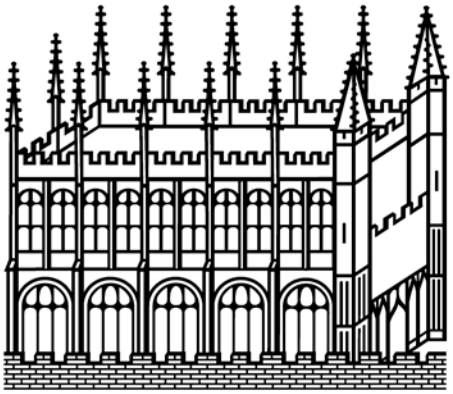

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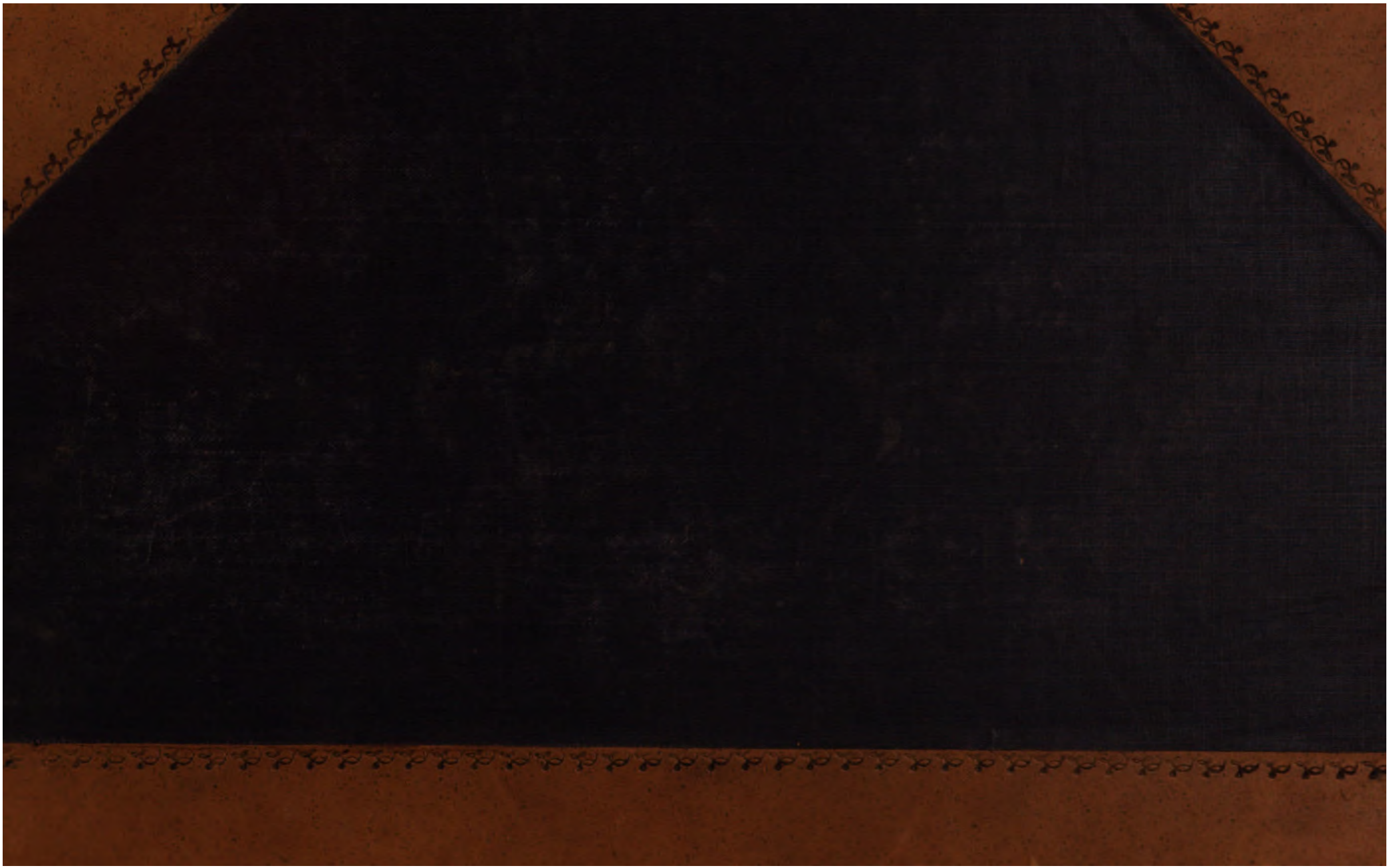

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THE

LONDON ENCYCLOPÆDIA.

F. The letter (Saxon ꝼ) is evidently derived from the Greek digamma, through the medium of the Latin language. Some contend that this is derived from the φ, phi, by first making the perpendicular stroke, and, in adding the circle at two strokes, carelessly omitting to make them join. This, however, the learned bishop of Salisbury disputes. He says it was anciently called vau, or wau, and is in fact a double vau of the Hebrew and Syriac, and corresponding in shape with the vau of the Arabic and Ethiopic. Ainsworth, however, derives it from the Hebrew פ phe, or ף, pe final, which, if turned, nearly gives the figure; and he observes, that in changing Hebrew words into Latin, ף is converted into F. Its sound, in English, is very uniform, being formed by compression of the lips, or a junction of the upper teeth with the under lip, and a forcible breath. In the preposition *of*, indeed, and on some few other occasions, it is pronounced softer, or like *v*.

As an abbreviation, F, in physical prescriptions, stands for fiat, i. e. Let it be done, or made up. Thus f. s. a. signifies fiat secundum artem. F, in the civil law, doubled thus, *ff*, signifies the pandects. See PANDECTS. F, in the criminal law, was a stigma put upon felons with a hot iron, on their being admitted to the benefit of clergy; by stat. 4 Hen. VII. c. 13. F, as a numeral, anciently signified 40, and when a dash was added at top (thus $\overline{F}$), it stood for 40,000.

FAABORG, a sea-port town of Denmark, on the south coast of the island of Funen. It has but an insecure harbour; and its trade, which is in provisions, is not considerable. Population about 1100. It is seventeen miles south of Oldensee.

FABBRONI (Giovanni), a modern Italian philosopher of considerable eminence. We find him filling the various posts of secretary to the Academia de i Georgofili, director of the Museum and Cabinet of Natural History at Florence, one of the forty members of the Societa Italiana delle Scienze, Tuscan deputy for the new system of weights and measures, member of the deputation of finance under the government of the queen regent of Etruria, a deputy to the corps legislative in France, director, under the Imperial government, of bridges and highways for the department beyond the Alps, director of the mint at Florence, royal commissary of the iron works and mines, and one of the commissioners of taxes for the states of Tuscany. His writings best known are—Provedimenti Annonarj; his Discourses on National Prosperity; on the Equilibrium of Commerce, and the Establishment of Custom-houses; on the Effects of the Free Traffic of Raw Material; on Rewards for the Encouragement of Trade; on the Chemical Action of Metals; on the Value and Reciprocal Proportion of Coins; on the Scales and Steelyards of the Chinese; on the Palaces of Spain; and on the ancient Hebrew People. He left behind him many unpublished memoirs. He died at Florence in 1823, aged upwards of seventy.

FABELL (Peter), a reputed magician, and native of Edmonton, lived and died there in the reign of Henry VII. In Norden's account of Edmonton, we read, 'There is a fable of one Peter Fabell, that lieth in this church, who is said to have beguiled the devell by policie for money; but the devell is deceit itself.' Weever supposes Fabell to have been an ingenious man, who amused himself and astonished his neighbours by sleight-of-hand tricks, or chemical experiments. There is a very scarce pamphlet, entitled—'The Life and Death of the Merry Devil of Edmonton; with the pleasant Pranks of Smug the Smith, &c.' In this book Fabell is styled 'an excellent scholar, and well seene in the arte of magicke.'

FABER (Basil), a protestant German critic of the sixteenth century, was born at Sorau in Lusatia, and, after studying at Wittemberg and other universities, was about 1550 appointed rector of the seminary of Nordhausen. He died rector of the Augustinian College at Erfurth in 1576. He was one of the protestant ecclesiastical historians, termed the Centuriators of Magdeburgh. Faber's literary reputation is founded on his Thesaurus Eruditionis Scholasticæ, 1571, folio, of which improved editions were published in 1735 and 1749.

FABER (John), a German divine, born at Heilbron in 1500. He was created doctor at Cologne, and in 1526 was appointed confessor to Ferdinand king of the Romans, who, when he became emperor, gave him the see of Vienna. He was called the mallet of heretics, and owed his preferment to the zeal which he displayed in opposition to Luther. He died in 1562. His works were printed at Cologne, in 3 vols. folio.

FABER, in ichthyology. See ZEUS.

FABIAN, or FABYAN (Robert), an alderman and sheriff of London at the close of the fifteenth century, was a man of learning, and author of a Chronicle of England and France, entitled the Concordance of Histories, in 2 vols. folio, beginning with Brute, and ending with the 20th of Henry VII. 1504. He was a member of the company of drapers, and resigned his gown in 1502 to avoid serving the office of lord mayor. Dying in 1511, or 1512, he was interred in the

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church of St. Michael, Cornhill. His Chronicle is a mere compilation, but it contains several curious particulars relative to the city of London, not elsewhere to be found. Stowe calls it 'a painful labor, to the great honor of the city and of the whole realm.' Cardinal Wolsey caused as many copies of it as he could procure to be burned, because the author had made too clear a discovery of the large revenues of the clergy. It is Fabian's general practice at the division of the books to insert metrical prologues and other pieces, in verse. The best of his metres is the complaint of King Edward the Second, who is introduced reciting his misfortunes; but this, in fact, is only a translation of an indifferent Latin poem ascribed to that monarch, and probably written by William of Worcester. In the first edition of Fabian's Chronicle (printed in 1516) he has given, as epilogues to his seven books, The Seven Joys of the Blessed Virgin, in English Rime: and under the year 1325 there is a poem to the Virgin; and another on one Badby, a Lollard, under the year 1409. These are suppressed in the later editions. In his panegyric upon London, he despairs of doing justice to his theme, 'even if he had the eloquence of Tully, the morality of Seneca, and the harmony of that faire ladie, Calliope.' Fabian's History was reprinted in 1811, 4to.

FABIUS, the surname of a powerful patrician family at Rome, said to have derived their name from *faba*, a bean, because some of their ancestors cultivated this pulse. They were once so numerous that they took upon themselves to wage a war against the Veientes. They came to a general engagement near the Cremera, in which all the family, consisting of 306 men, were slain, A. U. C. 277. There only remained one boy, whose tender age had detained him at Rome, and from him descended the noble Fabii of the following ages. Ovid celebrates the above transaction in those lines beginning,

> Una domus vires et onus susceperat urbis,
> Sumunt gentiles arma professa manus.
> Fasti. lib. ii. 197.

Fabius Maximus (Quintus), a celebrated Roman, who from a dull and inactive childhood was raised to the highest offices of the state. In his first consulship he obtained a victory over Liguria, and the fatal battle of Thrasymenes occasioned his election to the dictatorship. In this important office he began to oppose Hannibal, not by fighting him in the open field, like his predecessors, but by continually harassing his army by countermarches and ambuscades, from which he received the surname of Cunctator, or the Delayer. Hannibal sent him word, that 'If he was as great a captain as he would be thought, he ought to come into the plain and give him battle.' But Fabius coldly replied, 'That if he (Hannibal) was as great a captain as he would be thought, he would do well to force him to battle.' Such operations in the commander of the Roman armies gave offence to several; and Fabius was even accused of cowardice. He, however, continued firm in his resolution; and patiently bore to see his master of horse raised, by his enemies at home, to share the dictatorial dignity. When he had laid down his office of dictator, his successors, for a while, followed his plan; but the rashness of Varro, and his contempt for the operations of Fabius, occasioned the fatal battle of Cannæ. Tarentum was obliged to surrender to him after the battle of Cannæ; and on that occasion the Carthaginians observed, that Fabius was the Hannibal of Rome. When he had made an agreement with Hannibal for the ransom of the captives, which was totally disapproved by the Roman senate, he sold all his estates to pay the money, rather than forfeit his word to the enemy. The bold proposals of young Scipio, to carry the war from Italy to Africa, were rejected by Fabius as chimerical and dangerous. He did not, however, live to see the success of the Roman arms under Scipio, and the conquest of Carthage by measures which he treated with contempt, and heard with indignation. He died in the 100th year of his age, after he had been five times consul, and twice honored with a triumph. The Romans were so sensible of his great merit and services, that the expenses of his funeral were defrayed from the public treasury.

Fabius Maximus (Quintus), son of the preceding, showed himself worthy of his father's virtues. During his consulship he received a visit from his father on horseback in the camp. The son ordered the father to dismount; and the old man cheerfully obeyed, embracing his son, and saying, 'I wished to convince myself whether you knew what it is to be consul.' He died before his father, who, with the moderation of a philosopher, delivered a funeral oration over his son's body.

Fabius Maximus Rullianus was the first of the Fabii who obtained the surname of Maximus, for lessening the power of the populace at elections. He was master of horse, and his victory over the Samnites in that capacity nearly cost him his life, as he engaged the enemy without the command of the dictator. He was five times consul, twice dictator, and once censor. He triumphed over seven different nations.

FA'BLE, *n. s.*, *v. a.* & *v. n.*
Fa'bled, *part. adj.*
Fa'bler, *n. s.*
Fab'ulist,
Fabulo'sity,
Fab'ulous, *adj.*
Fab'ulously, *adv.*
Fab'ulousness, *n. s.*

Fr. *fable*; Ital. *favola*; Span. and Lat. *fabula*, from *for*, *fari*, to speak; Gr. φαω. The Hebrew חבל signifies vanity, and is considered, by Minsheu, as the root of the Latin. A fictitious story: fiction, generally, see below: a lie. The verb neuter (derived from the noun) signifies to feign; write, or tell falsehoods: as an active verb, to tell a thing falsely: fabled is feigned; and a fabulist is one celebrated in fables: a fabler, he who composes the specific fictions called fables, or who deals in fiction or falsehood generally. Fabulosity means abundance of fiction; fabulous invention, or faculty; in which latter sense it is synonymous with fabulousness: fabulous is full of fables; feigned; invented.

> But refuse profane and old wives' *fables*.
> 1 *Tim.* iv. 7.

He *fables* not: I hear the enemy.
Shakspeare. Henry VI.

In their *fabulosity* they report, that they had observations for twenty thousand years.
Abbot's Description of the World.

We mean to win,
Or turn this heaven itself into the hell
Thou *fablest*. *Milton's Paradise Lost.*

Ladies of the' Hesperides, they seemed
Fairer than feigned of old, or *fabled* since
Of fairy damsels met in forest wide,
By knights. *Id.*

There are many things *fabulously* delivered, and are not to be accepted as truths.
Browne's Vulgar Errours.

Triptolemus, so sung the nine,
Strewed plenty from his cart divine;
But, spite of all those *fable*-makers,
He never sowed on Almaign acres. *Dryden.*

The moral is the first business of the poet: this being formed, he contrives such a design or *fable* as may be most suitable to the moral. *Id. Dufresnoy.*

It would look like a *fable* to report that this gentleman gives away a great fortune by secret methods.
Addison.

A person terrified with the imagination of spectres, is more reasonable than one who thinks the appearance of spirits *fabulous* and groundless. *Id.*

Jotham's *fable* of the trees is the oldest extant, and as beautiful as any made since. *Id. Spectator.*

The first thing to be considered in an epick poem is the *fable*, which is perfect or imperfect, according as the action, which it relates, is more or less so. *Id.*

That Saturn's sons received the three-fold reign
Of heaven, of ocean, and deep hell beneath,
Old poets mention, *fabling*. *Prior.*

Quitting Æsop and the *fabulists*, he copies Boccace.
Croxal.

Palladius coming to die somewhere in the north part of Britain, may seem to give some kind of countenance to those *fables* that make him to have lived many years among the Scots. *Lloyd.*

Hail, *fabled* grotto! hail, Elysian soil!
Thou fairest spot of fair Britannia's isle!
Tickell.

Our bard 's a *fabulist*, and deals in fiction.
Garrick.

The style of Boethius, though, perhaps, not always rigorously pure, is formed with great diligence upon ancient models, and wholly uninfected with monastic barbarity. His history is written with elegance and vigour, but his *fabulousness* and credulity are justly blamed. *Johnson.*

The first ages of the Scottish History are dark and *fabulous*. *Robertson's History of Scotland.*

Fabulous narrative has accordingly been common in all ages of the world, and practised by teachers of the most respectable character. It is owing, no doubt, to the weakness of human nature, that *fable* should ever have been found a necessary, or a convenient, vehicle for truth. *Beattie.*

Believing every hillock green
Contains no *fabled* hero's ashes,
And that around the undoubted scene
Thine own 'broad Hellespont' still dashes,
Be long my lot! and cold were he
Who there could gaze denying thee! *Byron.*

FABLE is generally esteemed the most ancient species of wit; and has continued to be highly valued, not only in times of the greatest simplicity, but in the most polite ages of the world. Nathan's fable of the poor man (2 Sam. xii. 6) is next in antiquity to Jotham's, and which, as Addison (see the foregoing extracts) observes, is the oldest extant: perhaps that of Nathan is superior to it in close painting and affecting representation. We find Æsop delivering fables in the most distant ages of Greece; and, in the early days of the Roman commonwealth, we read of a mutiny appeased by the timely delivery of the fable of the belly and the members.

The earliest collection of fables extant is of eastern origin, and preserved in the Sanscrit language. It is called Hitopadesa, and the author Veshnoo Sarma; but they are known in Europe by The Tales and Fables of Bidpay, or Pilpay, an ancient Indian philosopher. Of this collection Sir William Jones takes the following notice:—'The Fables of Veshnoo Sarma, whom we ridiculously call Pilpay, are the most beautiful, if not the most ancient, collection of apologues in the world. They were first translated from the Sanscreet, in the sixth century, by Buzerchumihr, or bright as the sun, the chief physician, and afterwards the vizier of the great Anushirwan; and are extant under various names, in more than twenty languages. But their original title is Hitopadesa, or amicable instruction: and as the very existence of Æsop, whom the Arabs believe to have been an Abyssinian, appears rather doubtful, I am not disinclined to suppose that the first moral fables which appeared in Europe were of Indian or Ethiopian origin.'

Mr. Frazer, at the end of his History of Nadir Shah, gives us the following account of this curious work:—'The ancient Brahmins of India, after a good deal of time and labor, compiled a treatise (which they called Kurtuk Dumnik), in which were inserted the choicest treasures of wisdom, and the most perfect rules for governing a people. This book they presented to their rajahs, who kept it with the greatest secrecy and care. About the time of Mahomet's birth, or the latter end of the sixth century, Noishervan the Just, who then reigned in Persia, discovered a great inclination to see that book; for which purpose Burzuvia, a physician, who had a surprising talent in learning several languages, particularly Sanskerritt, was introduced to him as the most proper person to be employed to get a copy of it. He went to India, where, after some years' stay, and great trouble, he procured it. It was translated into the Pehluvi (the ancient Persian language) by him and Buzrjumehr, the vizier. Noishervan, ever after, and all his successors, the Persian kings, had this book in high esteem, and took the greatest care to keep it secret. At last Abu Jaffer Munsour zu Nikky, who was the second caliph of the Abassi reign, by great search, got a copy of it in the Pehluvi language, and ordered Imâm Hassân Abdal Mokaffa, who was the most learned of the age, to translate it into Arabic. This prince ever after made it his guide, not only in affairs relating to the government, but also in private life. In the year 380 of the Hegira, sultan Mahmud Ghazi put it into verse: and afterwards, in the year 515, by order of Bheram Shah ben Massaud, that which Abdal Mokaffa had translated, was re-translated into Persic by Abdul Mala Nasser Allah Mustofi; and this is that Kulila Dumna, which is now extant. As this latter had too many Arabic verses and obsolete phrases in it, Molana Ali ben Hassein Vaes, at the request of

Emîr Sohèli, keeper of the seals to sultan Hossein Mirza, put it into a more modern style, and gave it the title of Anuar Sohèli. In the year 1002 the great moghul, Jalal ô Dîn Mohommed Akbar, ordered his own secretary and vizier, the learned Abul Fazl, to illustrate the obscure passages, abridge the long digressions, and put it into such a style as would be most familiar to all capacities; which he accordingly did, and gave it the name of Ayar Danish, or the Criterion of Wisdom.' Thus far Mr. Frazer, under the word Ayar Danish.

'In the year 1709,' says Dr. Wilkins, 'the Kulila Dumna, the Persian version of Abul Mala Nasser Allah Mustofi, made in the 515th year of the Hēgira, was translated into French, with the title of Les Conseils et les Maximes de Pilpay, Philosophe Indien, sur les divers Etats de la Vie. This edition resembles the Hitopadesa more than any other then seen; and is evidently the immediate original of the English 'Instructive and entertaining Fables of Pilpay, an ancient Indian Philosopher,' which, in 1775, had gone through five editions. The Anuar Sohèli, above mentioned, about the year 1540, was rendered into the Turkish language; and the translator is said to have bestowed twenty years' labor upon it. In the year 1724 this edition M. Galland began to translate into French, and the first four chapters were then published; but, in the year 1778, M. Cardonne completed the work, in three volumes, giving it the name of Contes et Fables Indiennes de Bidpai et de Lokman; traduites d'Ali Tcheleby ben Saleh, auteur Turc: Indian Tales and Fables of Bidpay and Lockman, translated from Aly Tcheleby ben Saleh, a Turkish author.'

The Fables of Lockman were published in Arabic and Latin, with notes, by Erpenius, 4to., Amstel. 1636; and by the celebrated Golius, at the end of his edition of Erpen's Arabic Grammar, Lugd. Bat. 1656, with additional Notes; and also in the edition of the same Grammar, by Albert Schultens, Lugd. Bat. 1748, 4to. They are only thirty-seven in number.

Of the Hitopadesa, or Fables of Vishnoo Sarma, we have two very elegant English translations from the original Sanscrit: one by Sir William Jones, printed in his works, 4to. vol. VI, Lond. 1799; the other by the father of Sanscrit literature in Europe, Dr. Charles Wilkins, of the India House, 8vo., Bath, 1787, with a collection of very important notes.

Fable, as a mode of conveying moral instruction, is allied both to all other kinds of similitude and to parable: but, in the strict use of it, at least, it differs widely from both. Every subject of the inanimate creation may be employed in similitude and parable; but the grand objects in fable are borrowed from the animate and rational creation only: and the best fables consist of human actions, spirit, and intelligence, attributed to brute and irrational creatures.

FABRETTI (Raphael), LL. D. a learned Italian author and antiquary, born at Urbino, in 1619. He studied at Cagli, and took his degree at Urbino in his eighteenth year. Cardinal Imperiali sent him into Spain, where he continued thirteen years, and was for some time auditor general of the Nunciature. On his return to Rome he was appointed judge of appeals, and afterwards inspector of reliques. Pope Alexander VIII. appointed him Secretary of memorials, and Innocent XII made him keeper of the archives of St. Angelo. In the midst of this business, however, he found time to cultivate his favorite study of antiquities, upon which he wrote several tracts in Latin, particularly, 1. De Aquis et Aquæductibus Veteris Romæ; 2. De Columna Trajana; 3. Inscriptionum Antiquarum Explicatio, &c. He was admitted a member of the academy of Assorditi at Urbino, and of the Arcadi at Rome; and died 7th January, 1700.

FABRIANO (Gentile Da), a celebrated historical painter, was born at Verona, in 1332, and became a disciple of Giovanni Da Fiesole. He was employed to adorn a great number of churches and palaces at Florence, Urbino, Siena, Perusia, and Rome, but particularly the Vatican; and one picture of his, representing the Virgin and Child, attended by Joseph, which is preserved in the church of St. Maria Maggiore, was highly commended by Michael Angelo. By order of the doge and senate of Venice he painted a picture in the great council-chamber, which was considered as so extraordinary a performance that his employers granted him a pension for life, and conferred upon him the privilege of wearing the habit of a noble of Venice, the highest honor the state could bestow. He died in 1412.

FABRIANO, a town of the Papal states, at the foot of the Appennines in the Marca d'Ancona. The inhabitants trade chiefly in wool and its manufactures; also in paper. Population 4000. Thirty-three miles south-west of Ancona.

FAB'RIC, *n. s.* & *v. a.* } French, *fabrique*;
FAB'RICATE, *v. a.* } Belg. *fabryke*; Ital.
FA'BRICATION, *n. s.* } Span. and Lat. *fabrica*, from *faber* (i. e. *faciber* à *facio*, to do), a workman. A building or edifice: hence any system or combination of things: the verb, formed after the noun, signifies to build, construct, or frame, as does the more common verb to fabricate: the latter is also used, figuratively, for to invent, construct, or frame a fictitious, as distinguished from a true account of any thing.

> Like the baseless *fabric* of this vision,
> The cloud-capped towers, the gorgeous palaces,
> The solemn temples, the great globe itself,
> Yea, all which it inherits shall dissolve;
> And, like this insubstantial pageant faded,
> Leave not a wreck behind. *Shakspeare.*

> There must be an exquisite care to place the columns, set in several stories, most precisely one over another, that so the solid may answer to the solid, and the vacuities to the vacuities, as well for beauty as strength of the *fabrick*. *Wotton.*

> This *fabrication* of the human body is the immediate work of a vital principle, that formeth the first rudiments of the human nature. *Hale.*

> Still will ye think it strange,
> That all the parts of this great *fabrick* change;
> Quit their old station and primeval frame. *Prior.*

> Shew what laws of life
> The cheese inhabitants observe, and how
> *Fabrick* their mansions. *Philips.*

> How may the poet now unfold,
> What never tongue or numbers told,

How learn delighted and amazed,
What hands unknown that *fabrick* raised.
Collins.

From beginnings the most inconsiderable, and by instruments the most unlikely, the Almighty, with incredible facility, raised that glorious *fabric* of his church, which hitherto hath withstood all the rage of his enemies. *Robertson's Sermons.*

FABRICIA, in botany, a genus of plants of the class icosandria, and order monogynia: CAL. five-cleft, half superior; petals five, without claws; stigma capitate; CAPS. many-celled: SEEDS winged. Species two; natives of New Holland.

FABRICIUS (Caius), a celebrated Roman, who in his first consulship, A.U.C. 470, obtained several victories over the Samnites and Lucanians, and was honored with a triumph. The riches acquired in those battles were immense, the soldiers were liberally rewarded, and the treasury was enriched with 400 talents. Two years after Fabricius went as ambassador to Pyrrhus, and refused with contempt presents and offers, which might have corrupted the fidelity of a less virtuous citizen. Pyrrhus admired the magnanimity of Fabricius, but his astonishment was excited to the highest pitch, when the latter discovered to him the villany of his own physician, who had offered to the Roman general to poison his royal master. To this greatness of soul was added the most consummate knowledge of military affairs, and the greatest simplicity of manners. Fabricius never used plate at his table. A small salt cellar, the feet of which were of horn, was the only silver vessel which appeared in his house. This contempt of luxury he wished also to encourage among the people; and during his censorship he banished from the senate Cornelius Russinus, who had been twice consul and dictator, because he kept in his house more than ten pounds weight of silver plate. Such were the manners of the conqueror of Pyrrhus, who observed that he wished rather to command those that had money than possess it himself. He lived and died in virtuous poverty: his body was buried at the public charge; and the Roman people gave a dowry to his two daughters when they had arrived to years of maturity.

FABRICIUS (George), a learned German, born at Chemnitz in Misnia, in 1516. After a liberal education, he visited Italy in the character of tutor to a young nobleman; and, examining all the remains of antiquity with great accuracy, compared them with their descriptions in Latin writers. The result of these observations was his work entitled Roma, containing a description of that city. He afterwards settled at Misenum, where he conducted a great school till his death in 1571. He also wrote seven books of the Annals of Misnia, three of the Annals of Meissen, Travels, and many sacred poems in Latin.

FABRICIUS (Jerome), a celebrated physician in the end of the sixteenth century (surnamed Aquapendente, from the place of his birth), was the disciple and successor of Fallopius. He chiefly applied himself to surgery and anatomy, which he professed with great reputation at Padua for forty years. The republic of Venice settled a considerable pension upon him, and honored him with a gold chain and a statue. He died in 1603; leaving behind him several works which are much esteemed.

FABRICIUS (John Albert), one of the most learned and laborious theologians of his age, was born at Leipsic in 1668. He lost his parents when very young, but was carefully brought up by his guardian, who sent him to Quedlinburgh school. In 1692 he was admitted a preacher, and was chosen professor of eloquence at Hamburgh in 1697. He died at Hamburgh in 1736, after a life spent in collecting and publishing valuable remains of the ancients. His principal works are: Bibliotheca Latina, 2 vols. 4to.; Vita Procli Philosophi, 4to.; Codex Apocryphus Novi Testamenti collectus, 8vo.; Bibliotheca Græca, 14 vols. 4to. A new edition of this stupendous magazine of learning has been published by Harles. Centuria Fabriciorum Scriptis clarorum, 8vo.; Memoriæ Hambergenses, 7 vols. 8vo.; Codex Pseudepigraphus Vet. Test. 8vo.; Bibliographia Antiquaria, 4to.; Bibliotheca Ecclesiastica, fol.; Delectus argumentorum et syllabus Scriptorum, 4to.; Conspectus Thesauri Literariæ Italiæ, 8vo.; Salutaris Lux Evangelii, 4to.; Bibliotheca mediæ et infimæ Latinitatis, 5 vols. 8vo.

FABRICIUS (William), surnamed Hildanus, a famous surgeon, was born near Cologne in 1560. He became public physician at Berne, where he died in 1634. His Six Centuries of Observations and Cures were published in 1606, 4to.; besides which he wrote on Gangrene and Sphacelus; on Burns; Gun Shot Wounds; on Lithotomy, &c. The whole of his works were printed in folio, at Frankfort, in 1682.

FABRICIUS (John Christian), a modern entomologist of the greatest celebrity, was born in the duchy of Sleswick in 1742. After completing his studies, he went, at the age of twenty, to Upsal to attend the lectures of Linné. Having here conceived the idea of forming an arrangement of insects according to the structure of the mouth, Linné highly approved his plan, but declined introducing it into his Systema Naturæ. See our article ENTOMOLOGY. Fabricius now adopted the profession of medicine, and took his doctor's degree. Being afterwards appointed professor of natural history at Kiel, he devoted himself entirely to his favorite science; and published, in 1775, his new System of Entomology. Two years after he pointed out the classic and generic characters of insects, in a second treatise; and in 1778 published his Philosophia Entomologica, on the model of the Philosophia Botanica of Linnæus. From that period to his death Fabricius industriously employed himself in extending his system. His knowledge of all the branches of natural history was extensive, and he wrote many useful works in the German and Danish languages. He died in 1807.

FABRIC LANDS, in ecclesiastical affairs, those formerly given towards rebuilding or repairing cathedrals and other churches; for anciently almost every body gave more or less, by his will, to the fabric of the parish church where he dwelt.

FABROT (Charles Hannibal), one of the most celebrated civilians of his time, was born at Aix

in 1681; and acquired an extraordinary skill in the civil and canon law, and in the belles lettres. He published the Basilicæ, or Constitutions of the Emperors of the East, in Greek and Latin, with learned notes, in 7 vols. folio; and editions of Cedrenus, Nicetas, Anastasius, Bibliothecarius, Constantine Manasses, and Cujas, with learned and curious notes.

FACE', *n. s.*, *v. n.* & *v. a.* } Fr. *face*; Span. *haz*; Port. *faz*; Ital. *faccia*; Lat. *facies*, from *facio*, to make, 'the face being the part that makes the distinction or identitye.' Minsheu.
FACE'-CLOTH,
FACE'-PAINTING,
FACET',
FA'CING,

The visage or countenance; hence general appearance, presence, sight; also the surface or outward part of a thing, distortion or peculiarity; and confidence or boldness of face or character. As a verb neuter, to face, is to come with the face toward an object; to carry a false countenance or appearance: as an active verb, to meet in front, oppose or stand opposite to; cover with the outward layer or superficies; invest with any covering; oppose with boldness and impudence, or with success (as to face *down*, and face *out*): a face-cloth is linen cloth placed on the face of the dead: face-painting, portrait-painting. Facet (Fr. facette) is a diminutive of face, a small surface; applied particularly to the small superficies of precious stones. Face to face is an adverbial expression for mutual presence.

And thou child schalt be clepid the profete of the higheste, for thou schalt go before the *face* of the Lord to make redy hise weyes. *Wiclif. Luk.* i.

A mist watered the whole *face* of the ground. *Genesis.*

The children of Israel saw the *face* of Moses, that the skin of Moses's *face* shone. *Exod.* xxxiv. 35.

The breadth of the *face* of the house, towards the east, was an hundred cubits. *Ezek.* xli. 14.

It is not the manner of the Romans to deliver any man to die, before that he which is accused have his accusers *face to face*. *Acts* xxv. 16.

Now we see through a glass darkly; but then *face to face*. 1 *Cor.* xiii. 12.

I know how to content myself in others lust,
Of little stuffe unto my self to weave a webbe of trust:
And how to hyde my harmes with sole dyssembling chere,
Whan in my *face* the painted thoughtes would outwardly appeare.
I know how that the bloud forsakes the *face* for dred,
And how by shame it staynes agayne the chekes with flaming red. *Surry.*

Thou needs must learn to laugh, or lye,
To *face*, to forge, to scoff, to company. *Hubbard's Tale.*

They're thinking, by his *face*,
To fasten in our thoughts that they have courage:
But 'tis not so. *Shakspeare. Julius Cæsar.*

Shame itself!
Why do you make such *faces*? *Id. Macbeth.*

How many things are there which a man cannot, with any *face* or comeliness, say or do himself? A man can scarce allege his own merits with modesty, much less extol them: a man cannot sometimes brook to supplicate or beg. *Bacon.*

A man shall see *faces*, which, if you examine them part by part, you shall never find good; but take them together, are not uncomely. *Id.*

Honour that is gained and broken upon another, hath the quickest reflection, like diamonds cut with *facets*. *Id.*

These offices and dignities were but the *facings* and fringes of his greatness. *Wotton.*

Keep still your former *face*, and mix again
With these lost spirits; run all their mazes with 'em;
For such are treasons. *Ben Jonson.*

Give me a look, give me a *face*,
That makes simplicity a grace. *Id.*

He looked and saw the *face* of things quite changed,
The brazen throat of war had ceased to roar;
All now was turned to jollity and game,
To luxury and riot, feast and dance. *Milton.*

We trepanned the state, and *faced* it down
With plots and projects of our own. *Hudibras.*

You'll find the thing will not be done
With ignorance and *face* alone. *Id.*

The mere *face-painter* has little in common with the poet; but, like the mere historian, copies what he sees, and minutely traces every feature, and odd mark. *Shaftesbury.*

At the first shock, with blood and powder stained,
Nor heaven, nor sea, their former *face* retained;
Fury and art produce effects so strange,
They trouble nature, and her visage change. *Wallace.*

When men have the heart to do a very bad thing, they seldom want the *face* to bear it out. *Tillotson.*

Jove cannot fear; then tell me to my *face*,
That I of all the gods am least in grace. *Dryden's Iliad.*

I'll *face*
This tempest, and deserve the name of king. *Dryden.*

Kicked out, we set the best *face* on't we could. *Id. Virgil.*

Face about, man; a soldier, and afraid of the enemy? *Id.*

Hail and farewell they shouted thrice amain,
Thrice *facing* to the left, and thence they turned again. *Id.*

Georgione, the cotemporary of Titian, excelled in portraits of *facepainting*. *Id. Dufresnoy.*

You, says the judge to the wolf, have the *face* to challenge that which you never lost; and you, says he to the fox, have the confidence to deny that which you have stolen. *L'Estrange.*

Let any one, even below the skill of an astrologer, behold the turn of *faces* he meets as soon as he passes Cheapside Conduit, and you see a deep attention and a certain unthinking sharpness in every countenance. *Tatler.*

From beauty still to beauty ranging
In every *face* I found a dart. *Addison's Spectator.*

When it came to the count to speak, old Fact so stared him in the *face*, after his plain downright way, that the count was struck dumb. *Id. Count Tariff.*

We get intelligence of the force of the enemy, and cast about for a sufficient number of troops to *face* the enemy in the field of battle. *Id. On the War.*

This would produce a new *face* of things in Europe. *Id.*

The fortification of Soleurre is *faced* with marble. *Id.*

Because he walked against his will,
He *faced* men down that he stood still. *Prior.*

Where your old bank is hollow, *face* it with the first spit of earth that you dig out of the ditch. *Mortimer's Husbandry.*

Seized and tied down to judge, how wretched I!
Who can't be silent, and who will not lye:
To laugh, were want of goodness and of grace;
And to be grave, exceeds all power of *face*.
Pope.

The temple is described square, and the four fronts with open gates, *facing* the different quarters of the world. *Id.*

They are as loth to see the fires kindled in Smithfield as his lordship; and, at least, as ready to *face* them under a popish persecution. *Swift.*

The *face cloth* too is of great antiquity.—Mr. Strutt tells us, that after the closing the eyes, &c., a linen cloth was put over the *face* of the deceased.—Thus we are told, that Henry the Fourth, in his last illness seeming to be dead, his chamberlain covered his *face* with a linen cloth. English Æra, p. 105.
Brand's Popular Antiquities.

FACE comprehends all that part of the head which is not covered with the hair. The human face is called the image of the soul, as being the seat of the principal organs of sense, and the place where the ideas, passions, emotions, &c., are chiefly set to view. It shows also the sex, age, temperament, health, disease, &c. As the index of the passions, habits, &c., of the person, it becomes the subject of physiognomy. See PHYSIOGNOMY.

FACE OF THE MEASURES, in mining, is that part of a mine bounded by the length-way or principal vertical joints, or natural cracks of the measures. In coal mines, these principal joints are called sline back, or face joints, and are generally parallel to each other; the lesser joints, which cross the slines almost at right angles, are called end-joints or cutters.

To FACE, in the military art, a word of command intimating to turn about: thus, face to the right, is turn upon the left heel, a quarter round to the right; and, face to the left, is to turn upon the right heel a quarter round to the left.

FACE'TIOUS, *adj.* FACE'TIOUSLY, *adv.* FACE'TIOUSNESS, *n. s.* FACETE'LY, *adv.* FACETE'NESS, *n. s.* } Fr. *facetieux*; Lat. *facetus*, from *facetiæ*, jokes. Jocular; lively; witty; cheerful: facete and facetious seem both to have been used in this sense formerly.

Parables—work upon the affections, and breed delight of hearing, by reason of that *facetness* and wittiness. *Hales.*

If there be any kind of *facetiousness* innocent and reasonable, conformable to good manners, St. Paul did not intend to discountenance or prohibit that kind.
Barrow.

The eyes are the chief seats of love, as Lernutius hath *facetely* expressed. *Burton.*

Socrates, informed of some derogating speeches used of him behind his back, made this *facetious* reply, Let him beat me too when I am absent.
Government of the Tongue.

My *facetious* friend, D——r, I would wish also to be a partaker; not to digest his spleen, for that he laughs off, but to digest his last night's wine at the last field-day of the Crochallan corps. *Burns.*

'Tis pitiful
To court a grin, when you should woo a soul;
To break a jest, when pity would inspire
Pathetic exhortation; and to' address
The skittish fancy with *facetious* tales,
When sent with God's commission to the heart!
So did not Paul. *Cowper.*

Our word jealousies contains all the vowels, though three of them only were necessary: nevertheless in the two words abstemiously and *facetiously* the vowels exist all of them in their usual order, and are pronounced in their usual manner. *Darwin.*

And without turning his *facetious* head,
Over his shoulder with a Bacchant air,
Presented the o'erflowing cup, and said,
'Talking's dry work, I have no time to spare.'
Byron.

FACIES HIPPOCRATICA, the aspect of a dying man, as described by Hippocrates, and so named by later physicians, who have made similar observations: it is when the nostrils are sharp, the eyes hollow, the temples low, the tips of the ears contracted and cold, the forehead dry and wrinkled, and the complexion pale or livid. See MEDICINE. The Hippocratic face is chiefly observed towards the period of phthises and other consumptions, and is held a sure prognostic of death.

FA'CILE, *adj.* FA'CILELY, *adv.* FACIL'ITATE, *v. a.* FACILITA'TION, *n. s.* FACIL'ITY. } Fr. *facile*, *facilité*; Span. *facilidad*: Ital. *facilita*; Lat. *facilis*, *facilitas*, from *facio*, to do. Easy, pliant, flexible: to facilitate is to make easy; make free from difficulty or obstruction.

Piety could not be diverted from this to a more commodious business by any motives of profit or *facility*. *Raleigh.*

Choice of the likeliest and best prepared metal for the version will *facilitate* the work. *Bacon.*

A war upon the Turks is more worthy than upon any other Gentiles, both in point of religion and in point of honour; though *facility* and hope of success might invite some other choice. *Id.*

Facility is worse than bribery; for bribes come now and then: but if opportunity or idle respect lead a man, he shall never be without them. *Id.*

I meant she should be courteous, *facile*, sweet,
Hating that solemn vice of greatness, pride,
I meant each softest virtue there should meet,
Fit in that softer bosom to reside. *Ben Jonson.*

The one might be as *facilely* impetrate as the other.
Ld. Herbert.

Facility of yielding to a sin, or wooing it with a voluntary suit, is a higher stair of evil.
Bp. Hall's Contemplations.

They renewed their assault two or three days together, and planted cannon to *facilitate* their passage, which did little hurt; but they still lost many men in the attempt. *Clarendon.*

The *facile* gates of hell too slightly barred.
Milton.

Raphael now, to Adam's doubt proposed,
Benevolent and *facile*, thus replyed. *Id.*

Too *facile* then, thou didst not much gainsay;
Nay, didst permit, approve, and fair dismiss. *Id.*

By dividing it into parts so distinct, the order in which they shall find each disposed, will render the work *facile* and delightful. *Evelyn's Kalendar.*

To confine the imagination is as *facile* a performance as the Gothham's design of hedging in the cuckoo. *Glanville.*

Yet reason saith, reason should have ability
To hold these worldly things in such proportion,
As let them come or go with even *facility*. *Sidney.*

Though perspective cannot be called a certain rule of picture, yet it is a great succour and relief to art, and *facilitates* the means of execution.
Dryden's Dufresnoy.

They who have studied have not only learned many excellent things, but also have acquired a great *facility* of profiting themselves by reading good authors. *Id.*

'Tis a great error to take *facility* for good nature; tenderness without discretion, is no better than a more pardonable folly. *L'Estrange.*

The *facility* which we get of doing things, by a custom of doing, makes them often pass in us without our notice. *Locke.*

He opens and yields himself to the man of business with difficulty and reluctancy; but offers himself to the visits of a friend with *facility*, and all the meeting readiness of appetite and desire. *South.*

This may at first seem perplexed with many difficulties, yet many things may be suggested to make it more *facile* and commodious. *Wilkins.*

Some men are of that *facile* temper, that they are wrought upon by every object they converse with, whom any affectionate discourse, or serious sermon, or any notable accident, shall put into a fit of religion, which yet usually lasts no longer than till somewhat else comes in their way. *Calamy.*

What produceth a due quantity of animal spirits, necessarily *facilitates* the animal and natural motions. *Arbuthnot on Diet.*

A war on the side of Italy would cause a great diversion of the French forces, and *facilitate* the progress of our arms in Spain. *Swift.*

Science, though perhaps the nurseling of interest, was the daughter of curiosity: for who can believe that they who first watched the course of the stars, foresaw the use of their discoveries to the *facilitation* of commerce, or the mensuration of time? *Johnson. Rambler.*

FACING, Façade, or Revêtement, in fortification, is a strong wall of masonry, or other binding, built on the outside of the rampart and parapet, to prevent the soil of which they are composed giving way. When the revêtement of a rampart goes quite up to the top, four feet of the upper part is a vertical wall of three feet thick, with a square stone at the top of it, projecting about five or six inches, and a circular one below, or where the slope begins, of eight or ten inches diameter. When the facing is carried up as high as the soles of the embrasures, it is called a whole revêtement; but, when confined to the ditch only, it is termed a half-revêtement. These must depend on the nature of the soil, the facility of obtaining materials, the time that can be bestowed, the importance of the post, &c. Where difficulties occur, as also in temporary works, the facings are made with turf; in which case they are said to be gazoned.

FACIN'OROUS, *adj.* Lat. *facinus, facinoris*, from *facio*, to do, used both in a good and bad sense for great actions, but more commonly the latter. Extreme: extremely bad, or wicked.

'Tis strange, 'tis very strange, that is the brief and tedious of it; and he's of a most *facinorous* spirit that will not acknowledge it. *Shakspeare.*

FACT, *n. s.* Fr. *fait*; Lat. *factum*, from *facio*, *factus*, to do. A thing or effect accomplished: reality, as opposed to fiction or speculation; action; deed.

In matter of *fact* they say there is some credit to be given to the testimony of man; but not in matter of opinion and judgment: we see the contrary both acknowledged and universally practised all throughout the world. *Hooker.*

As men are not to mistake the causes of these operations, so much less are they to mistake the *fact* or effect, and rashly to take that for done which is not done. *Bacon.*

Those effects which are wrought by the percussion of the sense, and by things in *fact*, are produced likewise in some degree by the imagination: therefore if a man see another eat sour or acid things, which set the teeth on edge, that object tainteth the imagination. *Bacon's Natural History.*

I see the Levites, not long since, drawing their swords for God and Moses, against the rest of Israel; and that *fact* wins them both praise and blessing. *Bp. Hall's Contemplations.*

Unhappy man! to break the pious laws
Of nature, pleading in his children's cause:
Howe'er the doubtful *fact* is understood,
'Tis love of honour and his country's good;
The consul, not the father, sheds the blood.
Dryden.

Matter of *fact* breaks out and blazes with too great an evidence to be denied. *South's Sermons.*

Manifold sins, though in speculation they may be separable from war, in reality and *fact* never fail to attend it. *Smalridge.*

If this were true in *fact*, I do not see any colour for such a conclusion. *Addison on the War.*

It is a point of *fact* on which every English gentleman will determine for himself. *Junius.*

The *facts* which inspired writers relate are no less instructive than the doctrines which they teach. *Robertson's Sermons.*

It may seem strange, that horror of any kind should give pleasure. But the *fact* is certain. Why do people run to see battles, executions, and shipwrecks? *Beattie.*

FAC'TION, *n. s.* / FAC'TIONARY, / FAC'TIONIST, / FAC'TIOUS, *adj.* / FAC'TIOUSLY, *adv.* / FAC'TIOUSNESS, *n. s.* } Fr. *faction*; Ital. *fattione*; Lat. *factio, factionis*, from *facio, factus*, to make, or do. A public, or busy party: hence tumult; discord; dissension: factionary and factionist are old words for the promoters of faction or discord.

By one of Simon's *faction* murders were committed. *Shakspeare. Mac.*

The queen is valued thirty thousand strong;
If she hath time to breathe, be well assured
Her *faction* will be full as strong as ours.
Shakspeare.

He has been known to commit outrages,
And cherish *factions*. *Id. Timon.*

Pr'ythee, fellow, remember my name is Menenius; always *factionary* of the party of your general. *Id. Coriolanus.*

He is a traitor; lead him to the Tower,
And crop away that *factious* pate of his.
Shakspeare.

Be *factious* for redress of all these griefs. *Id.*

There be that can pack the cards, and yet cannot play well: so there are some that are good in canvasses and *factions*, that are otherwise weak men. *Lord Bacon.*

By the weight of reason I should counterpoise the overbalancing of any *factions*. *King Charles.*

Factious tumults overbore the freedom and honour of the two houses. *Id.*

I intended not only to oblige my friends, but mine enemies also: exceeding even the desires of those that were *factiously* discontented. *Id.*

God and Moses knew how o distinguish betwixt

the heads of the *faction* and the train; though neither be faultless, yet one is plagued, the other forgiven.
Bp. Hall's Contemplations.

By some needful act, to put a present restraint upon the wild and lawless courses of all their *factious* combinations abroad, and enterprises of this kind.
Bp. Hall.

Some busy *factionists* of the meaner sort. *Id.*

They remained at Newbury in great *faction* among themselves. *Clarendon.*

Gray-headed men and grave, with warriors mixed,
Assemble; and harangues are heard; but soon
In *factious* opposition. *Milton's Paradise Lost.*

How from dissensions in opinion do violent *factions* and feuds rage! *Barrow.*

Avoid the politic, the *factious* fool,
The busy, buzzing, talking, hardened knave.
Otway.

Why these *factious* quarrels, controversies, and battles amongst themselves, when they were all united in the same design? *Dryden.*

It is thus with all those, who, attending only to the shell and husk of history, think they are waging war with intolerence, pride, and cruelty, whilst, under color of abhorring the ill principles of antiquated parties, they are authorising and feeding the same odious vices in different *factions*, and perhaps in worse. *Burke.*

If all the world joined with them in a full cry against rebellion, and were as hotly influenced against the whole theory and enjoyment of freedom, as those who are the most *factious* for servitude, it could not in my opinion answer any one end whatsoever in this contest. *Id.*

Come thou, whose love unlimited, sincere,
Nor *faction* cools, nor injury destroys;
Who lend'st to Misery's moans a pitying ear,
And feel'st with ecstasy another's joys.
Beattie.

FACTION, in antiquity, a name given to the different companies of combatants in the circus. They were four; viz. the white, the red, the green, and the blue; to which Domitian added another of purple color. They were so denominated from the color of the liveries they wore; and were dedicated, according to M. Aur. Cassiodorus, to the four seasons of the year; the green being consecrated to spring, the red to summer, the white to autumn, and the blue to winter. It appears from ancient inscriptions, that each faction had its procurators and physician; and, from history, that party rage ran so high among them, that, in a dissension between two factions, in the time of Justinian, almost 40,000 men lost their lives in the quarrel.

FACTITIOUS, *adj.* Lat. *factitius*, from *facio*, to make. See FACTION. Made by art.

In the making and distilling of soap, by one degree of fire the salt, the water, and the oil or grease, whereof that *factitious* concrete is made up, being boiled up together, are easily brought to co-operate.
Boyle.

Hardness wherein some stones exceed all other bodies, and among them the adamant, all other stones being exalted to that degree that art in vain endeavours to counterfeit it; the *factitious* stones of chymists, in imitation, being easily detected by an ordinary lapidist. *Ray on the Creation.*

Hence the diamond reflects half as much more light as a *factitious* gem in similar circumstances; to which must be added its great transparency, and the excellent polish it is capable of. *Darwin.*

FACTOR, *n. s.* } Fr. *facteur*; Lat. *factor* (à *facio*). One who does business for another; an agent: factorage is his commission, or charge, for the business done. A factory is a house of business; a place where any thing is made; and figuratively, but more commonly, the collective body of merchants in a given place.
FACTORAGE,
FACTORY.

Take on you the charge
And kingly government of this your land;
Not as protector, steward, substitute,
Or lowly *factor* for another's gain.
Shakspeare. Richard III.

The senators alone of this great world,
Chief *factors* for the gods.
Id. Antony and Cleopatra.

We agreed that I should send up an English *factor*, that whatsoever the island could yield should be delivered at a reasonable rate. *Raleigh's Apology.*

The Scots had good intelligence, having some *factors* doubtless at this mart, albeit they did not openly trade. *Hayward.*

Forced into exile from his rightful throne,
He made all countries where he came his own;
And viewing monarch's secret arts of sway,
A royal *factor* for their kingdoms lay. *Dryden.*

Vile arts and restless endeavours are used by some sly and venomous *factors* for the old republican cause. *South.*

Asleep and naked as an Indian lay,
An honest *factor* stole a gem away:
He pledged to the knight; the knight had wit,
So kept the diamond, and the rogue was bit. *Pope.*

And, disclaiming all regard
For mercy, and the common rights of man,
Build *factories* with blood, conducting trade
At the sword's point, and dyeing the white robe
Of innocent commercial Justice red. *Cowper.*

'In the road of commerce,' said he, 'you will be sure, by diligence and assiduity, though you have no capital, of so far succeeding as to be employed as a *factor*. *Franklin.*

The *factorage* or wages, called also commission, is different at different places, and for different voyages: at a medium it may be fixed at about three per cent. of the value of the goods bought, beside the charge of package, which is paid over and above. When *factors* make themselves answerable for the debts of those persons with whom they deal, the charges of commission or *factorage* are, of course, enhanced.
Dr. A. Rees.

FACTORS are employed by merchants residing at other places, to buy or sell goods, negociate bills, &c., on their account; and are entitled to a certain allowance for their trouble. A supercargo differs from a factor in this: the business of the former is limited to the care of a particular cargo; he goes along with it, and generally returns when his business is completed: the latter has a fixed residence, and executes commissions for different merchants. A factor's power is either absolute or limited. Though entrusted with ample discretionary powers, he is not warranted to take unreasonable or unusual measures, or do any thing contrary to his employer's interest; but it is incumbent on the employer, if he challenge his proceedings, to prove that he could have done better, and was guilty of wilful mismanagement. When a factor's power is limited, he must adhere strictly to his orders. If he exceed his power, though with a view to

his employer's interest, he is liable for the consequence. For example, if he gives credit when not empowered, or long credit if not empowered, for the sake of a better price, and the buyer proves insolvent, he is liable for the debt. A factor has no power to give credit unless authorised: but if the goods consigned be generally sold on credit at the place of consignation, the factor will be vindicated for selling at the usual credit, unless expressly restricted. Although opinion will never justify the factor for departing from orders, necessity sometimes will. If he be limited not to sell goods under a certain price, and the goods be perishable, and not in a situation for being kept, he may sell them, to prevent their destruction, even under the price limited. A factor is never warranted to deal on trust, except with persons in good credit at the time. If the employer challenge the debtors, it is incumbent on him to prove that their bad circumstances were known at the time of sale; and the factor will be vindicated, if he trusted them at the same time for goods of his own. If the factor sell his employer's goods on trust, and, after the day of payment is elapsed, receive payment from the purchaser for a debt of his own, he becomes liable in equity for the debt. In case of bankruptcy, the factor ought immediately to lay attachments, and advise his employers; and he cannot withdraw his attachments, nor compound debts without orders. If a factor sells goods belonging to different merchants to the same person, and the buyer proves insolvent, they shall bear the loss in equal proportions; and, if the buyer has paid part before his insolvency, without specifying for which, the payment ought to be distributed in equal proportions; but, if the days of payment be fixed, and part of the debts only due, the payment ought to be applied, in the first place, to such debts as were due. If he makes a wrong entry at the custom-house, and the goods be seized in consequence thereof, he must bear the loss, unless the error be occasioned by a mistake in the invoice, or letter of advice. The owner bears the loss of goods seized, when attempted to be smuggled by his orders: but the factor complying with an unlawful order, is liable in such penalties as the laws exact. If a factor saves the duty of goods due to a foreign prince, he shall have the benefit; for, if detected, he bears the loss. If a factor sells goods bought by his employer's orders for his own advantage, the employer may recover the benefit, and the factor shall be amerced for the same. If a factor receives bad money in payment, he bears the loss; but if the value of the money be lessened by the government, the employer bears the loss. A factor is not liable for goods spoiled, robbed, or destroyed by fire. If a factor receives counterfeit jewels from his employer, and sells them, the employer is liable to indemnify him for any penalties he may incur. If a factor be ordered to make insurance, and neglect it, and the subject be lost, he is liable to make it good, providing he had effects in his hands. If a factor buys goods for his employer, his bargain shall be binding on the employer. Factors having obtained a profit for their employers, ought to be very cautious how they dispose of it; for if they act without commission, they are responsible: and even in the case of a merchant remitting goods to his factor, and some time after drawing a bill on him, which the factor, having effects in his hands, is supposed to accept, if the merchant fails, the goods are seized in the factor's hands, for behoof of the creditors, and the factor, it has been thought, must answer the bill notwithstanding, and only rank as a creditor for the sum, which, by his acceptance of the bill, he was obliged to pay. In case of a factor's insolvency, the owner may reclaim his goods; and, if they be sold on trust, the owner (and not the factor's creditors) shall recover payment of the debts. The above is principally applicable to factors residing abroad, and acting for merchants, or to supercargoes going a voyage to dispose of a cargo, and afterwards returning with another to their employers; but it is likewise the practice of merchants of the greatest credit in the commercial world, to act mutually as factors for each other. The business thus executed is called commission-business, and is generally desirable by all merchants, provided they have always effects in their custody, as a security for such matters as they transact, for the account of others. Those who trade extensively in this manner, have current as well as commission accounts, constantly between them; and draw on, remit to, and send commissions to each other, only by the intercourse of letters, which, among men of honor, are as obligatory and authoritative as all the bonds and ties of law.

FACTORAGE, the allowance given to factors by the merchant who employs them: called also commission. A factor's commission in Britain on most kinds of goods is 2½ per cent.: on lead and some other articles, 2 per cent. In some places it is customary for the factors to insure debts for an additional allowance, and in that case they are accountable for the debt when the usual term of credit is expired. Factorage on goods is sometimes charged at a certain rate per cask, or other package, measure, or weight, especially when the factor is only employed to receive or deliver them.

FACTO'TUM, *n. s.* Lat. *fac totum*. It is used likewise in burlesque French. A servant employed alike in all kinds of business: as Scrub in the Stratagem.

> *Factotum* here, Sir. *Ben Jonson.*

FA'CTURE, *n. s.* French. The act or manner of making any thing.

> There is no doubt but that the *facture* or framing, is as full of difference as the outward [parts.] *Bacon.*

FACULÆ, Latin, from fax, a torch, in astronomy, a name given by Scheiner and others, to certain bright spots on the sun's disc, that appear more lucid than the rest of his body. Hevelius affirms, that on July 20th, 1634, he observed a facula, whose breadth was equal to one-third of the sun's diameter. Kircher, Scheiner, and others, represent the sun's body as full of these faculæ, which they suppose to be volcanoes; and others contend that the maculæ change into faculæ before they disappear. But Huygens and others of the latest and best observers, finding

that the best telescopes discover nothing of the matter, agree entirely to explode the phenomena of faculæ; and attribute the cause of these appearances to the tremulous agitation of the vapors near our earth. Dr. Hutton concludes that 'the faculæ are not eructations of fire and flame, but refractions of the sun's rays in the rarer exhalations, which, being condensed, seem to exhibit a light greater than that of the sun.'

FAC'ULTY, *n. s.* Fr. *faculté*; Ital. *facolta*; Span. *faculdad*; Lat. *facultas*, from *facio*, to do. The power of doing any thing mechanical or mental: hence skill; dexterity; excellence; quality; power; authority or privilege: a company of skilful or eminent men in any of the professions.

There is no kind of *faculty* or power in man, or any creature, which can rightly perform the functions allotted to it without perpetual aid and concurrence of that supreme cause of all things. *Hooker.*

Law hath set down to what persons, in what causes, with what circumstances, almost every *faculty* or favour shall be granted. *Id.*

I'm traduced by tongues which neither know
My *faculties* nor person, yet will be
The chronicles of my doing.
Shakspeare. Henry VIII.

This Duncan
Hath born his *faculties* so meek, hath been
So clear in his great office, that his virtues
Will plead like angels. *Id. Macbeth.*

He had none of those *faculties*, which the other had, of reconciling men to him. *Clarendon.*

I understand in the prime end
Of nature, her the inferior; in the mind
And inward *faculties*, which most excel.
Milton.

Orators may grieve; for in their sides,
Rather than heads, their *faculty* abides.
Denham.

He, which hath given no man his *faculties* and graces for himself, nor put light into the sun, moon, stars, for their own use, hath stored no parcel of earth with a purpose of private reservation. *Bp. Hall.*

Our author found out monarchial absolute power in that tex; the had an exceeding good *faculty* to find it himself where he could not show it to others.
Locke.

We shall then use our understanding right, when we entertain all objects in that way and proportion, that they are suited to our *faculties*. *Id.*

Many are ignorant of mathematical truths, not out of any imperfection of their *faculties*, or uncertainty in the things themselves, but for want of application in acquiring, examining, and by due ways comparing those ideas. *Id.*

Reason in man supplies the defect of other *faculties* wherein we are inferior to beasts, and what we cannot compass by force we bring about by stratagem. *L'Estrange.*

A power of command there is without all question, though there be some doubt in what *faculty* this command doth principally reside, whether in the will or the understanding. *Bramhall against Hobbes.*

Sure it is a pitiful pretence to ingenuity that can be thus kept up, there being little need of any other *faculty* but memory, to be able to cap texts.
Government of the Tongue.

The fifth mechanical *faculty* is the wedge used in cleaving wood. *Wilkins.*

Nature its mother, habit is its nurse;
Wit, spirit, *faculties*, but make it worse;
Reason itself but gives it edge and power,
As heaven's blessed beam turns vinegar more sour.
Pope's Essay on Man.

He had an excellent *faculty* in preaching if he were not too refined. *Swift.*

Neither did our Saviour think it necessary to explain to us the nature of God, because it would be impossible, without bestowing on us other *faculties* than we possess at present. *Id.*

The wretched condition, weakness, and disorder of the *faculties* which I must employ in my inquiries, increase my apprehensions; and the impossibility of amending or correcting those *faculties*, reduces me almost to despair, and makes me resolved to perish on the barren rock on which I am at present, rather than venture myself upon that boundless ocean which runs out into immensity. *Hume. On Human Nature.*

Called thee into being when thou wast not; gave thee these reasoning and reflecting *faculties*, which thou art now employing in searching out the end and happiness of thy nature. *Mason.*

FADE, *v. n.* & *v. a.* Goth. *fœda*; Isl. and Swed. *fata*; Erse, *faid*; Arabic, *faut*: from Fr. *fade*, weak, insipid, says Dr. Johnson; but Mr. Todd derives it with more probability, from Lat. *vado*, Gr. βαδω to move, the primary meaning of fade being to disappear quickly. To vanish; disappear rapidly; languish; change to a weaker color; wither; lose vigor or beauty; die away. Our older writers use it as an active verb for to wear away; reduce.

Ye shall be as an oak whose leaf *fadeth*, and as a garden that hath no water. *Isaiah* i. 30.

The glorious beauty on the head of the fat valley shall be a *fading* flower. *Id.* xxviii. 4.

Whose flowring pride, so *fading* and so fickle,
Short Time shall soon cut down with his consuming sickle. *Spenser's Faerie Queene.*

This is a man, old, wrinkled, *faded*, withered;
And not a maiden, as thou sayest he is.
Shakspeare.

The stars shall *fade* away, the sun himself
Grow dim with age, and nature sink in years.
Addison.

The greenness of a leaf ought to pass for apparent, because, soon *fading* into a yellow, it scarce lasts at all, in comparison with the greenness of an emerald.
Boyle on Colours.

His palms, tho' under weights they did not stand,
Still thrived; no Winter could his laurels *fade*.
Dryden.

The pictures drawn in our minds are laid in *fading* colours, and, if not sometimes refreshed, vanish and disappear. *Locke.*

Where either through the temper of the body, or some other default, the memory is very weak, ideas in the mind quickly *fade*. *Id.*

The spots in this stone are of the same colour throughout, even to the very edges; there being an immediate transition from white to black, and the colours not *fading* or declining gradually.
Woodward.

Restless anxiety, forlorn despair,
And all the *faded* family of care.
Garth's Dispensary.

Narcissus' change to the vain virgin shows,
Who trusts to beauty, trusts the *fading* rose.
Gay.

The garlands *fade*, the vows are worn away;
So dies her love, and so my hopes decay. *Pope.*

—Hence plastic nature, as oblivion whelms
Her *fading* forms, repeoples all her realms;

Soft joys disport on purple plumes unfurled,
And love and beauty rule the willing world.
Darwin.

"Yet such the destiny of all on earth:
So flourishes and *fades* majestic man.
Fair is the bud his vernal morn brings forth,
And fostering gales awhile the nursling fan."
Beattie.

Then let the winds howl on! their harmony
Shall henceforth be my music, and the night
The sound shall temper with the owlet's cry,
As I now hear them, in the *fading* light
Dim o'er the bird of darkness' native site. *Byron.*

FADGE, *v. n.* Sax. ȝeþeȝan; Germ. *fugen;* from Goth. *fagks*, fit, accommodated. To suit; fit; succeed. Obsolete.

How will this *fadge*? my master loves her dearly,
And I, poor monster, fond as much on him;
And she, mistaken, seems to doat on me.
Shakspeare.

When they thrived they never *fadged*,
But only by the ears engaged;
Like dogs that snarl about a bone,
And play together when they've none.
Hudibras.

The fox hath a fetch; and when he saw it would not *fadge*, away goes he presently. *L'Estrange.*

FÆCES, in medicine. See EXCREMENTS. Alchemists, who searched every where for the secret of making gold, operated greatly on the fæces of men and other animals; but philosophical chemistry has acquired no knowledge from all these alchemical labors. Homberg particularly analysed and examined human fæces, to satisfy an alchemical project of one of his friends, who pretended that from this matter a white oil could be obtained, without smell, and capable of fixing mercury into silver. The oil was found, but mercury was not fixed by it. Homberg's labors were not, however, useless, as he has related his experiments in the Memoirs of the Academy of Sciences.

The following is the result of a careful analysis of human fæces by Berzelius in 1806:—

Water	73·3
Vegetable and animal undigested residue	7·0
Bile	0·9
Albumen	0·9
Extractive matter	2·7
Carbonat of soda	0·9
Muriat of soda	0·1
Sulphat of soda	0·05
Ammon. phosphat of magnesia	0·05
Phosphat of lime	0·1
Slimy matter, consisting of resin of bile, peculiar animal matter, and insoluble residue	14·0
	100·0

FÆCULENT, abounding with fæces. The blood and other humors are said to be fæculent, when without that purity which is necessary to health.

FAENZA, a city and bishop's see of the ecclesiastical state, in Romagna, anciently known by the name of Falentia, and noted in modern times for its pottery wares. Hence the French give to all fine stone ware the name of Fayence. It has several fine churches with good paintings and a cathedral standing in a noble square Faenza was ravaged by the Goths in the sixth century, and by the Germans in the thirteenth. It fell afterwards into the hands of the Venetians, the Bolognese, and finally of the pope. Its inhabitants carry on the manufacture of linen extensively. It is twenty miles south-west of Ravenna.

FAERNUS (Gabriel), a native of Cremona in Italy, was an excellent Latin poet and critic of the sixteenth century. He was skilled in all parts of polite literature; and pope Pius IV. particularly patronised him. He was the author of several Latin elegies; of 100 Latin fables, selected from the ancients, written in iambic verse; and of several pieces of criticism, as Censura Emendationum Livianarum, De Metris Comicis, &c. He was remarkably happy in decyphering MSS., and restoring ancient authors to their purity: he took such pains with Terence in partilar, that Bentley has adopted all his notes in the edition he gave of that writer. He died at Rome in 1561. Thuanus charges him with suppressing the then unknown fables of Phædrus, for fear of lessening the value of his own Latin fables, written in imitation of Æsop. M. Perrault, however, who translated Faernus's fables into French, has defended him from this imputation, by affirming that the first MS. of Phædrus's fables, found in the dust of an old library, was not discovered till about thirty years after Faernus's death.

FAG, *v. n., v. a.* & *n. s.* Lat. *fatigo;* Goth. *fæcka*, to be weary, or to diminish. To grow weary or tired; to outrival; beat: a fag is a drudge; a school-slave.

Creighton with-held his force 'till the Italian began to *fag*, and then brought him to the ground.
Mackenzie's Lives.

The duke of Dorset was my *fag* at Harrow, and I was not a very hard taskmaster.
Lord Byron, quoted by Captain Medwin.

FAGAN'S (St.), a small town and parish of Glamorganshire, South Wales, and having a castellated mansion built in a comparatively modern style of architecture. Here a sanguinary engagement took place in May 1648, between the royalists and republicans, in which, after a momentary advantage, the former were entirely routed, and left 3000 slain. According to the Welsh chronicle, St. Fagan came from Rome to Britain about the year 180, being sent by pope Eleutherius to convert the inhabitants to Christianity. It is three miles from Cardiff, and 163 from London.

FAGARA, iron-wood, a genus of the monogynia order and tetrandria class of plants; natural order forty-third, dumosæ: CAL. quadrifid: COR. tetrapetalous: CAPS. bivalved and monospermous. Species twelve, all natives of the East Indies and the warm parts of America, rising with woody stems more than twenty feet high. They are propagated by seeds; but in this country must be kept continually in a stove. The chief is F. octandra with pinnate leaves, downy each side. It is a tall tree, abounding in a balsamic glutinous juice, racemed flowers,

with white calyxes and yellow corols. Its balsam resembles the gum tacamahac.

FAGE (Raimond de la), an ingenious designer and engraver, highly esteemed by Carlo Maratti, was born at Toulouse in 1648. He had no master nor any assistance; but his superior talents supplied the want of them. His performances on licentious subjects are the most esteemed. It is reported that he never made use of money, but contracted debts, and when the accounts were brought him, he drew on the back of the bills, and bid the owners sell the drawings to connoisseurs for the amount, by which they were generally great gainers. Several of those drawings are in the cabinets of the curious. He led a loose depraved life, which his repeated debaucheries put an end to, at the age of forty-two.

FAGEND. From fag and end, says Dr. Johnson, but more probably from Swed. *fogan;* Sax. ꝑeꝛan, to join. The end of a web of cloth, rope, &c.; hence the refuse of any thing.

I have unpartially ransacked this *fag-end* of my life, and curiously examined every step of my ways; and I cannot, by the most exact scrutiny of my saddest thoughts, find what it is that I have done to forfeit that good estimation, wherewith you say, I was once blessed. *Bp. Hall's account of himself.*

In the world's *fagend*
A nation lies. *Fanshaw.*

When they are the worst of their way, and fixt in the *fagend* of business, they are apt to look not kindly upon those who go before them. *Collier.*

FAGGOT, or FAGOT, *v. a.* Fr. *fagot;* Arm. and Welsh *fagod;* Ital. *fagotta;* British *hagoden;* according to Casseneuve from Lat. *fagus,* a beech tree, the old faggots being mostly made of that wood. Others derive it from Lat. *fascis;* φασεδος, a bundle of wood. A bundle of sticks or small wood; any one of the pieces in the bundle: hence an individual in a muster or list of soldiers. See below. We only find the verb used by Dryden.

Spare for no *fagots,* let there be enow;
Place pitchy barrels on the fatal stake.
Shakspeare.

About the pile of *fagots,* sticks, and hay,
The bellows raised the newly-kindled flame.
Fairfax.

He was too warm on picking work to dwell,
But *fagoted* his notions as they fell,
And if they rhymed and rattled, all was well.
Dryden.

The Black Prince filled a ditch with *fagots* as successfully as the generals of our armies do it with fascines. *Addison.*

Mitres or *fagots* have been the rewards of different persons, according as they pronounced these consecrated syllables or not. *Watts on the Mind.*

FAGGOT, in times of popery, was a badge worn on the sleeve of the upper garment of such persons as had abjured heresy; being put on after the person had carried a faggot, by way of penance, to some appointed place of solemnity. The leaving off the wear of this badge was sometimes interpreted a sign of apostasy.

FAGGOTS, among military men, persons formerly hired by officers, whose companies were not full, to muster and hide the deficiencies of the company; by which means they cheated the king of so much money.

FAGIUS (Paul), alias Buchlin, a learned protestant minister, born at Rheinzabern in Germany in 1504. He was a schoolmaster at Isna; but afterwards became a zealous preacher, and wrote many theological works. During the persecution in Germany, he and Bucer came over to England in 1549, at the invitation of archbishop Cranmer, to perfect a new translation of the Scriptures. Fagius took the Old Testament, and Bucer the New for their respective parts; but the design was frustrated by the sudden deaths of both. Fagius died in 1550, and Bucer did not live above a year after. Their bodies were dug up and burned in the reign of queen Mary.

FAGONIA, in botany, a genus of the monogynia order and decandria class of plants; natural order fourteenth, gruinales: CAL. pentaphyllous; the petals are five and heart-shaped: CAPS. quinquelocular, ten-valved, with the cells monospermous. There are four species; natives of Spain, Crete, Arabia, and Persia.

FAGRÆA, in botany, a genus of plants of the class pentandria and order monogynia: COR. funnelform, with a very long tube; stigma peltate: BERRY two-celled, fleshy: SEEDS globular: species one only; a shrub of Ceylon; with thick square branches, and large terminal flowers.

FAGUS, the beech tree, a genus of the hexandria order and monœcia class of plants; natural order fiftieth, amentaceæ: male CAL. quinquefid and campanulated: COR. none: stamina from five to twelve: female CAL. quinquedentated; styles three: CAPS muricated and quadrivalved; the seeds two in number. There are five species, of which the most noted are,

1. F. castanea, the chestnut-tree, has a large upright trunk growing forty or fifty feet high, branching regularly round into a fine spreading head, garnished with large spear-shaped acutely serrated leaves, naked on the under side, having flowers in long amentums, succeeded by round prickly fruit, containing two or more nuts. It is chiefly propagated by seeds. Evelyn, says, 'Let the nuts be first spread to sweat, then cover them in sand; a month being past, plunge them in water, and reject the swimmers; being dried for thirty days more, sand them again, and to the water ordeal as before. Being thus treated until the beginning of spring or in November, set them as you would do beans. They need only to be put into the holes with the point upmost. In winter or autumn, inter them in their husks, which, being every way armed, are a good protection against the mouse. Being come up, they thrive best unremoved, making a great stand for at least two years upon every transplanting; if you must alter their station, let it be done against November.' Millar cautions about purchasing foreign nuts that have been kiln-dried, which, he says, is generally done to prevent their sprouting in their passage. He adds, 'If they cannot be procured fresh from the tree, it will be better to use those of the growth of England, which are full as good to sow for timber or beauty as any of the foreign nuts, though their fruit is much smaller.' He also recommends preserving them in sand, and proving them in water. In setting these nuts, he says, 'the best way is to make a

drill with a hoe, about four inches deep, in which place the nuts about four inches distant, with their eye uppermost; then draw the earth over them with a rake, and make a second drill a foot distance from the former, proceeding as before, allowing three or four rows in each bed. In April these nuts will appear above ground; keep them clear from weeds, especially while young: in these beds they may remain for two years, when you should remove them into a nursery at a wider distance. The best time for transplanting these trees is in October, though some prefer the end of February; the distance these should have in the nursery is three feet between, and one foot in the rows. If these trees have a downright tap root, it should be cut off, especially if they are intended to be removed again; this will occasion their putting out lateral shoots, and render them less subject to miscarry when finally removed. The time generally allowed them in the nursery is three or four years, according to their growth; but the younger they are transplanted, the better they will succeed. Young trees of this sort are very apt to have crooked stems; but when they are transplanted out and have room to grow, as they increase in bulk they will grow more upright, and their stems will become straight' Hanbury recommends that the young plants, a year after they have been planted in the nursery, be cut down to within an inch of the ground; which, he says, 'will cause them to shoot vigorously with one strong and straight stem.' There is one material objection against sowing chestnuts in drills, that they serve as guides to the field-mouse, who will run from one end to the other of a drill without leaving a single nut: we rather recommend setting them with a dibble, either promiscuously, or a quincunx, at about six inches distance. Evelyn says, that coppices of chestnuts may be thickened by layering the tender young shoots: but adds that 'such as spring from the nuts and marrons are best of all.' There is a striped-leaved variegation which is continued by budding; and the French are said to graft chestnuts for their fruit; but Miller says, such grafted trees are unfit for timber. The chestnut-tree will thrive almost upon any soil which lies out of the water's way; but disaffects wet moorish land. It sometimes grows to an immense size. The largest in the known world are those which grow upon Mount Ætna in Sicily. At Tortworth, in Gloucestershire, is a chestnut tree fifty-two feet round. It is proved to have stood there ever since 1150, and was then so remarkable that it was called the 'great chestnut of Tortworth.' It fixes the boundary of the manor, and is probably near 1000 years old. As an ornamental, the chestnut is well worthy the gardener's attention. Its uses have been highly extolled. As a substitute for the oak, it is preferable to the elm: for door-jambs, window-frames, and some other purposes, it is nearly equal to oak itself; but there is a deceitful brittleness in it which renders it unsafe to be used in beams, or in any other situation where an uncertain load is required to be borne. It is excellent for liquor casks; not being liable to shrink, nor to change the color of the liquor: it is also recommended as an underwood for hop-poles, stakes, &c. Its fruit too is valuable; not only for swine and deer, but as a human food: bread is said to have been made of it.

2. F. pumila, the dwarf chestnut tree, or chinkapin, rises eight or ten feet high, with a branching shrubby stem, and oval spear-shaped and acutely serrated leaves, hoary on the under side. It is propagated from seeds, brought from America. These should be planted in drills, as soon as they arrive, in a moist bed of rich garden mould. If good, they will come up pretty soon in the spring. After they appear, they require no trouble, except keeping them clean from weeds, and watering them in dry weather. They may stand in the seed-bed two years, and be afterwards planted in the nursery ground, a foot asunder, and two feet between the rows. When strong, they are fit for any purpose.

3. F. sylvatica, the beech tree, rises sixty or seventy feet high, and has a proportionable thickness, branching upward into a fine regular head, garnished with oval serrated leaves, with flowers in globular catkins, succeeded by angular fruit called mast. It is very easily raised from the mast or seed. 'For woods,' says Evelyn, 'the beech must be governed as the oak: in nurseries, as the ash; sowing the mast in autumn, or later, even after January, or rather nearer the spring, to preserve them from vermin. They are likewise to be planted of young seedlings to be drawn out of the places where the fruitful trees abound. Millar says, 'the season for sowing the mast is any time from October to February, only observing to secure the seeds from vermin when early sowed. The sooner they are sown the better, after they are fully ripe.' Hanbury orders a sufficient quantity of mast to be gathered about the middle of September, when they begin to fall; these are to be 'spread upon a mat in an airy place six days to dry; and after that you may either sow them immediately, or put them up in bags to sow them nearer the spring; which method,' says he, 'I would rather advise, as they will keep very well, and there will be less danger of having them destroyed by mice or other vermin.' They must be sown in beds properly prepared, about an inch deep. In the first spring many of the young plants will appear, whilst others will not come up till the spring following. Having stood two years in the seminary, they should be removed to the nursery, where they may remain till wanted. In stateliness and grandeur the beech vies with the oak. Its foliage is peculiarly soft and pleasing; its branches are numerous and spreading; and its stem waxes to a great size. The bark is remarkably smooth, and of a silvery cast; which, added to the splendor and smoothness of its foliage, gives a striking delicacy to its general appearance. The beech, therefore, standing singly, and suffered to form its own natural head, is highly ornamental; and its leaves, varying their hue as the autumn approaches, render it still more desirable. In point of use the beech follows next to the oak and the ash; it is almost as necessary to the cabinet-makers and turners, as the oak is to the ship-builder, or the ash to the plough and cart-wright. Evelyn, however, observes, that 'where it lies dry, or wet and dry,

it is exceedingly obnoxious to the worm, but being put ten days in water, it will resist the worm.' The natural soil of the beech is upon dry, chalky, or limestone heights. It grows to a great size upon the hills of Surry and Kent; upon the declivities of the Cotswold and Stroudwater hills of Gloucestershire, and upon the bleak banks of the Wye, in Hereford and Monmouth shires; where it is much used in making charcoal. The mast, or seeds, yield a good oil for lamps; and are a very agreeable food to squirrels, mice, and swine. The fat of swine fed with them, however, is soft, and boils away, unless hardened by some other food. The leaves gathered in autumn, before they are injured by the frosts, make much better matrasses than straw or chaff; and last for seven or eight years. The nuts occasion giddiness and head-ache; but when well dried and powdered, they make wholesome bread. They are sometimes roasted and substituted for coffee. The poor in Silesia use the expressed oil instead of butter. 'The purple beech,' says Mr. Nicholls, 'is a fine ornamental variety, and even promises to become fit for the decoration of the park, although it has hitherto been chiefly confined to the pleasure-ground. A tree of the purple variety in the gardens of Messrs. Telfords, within the walls of the city of York, and another in the pleasure-ground at Enville, have assumed such tree-like forms, each being fully thirty feet high, that such an expectation may reasonably be entertained; and the more especially, as we know of several even in Scotland from twenty to thirty feet high. It must, however, be observed, that the purple beech plants most proper for the park or the lawn, or indeed for any situation where it is required that they grow to a great size, are such as are grafted or budded on the common sort. Those raised by layers grow more dwarf; and therefore should be planted in situations where dwarf trees, or bushes, are required.

FAHLUN, a mining town of Sweden, the capital of the province of Dalecarlia. Sometimes the whole province is called by the name of Fahlun. It stands in a small plain, is surrounded by hills, and consists of several parallel streets, crossing others at right angles. It is chiefly built of wood, and the population has diminished from above 7000 to a little above 4000, the copper mines of the vicinity having become less productive. They still yield an annual supply of ochre and vitriol, together with small portions of silver and gold. It is 110 miles N. N. W. of Stockholm.

FAHRENHEIT, a celebrated experimental philosopher, born at Hamburgh in 1686. He improved the thermometer, by making use of mercury instead of spirit of wine, and formed a new scale for the instrument, grounded upon the most accurate experiments. This scale has been generally adopted by the English, but the French prefer that of Reaumur. Fahrenheit wrote a dissertation on thermometers. He died in 1736. See THERMOMETER.

FAIFO, or HAIFO, an old town of Cochin China, situated on a navigable river falling into the bay of Turon, about ten miles from the sea. It was formerly of considerable size, the streets were regular, and the houses built of brick; but it was destroyed during the late wars, and is now but slowly regaining its importance.

FAIL, *v. n.*, *v. a.* & *n. s.* } Fr. *faillir*; Teut.
FAIL'ING, *n. s.* } *fehlen*; Wel. *faeln*;
FAIL'URE. } Belg. *faalen*, from Goth. *fela*; Lat. *fallo*; Gr φηλέω, to deceive. To be lacking or deficient; to cease; sink; be borne down; decay; miss; not succeed; die. As an active verb, to desert; forsake; omit duty; disappoint; deceive. As a substantive it signifies, miscarriage; non-success; omission; want: and failing and failure are used in these last senses.

And he s ide to hem, whanne I sente you without sachel and scrippe and schoon, wher ony thing *failide* to you? *Wiclif. Luk.* xxii.

He will without *fail* drive out from before you the Canaanites. *Jos.* iii. 10.

The waters *fail* from the sea, and the flood decayeth and drieth up. *Job* xiv. 11.

Help, Lord, for the godly man ceaseth; for the faithful *fail* from among the children of men. *Psalm* xii. 1.

Let him complayne who hathe been deceyved; let him despayre to whom his promised hopes have *fayled*; let him confesse it whom I shall ever call; let him vaunt whom I shall admit. But let him not call me cruell or an homicide, whom I never promised, deceyved, called, or admitted. *Spelman.*

But little may such guile thee now avail,
If wonted force and fortune do not much me *fail*.
Spenser.

I am enjoined, by oath, if I *fail*,
Of the right casket, never in my life
To woo a maid in way of marriage.
Shakspeare.

Had the king in his last sickness *failed*,
Their heads should have gone off. *Id. Henry VIII.*

How grounded he his title to the crown,
Upon our *fail*. *Id.*

Mark and perform it, seest thou? for the *fail*
Of any point in't shall not only be
Death to thyself, but to thy lewd-tongued wife.
Shakspeare.

Consider of deformity not as a sign, which is deceivable, but as a cause which seldom *faileth* of the effect. *Bacon.*

Since nature *fails* us in no needful thing,
Why want I means my inward self to see?
Davies.

Besides what *failings* may be in a matter, even in the expressions there must often be great obscurities. *Digby.*

By fate the strength of Gods
And this empyreal substance cannot *fail*. *Milton.*
I perceive
Thy mortal sight to *fail*; objects divine
Must needs impair and weary human sense. *Id.*

I laugh, when those who at the spear are bold
And vent'rous, if that *fail* them, shrink and fear.
Id.

Wherefore should not strength and might
There *fail* where virtue *fails*, or weakest prove
Where boldest, though to fight unconquerable?
Id.

Whether such virtue spent of old now *fail*
More angels to create. *Id.*

The ship was now left alone, as proud lords be when fortune *fails* them. *Sidney.*

All other arts may *fail*, but truth and integrity will carry a man through, and bear him out to the last. *Tillotson.*

The inventive god who never *fails* his part,
Inspires the wit when once he warms the heart.
Dryden.

This jest was first of the other house's making,
And, five times tried, has never *failed* of taking.
Id.

Her heart *failed* her, and she would fain have compounded for her life. *L'Estrange.*

In difficulties of state, the true reason of *failing* proceeds from *failings* in the administration *Id.*

Where the credit and money *fail*, barter alone must do. *Locke.*

He presumes upon his parts that they will not *fail* him at time of need, and so thinks it superfluous labour to make any provision before-hand. *Id.*

He, that being subject to an apoplexy, used still to carry his remedy about him; but upon a time shifting his clothes, and not taking that with him, chanced upon that very day to be surprised with a fit; he owed his death to a mere accident, to a little inadvertency and *failure* of memory. *South.*

For Titan, by the mighty loss dismayed,
Among the heavens the' immortal fact displayed,
Lest the remembrance of his grief should *fail*.
Addison.

Men who have been busied in the pursuit of the philosopher's stone, have *failed* in their design. *Id.*

There must have been an universal *failure* and want of springs and rivers all the summer season. *Woodward.*

Endeavour to fulfil God's commands, to repent as often as you *fail* of it, and to hope for pardon of him. *Wake.*

Even good men have many temptations to subdue, many conflicts with those enemies which war against the soul, and many *failings* and lapses to lament and recover. *Rogers.*

He does not remember whether every grain came up or not; but he thinks that very few *failed*. *Mortimer's Husbandry.*

To *failings* mild, but zealous for desert;
The clearest head and the sincerest heart. *Pope.*

He (the clerk) used a sort of ivory knife with a blunt edge to divide a sheet of paper, which never *failed* to cut it even, only requiring a steady hand. *Swift.*

Books, like friends, should be few and well chosen. Like friends, too, we should return to them again and again—for, like true friends, they will never *fail* us—never cease to instruct—never cloy. *Joineriana*, 1772.

It is more disgraceful never to try to speak (in public) than to try it, and *fail*; as it is more disgraceful not to fight, than to fight and be beaten. *Johnson.*

Canst thou be too well fortified against the terrors of that day? And art thou sure that the props which support thee now will not *fail* thee then? *Mason.*

Timidity and irresolution were his predominant *failings*; the one occasioned by his natural constitution, and the other arising from a consciousness that his abilities were not equal to his station. *Robertson's History of Scotland.*

They never *fail* who die
In a great cause: the block may soak their gore;
Their heads may sodden in the sun; their limbs
Be strung to city gates, and castle walls—
But still their spirit walks abroad. *Byron.*

FAIN, *v. n.*, *adv.* & *adj.* } Sax. fægn; Goth.
FA'INLY, *adv.* } *faginon*, or *fagn*; Swed. *fagna*; Icel. *feigin*, to be glad. To desire; wish. As an adjective, the old sense is fond; glad; desirous; afterwards it was used for desirous of one evil in preference to a greater: and the adverbial use has followed these significations.

My lips will be *fain* when I sing unto thee, and so will my soul whom thou hast delivered. *Psalm* lxxi.

Alas alas howe dull and deffe be the cares of cruel death vnto men in misery that would *fayne* dye: and yet refusythe to come and shutte vp theyr carefull wepyng eyes. *Colvile.*

With hym truly,
Fayne speake would I,
Sir quod she by my fay,
He is so sike,
Ye be not lyke,
To speake with hym to day.
Sir T. More.

And in her hand she held a mirrour bright,
Wherein her face she often viewed *fain*.
Faerie Queene.

Every weight to shroud it did constrain,
And this fair couple eke to shroud themselves were *fain*. *Spenser.*

Fairer than fairest, in his *faining* eye,
Whose sole aspect he counts felicity.
Id. on Love.

Whosoever will hear, he shall find God; whosoever will study to know, shall be also *fain* to believe. *Hooker.*

I was *fain* to forswear it; they would else have married me to the rotten medlar. *Shakspeare.*

When Hildebrand had accursed Henry IV. there were none so hardy as to defend their lord; wherefore he was *fain* to humble himself before Hildebrand. *Raleigh's Essays.*

There cannot be conceived an honour less worth emulation, than this principality of Israel; a people that could give nothing;—a people whom their leader was *fain* to feed with bread and water. *Bp. Hall's Contemplations.*

The learned Castalio was *fain* to make trenchers at Baste, to keep himself from starving. *Locke.*

Why wouldest thou urge me to confess a flame
I long have stifled, and would *fain* conceal.
Addison.

The plebeians would *fain* have a law enacted to lay all men's rights and privileges upon the same level. *Swift.*

Teach me—too early taught by thee!
To bear, forgiving and forgiven:
On earth thy love was such to me;
It *fain* would form my hope in Heaven.
Byron.

FAINT', *v. n.*, *v. a.* & *adj.*
FAINT'HEARTED,
FAINTHEART'EDLY, *adv.*
FAINTHEART'EDNESS, *n. s.*
FAINT'ING,
FAINT'ISH, *adj.*
FAINT'ISHNESS, *n. s.*
FAINT'LING, *adj.*
FAINT'LY, *adv.*
FAINT'NESS, *n. s.*
FAINT'Y, *adj.*

From Fr. *faner*, to fade, says Dr. Johnson; but Mr. Horne Tooke says it is the past participle of the Saxon fynigean, to grow musty; to spoil. To decay; waste or wear away; lose vigor, or muscular strength; grow feeble or dejected. Shakspeare only (as we find) uses it in an active sense for to enfeeble: faint, as an adjective, means weak in any sense, and is applied to light, color, sound, objects of taste, &c.: faintly follows this variety of acceptation: faintish is slightly, or beginning to grow, faint: fainty is an obsolete and poetical synonyme of faint: faintling, timorous; feeble-minded. The other compounds seem not to require explanation.

They will stand in their order, and never *faint* in their watches. *Eccles.* xliii. 10.

Fear not, neither be *fainthearted*. *Isaiah* vii. 4.

Consider him that endured such contradiction against himself, lest ye be wearied and *faint* in your minds. *Heb.* xii. 3.

— Sooth it is said, and tried in each degree,
Faint friends when they fall out, most cruel foe-men be. *Spenser.*

This evil proceeds rather of the unsoundness of the counsels, or of *faintness* in following and effecting the same, than of any such fatal course appointed of God. *Spenser.*

If the prince of the lights of heaven, which now as a giant doth run his unwearied courses, should through a languishing *faintness* begin to stand. *Hooker.*

Loth was the ape, though praised, to adventure;
Yet *faintly* 'gan into his work to enter.
Hubbard's Tale.

Should they resolve the next day, as victorious conquerors, to take the city, or else there, as *faint-hearted* cowards, to end their days. *Knolles.*

The paleness of this flower
Bewrayed the *faintness* of my master's heart.
Shakspeare.

It *faints* me
To think what follows.
Id. Henry VIII.

I have told you what I have seen and heard but *faintly*; nothing like the image and horrour of it. *Id. King Lear.*

The imagination cannot be always alike constant and strong, and if the success follow not speedily it will *faint* and lose strength. *Bacon's Natural History.*

Faint heart never won fair lady. *Proverb in Camden's Remains.*

The defects which hindered the conquest, were the *faint* prosecution of the war, and the looseness of the civil government. *Davies on Ireland.*

Why are we *faint* in spiritual things, when we are not denied, but delayed? *Bp. Hall's Contemplations.*

Lest they *faint*
At the sad sentence rigorously urged,
All terror hide. *Milton.*

Now the late *fainthearted* rout
O'erthrown and scattered round about,
Chaced by the horrour of their fear,
From bloody fray of knight and bear,
Took heart again and faced about,
As if they meant to stand it out. *Hudibras.*

He *faintly* now declines the fatal strife;
So much his love was dearer than his life. *Denham.*

In intemperate climates, the spirits, exhaled by heat or comprest by cold, are rendered *faint* and sluggish. *Temple.*

This proceeded not from any violence of pain, but from a general languishing and *faintness* of spirits, which made him think nothing worth the trouble of one careful thought. *Id.*

The pump after this being employed from time to time, the sound grew *fainter* and *fainter*. *Boyle.*

Our *faint* Egyptians pray for Antony;
But in their servile hearts they own Octavius. *Dryden.*

When Jove in dusky clouds involves the skies,
And the *faint* crescent shoots by fits before their eyes. *Id.*

With his lolled tongue he *faintly* licks his prey,
His warm breath blows her flix up as she lies. *Id.*

The ladies gasped, and scarcely could respire;
The breath they drew, no longer air, but fire:
The *fainty* knights were scorched, and knew not where
To run for shelter; for no shade was near. *Id.*

Villain, stand off! base, groveling, worthless wretches,
Mongrels in faction; poor *fainthearted* traitors. *Addison.*

How while the *fainting* Dutch remotely fire,
And the famed Eugene's iron troops retire. *Smith.*

The blue compared with these is a *faint* and dark colour, and the indigo and violet are much darker and *fainter*. *Newton.*

The length of the image I measured from the *faintest* and utmost red at one end, to the *faintest* and utmost blue at the other end, excepting only a little penumbra. *Id. Opticks.*

A certain degree of heat lengthens and relaxes the fibres; whence proceeds the sensation of *faintishness* and debility in a hot day. *Arbuthnot on Air.*

There's no having patience, thou art such a *faintling* silly creature. *Arbuthnot. History of John Bull.*

These *faintings* her physicians suspect to proceed from contusions. *Wiseman's Surgery.*

Words pronounced at length, sounded *faint* and languid. *Swift.*

From her naked limbs of glowing white,
In folds loose floating fell the *fainter* lawn. *Thomson.*

An obscure and confused idea represents the object so *faintly*, that it doth not appear plain to the mind. *Watts*

The showery arch
Delights and puzzles the beholder's eyes,
That views the wat'ry brede with thousand shews
Of painture varied; yet unskilled to tell
Or where one colour rises, or where one *faints*. *Philips.*

Gilded clouds, while we gaze upon them, *faint* before the eye, and decay into confusion. *Pope.*

Nature affords at least a glimmering light;
The lines, tho' touched but *faintly*, are drawn right. *Id.*

Upon hearing the honour intended her, she *fainted* away, and fell down as dead. *Guardian.*

Two neighbouring shepherds, *faint* with thirst, stood at the common boundary of their grounds. *Rambler.*

Faint o'er her couch in scintillating streams
Pass the thin forms of fancy and of dreams. *Darwin.*

Lifts proud Anteus from his mother-plains
And with strong grasp the struggling giant strains;
Back falls his *fainting* head, and clammy hair,
Writhe his weak limbs, and flits his life in air. *Id.*

His brow was pale, his blue eyes sunken in,
And blood-drops sprinkled o'er his yellow hair
Showed that his *faintness* came not from despair,
But nature's ebb. *Byron.*

FAIR, *adj.*, *adv.* & *n. s.* FAIR'LY, *adv.* FAIR'NESS, *n. s.* FAIR-SPOKEN, *adj.* Sax. fæzep; Gothic, *fæigr* or *fager*; Sw. *fager*, Dan. *faur*, formed from the old verb *fey*, to cleanse, or Swedo-Goth. and Icel. *fægia*; Teut. *fegen*, to purify. Minsheu says, from Gr. φαεpo· shining; Heb. פאר, *pheer*, beauty. This adjective has, throughout its various applications, the sense of clear or bright, literal or figurative. In its adverbial use, it preserves the same idea. As a substantive, it is principally used for women, collectively or individually; for honesty in transactions; and the quality of fairness in things or persons.

Thou art a *fair* woman to look upon. *Gen.* xii. 11.
Fair weather cometh out of the north. *Job.*
Take fire, and bere it into the derkest hous
Betwix this and the Mount of Caucasus,
And let men shette the dores, and go thenne,
Yet wol the fire as *faire* lie and brenne
As twenty thousand men might it behold.
Chaucer. Cant. Tales.
Ey flattering fortune, loke thou neuer so *fayre*,
Or neuer so pleasantly begin to smile,
As though thou wouldst my ruine all repayre,
During my life thou shalt not me beguile.
Sir T. More.
He only *fair*, and what he *fair* hath made,
All other *fair* like flowers untimely fade. *Spenser.*
All the lords came in, and, being by *fair* means wrought thereunto, acknowledged king Henry.
Id. On Ireland.
All this they *fairly* overcame, by reason of the continual presence of their king. *Id.*
Arius, a priest in the church of Alexandria, a subtle-witted and a marvellous *fairspoken* man, but discontented that we should be placed before him in honour, whose superior he thought himself in desert; because through envy and stomach prone unto contradiction. *Hooker.*
Fair is foul, and foul is *fair*;
Hover through the fog and filthy air.
Shakspeare.
I never yet saw a man,
But she would spell him backward; if *fair* faced,
She'd swear the gentleman should be her sister:
If black, why, nature, drawing of an antick,
Made a foul blot. *Id. Much Ado about Nothing.*
Yourself, renowned prince, stood as *fair*
As any comer I have looked on yet,
For my affection. *Id. Merchant of Venice.*
Well, you must now speak sir John Falstaff *fair*.
Shakspeare.
O, princely Buckingham, I'll kiss thy hand,
In sign of league and amity with thee:
Now *fair* befall thee and thy noble house!
Thy garments are not spotted with our blood. *Id.*
Hereby, upon the edge of yonder coppice,
A stand where you may make the *fairest* shoot.
Id.
Our love is not so great, Hortensio, but we may blow our nails together, and fast it *fairly* out.
Id. Taming of the Shrew.
Carry him gently to my *fairest* chamber,
And hang it round with all my wanton pictures.
Shakspeare.
But if greatness be so blind,
As to trust in towers of air,
Let it be with goodness joyned,
That at least the fall be *fair*. *Bacon.*
A standard of a damask-rose, with the root on, was set in a chamber where no fire was, upright in an earthen pan, full of *fair* water, half a foot under the water. *Id.*
There is due from the judge to the advocate some commendation and gracing where causes are *fairly* pleaded. *Id.*
He through his virtue was as free from greediness, as through his *fair* livelihood, far from neediness.
Carew.
Careth the world, thou love, thou live, or die?
Careth the world how *faire* thy *faire* one bee?
Bp. Hall's Satires.
About three of the clock in the afternoon the weather was very *fair* and very warm. *Clarendon.*
The king did so much desire a peace, that no man need advise him to it, or could divert him from it, if *fair* and honourable conditions of peace were offered to him. *Id.*
For to reduce her by main force
Is now in vain; by *fair* means, worse.
Hudibras.
Greedily they pluck
The fruitage *fair* to sight, like that which grew
Near that bituminous lake where Sodom flamed,
This more delusive, not the touch, but taste
Deceived. *Milton.*
His doom is *fair*,
That dust I am, and shall to dust return.
Id.
Not only do'st degrade them, or remit
To life obscured, which were a *fair* dismission;
But throw'st them lower than thou didst exalt them high. *Id. Agonistes.*
Let us look upon men in several climates: the Ethiopians or black, flat-nosed, and crisp-haired: the Moors tawny; the northern people large, and *fair* complexioned. *Hale.*
That which made her *fairness* much the *fairer* was that it was but an ambassador of a most *fair* mind.
Sidney.
After all these conquests he passed the rest of his age in his own native country, and died a *fair* and natural death. *Temple.*
For still, methought, she sung not far away:
At last I found her on a laurel-spray:
Close by my side she sat, and *fair* in sight,
Full in a line, against her opposite. *Dryden.*
In this plain fable you the' effect may see
Of negligence, and fond credulity;
And learn besides of flatterers to beware,
Then most pernicious when they speak too *fair*.
Id.
As I interpret *fairly* your design,
So look not with severer eyes on mine. *Id.*
'Waiting 'till willing winds their sails supplied,
Within a trading town they long abide,
Full *fairly* situate on a haven's side.' *Id.*
Of sleep forsaken, to relieve his care,
He sought the conversation of the *fair*.
Id. Fables.
When *fair* words and good counsel will not prevail upon us, we must be frighted into our duty.
L'Estrange.
He that attacks received opinions, with any thing but *fair* arguments, may, I own, be justly suspected not to mean well, nor to be led by the love of truth; but the same may be said of him too who so defends them. *Locke.*
He who *fair* and softly goes steadily forward, in a course that points right, will sooner be at his journey's end, than he that runs after every one, though he gallop. *Id.*
Gentlemen who do not design to marry, yet pay their devoirs to one particular *fair*. *Spectator.*
This promised *fair* at first.
Addison on Italy
In vain you tell your parting lover,
You wish *fair* winds may waft him over.
Prior.
To the first advantages we may *fairly* lay clai n; I wish we had as good a title to the latter.
Atterbury.
I am not much for that present; we'll settle it between ourselves; *fair* and square, Nic, keeps friends together. *Arbuthnot.*
This nutritious juice, being a subtile liquor, scarce obtainable by a human body, the serum of the blood is *fairly* substituted in its place. *Id. on Aliments.*
I looked for the jugular veins, opened the *fairest*, and took away a dozen ounces of blood. *Wiseman.*
Virtuous and vicious every man must be,
Few in the' extreme, but all in the degree;

The rogue and fool by fits is *fair* and wise,
And even the best, by fits what they despise.
Pope.

The stage how loosely does Astrea tread,
Who *fairly* puts all characters to bed! *Id.*

It is a church of England man's opinion, that the freedom of a nation consists in an absolute unlimited legislative power, wherein the whole body of the people are *fairly* represented in an executive duly limited. *Swift.*

There are other nice, though inferior cases, in which a man must guard, if he intends to keep *fair* with the world, and turn the penny.
Collier on Popularity.

—— Nature's circle, like a chariot wheel
Rolling beneath their elevated aims,
Makes their *fair* prospect *fairer* every hour,
Advancing virtue in a line to bliss. *Young.*

For as by depredations wasps proclaim
The *fairest* fruit, so these the *fairest* fame. *Id.*

Behold, my *fair*, where'er we rove,
What dreary prospects round us rise.
Johnson. Winter's Walk.

Not slothful he, though seeming unemployed,
And censured oft as useless. Stillest streams
Oft water *fairest* meadows, and the bird,
That flutters least, is longest on the wing.
Cowper.

So, robed by beauty's queen, with softer charms
Saturnia wooed the thunderer to her arms;
O'er her *fair* limbs a veil of light she spread,
And bound a starry diadem on her head. *Darwin.*

When blest with the smiles of my *fair*,
I know not how much I adore;
Those smiles let another but share,
And I wonder I prized them no more! *Byron.*

FAIR, *n.s.* } Fr. *foire*; Ital. *fiera*; Port.
FAIR'ING. } *faira*; Span. *feria*: Teut. *feyer*; Welsh *ffair*; Swed. *fira*; either from Lat. *feriæ*, feast days, or *forum*, the market place; Gr. φοριον, merchandise.—Minsheu. A stated market: a meeting-day, or meeting-place, for buyers and sellers: a fairing is a present brought from, or given at, a fair.

With silver, iron, tin and lead, they traded in thy *fairs*. *Ezek.*

Sweetheart, we shall be rich ere we depart,
If *fairings* come thus plentifully in. *Shakspeare.*

Like children that esteem every trifle, and prefer a *fairing* before their fathers. *Ben Jonson.*

His corn, his cattle, were his only care,
And his supreme delight a country *fair*. *Dryden.*

The ancient Nundinæ, or *fairs* of Rome, were kept every ninth day: afterwards the same privileges were granted to the country markets, which were at first under the power of the consuls.
Arbuthnot on Coins.

Now he goes on, and sings of fairs and shows;
For still new fairs before his eyes arose:
How pedlars stalls with glittering toys are laid,
The various *fairings* of the country maid.
Gay's Pastorals.

FAIRS are generally kept once or twice in the year, and in most places on the same day with the festival of some patron saint to whom the church was dedicated. This may in some measure serve to show us their origin. When bishops and abbots observed that crowds of people assembled to celebrate the festivals of their patron saints, they applied to the crown for charters to hold fairs at those times, for the accommodation of strangers, and with a view to increase their own revenues by the tolls which their charters authorised them to levy at these fairs. Hence the multitude of attendants increased, some of whom were actuated by religious, and others by commercial views. When a fair was held within the precincts of a cathedral or monastery, it was not uncommon to oblige every man to take an oath at the gate, before he was admitted, that he would neither lie, nor steal, nor cheat, while he continued at the fair. The duration of fairs is determined by proclamation, by stat. 2 Ed. III. c. 15; and if a person shall sell any goods after the time of the fair expires, he shall incur a forfeiture of double the value of the goods sold, one-fourth to the prosecutor, and the rest to the king. Any citizen of London may carry his goods to any fair or market in England at his pleasure. If any person is entitled to hold a fair or market, and another is set up within the distance of a third part of twenty miles, either on the same day, or a different day, it is a nuisance, and an action on the case lies; and also against persons disturbing such as are coming to buy or sell in the fair or market, so that the person holding the fair, &c., loses his toll, or receives prejudice in the profits arising from it. There is a toll usually paid in fairs on the sale of things, and for stallage, piccage, &c. Fairs abroad are either free, or charged with toll and impost. The privileges of free fairs consist chiefly, first, in that all traders, &c., whether natives or foreigners, are allowed to enter the kingdom, and are under the royal protection, exempt from duties, impositions, tolls, &c. Secondly, that merchants, in going or returning, cannot be molested or arrested, or their goods stopped. They are established by letters patent from the prince. Fairs, particularly free fairs, are of great importance in the commerce of Europe, especially in that of the Mediterranean, and inland parts of Germany, &c.

The principal fairs in Europe are—1. Two in Frankfort; the first commencing the Sunday before Palm Sunday, and the second on the Sunday before the 8th of September. Each lasts three weeks; the first called the week of acceptance, the second the week of payment. They are famous for the sale of all kinds of commodities; but particularly for the immense quantity of books, no where else to be found, whence the booksellers throughout all Europe used to furnish themselves. Before each fair there is a catalogue of all the books to be sold, printed and dispersed, to call together purchasers; though the learned have long complained of unfair practices herein; as fictitious titles, names of books purely imaginary, &c., besides great blunders in the names of the authors, and the titles of the real books. 2. The fairs of Leipsic, which are held thrice a-year; one beginning on the 1st of January, the second three weeks after Easter; and the third after Michaelmas. 3. The four fairs of Novi, in the Milanese, commencing on the 2d of February, the 2d of May, the 1st of August, and 2d of September. Though the commodities bought and sold are very considerable, yet what chiefly contributes to render them famous is, the vast concourse of the most considerable mer-

chants and negociants of the neighbouring kingdoms, for transacting affairs and settling accounts. 4. The fairs of Riga, two in the year; in May and September, much frequented by the English, Dutch, and French ships, as also from all parts of the Baltic. The best time for the sale of goods at Riga is during the fairs. Since the building of Petersburg, these fairs have suffered some diminution. 5. Fair of Archangel, during which all the trade foreigners have with that city is managed. It holds a month, or six weeks, commencing in the middle of August. The Muscovite merchants attend here from all parts of that vast empire; and the English, Dutch, French, Swedish, Danish, and other ships in the port of that city, on this occasion, ordinarily amount to 300. But this is not a free fair as the rest are: The duties of exportation and importation are very strictly paid, and on a high footing. 6. The fair of St. Germain, near Paris, commencing the 3d of February, and holding till Easter, though it is only free for the first fifteen days. 7. The fairs of Lyons, which M. de Chesne, in his Antiquity of Cities, alleges, from a passage of Strabo, were established by the Romans; though the fairs, as they now stand, are of a much later date. There are three in the year, each lasting twenty days, and free for ever. They begin on Easter Monday, the 26th of July, and the 1st of December. 8. Fair of Guibray, a suburb of Falaise, said to have been established by William the Conqueror, who was born at Falaise. It commences on the 16th of August; and holds fifteen days free by charter, and longer by custom. 9. Fair of Beaucaire, held partly in the city of that name, and partly in the open country, under tents, &c. It commences on the 22d of July, and only holds for three days; yet it is the greatest and most celebrated of all the fairs in that part of Europe, both for the concourse of strangers from all parts of the world, and for the traffic of all kinds of goods: the money returned in these three days amounting sometimes to about 6,000,000 of livres.

Fair Head, or Benmore, i. e. the Great Head, as it is generally and more properly called, is said, by Dr. Hamilton, to be the Rhobogdium of Ptolemy. It is not, however, the most northern point of Ireland, which was what Ptolemy meant to designate by this name. Mr. Wright therefore considers that geographer to apply this denomination to Malin Head, or Inishowen Head.

This splendid promontory, whose highest point is 535 feet above the ocean's level, is, according to the latter writer, composed of a body of columnar green-stone, of such dimensions, that its articulations are not at first very obvious; but, upon surveying attentively one of the gigantic columns, the joints and separatrices are distinctly marked. The whole structure of the promontory consists of two parts; the one, at the sea side, is an inclined plane, strewn with enormous masses of the same stone, in the wildest and most terrific chaos; above this rises the mural precipice of columnar green-stone, 250 feet in height. The scene of ruin at the base of these Titanian pillars is probably not exceeded in Europe. Here the sea heaves in a solemn majestic swell, and in every retreat discloses the apparently endless continuation of convulsive ruin, covered by the waters beneath the promontory. Upon this region of desolation, on the shore, enormous debris, either assuming the character of rude columnisation, or in a perfectly shapeless mass, whose weight is calculated at from 4000 to 5000 tons, are thrown together in all the savage sublimity of which we can conceive the wildest scenes in nature capable.

The scene just now described is discovered below the feet of the traveller, as he cautiously paces along the brink of the precipice. The surface upon which he treads, upon examination, will be found to consist of a regular pavement, formed of the extremities of enormous prismatic masses, composing the precipice, perfectly denuded and completely level. These prisms vary in form; some are quadrilateral, and appear to be composed of a congeries of smaller prisms, aggregated in such a way as to suggest very obviously the clustered assemblage of shafts, which occur in the formation of a Gothic column. In tracing the summit of this bold head, several natural curiosities are pointed out; the first, to the west, is a fissure in the face of the precipice, called Fhir Leith, or the Gray Man's Path: the entrance to the pass, at the top, is extremely narrow; and formerly, a joint of green-stone, which had fallen across it, formed a sort of natural gate, through which the bold enquirer descended; entering, next, a gradually expanding passage, which leads to the chaotic heaps, at the base of the great colonnade. The natural architrave has lately fallen down, and quite choked up the passage. There are one or two similar chasms along the summit, which have frequently proved fatal to the cattle left pasturing upon the headland. There are several places, along the brink of the precipice, where the guide directs his followers to lie flat upon the ground, and cast the eye down perpendicularly to the foot of the column, a depth of 250 feet; this can be done in many places without the least danger. Some of the columns are magnetical.

Near the highest point of Fair Head is an extraordinary cave, said to be artificial, and called a Pict's house. Not far hence are two small lakes, at an elevation exceeding 400 feet above the sea, called Lough Caolin and Lough-na-Cressa; one of these discharges its overflowing waters into the sea, through the whyndyke, called Carrick Mawr, or the Great Crag.

Fair Isle, or Faro, as Buchanan calls it, a small island lying between Orkney and Shetland, thirty miles E. N. E. from the former, and twenty-four south-west from the latter. It is above three miles long, and nearly two broad, very craggy, with three very high promontories (one of them called Sheep Craig, 480 feet high), which are visible both from Orkney and Shetland. Buchanan says, it is 'encompassed with lofty rocks; and is every where inaccessible, unless upon the south-east, where, lowering a little, it affords a safe station for small vessels.' There is great plenty of sea and water fowl, and all kinds of fish upon the coast. There is a small harbour at the south end, which is full of rocks, where only small boats can lie, and another at the north-east end, larger and safer in summer, so that it serves

commodiously enough for their fishery. The duke of Medina Sidonia, commander of the famous Spanish armada, in 1588, was wrecked on the east coast of this island. The ship broke to pieces, but the duke and 200 men made their escape. They lived here so long, that both they and the inhabitants were almost famished. At length the duke, and the poor remains of his people, were carried over to the main land of Shetland, and thence to Dunkirk, by one Andrew Humphrey, for which Andrew was rewarded with 3000 merks.

FAIRFAX (Sir Thomas), general of the parliamentary forces in the civil wars, was the eldest son of Ferdinando lord Fairfax, and born at Denton, the family seat, in Yorkshire, in 1611. He commenced his military career in the army under lord Vere in Holland; and, when the differences broke out into hostility between the king and parliament, took a decided part in the favor of the latter, being, as well as his father, a zealous presbyterian. He had a principal command in the north, where he and his father were defeated in several engagements, particularly at Adderton Moor, in June 1643. Sir Thomas was, however, more successful in some subsequent actions, and he distinguished himself so greatly, at the battle of Marston Moor, that, when the army was new modelled, he was appointed general in the room of the earl of Essex. In June, 1645, he defeated the king's forces at Naseby, after which he marched to the west, where he obliged a number of places to submit. Upon the death of his father, in 1648, he succeeded to his title, and the same year took Colchester, after a brave resistance by Sir George Lisle and Sir Charles Lucas, whom his lordship, after the surrender, basely caused to be shot. He pretended to be against putting the king to death, but took no steps to prevent it; and, at the time of the execution, was engaged in prayer with major Harrison. He declined commanding the army against the presbyterians, who afterwards appeared in favor of Charles II., and lived in retirement till measures were adopted for bringing back the king. He was at the head of the committee appointed by the house of commons to attend king Charles II. at the Hague, and, having assisted in his restoration, returned again to his seat in the country; where he lived in a private manner till his death, which took place in 1671 in the sixtieth year of his age. He wrote, says Mr. Walpole, Memorials of Thomas Lord Fairfax, printed in 1699; and was not only an historian but a poet. In Mr. Thoresby's museum were preserved, in MS., the following pieces:—The Psalms of David, the Canticles, the Song of Moses, and other parts of Scripture, versified; a poem on Solitude; Notes of Sermons; and a Treatise on the Shortness of Life. But the most remarkable of lord Fairfax's works, says Walpole, were the verses he wrote on the horse on which Charles II. rode to his coronation. He gave a collection of MSS. to the Bodleian library.

FAIRFAX (Edward), natural son of Sir Thomas Fairfax, was an English poet who lived in the reigns of Elizabeth and James I. He was an accomplished scholar. Dryden classes him with Spenser, as a leading writer of the times; and even seems to give him the preference for harmony, when he observes that Waller owned himself indebted for the harmony of his numbers to Fairfax's Godfrey of Boulogne. He died about 1632, at his house, called Newhall, between Denton and Knaresborough.

FAIRFAX, a county of Virginia, on the west bank of the Potomac, twenty-five miles long and eighteen broad. The chief town is Alexandria.

FAIRFAX, a township of Vermont, in Franklin county, east of Georgia, on the bank of the Moille; nine miles from Lake Champlain.

FAIRFIELD, a populous maritime county of Connecticut, forty-six miles long and thirty-five broad, bordering on the state of New York. It is divided into thirteen townships. Danbury and Fairfield are the chief towns.

FAIRFIELD, the capital of the above county, called Unquowa by the Indians, is seated on the Mill-run, a little above its influx into Long Island Sound. It was burnt in 1777, by a party of British and loyalists; by which it incurred a loss of above £40,109. It has been since rebuilt, and is now flourishing. It carries on a considerable trade to the West Indies. It is twenty-two miles south-west by west of New Haven, sixty-four north-east of New York, and 161 of Philadelphia.

FAIRFIELD, a county of South Carolina, in Camden district, forty miles square; seated between the Wateree and Broad River. Winusborough is the capital.

FAIRFORD, a town in Gloucestershire, remarkable for its church, which has curious painted glass windows. They are said to have been taken in a ship by John Tame, esq., towards the end of the fifteenth century, who built a church for their sake. They are preserved entire, and the figures are extremely well drawn and colored. They represent the most remarkable histories in the Old and New Testament. The painter was Albert Durer. In the church are also a number of monuments, particularly a curious one to the memory of the founder, who died in the year 1500; with his effigy in white marble. Near it is a handsome free school, endowed for sixty boys; besides which this town has many other charitable institutions: it has also two neat bridges over the river Colne. It is twenty-two miles E. S. E. of Gloucester, and seventy-nine and a half west by north of London.

FAIR WEATHER MOUNT, a mountain on the north-east coast of North America, about 14,900 feet above the level of the sea, and about twelve miles north-east of Fair Weather Cape. It is one of the principal summits of the Cordillera of New Norfolk; its base being formed by the summits of various surrounding mountains. It is covered with perpetual snow. Long. 222° 47′ E., lat. 58° 57′ N.

FAIRY, *n. s.* & *adj.* } Old Fr. *faerie*, a spec-
FAIRYLIKE. } tre, *fée*, a nymph; Sax. ϸeɲhϑ. 'Ab ἴρα terra, fit et ϸέρα Macedonum dialecto; unde ἔνειροι ἔνϸειροι, et Romanis inferi, qui Scoto-Saxonibus dicuntur *feries* nostratibusque; vulgo corruptius *fairies*, καταχθονιοι δαίμονες, sive dii manes.'—Baxter's Glossary. The French have also an old verb *faer*, to enchant. Fairy and fay are indiscriminately used

by our older writers. See FAY. Both, perhaps, came into our language from the French. An imaginary being, or spirit, supposed to appear in a diminutive human form, and generally of the female sex: as an adjective, fairy means given by, or belonging to fairies.

To this great *fairy* I'll commend thy acts,
Make her thanks bless thee.
Shakspeare. Antony and Cleopatra.

Nan Page, my daughter, and my little son,
And three or four more of their growth, we'll dress
Like urchins, ouphes, and *fairies*, green and white.
Shakspeare.

Then let them all encircle him about,
And *fairy* like to pinch the unclean knight:
And ask him, why, that hour of *fairy* revel,
In their so sacred paths he dares to tread
In shape prophane. *Id. Merry Wives of Windsor.*

This is the *fairy* land: oh, spight of spights,
We talk with goblins, owls, and elvish sprights.
Shakspeare.

Be secret and discrete; these *fairy* favours
Are lost when not concealed.
Dryden's Spanish Fryar.

Such borrowed wealth, like *fairy* money, though it were gold in the hand from which he received it, will be but leaves and dust when it comes to use. *Locke.*

By the idea any one has of *fairies*, or centaurs, he cannot know that things, answering those ideas exist.
Id.

Fays, *faries*, genii, elves, and demons, hear.
Pope.

What farther clishmaclaver might been said,
What bloody wars, if sprites had blood to shed,
Nae man can tell; but a' before their sight,
A *fairy* train appeared in order bright;
Adown the glittering stream they featly danced;
Bright to the moon their various dresses glanced.
Burns.

While frowning loves the threatening falchion wield,
And tittering graces peep behind the shield,
With jointed mail their *fairy* limbs o'erwhelm,
Or nod with pausing step the plumed helm.
Darwin.

This hour we part!—my heart foreboded this:
Thus ever fade my *fairy* dreams of bliss. *Byron.*

FAIRY. Fairies were most usually imagined to be women of an order superior to human nature, yet subject to wants, passions, accidents, and even death; sprightly and benevolent while young and handsome; morose, peevish, and malignant, if ugly, or in the decline of their beauty; fond of appearing in white, whence they are often called the white ladies. Jervaise of Tilleberry, marshal of the kingdom of Arles, who lived in the beginning of the thirteenth century, writes thus concerning them, in a work inscribed to the emperor Otho IV. 'It has been asserted, by persons of unexceptionable credit, that fairies used to choose themselves gallants from among men, and rewarded their attachment with an affluence of worldly goods; but if they married, or boasted of a fairy's favors, they as severely smarted for such indiscretion.' Similar tales are still current in Languedoc; where there is not a village without some ancient seat or cavern, which had the honor of being a fairy's residence, or some spring where a fairy used to bathe. This idea of fairies has a near affinity with that of the Greeks and Romans, concerning the nymphs of the woods, mountains, rivers, and springs; and an ancient scholiast on Theocritus says, 'The nymphs are demons which appear on the mountains in the figure of women.' The Arabs and other orientals have also their ginn and peri, of whom they entertain the like notions. Fairies have been likewise described as of both sexes, and generally as of minute stature, though capable of assuming various forms and dimensions. The most elegant representation of these children of romantic fancy is to be found in the Midsummer Night's Dream of Shakspeare. Spenser's Fairy Queen is an epic poem, under the characters of fairies. The belief of fairies subsists in many parts of our own country. The 'Swart fairy of the mine,' is scarcely yet believed to have quitted our subterraneous works. And, in the Highlands of Scotland, new-born children are watched till the christening is over, lest they should be stolen or changed by some of these imaginary beings.

FAIRY CIRCLE, or RING, a phenomenon pretty frequent in the fields, &c. long supposed to be traced by the fairies in their dances. There are two kinds of it; one of about seven yards in diameter, containing a round bare path, a foot broad, with green grass in the middle of it. The other is of a different size, encompassed with a circumference of grass. Some suppose these circles to be made by ants, which are often found in great numbers in them. Messrs. Jessop and Walker, in the Philosophical Transactions, ascribe them to lightning; which is thought to be confirmed by their being most frequently produced after a storm of that kind, as well as by the color and brittleness of the grass roots when first observed. Lightning, like all other fires, moves round, and burns more in the extremity than in the middle; the second circle arises from the first, the grass burnt up growing very plentifully afterwards. Mr. Cavallo, however, in his valuable Treatise on Electricity, does not think that lightning is concerned in the formation of them: 'They are not,' says he, 'always of a circular figure; and, as I am informed, they seem to be rather beds of mushrooms than the effects of lightning.' Other philosophers, who have examined these circles, believe they are produced by a kind of fungus breaking and pulverising the soil.

Dr. Wollaston has examined this subject with his usual ingenuity. He observed that the fungi or mushrooms, first noticed by Withering, were found solely at the exterior margin of the dark ring of grass. The breadth of the ring, in that instance, measured from them towards the centre, was about twelve or fourteen inches, while the exterior ring, occupied by the mushrooms, was only about four or five inches broad. Dr. Wollaston conjectured, from the position of the mushrooms, that the rings were formed after the manner described by Dr. Hutton, by a progressive increase from a centre, and this opinion was strengthened by finding that a second species of fungus presented a similar arrangement, with respect to the relative position of the ring and fungi, the fungi being always upon the external margin of a dark ring of grass. 'I thought it not improbable,' says he, 'that the soil which

had once contributed to the support of fungi might be so exhausted of some peculiar pabulum necessary for their production, as to be rendered incapable of producing a second crop of that singular class of vegetables. The second year's crop would consequently appear in a small ring surrounding the original centre of vegetation, and, at every succeeding year, the defect of nutriment on one side, would necessarily cause the new roots to extend themselves solely in the opposite direction, and would occasion the circles of fungi continually to proceed by annual enlargement from the centre outwards. An appearance of luxuriance of the grass would follow as a natural consequence, as the soil of an interior circle would always be enriched by the decayed roots of fungi of the preceding year's growth.'

Dr. Wollaston often observed undecayed spawn, even below the most luxuriant grass. 'During the growth of the fungi, they so entirely absorb all nutriment from the soil beneath, that the herbage is for a while destroyed, and a ring appears, bare of grass, surrounding the dark ring. If a transverse section be made of the soil beneath the ring, at this time, the part beneath the fungi appears paler than the soil on either side of it, but that which is beneath the interior circle of dark grass, is found, on the contrary, to be considerably darker than the general surrounding soil. But, in the course of a few weeks after the fungi have ceased to appear, the soil where they stood grows darker, and the grass soon vegetates again with peculiar vigor, so that I have seen the surface covered with dark grass, although the darkened soil has not exceeded half an inch in thickness, while that beneath has continued white with spawn, for about two inches in depth. The section of the space occupied by the white spawn, has in general, nearly the same form, and may be compared to that of a wave, proceeding from the centre outwards, as its boundary on the inner side ascends obliquely towards the surface, while its exterior termination is nearly in a vertical position. The extent occupied by the spawn varies considerably, according to the season of the year, being greatest after the fungi have come to perfection, and is reduced to its smallest dimensions, and may, in some cases, not be discernible before the next year's crop begins to make its appearance.

'For the purpose of observing the progress of various circles, I marked them three or four years in succession, by incisions of different forms, by which I could distinguish clearly the successive annual increase, and I found it to vary in different circles, from eight inches to as much as two feet. The broadest rings that I have seen, were those of the common mushroom, (ag. campestris); the narrowest are the most frequent, and are those of the champignon (ag. orcades of Dr. Withering). The mushroom accordingly makes circles of the largest diameter, but those of the champignon are most regular. There are, however, as many as three other fungi that exhibit the same mode of extension, and produce the same effect upon the herbage. These are the ag. terreus, ag. procerus, and the lycoperdon bovista, the last of which is far more common than the two last-mentioned agarics. There is one circumstance that may frequently be observed respecting these circles, which can satisfactorily be accounted for, according to the preceding hypothesis of the cause of their increase, and may be considered as a confirmation of its truth. Whenever two adjacent circles are found to interfere, they not only do not cross each other, but both circles are invariably obliterated between the points of contact; at least, in more than twenty cases, I have seen no one instance to the contrary. The exhaustion occasioned by each, obstructs the progress of the other, and both are starved.

'I think it also not unworthy of observation, that different species of fungi appear to require the same nutriment; for in a case of interference, between the one circle of puff-balls and another of mushrooms, they did not intersect; but I cannot say positively that I have seen more than one instance. I once found that a tree had interrupted the regular progress of a circle; but this appeared to be only a temporary impediment, as the extension had proceeded at the usual rate; and, by passing obliquely from each side into the soil beyond the tree, had given the ring the form of a kidney, so that another year or two would probably reunite the two extremities into one curve surrounding the tree. Being desirous of ascertaining in what length of time a soil might again recover the power of producing a fresh crop of fungi, I cut a groove, in one or two instances, along the diameter of a mushroom ring, and inserted a quantity of spawn taken from its circumference, with the hope of seeing it vegetate for some distance near the centre; but the experiment failed altogether, as I shortly after quitted my residence in the country.'

Another modern writer, Mr. Wilson, ascribes fairy rings to the action of grubs, concealed under the ring among the roots of the herbage; and supposes, that the fungi give a preference to these rings, on account of the abundance of dead vegetable matter to be found in them.

FAIRY OF THE MINE, an imaginary inhabitant of mines. The Germans believe in two species; one fierce and malevolent; the other a gentle race, appearing like little old men, dressed like the miners, and not much above two feet high. These wander about the drifts and chambers of the works; seem perpetually employed, yet do nothing; some seem to cut the ore, or sling what is cut into vessels, or turn the windlass; but never do any harm to the miners, unless provoked, as Agricola relates in his book De Animantibus Subterraneis.

FAITH, *n. s.*
FAITH'BREACH,
FAITH'ED, *adj.*
FAITH'FUL
FAITH'FULLY, *adv.*
FAITH'FULNESS, *n. s.*
FAITH'LESS, *adj.*
FAITH'LESSNESS, *n. s.*

Fr. *foy*, *foi*; Span. and Port. *fe*; Ital. *fede*; Lat. *fides*. Mr. Tooke considers our modern word faith, once written faieth, as the third person singular of the Saxon verb ꝼæʒan; Parkhurst, and others derive it from the Greek πειθω; and this from the Hebrew פתה, to persuade. Belief; credence: belief of revealed truth: and hence the truth believed, tenets held by man; a promise given by man or God: also, confidence, or trust, in a thing or

party believed; and (the qualities which inspire this feeling) fidelity to engagements; sincerity; veracity: faithbreach is a breach of honor or faith: faithed, honest; sincere: as is faithful, which also means true to allegiance, duty, or regard, professed: faithless is without faith; perfidious; and, particularly, without belief in revealed religion.

And he seide to hir, doughtir, thi *feith* hath maad the saaf. *Wiclif. Luk.* 8.

My servant Moses is *faithful* in all mine house. *Numbers.*

They are a very froward generation, children in whom is no *faith*. *Deut.* xxxii. 20.

For there is no *faithfulness* in your mouth; your inward part is very wickedness. *Psalm* lix.

Felix heard Paul concerning the *faith*. *Acts* xxiv.

Adew myne owne dere spouse my worthy lorde,
The *faithfull* loue, that dyd vs both combyne,
In mariage and peasable concorde,
Into your handes here I cleane resyne,
To be bestowed vppon your children and myne.
Sir T. More.

The man that is *faithful*, thinks it more liberty to be his friend's prisoner, than to be any other's general. *Sir P. Sidney.*

The name of *faith* being properly and strictly taken, it must needs have reference unto some uttered word, as the object of belief. *Hooker.*

Whatsoever our hearts be to God and to his truth, believe we, or be we as yet *faithless*, for our conversion or confirmation, the force of natural reason is great. *Id.*

I have been forsworn,
In breaking *faith* with Julia whom I loved.
Shakspeare.

I have this day received a traitor's judgment,
And by that name must die; yet, heaven bear witness,
And, if I have a conscience, let it sink me,
Even as the axe falls, if I be not *faithful*. *Id.*

Never dare misfortune cross her foot,
Unless she doth it under this excuse,
That she is issue to a *faithless* Jew. *Id.*

Both
Fell by our servants, by those men we loved most;
A most unnatural and *faithless* service. *Id.*

His noble grace would have some pity
Upon my wretched women, that so long
Have followed both my fortunes *faithfully*. *Id.*

Vision in the next life is the perfecting of that *faith* in this life, or that *faith* here is turned into vision there, as hope into enjoying. *Hammond.*

For his own part he did *faithfully* promise to be still in the king's power. *Bacon's Henry VII.*

If they had gone to God without Moses, I should have praised their *faith*; but now they go to Moses without God, I hate their stubborn *faithlessness*. *Bp. Hall's Contemplations.*

Her failing, while her *faith* to me remains,
I should conceal. *Milton's Paradise Lost.*

So spake the seraph Abdiel, *faithful* found;
Among the *faithless*, *faithful* only he. *Milton.*

Seeming devotion doth but gild the knave,
That's neither *faithful*, honest, just, nor brave.
Waller.

For you alone
I broke my *faith* with injured Palamon. *Dryden.*

Well I know him;
Of easy temper, naturally good,
And *faithful* to his word. *Id. Don Sebastian.*

If on my wounded breast thou drop a tear,
Think for whose sake my breast that wound did bear,
And *faithfully* my last desires fulfil,
As I perform my cruel father's will. *Id. Ovid.*

And, therefore, I have often wondered to hear men of several churches so heartily exclaim against the implicit *faith* of the church of Rome; when the same implicit *faith* is as much practised and required in their own, though not so openly professed, and ingenuously owned there. *Locke.*

The band that knits together and supports all compacts, is truth and *faithfulness*. *South.*

They suppose the nature of things to be truly and *faithfully* signified by their names, and thereupon believe as they hear, and practise as they believe. *Id. Sermons.*

Then *faith* shall fail, and holy hope shall die;
One lost in certainty, and one in joy. *Prior.*

Faith is an entire dependence upon the truth, the power, the justice, and the mercy of God; which dependence will certainly incline us to obey him in all things. *Swift.*

We may meet with frauds and *faithless* dealings from men; but after all, our own hearts are the greatest cheats; and there are none we are in greater danger from. *Mason.*

From every joy and pleasure torn,
Life's weary vale I'll wander through;
And hopeless, comfortless, I'll mourn
A *faithless* woman's broken vow. *Burns.*

To praise him is to serve him, and fulfil
Doing and suffering his unquestioned will;
'Tis to believe what men inspired of old,
Faithful and *faithfully* informed, unfold;
Candid and just, with no false aim in view,
To take for truth what cannot but be true.
Cowper.

A nation famed for song, and beauty's charms,
Zealous, yet modest; innocent, though free;
Patient of toil; serene amidst alarms;
Inflexible in *faith*; invincible in arms! *Beattie.*

FAITH, in philosophy and theology, is that assent which we give to a proposition advanced by another, the truth of which we do not immediately perceive from our own reason or experience; or it is that judgment or assent of the mind, the motive whereof is not any intrinsic evidence, but the authority and testimony of some other who reveals or relates it. Hence, as there are two kinds of authorities and testimonies, the one of God, and the other of man, faith becomes distinguished into divine and human:—

1. FAITH, DIVINE, is that founded on the authority of God; or that assent we give to what is revealed by God. The objects of this faith, therefore, are matters of Revelation. See REVELATION and THEOLOGY.

2 FAITH, HUMAN, is that whereby we believe what is told us by men; and the object of it is matter of human testimony and evidence. See METAPHYSICS.

FAITHORN (William), an ingenious artist, a native of London, was the disciple of Peak the painter, and worked with him three or four years. At the breaking out of the civil war Peak espoused the royal cause, and Faithorn, who accompanied him, was taken prisoner, sent to London, and confined in Aldersgate. In this uncomfortable situation he exercised his graver; and executed a small head of the first Villars

duke of Buckingham, in the style of Melan. Being permitted to retire to the continent, he found protection from the abbé de Marolles, in France; where he formed an acquaintance with Nanteuil. About 1650 he returned to England, and soon after married the sister of a captain Cround. By her he had two sons: Henry, who was a bookseller, and William an engraver in mezzotinto. He painted portraits from the life in crayons. He also painted in miniature; and his performances were much esteemed. His spirits were broken by the dissipation of his son William; and a lingering consumption put an end to his life in 1691. He wrote a work on Drawing, Graving, and Etching.

FA'ITOUR, *n. s.* Fr. *faitard*; or, as Minsheu thinks, a corruption of *faiséur*, i. e. a factor, or doer; but the Norman Fr. has *faitour* regularly. A scoundrel; a rascal; a poltroon. Obsolete.

> To Philemon, false *faitour*, Philemon,
> I cast to pay, that I so dearly bought.
> *Faerie Queene.*
> Into new woes unweeting I was cast,
> By this false *faitour*. *Id.*

FAKE, *n. s.* Among seamen. A coil of rope.

FAKIRS, or FAQUIRS, oriental monks or friars. The word is Arabic and signifies a poor or needy person. D'Herbelot regards it as synonymous with dervise: and certainly in some Mahommedan countries the religious are called fakirs, in others dervises.

These oriental monks are said to outvie the severity and mortification of the ancient Anchorets. Some of them make a vow of continuing all their lifetime in one posture, and keep it effectually. Others never lie down; but continue in a standing posture for long periods of their lives, supported only by a stick, or rope under their arm-pits. Some mangle their bodies with scourges and knives. They pretend to have conquered every passion, and triumphed over the world; and accordingly scruple not, as if in a state of innocence, to appear sometimes entirely naked. The people of the east are persuaded of the virtue of the fakirs; notwithstanding which, they are accused of committing the most enormous crimes in private.

One set or sect of fakirs, who do not practise such severities, travel together, from village to village, prophesying, and telling fortunes. They make use of drums, trumpets, and other musical instruments, to rouse themselves and their auditors to an artificial ecstasy: and their votaries are said to consult them in the most indecent attitudes. They are so indulgent towards every living creature, that they suffer themselves to be over-run with vermin, or stung by insects, without the least reluctancy or complaint: but it is more than probable, that they lull their senses by opiates in order to render themselves insensible to the excessive torments they undergo. The garment of the chief fakirs distinguishes them from the rest. Some persons of considerable rank in India have become fakirs: and D'Herbelot estimates the number at about 2,000,000.

FALAISE, a town of France, in Lower Normandy, having still, in the ruins of its castle, one of the finest towers in France; famous for being the birth place of William the Conqueror It has a good trade in serges, linens, and lace: with a famous fair held in Guibray, one of its suburbs, which begins 28th Thermidor (Aug. 16th) and lasts a week. It is fifteen miles south by east of Caen. Population 14,000.

FALASHA, a people of Abyssinia, of Jewish origin, described by Mr. Bruce, who was at great pains to acquaint himself with their history. According to the accounts he received, they are the descendants of those Jews who came from Palestine into Ethiopia, as attendants of Menilek, or David I., the son of the queen of Sheba by Solomon. They agree in the relations given by the Abyssinians of that princess (See ETHIOPIA); but deny that the posterity of those who came with Menilek ever embraced Christianity, as the Abyssinians say they did. They state that at the decline of the Jewish commerce, when the ports of the Red Sea fell into the hands of other nations, and no intercourse took place betwixt them and Jerusalem, the Jewish inhabitants quitted the sea coasts and retired into the province of Dembea. Here they carried the art of pottery to a great degree of perfection, multiplied exceedingly, and became very numerous and powerful, about the time the Abyssinians were converted to Christianity. As this event was accounted by them an apostasy from the true religion, they now separated themselves from the Abyssinians, and declared one Phineas, of the line of Solomon, their king. Thus they say, they have still a prince of the house of Judah for their sovereign. About A. D. 960 Judith, queen of this people, after extirpating the Abyssinian princes on Damo, assumed the sovereignty of the whole empire, which the Falasha retained for some time; but, their power being by degrees reduced, they were obliged to take up their residence among the rugged mountains of Samen; one of which they chose for their capital, and which has ever since been called the Jews' Rock. About A.D. 1600 they were almost entirely ruined by an overthrow from the Abyssinians, in which both their king and queen were slain; since which time they have been in subjection to the emperors of that country, but are still governed by their own princes.

When Mr. Bruce was in Abyssinia the Falasha were supposed to amount to about 100,000 effective men. Gideon and Judith were the names of the king and queen at that time. The language of this people is very different from the Hebrew, Samaritan, or any other which the Jews ever spoke in their own country. On being interrogated concerning it, by Mr. Bruce, they said, that it was probably one of those spoken by the nations on the Red Sea, among whom they had settled at their first coming. They arrived in Abyssinia it is said speaking Hebrew, and with the advantage of having books in that language; but had now forgot it, and were entirely ignorant of the art of writing. At the time of their leaving Judea they were in possession both of the Hebrew and Samaritan copies of the law; but when their fleet was destroyed in the time of Rehoboam, and no farther communication with Jerusalem took place, they were obliged to use translations of the Scriptures, or those copies

which were in the possession of the shepherds, who, they say, were all Jews, before the time of Solomon. On being asked, however, where the shepherds got their copy, and being told, that, notwithstanding the invasion of Egypt by Nebuchadnezzar, there was still a communication with Jerusalem, by means of the Ishmaelite Arabs through Arabia, they frankly acknowledged that they could not tell; neither had they any memorials of the history either of their own or any other country; all that they believed in this case being derived from mere tradition, their histories, if any existed, having been destroyed by the famous Moorish captain, Gragné. (See ETHIOPIA). They say, that the first book of Scripture they ever received was that of Enoch; and they place that of Job immediately after it, supposing that patriarch to have lived soon after the flood. They have no copy of the Old Testament in the Falasha language, what they make use of being in that of Geez. This is sold to them by the Abyssinian Christians, who are the only scribes in that country. No difference takes place about corruptions of the text; nor do the Falasha know any thing of the Jewish Talmud, Targum, or Cabala.

FALCA'DE, *n. s.* } Lat. *falx, falcis.* A
FALCA'TED, *adj.* } sickle: a crooked motion
FALCA'TION, *n. s.* } or bend: hooked; bent like a reaping-hook or scythe: crookedness.

The locusts have antennæ, or long horns before, with a long *falcation* or forcipated tail behind. *Browne.*

The enlightened part of the moon appears in the form of a sickle, or reaping-hook, which is while she is moving from the conjunction to the opposition, or from the new moon to the full; but, from full to a new again, the enlightened part appears gibbous, and the dark *falcated.* *Harris.*

A horse is said to make *falcades* when he throws himself upon his haunches two or three times, as in very quick curvets; therefore a *falcade* is that action of the haunches and of the legs, which bend very low, when you make a stop and half a stop.
Farrier's Dictionary.

FA'LCHION, *n. s.* Fr. *fauchon*; Lat. *falx.* A short crooked sword; a scimitar.

I've seen the day, with my good biting *falchion,*
I would have made them skip: I am old now.
Shakspeare.

Old *falchions* are new tempered in the fires;
The sounding trumpet every soul inspires.
Dryden's Æneid.

What sighs and tears
Hath Eugene caused! how many widows curse
His cleaving *falchion.* *Philips.*

Have moments, hours, and days, so unprepared,
That you might 'brain them with their lady's fan;'
And sometimes ladies hit exceeding hard,
And fans turn into *falchions* in fair hands,
And why and wherefore no one understands. *Byron.*

FALCO, in ornithology, a genus of birds, belonging to the order of accipitres. The characters are these: The bill is hooked at the end, and covered at its base with a cere, or naked membranous skin; the head is covered with feathers, which lie close on each other; the tongue is often cleft. This is a rapacious carnivorous race of animals, feeding almost entirely on animal food; they are very quick-sighted; generally fly high, and build their nests in lofty places. They are not gregarious; and the females are larger than the males. The legs and feet are scaly; the claws large, strong, very sharp, and much hooked. Gmelin divides this genus into four sub-genera, or less divisions; which Kerr has reduced to three, by including the G. serpentarius in the second subgenus, because it has some relation to the vultures. These three sub-genera are, 1. Gypæti, bastard eagles; 2. Aquilæ, Eagles; and 3. Falcones, falcons and hawks. 1. The Gypæti comprehend nine species and two varieties which have the bill-hooked only towards the point, and its base garnished with a beard of longish extended bristles. This sub-genus holds a middle rank between the vultures and eagles; the head is not so naked as in the former, and the bill not so much hooked as in the latter; like eagles they prey on living animals, but like vultures they also devour dead carrion. Hence they have been hitherto ranked by some authors with the one genus, and by others with the other. 2. The Aquilæ comprehend forty-one species and seven varieties, which are larger in size than those of the third sub-genus, and have their legs for the most part rough. They differ from the gypæti in preying on living animals, while the latter prefer dead carcases. They can abstain long from food, though very voracious. Their gastric juice is very acrid, yet they are killed by eating bread. 3. The Falcones are less in size than the aquilæ, and their legs are universally naked. But in other respects, the limits between the falcons and hawks, and the eagles, are by no means well ascertained. This sub-genus comprehends eighty-six species, and thirty-two varieties: making in all no fewer than 136 species, and forty-one varieties, in the whole genus. Of these (as our room permits us not to enumerate the whole) we shall describe a few of the most remarkable:

1. F. æruginosus, the moor buzzard, greenish cere, a grayish body, the top of the head, nape of the neck, and legs, yellowish; is a native of Europe, and frequents moors, marshy places, and heaths; it never soars like other hawks; but commonly sits on the ground or on small bushes. It makes its nest in the midst of a tuft of grass or rushes. It is a very fierce and voracious bird; and is a great destroyer of rabbits, young wild ducks, and other water fowl. It also preys on fish.

2. F. apivorus, the honey buzzard of Ray, has black cere, yellow legs half naked, the head of an ash color, and having an ash-colored stripe on the tail, which is white at the end. It had its name from the combs of bees being found in its nest. It is a native of Europe, and feeds on mice, lizards, frogs, bees, &c. It runs very swiftly.

3. F. aquila chrysaëtos, the golden eagle, weighs about twelve pounds, and is about three feet long, the wings when extended measuring seven feet four inches. The sight and sense of smelling are very acute: the head and neck are clothed with narrow, sharp-pointed feathers, of a deep brown color bordered with tawny; the hind part of the head is of bright rust color. These birds are destructive to fawns, lambs, kids, and all kinds of game; particularly in the breed-

ing season, when they bring a vast quantity of prey to their young. Smith, in his history of Kerry, relates, that a poor man in that country obtained a comfortable subsistence for his family, during a summer of famine, out of an eagle's nest, by robbing the eaglets of the food the old ones brought; whose attendance he protracted beyond the natural time, by clipping the wings and retarding the flight of the former. In order to extirpate these pernicious birds, there was formerly a law in the Orkney isles, which entitled every person that killed an eagle to a hen out of every house in the parish where it was killed. Eagles seem to give the preference to the carcases of dogs and cats. Those who formerly made it their business to kill these birds, fired the instant they alighted; for the eagle at that moment looks about before she begins to prey. Yet, quick as her sight may be, her sense of hearing seems still more exquisite. If hooded crows or ravens happen to be nearer the carrion, and resort to it first, and give a single croak, the eagle instantly repairs to the spot. These eagles are remarkable for their longevity, and for sustaining a long abstinence from food. Mr. Keysler relates, that an eagle died at Vienna after a confinement of 104 years. This length of days seems alluded to by the Psalmist, 'Thy youth is renewed like the eagle's.' One of this species, which was nine years in the possession of Owen Holland Esq. of Conway, lived thirty-two years with the gentleman who made him a present of it; but what its age was, when the latter received it, from Ireland, is unknown. The same bird also furnishes us with a proof of the truth of the other remark; having once, through the neglect of servants, endured hunger for twenty-one days without any sustenance whatever.—It is perhaps proper here to notice a very singular variety of the golden eagle, described by Mr. Bruce, in his travels in Abyssinia; for, whether it properly belongs to this species or not, we do not find that it has been as yet either arranged under any other, or ranked as a different genus. Mr. Bruce says, it is not only the largest of the eagle kind, but the largest bird that flies. By the natives it is vulgarly called abon duchen, or father long-beard. It is not an object of any chase, nor stands in need of any stratagem to bring it within reach. Upon the highest top of mount Lamalmon, while Mr. Bruce's servants were refreshing themselves after their toilsome ascent, and enjoying the pleasure of a most delightful climate, eating their dinner in the open air with several large dishes of boiled goat's flesh before them, this noble bird suddenly made its appearance; he did not stoop rapidly from a height, but came flying slowly along the ground, and sat down close to the meat within the ring the men had made round it. A great shout, or rather cry of distress, which they raised, made the bird stand for a minute as if to recollect himself, while the servants ran for their lances and shields. His attention was fully fixed upon the flesh. He put his foot into the pan where was a large piece in water nearly boiling; but, feeling the smart, he withdrew it, and forsook the piece which he held. There were two large pieces, a leg and a shoulder, lying upon a wooden platter; into these he trussed his claws and carried them off; skimming slowly along the ground as he had come, till he disappeared behind a cliff. But being observed at his departure to look wistfully at the large piece, which remained in the warm water, it was concluded that he would soon return; in expectation of which Mr. Bruce loaded a rifle gun with ball, and sat down close to the platter by the meat. It was not many minutes before he came, and a prodigious shout was raised by the attendants, 'He is coming, he is coming!' enough to have discouraged a less courageous animal. Whether it was not quite so hungry as at the first visit, or suspected something from Mr. Bruce's appearance, it made a small turn, and sat down about ten yards from him, the pan with the meat being between them. In this situation Mr. Bruce fired, and shot him with the ball through the middle of his body about two inches below the wing, so that he lay down upon the grass without a single flutter. Upon laying hold of his monstrous carcase, our author was not a little surprised at seeing his hands covered and tinged with yellow dust. Upon turning him upon his belly, and examining the feathers of his back, they produced a brown dust, the color of the feathers there. This dust was not in small quantities; for, upon striking his breast, the yellow powder flew in greater quantity than from a hair dresser's powder puff. The feathers of the belly and breast, which were of gold color, did not appear to have any thing extraordinary in their formation, but the large feathers in the shoulders and wings seemed apparently to be fine tubes, which upon pressure scattered this dust upon the finer part of the feather; but this was brown, the color of the feathers of the back. Upon the side of the wing, the ribs, or hard part of the feather, seemed to be bare as if worn, or, in our author's opinion, were rather renewing themselves, having before failed in their function. What is the reason of this extraordinary provision of nature, Mr. Bruce does not attempt to determine. But, as it is an unusual one, it is probably meant, he thinks, for a defence against the climate in favor of those birds, which live in those almost inaccessible heights of a country, doomed even in its lower parts to several months of excessive rain. This bird, from wing to wing, was eight feet four inches; from the tip of his tail to the point of his beak, when dead, four feet seven inches. He was remarkably short in the legs, being only four inches from the joining of the foot to where the leg joins the thigh, and from the joint of the thigh to the joining of his body six inches. The thickness of his thigh was little less than four inches; it was extremely muscular and covered with flesh. His middle claw was about two inches and a half long, not very sharp at the point, but extremely strong. From the root of the bill to the point was three inches and a quarter, and one inch and three-quarters in breadth at the root. A forked brush of strong hair, divided at the point into two, proceeded from the cavity of his lower jaw at the beginning of his throat. His eye was remarkably small in proportion to his bulk, the aperture being scarcely half an inch. The crown of his head, and the front where the bill and skull joined, were bald,

4. F. aquila fulvus, the tawny eagle or white tailed eagle of Edwards, has the whole plumage of a dusky brown: the breast marked with triangular spots of white, but which are wanting in the British kind: the tail is white, tipt with black; but in young birds dusky, blotched with white: the legs are covered to the toes with soft rust-colored feathers. These birds inhabit Hudson's Bay, and northern Europe as far as Drontheim. They are found on the highest rocks of the Uralian chain, where it is not covered with wood; but are most frequent on the Siberian, where they make their nests on the loftiest rocks. They are inferior in size to the sea eagle; but are spirited, and docile. The Tartars train them for the chase of hares, foxes, antelopes, and even wolves. The use is of considerable antiquity; for Marco Polo, the great traveller of 1269, observed and admired the diversion of the great cham of Tartary; who had several eagles, which were applied to the same purposes. The Tartars also esteem the feathers of the tail as the best for pluming their arrows. This species is frequent in Scotland; where it is called the black eagle, from the dark color of its plumage. It is very destructive to deer, which it will seize between the horns; and, by incessantly beating it about the eyes with its wings, soon makes a prey of the harassed animal. The eagles in the isle of Rum have nearly extirpated the stags that used to abound there. They generally build in clefts of rocks near the deer forests; and make great havoc among them, the white hares, and the ptarmigans. Willoughby gives the following curious account of the nest of this species. 'In 1668, in the woodlands near the river Darwent, in the peak of Derbyshire, was found an eagle's nest made of great sticks, resting one end on the edge of a rock, the other on two birch-trees; upon which was a layer of rushes, and over them a layer of heath, and upon the heath rushes again; upon which lay one young one and an addle egg; and by them a lamb, a hare, and three heath poults. The nest was about two yards square, and had no hollow in it.

The following account of the capture of four young of this species, when about three weeks old, is given by Mr. Bullock:—'On the 10th of June, 1812, they were seen in their aëry on the tremendous cliff called the West Craigs, in the Isle of Hoy (one of the Orkneys), the towering rocks of which rise to the perpendicular height of 1200 feet from the sea. About one-third of the way down this awful abyss a slender-pointed rock projected from the cliff, like the pinnacle of a Gothic building; on the extremity of this is a hollow, scarcely of sufficient size for the purpose for which these birds had fixed on it, i. e. as a place of security for rearing their young; the situation was such as almost to defy the power of man to molest their habitation; yet with the assistance of a short slender rope made of twisted hogs' bristles, did the well-known adventurous climber, or Rocksman, 'Woolley Tomson,' traverse the face of this frightful precipice, and for a trifling remuneration brought up the young birds.

'After a fatiguing scramble up the sides of the mountains, we arrived at the place from whence we could see the aëry beneath; the distance was so great that the young eagles appeared no larger than pigeons. After placing us in a secure situation on a projecting ledge of the rock, that commanded a view of the scene of action, Tomson left us, carrying his rope in his hand, and disappeared for upwards of half an hour; when, to our great joy, we discovered him creeping on his hands and knees up the spiry fragment, on which lay the unfledged eaglets; when, knowing he was then in our sight, he knelt on the top, and looking towards us, waved his hat. At this time it was impossible to see the situation he was in without trembling for his safety; the slender point of the rock on which he knelt was at least 800 feet above the surges of the Atlantic, which with unbroken violence were foaming beneath him. Yet he deliberately took from his pocket a cord, and tying the wings of the young birds, who made some resistance with their bills and talons, he put them into a basket, and began to descend, and in a few minutes the overhanging masses of stone hid him from our view. The old birds were in sight during the transaction, and made no attempt to defend their young; but, soaring about a quarter of a mile above, occasionally uttered a short shrill scream, very different from their usual barking noise. Had they attempted a rescue, the situation of the climber would have been extremely dangerous, as the slightest deviation or false step would have precipitated him into eternity, a misfortune that a few years since befel his brother on the same spot, when in his company.

'After waiting in a most painful state of suspense for near an hour, our climber suddenly made his appearance, and, laughing, presented his prize.'

5. F. aquila Groenlandicus, the falco fuscus of Latham, the dusky falcon of Pennant, or Greenland eagle, has dusky irides; lead-colored cere and feet; brown crown, marked with irregular oblong white spots; whitish forehead, blackish cheeks; the hind part of the head and throat white; breast and belly of a yellowish white, striped downwards with dusky streaks; the back dusky, tinged with blue; the ends of the feathers lightest, and sprinkled over with a few white spots, especially towards the rump; the wings of the same colors, variegated with white and black; the upper part of the tail dusky crossed very faintly with paler bars, the under side whitish. They inhabit all parts of Greenland, from the remotest hills to those which impend over the sea; and are even seen on the islands of ice remote from shore. They retire in the breeding season to the farthest part of the country, and return in autumn with their young. They breed in the same manner as the cinereous eagle, but in more distant places; and lay from three to five eggs. The tail of the young is black, with great brown spots on the exterior webs. They prey on ptarmigans, auks, and all the small birds of the country. They have frequent disputes with the raven, but seldom come off victors; for the raven, on being attacked, flings itself on its back; and either by defending itself with its claws, or by calling, with its croaking, numbers of others to its help, obliges the eagle to retire. The Greenlanders use the skin for their inner

garments; the wings for brushes; the feet for amulets; but seldom eat the flesh, unless compelled by hunger.

6. F. aquila haliætos, the balbuzard of Buffon, the osprey of Pennant and Latham, or the fishing-hawk of Catesby, weighs three pounds and a quarter; it measures from one tip of the wing to the other five feet and a half, but is hardly two feet long. The bill is black, with a blue cere; the iris of the eye is yellow, and the crown of the head brown, with a mixture of white feathers; from each eye backwards runs a brown stripe; the back, wings, and tail, are of a dark brown; the throat, neck, and belly, white; the legs and feet are rough and scaly, and of a pale blue color; the talons are black, and nearly of an equal size; the feathers of the thighs, contrary to others of the hawk kind, are short, and adhere close to them, for the more easily penetrating the water. Notwithstanding this bird is so persecuted by the bald eagle, yet it always keeps near its haunts. It is very quick-sighted, and will see a fish near the surface from a great distance, descend with prodigious rapidity, and carry the prey with an exulting scream high into the air. Sometimes the bird perishes in taking its prey; for, if it chances to fix its talons in an overgrown fish, it is drawn under water before it can disengage itself, and is drowned.

7. F. aquila leucocephalus, the bald eagle of Catesby and Latham, and the white-headed eagle of Pennant, is ash-colored, with the head and tail white; the iris of the eye is white, over which is a prominence covered with a yellow skin; the bill and cere are yellow, as well as the legs and feet; and the talons are black. Though it is only three feet long, it weighs nine pounds, is strong and full of spirit, preying on lambs, pigs, and fawns. They always make their nests near the sea or great rivers, and usually upon old pine or cypress trees, continuing to build annually on the same tree till it falls Though he is so formidable to all birds, yet he suffers them to build near his nest without molestation; particularly the fishing-hawk, herons, &c., which all build on high trees. The nests are very large and very fetid by reason of the relics of their prey. Lawson says, they breed very often, laying again under their callow young; whose warmth hatches the eggs. In Bhering's Isle they make their nests on the cliffs nearly six feet wide and one thick; and lay two eggs in the beginning of July. This species inhabits Europe, but is more common in America. It feeds also on fish. This, however, it does not procure for itself; but, sitting in a convenient spot, watches the diving of the osprey in the water after a fish, which, the moment it has seized, the bald eagle follows close after, when the osprey is glad to escape by dropping the fish from his bill; and such is the dexterity of the eagle, that it often seizes the prey before it can fall to the ground. Catesby says, the male and female are much alike.

8. F. aquila maculatus, the spotted eagle of Latham and Catesby, and crying eagle of Pennant, has a dusky bill and yellow cere; the color of the plumage is a ferruginous brown; the coverts of the wings and scapulars are elegantly varied with oval white spots; the primaries dusky, the ends of the greater white; the breast and belly are of a deeper color than the rest of the plumage, streaked downwards with dull yellow; the tail is dark brown, tipped with dirty white; the legs are feathered to the feet, which are yellow. The length of the bird is two feet. This species is found in many parts of Europe, but not in Scandinavia; is frequent in Russia and Siberia; and extends even to Kamptschatka. It is less spirited than other eagles, and is perpetually making a plaintive noise; from which it was styled by the ancients planga; and anataria, from its preying on ducks, which Pliny describes with great elegance. Lib. x. c. 3. The Arabs used to train it for the chase; but its quarry was cranes and other birds; the more generous eagle being flown at antelopes and various quadrupeds. This species was itself an object of diversion, and made the prey of even so small a bird as the sparrow-hawk; which would pursue it with great eagerness, soar above, then fall on it, and, fastening with its talons, keep beating it about the head with its wings, till they both fell together to the ground. Sir John Chardin saw this practised about Tauris.

9. F. aquila milvus, the kite, is a native of Europe, Asia, and Africa. This species generally breeds in large forests or woody mountainous countries. Its nest is composed of sticks, lined with several odd materials, such as rags, bits of flannel, ropes, and paper. It lays two, or at most three eggs; which, like those of other birds of prey, are much rounded and blunt at the smaller end. They are white, spotted with dirty yellow. Its motion in the air distinguishes it from all other birds, being so smooth and even that it is scarce perceptible. Sometimes it will remain quite motionless for a considerable space; at others glide through the sky without the least apparent action of its wings; from thence deriving the old name of glede, from the Saxon glida. They inhabit the north of Europe, as high as Jarisberg, in the south of Norway; but do not extend farther. They quit Sweden in flocks at the approach of winter, and return in spring. Some of them winter about Astrakan, but the greater part are supposed to retire into Egypt, being seen in September passing by Constantinople in their way from the north; and again in April returning to Europe, to shun the great heats of the east. They are observed in vast numbers about Cairo, where they are extremely tame, and feed even on dates, probably for want of other food. They also breed there; so that, contrary to the nature of other rapacious birds, they increase and multiply twice in the year; once in the mild winters of Egypt, and a second time in the summers of the north. They appear in Greece in the spring. In Britain they are found the whole year. Lord Bacon observes, that when kites fly high, it portends fair and dry weather. Kerr enumerates three varieties of this species, viz. the Siberian, Russian, and Jaic kites.

10. F. aquila ossifragus, the osprey, or sea eagle, with yellow cere, and half-feathered legs; is about the size of a peacock; the feathers are white at the base, iron-colored in the

middle, and black at the points; and the legs are yellow. It is found in several parts of Great Britain and Ireland. Willoughby tells us, that there was an aëry of them in Whinfield Park, Westmoreland; and the bird soaring in the air with a cat in its talons, which Barlow drew from the very fact which he saw in Scotland, is of this kind. The cat's resistance brought both animals to the ground, when Barlow took them up; and afterwards caused them to be engraved, as struggling, in the thirty-sixth plate of his Collection of Prints. Turner says, that in his days this bird was too well known in England; for it made terrible destruction among the fish. All authors indeed agree, that it feeds principally on fish, which it takes as they are swimming near the surface, by darting down upon them, not by diving or swimming, as some authors have pretended, who furnish it for that purpose with one webbed foot to swim with, and another divided foot to take its prey with. Martin, speaking of the great eagles of the Western Isles, says, that they fasten their talons in the back of the fish, commonly salmon, which are often above the water, or very near the surface. Those of Greenland will even take a young seal out of the water. It also preys on water-fowl. This species is frequent in North America, and was met with in Botany Island by captain Cook.

11. F. aquila Peruvianus, or furcatus; the Peruvian kite, or swallow-tailed hawk, has a black bill, less hooked than usual with rapacious birds; the eyes are large and black, with a red iris; the head, neck, breast, and belly, are white; the upper part of the back and wings a dark purple; but more dusky towards the lower parts, with a tincture of green. The wings are long in proportion to the body, and, when extended, measure four feet. The tail is dark purple mixed with green, and remarkably forked. This most elegant species inhabits only the south parts of North America; and that only during summer. They feed chiefly flying; for they are much on wing, and prey on various sorts of insects. They also feed on lizards and serpents; and will kill the largest of them with the utmost ease. They quit North America before winter, and are supposed to retreat to Peru.

12. F. aquila Sinesis, the Chinese eagle, is one of the largest of the sub-genus. The cere and legs are yellow; the body is reddish brown above and yellowish beneath. The bill and claws are large and black; the irides brown; the crown dusky; the coverts and quill-feathers marked with a dusky band. It inhabits India and China.

13. F. aquila tharus, the Chilese eagle, has a crest of black feathers on the head; legs and cere yellow; the body blackish white; feet scaly, with very strong claws. It is common in Chili; is about the size of a large capon, and feeds on dead carcases, like the bastard eagles. The female is smaller than the male, and grayish; and lays five eggs at a brood.

14. F. aquilinus, the aquiline falcon, or small American eagle, of Buffon, has yellow legs and cere; the upper parts blue; the under reddish-white; the neck purplish-red; the sides of the head downy, and hardly covered with feathers; eye-lids bristly; the orbits yellow; and irides orange colored; the bill blue, and claws black. The male is from sixteen to eighteen inches long; the female twenty-three. It inhabits South America.

15. F. buteo, the buzzard, is the most common of the hawk kind in England. It breeds in large woods, and usually builds on an old crow's nest, which it enlarges, and lines with wool and other soft materials. It lays two or three eggs, perfectly white, or spotted with yellow. The cock buzzard will hatch and bring up the young, if the hen is killed. The young keep company with the old ones for some time after they quit the nest; which is not usual with other birds of prey, who always drive away their brood as soon as they can fly. This bird is very sluggish and inactive, and is much less in motion than other hawks; remaining perched on the same bough for the greatest part of the day, and is found at most times near the same place. It feeds on birds, rabbits, moles, and mice; it will also eat frogs, earthworms, and insects. This species is subject to some variety in color. Some have their breast and belly of a brown color, and are only marked across the craw with a large white crescent; but usually the breast is of a yellowish white, spotted with oblong rust-colored spots, pointing downwards: the back of the head and neck, and coverts of the wings, are of a deep brown, edged with a pale rust-color; the middle of the back covered only with a thick white down. The tail is barred with black, and ash-color, and sometimes with ferruginous.

16. F. cachinnans, the laughing falcon, has yellowish legs and cere, and white eye-brows; the body is variegated with brown and white; and it has a black ring round the top of the head. It makes a laughing kind of noise when it observes any person, and is a native of South America.

17. F. candicans, the white gyrfalcon of Pennant, has legs and cere of a bluish ash, the bill bluish, and greatly hooked; the eye dark blue; the throat of a pure white; the whole body, wings, and tail of the same color, most elegantly marked with dusky bars, lines, or spots, leaving the white the far prevailing color. There are instances, but rare, of its being found entirely white. In some the whole tail is crossed by remote bars of black or brown; in others, they appear only very faintly on the middle feathers: the feathers of the thighs are very long and unspotted: the legs strong, and of a light blue. Its weight is forty-five ounces Troy; length near two feet; extent four feet two inches. This species has the same manners and haunts with the Iceland falcon. It is very common in Iceland; is found in Lapland and Norway; but rarely in the Orkneys and North Britain. In Asia it dwells in the highest points of the Uralian and other Siberian mountains, and dares the coldest climates throughout the year. It is kept in the latitude of Petersburgh, uninjured in the open air during the severest winters. This bird is pre-eminent in courage as well as beauty, and is the terror of other hawks. It was flown at all kinds of fowl, how great soever, but its chief game was herons and cranes. This species, with

the Iceland and Greenland falcons, are reserved for the kings of Denmark; who send their falconer with two attendants annually into Iceland to purchase them. They are caught by the natives, a certain number of whom in every district are licensed for that purpose. The falconer examines the birds, rejects those which are not for his purpose, and gives the seller a written certificate of the qualities of each, which entitles him to receive payment from the king's receiver-general. They are taken in the following manner:—Two posts are fastened in the ground, near their haunts. To one is tied a ptarmigan, a pigeon, and a cock or hen, fastened to a cord, that it may flutter, and so attract the attention of the falcon. On the other post is placed a net, distended on a hoop, about six feet in diameter. Through this post is introduced a string, above 100 yards long, which is fastened to the net, in order to pull it down; and another is fastened to the upper part of the hoop, and goes through the post to which the bait is tied. As soon as the falcon sees the fowl flutter on the ground, he takes a few circles in the air, to see if there is any danger, then darts on his prey with such violence as to strike off the head, as nicely as if it was done with a razor. He then usually rises again, and takes another circle, to explore the place a second time; after which he makes another stoop, when, at the instant of his descending, the man pulls the dead bird under the net; and, by means of the other cord, covers the falcon with the net at the moment it has seized the prey; the person lying concealed behind some stones, or flat on his belly, to elude the sight of the falcon. As soon as one is caught, it is taken gently out of the net, for fear of breaking any of the feathers of the wings or tail: and a cap is placed over its eyes. If any of the tail feathers are injured, the falconers have the art of grafting others.

18. F. columbarius, the pigeon-hawk of Catesby, weighs about six ounces. The bill is black at the point, and whitish at the base: the iris of the eye is yellow; the base of the upper mandible is covered with a yellow wax; the upper parts of the body and wings are brown: the tail is brown, but has four white bars. The interior vanes of the quill feathers have large red spots. The tail is marked with large regular transverse white lines; the throat, breast, and belly, are white, mixed with brown; the small feathers that cover the thighs reach within half an inch of the feet, and are white, with a tincture of red beset with long spots of brown; the legs and feet are yellow. It inhabits America, from Hudson's Bay as low as South Carolina. In the last it attains to a larger size. In Hudson's Bay it appears in May on the banks of the Severn, breeds, and retires south in autumn. It feeds on small birds; and on the approach of any person flies in circles, and makes a great shrieking. It forms its nest in a rock, or some hollow tree, with sticks and grass, and lines it with feathers: and lays from two to four eggs, white, spotted with red. In Carolina it preys on pigeons, and the young of wild turkeys.

19. F. gentilis, the gentle falcon, inhabits the north of Scotland, and was in high esteem in the days of falconry. It makes its nest in rocks: it is larger than the goshawk; the cere and legs are yellow, the head of a light rust color, with black streaks; the whole upper side from chin to tail white, with dusky heart-shaped spots: the back of a brown color; the tail barred with four or five bars of black, and as many of ash-color; the tips of all the tail feathers white.

20. F. gypætus albicilla, the cinereous bastard eagle, is inferior in size to the golden eagle; the head and neck are of a pale ash color; the body and wings cinereous, clouded with brown; the quill feathers very dark: the tail white; the legs feathered but little below the knees, and of a very bright yellow. The male is of a darker color than the female. The bill of this species is rather straighter than usual, which seems to have induced Linnæus to rank it among the vultures. But Pennant observes, that it can have no title to be ranked with that genus, the characteristical mark of which is, that the head and neck are either quite bare, or only covered with down; whereas this bird is wholly feathered. This species is in size equal to the black eagle, and inhabits Europe as high as Iceland and Lapland, and particularly the north of Scotland. It is common in Greenland, but does not extend to America; or according to Pennant, if it does, it varies into the white-headed eagle, to which it has great affinity, particularly in its feeding much on fish; the Danes therefore call it fiskeorn. It is common in the south of Russia, and about the Volga, as far as trees will grow; but is very scarce in Siberia. It inhabits Greenland the whole year, sitting on the rocks with flagging wing, and flies slowly. It makes its nest on the lofty cliffs, with twigs, lining the middle with mosses and feathers: lays two eggs, and sits in the end of May, or beginning of June. These birds prey on young seals, which they seize while floating on the water; but oftentimes, by fixing their talons in an old one, they are overmatched, and drawn down to the bottom, screaming horribly. They feed also on fish, especially the lump-fish, and a sort of trout: on ptarmigans, auks, and eider ducks. They sit on the top of rocks, attentive to the motion of the diving-birds; and with quick eyes observe their course by the bubbles which rise to the surface of the water, and catch the fowls as they rise for breath. The Greenlanders use their skins for clothing next to their bodies; eat the flesh, and keep the bill and feet for amulets. They kill them with the bow, or take them in nets placed in the snow properly baited; or tempt them by the fat of seals, which the eagles eat to an excess, and which occasions such a torpidity as to make them an easy prey. In Scotland and the Orkneys they feed on land animals as well as fish.

21. F. gypætus barbatus, the bearded bastard eagle, or bearded vulture of Linnæus, is of a whitish fiery-red color, brown on the back, with a black stripe above and below each eye. It inhabits the Alps, is four feet long, and ten feet in extent; the bill is of an ash color, mixed with reddish; fringed at the sides and below with stiff black bristles. The wings have twenty-eight bright ash-colored quill feathers, and the tail twelve. This species build their nests in the caverns of

inaccessible rocks, and lay four or five eggs each brood. They keep in small flocks, and feed on dead carcases, like the vulture tribe, which they resemble in general appearance; but they have their head and necks covered with feathers, and prey on living animals, as chamois, goats, and lambs.

22. F. gypætus harpyja, the harpy, the vulture harpyja of Linnæus, the yzquachtli, or crested eagle of Willoughby, has a crest of long feathers on the hind head: the back, neck, and crest are black; the under parts variegated with black, white, and tawny; under the maw the feathers are long and white, and, when irritated, hang down almost to the ground; the eyes have a nictitating membrane. This species inhabit the warm parts of America; are almost as large as a sheep, and are said to be able to cleave a man's skull with one stroke.

23. F. gypætus serpentarius, the secretary, or vultur serpentarius of Latham, is of a dark leaden color; has a crest on the hind head, which he can erect or depress at pleasure; the legs are remarkably long; the claws short, black, and hooked; the wing quills, vent feathers, and thighs are black; and the two mid tail quills much longer than the rest. It is about three feet high when erect; the space round the eyes is orange colored; the irides pale ash; the bill is black with a white cere, but wants the bristly beard, which is a characteristic of the subgenus of gypæti;—a circumstance, which, with the great length of its legs, induced Gmelin to rank this species as a distinct subgenus. These birds inhabit Africa, Asia, and the Philippines. They prey on quadrupeds of the order of glires, and on amphibious animals, but are easily tamed.

24. F. gyrfalco, the Iceland falcon, or brown gyrfalcon, has a strong bill, much hooked, the upper mandible sharply angulated on the lower edges, with a bluish cere: the head is of a very pale rust color, streaked downwards with dusky lines; the neck, breast, and belly, are white, marked with cordated spots; the thighs white, crossed with short bars of deep brown: the back and coverts of the wings are dusky, spotted, and edged with white: the exterior webs of the primaries dusky mottled with reddish white, the inner barred with white; the feathers of the tail are crossed with fourteen or more narrow bars of dusky and white; the dusky bars regularly opposing those of white: the wings, when closed, reach almost to the end of the train: the legs are strong and yellow. The length of the wing, from the pinion to the tip, is sixteen inches. This species is an inhabitant of Iceland, and is the most esteemed of any for the sport of falconry. They will last ten or twelve years; whereas those of Norway, and other countries, seldom are fit for sport after two or three years' use.

25. F. lanarius, the common lanner, has the cere yellow, sometimes bluish; the legs and bill blue; the breast white, tinged yellow, with brown spots; the wing quills and tail dusky, with oval rusty spots: and has a white line over each eye. This species is about the size of the buzzard; inhabits Europe, the Uralian, Baraba, and Tartarian deserts; but is rarely found in Britain. It builds on low trees, and is migratory.

26. F. nisus, the sparrow-hawk, with green cere, yellow legs, a white belly undulated with gray, and the tail marked with blackish belts. This is the most pernicious hawk we have; and makes great havoc among pigeons and partridges. It builds in hollow trees, in old nests of crows, large ruins, and high rocks: it lays four white eggs, encircled near the blunt end with red specks.

27. F. palumbarius, the goshawk of Ray, with black cere edged with yellow; yellow legs, a brown body, the prime feathers of the tail marked with pale streaks, and the eyebrows white. It was once in high esteem among falconers, being flown at cranes, geese, pheasants, and partridges. It breeds in Scotland, and builds its nest in trees. It is very destructive to game, and dashes through the woods with vast impetuosity; but if it cannot catch the object of its pursuit almost immediately, desists, and perches on a bough till some new game appears. This species is common in Muscovy and Siberia. They extend to the river Amur; and are used by the emperor of China in his sporting progresses, attended by his grand falconer, and 1000 of the subordinates. Every bird has a silver plate fastened to its foot, with the name of the falconer who has the charge of it; that in case it should be lost it might be brought to the proper person.

28. F. subbuteo, the hobby, was used like the kestrel in the humbler kind of falconry; particularly in what was called daring of larks: the hawk was cast off; the larks, aware of their most inveterate enemy, were fixed to the ground for fear; by which means they became a ready prey to the fowler, by drawing a net over them. The back of this bird is brown; the nape of the neck white; and the belly pale, with oblong brown spots. It is a bird of passage; but breeds in Britain, and migrates in October.

29. F. sufflator, the Surinam falcon, has yellowish cere and legs; the body is of a brownish white color: and the coverts of the eyes are bony. He has a fleshy lobe between the nostrils; which Rolander says, when angry or terrified, he inflates till his head becomes as big as his whole body.

30. F. tinnunculus, the kestrel, breeds in the hollows of trees, in the holes of high rocks, towers, and ruined buildings. It feeds on field mice, small birds, and insects; which it discovers at a great distance. This is the hawk that we so often see in the air fixed in one place; and, as it were, fanning it with its wings; at which time it is watching for its prey. When falconry was in use in Great Britain, this species was trained for catching small birds and young partridges. It is easily distinguished from all other hawks, by its colors. The crown of the head and the greater part of the tail are of a fine light gray; the back and coverts of the wing of a purplish red, elegantly spotted with black: the whole under side of the bird of a pale rust-color spotted with black. The male weighs six ounces; the female eleven.

31. F. versicolor, the variegated falcon, or spotted falcon of Pennant, inhabits England; is about the size of the common buzzard; and has the bill black; the cere and legs yellow; the

head and upper parts white, with light reddish brown spots; the wings dusky and barred with ash; the rump and under parts white; the breast being marked with a few rusty spots; and the tail quills barred with light and dark brown.

FAL'CON, *n. s.* } Fr. *faucon;* Lat. *falco;*
FALCONER, *n. s.* } Ital. *falconne;* 'à rostro
FALCONET. } falcato sive aduncо,' from the falcated or crooked bill, says Dr. Johnson. A hawk trained for sport; a kind of cannon: a falconer is one who breeds and trains hawks; one who follows the sport of fowling with hawks.

Mahomet sent janizaries and nimble footmen, with certain *falconets* and other small pieces, to take the streights. *Knollcs.*

Hist! Romeo, hist! O for a *falconer's* voice,
To lure this tarsel gentle back again. *Shakspeare.*

As Venus' bird, the white, swift, lovely dove,
O! happy dove that art compared to her,
Doth on her wings her utmost swiftness prove,
Finding the gripe of *falcon* fierce not far. *Sidney.*

Air stops not the high soaring of my noble *falcon.* *Walton.*

ne universal remedy was swallowing of pebble-stones, in imitation of *falconers* curing hawks. *Temple.*

I have learned of a *falconer* never to feed up a hawk when I would have him fly.
Dryden. Don Sebastian.

Apulian farms, for the rich soil admired,
And thy large fields where *falcons* may be tired.
Dryden.

Say, will the *falcon,* stooping from above,
Smit with her varying plumage, spare the dove?
Pope.

A *falconer* Henry is, when Emma hawks:
With her of tarsels, and of lures he talks. *Prior.*

[A *falcon* is] a sort of cannon, whose diameter at the bore is five inches and a quarter, weight seven hundred and fifty pounds; length seven feet; load two pounds and a quarter; shot two inches and a half diameter, and two pounds and a half weight. *Harris.*

Falconet is a sort of ordnance, whose diameter at the bore is four inches and a quarter, weight four hundred pounds, length six feet, load one pound and a quarter, shot something more than two inches diameter, and one pound and a quarter weight. *Id.*

FALCON, in heraldry, is usually represented with bells tied on his legs: when decorated with hood, bells, virols (or rings), and leishes, then in blazon he is said to be hooded, belled, jessed and leished, and the colors thereof must be named.

FALCONER. See FALCONRY. The French kings had a grand falconer, an office dismembered from that of grand veneur, as early as the year 1250. A falconer should be well acquainted with the quality and mettle of his hawks, that he may know which of them to fly early, and which late. Every night after flying he should give them casting; one while plumage, sometimes pellets of cotton, and at another time physic, as he finds necessary. He ought also every evening to make the place clean under the perch, that by her casting he may know whether she wants scouring upwards or downwards. He must water his hawk every evening, except on such days as she has bathed; after which, at night, she should be put into a warm room, having a candle burning by her, where she is to sit unhooded, if she be not ramage, that she may prick and prune herself. He should always carry proper medicines into the field, as hawks frequently meet with accidents there. He must take with him all his hawking implements; and should be skilful in making lures, hoods of all sorts, jesses, bewets, and other furniture. He ought to have his coping irons, to cope his hawk's beak when overgrown, and to cut her pounces and talons as there shall be occasion: nor should his cauterising irons be wanting

FALCONER (William), an ingenious Scotch sailor and poet, born in the county of Fife, of humble parentage. He was bred to the sea; and, though he possessed few of the advantages which result from education, he had good natural talents, which he cultivated with assiduity. In 1751 he published a poem on the death of the prince of Wales, which possesses considerable merit; but his reputation rests on The Shipwreck, a poem in three cantos, in which he beautifully describes the scenes he himself witnessed, being shipwrecked in a voyage from Alexandria to Venice, when only three of the crew were saved. The motto is taken from the second book of the Æneid:—

Quæque ipse miserrima vidi,
Et quorum pars magna fui.

The publication of the Shipwreck recommended him to the then duke of York; to whom he afterwards wrote an Ode, which obtained him the post of purser to the Royal George. He also published a very useful and laborious work, entitled The Marine Dictionary, in one vol. 4to., besides a poem against Wilkes and Churchill, under the title of The Demagogue. In 1770 he went out a volunteer in the Aurora frigate, sent to carry Messrs. Vansittart, Scraston, and Ford, the supervisors appointed to regulate our East India settlements; which vessel, after it had touched at the Cape of Good Hope, was never more heard of. Falconer is said to have been the author of the popular song—The Storm.

FALCONER (William), M. D., was born at Chester in 1743; and his father was for some time recorder of that city. He studied medicine at Edinburgh, and took his doctor's degree there in 1766; after which he established himself at Bath. He became physician of the general hospital of that city, and was elected a member of the Royal Society, to whose Transactions, as well as to those of the Manchester Philosophical Society, he was a frequent and valuable contributor. Dr. Falconer, after a long and useful life, died at Bath, August 30th 1824. His principal works are, 1. Dissertatio de Nephritide vera. 2. Essay on Bath Waters, 2. vols, 8vo. 3. Observations on Dr. Cadogan's Dissertation on the Gout, 8vo. 4. Observations and Experiments on the Poison of Copper, 8vo. 5. Essay on the Water commonly used at Bath, 8vo. 6. Experiments and Observations, 3 parts, 8vo. 7. Observations on Diet and Regimen for Valetudinarians, 8vo. 8. Remarks on the Influence of Climate, 4to. 9. Account of the Epidemic Catarrhal Fever, called the Influenza, 8vo. 10. On the Influence of the Passions upon the Disorders of the Body, 8vo. 11. Essay on the Preservation of the Health of Persons employed in

Agriculture, 8vo. 12. Practical Dissertation on the Effects of Bath Waters, 8vo. 13. Tracts and Collections relating to Natural History, 4to. 14. Observations respecting the Pulse, 8vo. 15. Examination of Dr. Heberden's Observations on the Plague, 8vo. 16. Account of an Epidemical Catarrhal Fever at Bath in 1803, 8vo. 17. Dissertation on Ischias, or the Disease of the Hip-joint. 18. Arrian's Voyage round the Euxine Sea translated, with a Geographical Dissertation, and Three Discourses, 4to.

FALCONETTO (John Maria), a celebrated architect of Verona, was born in 1458, and died in 1534. He erected the church della Madonna delle Grazie, at Padua; and a music-hall, praised by Serlio, who called it La Rotonda di Padova. This building is said to have suggested to Palladio the idea of the villa Capra, which served as the model of the duke of Devonshire's house, at Chiswick. Falconetto built several other palaces and churches in Italy, where his works are highly esteemed.

FALCONIA (Proba), an Etrurian Christian poetess who flourished in the reign of the emperor Honorius, towards the end of the fourth century. She composed a celebrated cento from the works of Virgil, comprising the history of the Old Testament, and that of Jesus Christ, from the Gospels. The best edition is that of Wolfius, 1734, 4to.

FALCONNET (Stephen Maurice), a French sculptor of the eighteenth century, of low extraction but who happily obtained the assistance of Lemoine in his studies. Catharine II. of Russia ultimately patronised him, and he was employed by her to execute the colossal statue of Peter the Great at Petersburgh. He wrote notes on the thirty-fourth and thirty-fifth books of Pliny's Natural History; Observations on the Statue of Marcus Aurelius; and other works relating to the arts, printed together in 6 vols. 8vo., Paris, 1781: and died at Paris in 1791.

FALCONRY, the art of training different kinds of hawks, but more especially the larger ones, called falcons, to the art of taking wild fowl, &c.

Falconry was anciently a favorite amusement in Britain, and to carry a hawk was esteemed a distinction of a man of rank. The Welsh had a saying, that you may know a gentleman by his hawk, horse, and greyhound. In those days a person of rank seldom went without one on his hand. Even the ladies were not without them; and in an ancient sculpture in the church of Milton Abbas, in Dorsetshire, appears the consort of king Athelstan, with a falcon on her hand, tearing a bird.

Though generally disused, this amusement is partially reviving in some places, and has never been wholly discontinued in certain favorable districts.

'In our own country, however,' says Mr. Pennant, 'I cannot trace the certainty of falconry till the reign of king Ethelbert, the Saxon monarch, in the year 760, when he wrote to Germany for a brace of falcons, which would fly at cranes and bring them to the ground, as there were very few such in Kent.'

Of the Anglo-Saxons, Mr. Turner says, 'Hawks and falcons were also favorite subjects of amusement, and valuable presents in those days, when the country being much over-run with wood, all species of the feathered race must have abounded. A king of Kent begged of a friend abroad, two falcons of such skill and courage as to attack cranes willingly, and, seizing them, to throw them to the ground. We may infer the common use of the diversion from his forbidding his monks to hunt in the woods with dogs, and from having hawks and falcons. An Anglo-Saxon, by his will, gives two hawks (hafocas), and all his stag-hounds (header hundas), to his natural lord. The sportsmen in the train of the great were so onerous on lands, as to make the exemption of their visit a privilege. Hence a king liberates some lands from those who carry with them hawks or falcons, horses or dogs. The Saxon calendar, in its drawings, represents hawking in the month of October.'

The Saxon Dialogues in the Cotton library speak thus of the fowler:—'How do you deceive fowls?' 'Many ways; sometimes with nets, sometimes with gins, sometimes with lime, sometimes whistling, sometimes with hawks, sometimes with traps.' 'Have you a hawk?' 'I have!' 'Can you tame them?' 'I can; what use would they be to me if I could not tame them?' 'Give me a hawk.' 'I will give it willingly if you will give me a swift hound; which hawk will you have, the greater or the less?' 'The greater; how do you feed them?' 'They feed themselves and me in winter, and in spring I let them fly to the woods. I take for myself young ones in harvest, and tame them.' 'And why do you let them fly from you when tamed?' 'Because I will not keep them in summer as they eat too much.' 'But many feed and keep them tame through the summer that they may again have them ready.' 'So they do, but I will not have that trouble about them as I can take many others.'

'It seems highly probable,' continues Mr. Pennant, 'that falconry had its rise in Scythia, and passed thence to the northern parts of Europe. Tartary is even at present celebrated for its fine breed of falcons; and the sport is in such general esteem, that, according to Olearius, there was no hut but what had its eagle or falcon. The boundless plains of that country are as finely adapted to the diversion, as the wooded or mountainous nature of most parts of Europe is ill calculated for that rapid amusement.'

To the Romans this diversion was scarcely known in the days of Vespasian; yet it was introduced soon after. Probably they adopted it from the Britons; but they greatly improved it by the introduction of spaniels into the island. In this state it appears among the Britons in the sixth century. Gildas, in his first epistle, speaking of Maglocunus, on his relinquishing ambition, and taking refuge in a monastery, compares him to a dove, that with various turns and windings takes her flight from the talons of the hawk. In after times hawking was the principal amusement of the English: a person of rank scarce stirred out without his hawk on his hand: which in old paintings is the criterion of nobility. Harold, afterwards king of England, when he went on an embassy into Normandy, is painted

embarking with a bird on his hand, and a dog under his arm: and in an ancient picture of the nuptials of Henry VI. a nobleman is represented in the same manner; for in those days 'it was thought sufficient for noblemen to winde their horn, and to carry their hawk fair, and leave study and learning to the children of mean people!' In short, this diversion was, among the ancient English, the pride of the rich, and the privilege of the poor; no rank of men seems to have been excluded from it: we learn from the book of St. Alban's, that every degree had its peculiar hawk, from the emperor down to the holy-water clerk. Vast was the expense that sometimes attended this sport. In the reign of James I. Sir Thomas Monson is said to have given £1000 for a cast of hawks: we are not then to wonder at the rigour of the laws made to preserve a sport that was carried to such an extravagant pitch. In the 34th of Edward III. it was made felony to steal a hawk; to take its eggs even in a person's own ground, was punishable with imprisonment for a year and a day, besides a fine at the king's pleasure: in queen Elizabeth's reign, the imprisonment was reduced to three months; but the offender was to find security for seven years, or lie in prison till he did.

The Norwegian breed was, in old times, in high esteem in England: they were thought bribes worthy a king. Geoffrey Fitzpierre gave two good Norway hawks to king John, to obtain for his friend Walter Le Madena, the liberty of exporting 100 weight of cheese; and Nicholas, the Dane, was to give the king a hawk every time he came to England, that he might have free liberty to traffic throughout the king's dominions. They were also made the tenures by which some nobles held their estates from the crown. Thus Sir John Stanley had a grant of the Isle of Man from Henry IV. to be held of the king, his heirs, and successors, by homage and the service of two falcons, on the day of his or their coronation. And Philip de Hasting held his manor of Combertoun, in Cambridgeshire, by the service of keeping the king's falcons.

In order to instruct them, the following method is generally pursued:—When a hawk or falcon is taken, she must be seeled in such a manner, that, as the seeling slackens, she may see what provision lies before her; but care ought to be taken, not to seel her too hard. A falcon or hawk newly taken should have all new furniture, as new jesses of good leather, mailled leashes with buttons at the end, and new bewits. There should also be provided a small round stick, to stroke the hawk; because, the oftener this is done, the sooner and better will she be manned. She must also have two large bells, 'that she may be found when she scattereth.' Her hood should be well fashioned, raised, and embossed against her eyes, deep, and yet strait enough beneath, that it may fasten about her head without hurting her; and her beak and talons must be a little coped, but not so near as to make them bleed. A soar falcon, which has passed the seas, will be harder to reclaim, but will prove the best of falcons. Her food must be good and warm, and given twice or thrice a day, till she be full gorged: the best for this purpose is pigeons, larks, or other live birds; because she must be broken off by degrees from her accustomed feeding. When she is fed, you must whoop and lure, that she may know when you intend to give her meat. On this occasion she must be unhooded gently; and, after giving her two or three bits, her hood must be put on again, when she is to get two or three bits more. Care must be taken that she be close seeled; and after three or four days her diet may be lessened; the falconer setting her every night to perch by him, that he may awaken her often in the night. In this manner he must proceed, till he find her grow tame and gentle; and, when she begins to feed eagerly, he may give her a sheep's heart. He may now begin to unhood her in the day time, but it must be far from company, first giving her a bit or two, then hooding her gently, and giving her as much more. When she is sharp set, he may now unhood her, and give her some meat just against his face and eyes, which will make her less afraid of the countenances of others. She must be borne continually on the hand, till she is properly manned, causing her to feed in company, giving her in the morning, about sun-rise, the wing of a pullet; and in the evening, the foot of a hare or coney, cut off the joint, flead and laid in water, which being squeezed is to be given her with the pinion of a hen's wing. For two or three days give her washed meat, and then plumage in more or less quantity as she is thought to be more or less foul within. After this, being hooded again, she is to get nothing till she has gleamed and cast, when a little hot meat may be given her in company; and, towards evening, she may be allowed to plume a hen's wing in company also. Cleanse the feathers of her casting, if foul and slimy; if she be clean within, give her gentle castings; and when she is reclaimed, manned, and made eager and sharp set, feed her on the lure.

The lure is a piece of red stuff or wool, on which are fixed a bill, talons, and wings. To this is likewise fastened a piece of that flesh on which the bird feeds, and the lure is thrown out to him. When they intend to reclaim or recall him, the sight of food brings him back; and in time the voice will be sufficient. The various plumage with which the lure is set off is called a 'drawer.' When they accustom the hawk to fly at a kite, a heron, or a partridge, they change the drawer according to the kind of game to which he is to be devoted. When this is a kite, they fix the bill and feathers of that bird to the lure; and so of the rest: and in order to entice the bird to his object, they fasten beneath the drawer or plumage, the flesh of a chicken, or other fowl, occasionally seasoned with sugar and spices, together with marrow and other delicacies. Three things are to be considered before the lure be showed her: 1. That she be bold and familiar in company, and not afraid of dogs and horses. 2. Sharp set and hungry, having regard to the hour of morning and evening, when you would lure her. 3. Clean within, and lure well garnished with meat on both sides; and when you

intend to give her the length of a leash, you must abscond. She must also be unhooded, and have a bit or two given her on the lure as she sits on your fist; afterwards take the lure from her, and hide it that she may not see it; and, when she is unseeled, cast the lure so near her, that she may catch it within the length of her leash, and as soon as she has seized it, use your voice, feeding her upon the lure, on the ground, with the heart and warm thigh of a pullet. Having so lured your falcon, give her but little meat in the evening; and let this luring be so timely, that you may give her plumage next morning on your fist. When she has cast and gleamed, give her a little warm meat. About noon, tie a creance to her leash; and going into the field, there give her a bit or two upon her lure; then unwind the creance, and draw it after you a good way; and let him who has the bird hold his right hand on the tassel of her hood, ready to unhood her as soon as you begin to lure; to which if she come well, stoop roundly upon it, and hastily seize it, let her cast two or three bits thereon. Then, unseizing and taking her off the lure, hood her and give her to the man again; and going farther off, till she is accustomed to come freely and eagerly to the lure; after which she may be lured in company taking care that nothing affright her. When she is used to the lure on foot, she is to be lured on horseback; which may be effected the sooner, by causing horsemen to be about her when lured on foot. When she has grown familiar to this way, let somebody on foot hold the hawk, and the person on horseback must call and cast the lure about his head, the holder taking off the hood by the tassel; and if she seize eagerly on the lure without fear of man or horse, then take off the creance, and lure her at a greater distance. If you would have her love dogs as well as the lure, call dogs when you give her her living or plumage. After this, she may be allowed to fly, in a large field, unencumbered with trees. To excite her to fly, whistle softly; unhood her, and let her fly with her head to the wind; as she will thus the more readily get upon the wing, and fly upwards. The hawk sometimes flies from the falconer's fist, and takes stand on the ground: this is a fault very common with soar falcons. To remedy this, fright her up with your wand; and, when you have forced her to take a turn or two, take her down to the lure, and feed her. But if this does not do, then you must have in readiness a duck seeled, so that they may see no way but backwards, and that will make her mount the higher. Hold this duck in your hand, by one of the wings near the body; then lure with the voice, to make the falcon turn her head; and when she is at a reasonable pitch, cast your duck up just under her; when, if she strike, stoop, or truss the duck, permit her to kill it, and reward her by giving her a reasonable gorge. After you have practised this two or three times, your hawk will leave the stand, and, delighted to be on the wing, will be very obedient. It is not convenient, for the first or second time, to show your hawk a large fowl; for such often escape from the hawk, and she rakes after them: this gives the falconer trouble, and frequently occasions the loss of the hawk But if she happens to pursue a fowl, and being unable to recover it gives it over, and comes in again directly, then cast out a seeled duck; and if she stoop and truss it across the wings, permit her to take her pleasure, rewarding her also with the heart, brains, tongue, and liver. If you have not a quick duck, take her down with a dry lure, and let her plume a pullet and feed upon it. A hawk will thus learn to give over a fowl that rakes out, and on hearing the falconer's lure, will make back again, and know the better how to hold in the head. Some hawks have a disdainful coyness, proceeding from their being high fed: such a hawk must not be rewarded though she should kill, but may be allowed to plume a little: then taking a sheep's heart cold, or the leg of a pullet, when the hawk is busy in pluming, let either of them be conveyed into the body of the fowl, that it may savour of it; and when the hawk has eaten the heart, brains, and tongue of the fowl, take out what is enclosed, call her to your fist, and feed her with it; afterwards give her some of the feathers of the fowl's neck, to scour her, and make her cast.

When falcons are taught to fly at rabbits, hares, &c., it is called 'flying at the fur;' and some are instructed to fly at the fur and the plume, or to the pursuit of hares and rabbits, as well as of pheasants and partridges, &c. For this purpose, when the falcon is very tame, they take a hare's skin stuffed with straw; and having fixed to it a piece of chicken's flesh, or such food as the falcon is most fond of, they tie this skin, with a long cord, to the girth of a horse, and, as the skin is thus dragged along, the bird imagines it to be a hare in flight, and is allowed to dart upon it; and is thus taught to distinguish the animal. Falcons of the larger kind have been taught to fly at the roebuck, and even at the wild boar, and the wolf. With this view they should be accustomed to feed, when young, from out of the sockets of the eyes of a wolf's or boar's head; the whole skin of the animal being stuffed, so as to make it appear alive. While the bird is feeding, the falconer begins to move the figure gradually; in consequence of which the bird learns to fasten itself so as to stand firm, notwithstanding the precipitate motions with are gradually given to the stuffed animal. He would lose his meal if he quitted his hold, and therefore he takes care to secure himself. When these first exercises are finished, the skin is placed on a cart, drawn by a horse at full speed; the bird follows it, and is particularly feeding; and then, when they come to fly him in the field, he never fails to dart on the head of the first beast of the kind he discovers, and begins to scoop out the eyes. This puts the animal into such distress, that the hunters have time to approach, and despatch it with their spears.

FA'LDAGE, *n. s.* } Barbarous Lat. *falda-*
FALDFEE. } *gium.* A privilege which anciently several lords reserved to themselves of setting up folds of sheep, in any fields within their manors, the better to manure them; and this not only with their own, but their tenants' sheep: faldfee is a composition paid anciently by tenants for the privilege of faldage.

Faldage in some places they call a foldcourse or fraehold. *Harris.*

Faldfee, or fey, is a term which was formerly used to denote a rent or fee paid by certain customary tenants for the liberty of folding their sheep upon their own lands. *Dr. A. Rees.*

FALDING, *n. s.* } Sax. ꝼealꝺ, ꝼalꝺ; Goth.
FALDSTOOL, } *falder* (whence our word
FALDUSTOR. } fold). A kind of coarse cloth; fold or wrapper: faldstool is a folding stool, or chair; a kind of stool placed at the south side of the altar, at which the kings of England kneel at their coronation: faldustor the extract explains.

Faldustor was anciently used to signify the highest seat of a bishop, inclosed round with a lattice. *Dr. A. Rees.*

FALERII, in ancient geography, a town and territory of Etruria, on the west or right side of the Tiber. The territory was famous for its rich pastures; hence the gramen Faliscum in authors. Eutropius and Frontinus call the town Falisci; which, according to the last, was surnamed Colonia Junonia.

FALISCI, the people of Falerii, called Æqui by Virgil, because they afforded supplemental laws to the twelve tables. When the Falisci were besieged by Camillus, a schoolmaster went out of the gates of the city with his pupils, and proposed to betray them into the hands of the Roman enemy, that by such a possession he might easily oblige the place to surrender. Camillus heard the proposal with indignation, and ordered the man to be stripped naked, and whipped back to the town by the boys whom he wished to betray. This instance of generosity operated upon the people so powerfully, that they surrendered to the Romans.

FALK or FALCK (John Peter), a disciple of Linné, studied at Upsal, and was appointed director of the cabinet of natural history, at St. Petersburgh; and also professor of botany in the garden of the apothecaries in that metropolis. In 1768 the Imperial Academy of Sciences engaged Falk to assist in exploring the Russian dominions; and he travelled for that object as far as Kasan, when he was recalled. Being afflicted with hypochondria he went to use the baths of Kisliar, and returned to Kasan much relieved: but his complaint recurring with violence, he put an end to his life by shooting himself through the head with a pistol, March 31st, 1774. The Travels of Falk were published from his papers, by professor Laxman, in 3 vols. 4to. Petersburgh, 1785.

FALKENSTEIN (John Henry), a voluminous writer of Franconia, was born in 1682. He was appointed director of the nobles' academy at Erlangen; but afterwards, having embraced the Roman catholic faith, he entered into the service of the bishop of Eichstadt, on whose death the margrave of Anspach became his patron. He wrote the Antiquities of Nordgan, in the bishopric of Eichstadt, 3 vols. folio, and several other works of a similar nature. He died in 1760.

FALKIA, in botany, a genus of the trigynia order, and hexandria class of plants: CAL. monophyllous: COR. monopetalous: SEEDS four. Species one only, a Cape creeper.

FALKIRK, a considerable town of Stirlingshire, situated near the river Carron, on the high road from Edinburgh to Glasgow. The road to Stirling and the North Islands also passes through it: and in the neighbourhood are the celebrated Carron iron works. The town stands upon an eminence, commanding an extensive and delightful prospect of the surrounding country. Falkirk was formerly a borough of barony, under the baronial jurisdiction of the earls of Linlithgow and Callander; but no records are extant of any magistrates having been invested with the power of the borough, except the bailiff of the earl; who, before the abolition of hereditary jurisdictions, had an extensive authority, both in civil and criminal mattters. It is now governed by a baron bailie, appointed by the lord of the manor; an officer, who, within the bounds of his jurisdiction, can enforce the payment of rents to any amount, and decide all money matters under £2 sterling: he can also punish petty offenders by fine and imprisonment. The chief support of this town is its great fairs and trysts for black cattle from the Highlands, at which, on an average, there are sold 60,000 head annually. Falkirk is memorable in history for a battle fought in its neighbourhood between Edward I. of England, and the Scots commanded by the Grand Steward of Scotland, Cumin of Badenoch, and Sir William Wallace. The latter had been invested with the supreme command; but, perceiving that this gave umbrage to the nobility, he resigned his power into the hands of the noblemen above mentioned, reserving to himself only the command of a small body who refused to follow another leader. The Scots generals placed their pikemen along the front, and lined the intervals, between the three bodies of which their army was composed, with archers; and, dreading the great superiority of the English cavalry, endeavoured to secure their front by palisadoes tied together with ropes. The battle was fought on the 22d of July 1298. Edward divided his army also into three bodies; and by the superiority of his archers, defeated the Scots with great slaughter. Wallace alone preserved entire the troops he commanded; and, retiring behind the Carron, marched leisurely along the banks of that river, which protected him from the enemy. In this battle fell John de Graham, a hero much celebrated for his valor, and styled the right hand of Wallace. His epitaph is still to be seen on a plain stone in the church-yard of Falkirk. On the 18th of January, 1746, a battle was fought here between the king's forces commanded by general Hawley, and the Highlanders headed by prince Charles Stuart. The former were seized with a panic and fled; but colonel Husk with two regiments, who kept their ground, prevented the Highlanders from pursuing their victory. Extensive ruins are to be seen in the neighbourhood of this town, supposed by some antiquarians to have been the capital of the Pictish government; but others believe them to be the remains of some Roman stations. On taking down the wall of the church, a few years ago, two inscriptions were found, which have excited considerable controversy. The one referred to events supposed to have occurred not many centuries

subsequent to the Christian era; the other alluded to the foundation of a church or monastery here in the eleventh century. Both, however, appeared in a character and under peculiarities fatal to their supposed antiquity: therefore, if not entirely spurious, they can only be considered an attempt at renewing inscriptions of more ancient date. The annual competition of bagpipers was formerly held at Falkirk, but of late years it has been transferred to Edinburgh. It is twelve miles south-east of Sterling, and twenty-four west of Edinburgh.

FALKLAND, a town of Fifeshire, anciently one of the seats of the Macduffs, earls of Fife, which, on the attainder of Munro Stewart, the seventeenth earl, in 1424, became forfeited to the crown, and afterwards was a residence of the Scottish kings. It was erected into a royal burgh by James II. in 1458; enlarged and improved by James V. who died here in 1542; and received a renewal of its charter from James VI. in 1595, 'to obviate (as the preamble states), the damage and inconvenience sustained for want of innkeepers and victuallers, by the many prelates, peers, barons, nobles, and others of their subjects, who came to their country seats.' By this charter Falkland has a right to hold a weekly market and four annual fairs. The town is neatly built, and plentifully supplied with excellent water. It carries on a manufacture of coarse linens and osnaburghs, and is governed by three bailies, fourteen counsellors, a treasurer, and town clerk. The annual revenue of the borough is about £100. The remains of the palace evince its former magnificence and elegance, and the noble taste of the architect. The gateway is placed between two fine round towers; and on the right hand joins the chapel, roofed with wood, handsomely gilt and painted, but in a most ruinous condition. Beneath are several apartments. The front next to the court was beautifully adorned with statues, heads in bas-relief, and elegant columns not reducible to any order, but of fine proportion, with capitals approaching the Ionic scroll. Beneath some of these pillars was inscribed I. R. M. G. 1537: Jacobus Rex, Maria de Guise. This place was also a favorite residence of James VI. on account of the fine park and deer. The east side was accidently burnt in the time of Charles II., and the park ruined during Cromwell's usurpation; when the fine oaks were cut down to build the fort at Perth. Falkland is fifteen miles north of Edinburgh, and fifteen south-east of Perth.

FALKLAND ISLANDS, a cluster of Islands at the extremity of South America, not far from the Straits of Magellan. They were discovered by Sir Richard Hawkins in 1594. The soil is bad, and the shores are beaten by perpetual storms. A British settlement was formed in 1764, but the settlers were dispossessed by the Spaniards in 1770; which occasioned an armament on the part of Britain; but, the dispute being settled by a convention, the British regained possession of them. In 1774, however, they were voluntarily abandoned to the Spaniards. The soil is represented as a mere bog, and the mountains to be barren. They have been called, by different navigators, South Belgia Islands, New Islands of St. Lewis, and the Mallouines: but they are now generally known by the name of Falkland Islands. Long. between 50° and 56° W., lat. from 51° to 53° S.

FALKLAND SOUND, a strait or bay separating the two largest of the foregoing islands.

FALL, *v. n.* & *v.a.* Sax. ꝑeallen; Germ. *fallen;* Belg. *vallen;* Goth. and Swed. *falla;* ab Heb. נפל, says Minsheu. To drop; tumble down; move down; sink; descend in any way: hence to decrease; lessen; ebb; grow shallow; decline; become dejected; sink below something else in comparison; sink into weakness and apparent torpor (hence the phrase 'to fall asleep'); come to an end (as that which falls to the ground does with regard to its motion); die. To fall also frequently includes the idea of casualty, accident, or chance, perhaps from the ancient modes of decision by lot, or from the accidental manner in which fruit and other things drop around us: it is also applied to wrath and punishment, as being supposed to fall with weight; to the birth of animals who are dropped from the mother, &c. As an active verb, to fall signifies to let fall; sink; depress; diminish; yean; bring forth. Dr. Johnson having arranged the prepositions with which fall is used in composition alphabetically, we retain that order, and his definitions of the modification of meaning the verb thus undergoes. Fall, as a substantive, signifies the act of dropping or tumbling from a height, or erect posture; decline; degradation; declension or diminution of any kind; declivity: it is used particularly for the rushing of water down a precipice or declivity, or into a larger body of water; for autumn, the season of the fall of the leaf; and for any conspicuous or remarkable act or habit of falling, as 'a fall of rain;' 'the fall of timber;' 'fall of prices,' &c. Fall, says Dr. Johnson, is one of those general words of which it is very difficult to ascertain or detail the full signification. It retains in most of its senses some part of its primitive meaning, and implies, either literally or figuratively, descent, violence, or suddenness; In many of its senses it is opposed to *rise;* but in others has no counterpart or correlative.

Not newe conuertid to the feith; lest he be borun up into pride and *falle* into doom of the deuel.
Wiclif. 1 *Tymo.* iii

And the next multitude *fell* a lusting.
Numb. ii. 4.

Ye shall chase your enemies, and they shall *fall* before you by the sword. *Lev.* xxvi. 7.

Thou shalt make a battlement for thy roof, that thou bring not blood upon thine house, if any man *fall* from thence. *Deut.*

There *fell* wrath for it against Israel. 2 *Chron.*

Fear *fell* on them all. *Acts* xix. 17.

Labour to enter into that rest, lest any man *fall* after the same example of unbelief. *Heb.* iv. 11.

A whistling wind, or a melodious noise of birds, among the spreading branches, or a pleasing *fall* o' water running violently, these things made them to swoon for fear. *Wisdom.*

Our fathers were given to the sword, and for a spoil, and had a great *fall* before our enemies.
Judith, viii. 9.

Wickedness may well be compared to a bottomless pit, into which it is easier to keep one's self from *fall-*

ing, than, being *fallen*, to give one's self any stay from *falling* infinitely. *Sir P. Sidney.*

All the lands, which will *fall* to her majesty thereabouts, are large enough to contain them. *Spenser.*

O Man! have mind of that last bitter throw;
For as the tree does *fall*, so lyes it ever low.
Id. Faerie Queene.

Till the empire came to be settled in Charles the Great, the *fall* of the Romans' huge dominion, concurring with other universal evils, caused those times to be days of much affliction and trouble throughout the world. *Hooker.*

For such things as do *fall* scarce once in many ages, it did suffice to take such order as was requisite when they *fell*. *d.*

The stout bishop could not well brook that his province should *fall* into their hands. *Knolles.*

Solyman, chafed with the loss of his gallies and best soldiers, and with the double injury done unto him by the Venetians, *fell* into such a rage that he cursed Barbarossa. *Id.*

Some *falls* are means the happier to rise.
Shakspeare.

I saw him run after a gilded butterfly; and when he caught it he let it go again, and after it again; and over and over he comes, and up again, and caught it again; or whether his *fall* enraged him, or how it was, he did so set his teeth, and did tear it.
Id.

What can be their business
With a poor weak woman *fallen* from favour! *Id.*

——— Then burst his mighty heart?
And, in his mantle muffling up his face,
Even at the base of Pompey's statue,
Which all the while ran blood, great Cæsar *fell*.
Oh! what a *fall* was there my countrymen!
Then I and you, and all of us *fell* down,
Whilst bloody treason flourished over us. *Id.*

What other oath,
Than honesty to honesty engaged?
That this shall be, or we will *fall* for it. *Id.*

There will we sit upon the rocks,
And see the shepherds feed their flocks
By shallow rivers, to whose *falls*
Melodious birds sing madrigals. *Id.*

They then conceiving, did in yeaning time
Fall party-coloured lambs, and those were Jacob's.
Id.

If the worst *fall* that ever *fell*, I hope, I shall make shift to go without him. *Id.*

Each of us *fell* in praise of our country mistresses.
Id.

He was stirred,
And something spoke in choler, ill and hasty;
But he *fell* to himself again, and sweetly
In all the rest shewed a most noble patience. *Id.*

In sweet musick is such art,
Killing care and grief of heart,
Fall asleep or hearing die. *Id.*

To-morrow in the battle think on me,
And *fall* thy edgeless sword, despair and die.
Id.

Did Cæsar swoon?—He fell down in the market-place, and foamed at mouth, and was speechless.—He hath the *falling-sickness*. *Id.*

That is a step,
On which I must *fall* down, or else o'erleap;
For in my way it lies. *Id. Macbeth.*

That strain again; it had a dying *fall*.
O it came o'er my ear, like the sweet South
That breathes upon a bank of violets,
Stealing and giving odours. *Id. Twelfth Night.*

I have two boys
Seek Percy and thyself about the field;
But seeing thou *fallest* on me so luckily,
I will assay thee. *Id. Henry IV.*

If you have any other request to make, hide it not; for ye shall find we will not make your countenance to *fall* by the answer ye shall receive. *Bacon.*

The greatness of an estate, in bulk and territory, doth *fall* under measure; and the greatness of finances and revenue doth *fall* under computation. *Id.*

If a man would endeavour to raise or *fall* his voice still by half notes, like the stops of a lute, or by whole notes alone without halfs, as far as an eight, he will not be able to frame his voice unto it.
Id. Natural History.

He *fell* at difference with Ludovico Sfortia, who carried the keys which brought him in, and shut him out. *Bacon's Henry VII.*

When the price of corn *falleth*, men generally break no more ground than will supply their own turn.
Carew.

O, how feeble is man's power,
That if good fortune *fall*,
Cannot add another hour,
Nor a lost hour recall! *Donne.*

The greatness of these Irish lords suddenly *fell* and vanished, when their oppressions and extortions were taken away. *Davies.*

These, by obtruding the beginning of a change for the entire work of new life, will *fall* under the former guilt. *Hammond.*

That the Israelites might see the hand of Moses had a greater stroke in the fight than all theirs, the success must rise and *fall* with it: Amalek rose, and Israel *fell*, with his hand *falling*; Amalek *fell*, and Israel rises, with his hand raised.
Bp. Hall's Contemplations.

Perhaps thou talkest of me, and do'st enquire
Of my restraint: why here I live alone;
And pitiest this my miserable *fall*.
Daniel's Civil War.

They not obeying,
Incurred, what could they less? the penalty;
And manifold in sin, deserved to *fall*. *Milton.*

How sweetly did they float upon the wings
Of silence, through the empty-vaulted night,
At every *fall* smoothing the raven down
Of darkness 'till it smiled! *Id.*

They brought scandal
To Israel, diffidence of God, and doubt
In feeble hearts, propense enough before
To waver or *fall* off, and join with idols. *Id.*

None on their feet might stand,
Though standing else as rocks, but down they *fell*
By thousands, angel on archangel rolled. *Id.*

Fame of thy beauty and thy youth,
Among the rest me hither brought,
Finding this fame *fall* short of truth,
Made me stay longer than I thought. *Waller.*

The dogfisher is good against *falling-sickness*.
Walton.

Paul's, the late theme of such a muse, whose flight
Has bravely reached and soared above thy height;
Now shalt thou stand, though sword, or time, or fire,
Or zeal more fierce than they, thy *fall* conspire.
Denham.

After the flood, arts to Chaldea *fell*;
The father of the faithful there did dwell,
Who both their parent and instructor was. *Id.*

The king, understanding of their adventure, suddenly *falls* to take pride in making much of them.
Sidney.

Her memory served as an accuser of her change, and her own handwriting was there to bear testimony against her *fall*. *Id.*

Oft it *falls* out, that while one thinks too much of his doing, he leaves to do the effect of this thinking *Id.*

A long advertent and deliberate connexing of consequents, which *falls* not in the common road of ordinary men. *Hale.*

When a horse is hungry, and comes to a good pasture, he *falls* to his food immediately. *Id.*

I am *fallen* upon the mention of mercuries. *Boyle.*

When about twenty, upon the falseness of a lover, she *fell* distracted. *Temple.*

The odd hours at the end of the solar year, are not indeed fully six, but are deficient $10,'44''$; which deficiency, in 134 years, collected, amounts to a whole day: and hence may be seen the reason why the vernal equinox, which at the time of the Nicene council *fell* upon the 21st of March, *falls* now about ten days sooner. *Holder on Time.*

High o'er their heads a mouldering rock is placed,
That promises a *fall*, and shakes at every blast.
Dryden.

I am willing to *fall* this argument: 'tis free for every man to write or not to write in verse, as he thinks it is or is not his talent, or as he imagines the audience will receive it. *Id.*

Since both cannot possess what both pursue,
I'm grieved, my friend, the chance should *fall* on you.
Id.

Some painters taking precepts in too literal a sense, have *fallen* thereby into great inconveniences. *Id.*

What crouds of patients the town doctor kills,
Or how last *fall* he raised the weekly bills. *Id.*

Down through the crannies of the living walls
The crystal streams descend in murmuring *falls*. *Id.*

He first the fate of Cæsar did foretell,
And pity'd Rome when Rome in Cæsar *fell*;
In iron clouds concealed the publick light,
And impious mortals feared eternal night. *Id.*

A spark like thee, of the man-killing trade,
Fell sick, and thus to his physician said;
Methinks I am not right in every part,
I feel a kind of trembling at my heart;
My pulse unequal, and my breath is strong;
Besides a filthy fur upon my tongue. *Id. Pers.*

Upon a great *fall* of rain the current carried away a huge heap of apples. *L'Estrange.*

They *fell* to blows, insomuch that the Argonauts slew the most part of the Delioncs. *Id.*

This book must stand or *fall* with thee; not by any opinion I have of it, but by thy own. *Locke.*

Upon lessening interest to four per cent. you *fall* the price of your native commodities, or lessen your trade, or else prevent not the high use. *Id.*

Rents will *fall*, and incomes every day lessen, 'till industry and frugality, joined to a well ordered trade, shall restore to the kingdom the riches it had formerly. *Id.*

All liquid bodies are diffusive; for their parts, being in motion, have no connexion one with another, but glide and *fall* off any way, as gravity and the air presseth them. *Burnet.*

What men could do,
Is done already: heaven and earth will witness,
If Rome must *fall*, that we are innocent.
Addison.

We must immediately *fall* into our subject, and treat every part of it in a lively manner. *Id.*

It shows the nose and eyebrows, with the several prominences and *fallings* in of the features, much more distinctly than any other kind of figure. *Id.*

You shall see a great estate *fall* to you, which you would have lost the relish of, had you known yourself born to it. *Id.*

Portius himself oft *falls* in tears before me
As if he mourned his rival's ill success. *Id.*

I have observed of late thy looks are *fallen*,
O'ercast with gloomy cares and discontent. *Id.*

For as his own bright image he surveyed,
He *fell* in love with the fantastick shade. *Id.*

Before the *fall* of the Po into the gulph, it receives into its channel considerable rivers. *Id. on Italy.*

A kind refreshing sleep is *fallen* upon him:
I saw him stretched at ease, his fancy lost
In pleasing dreams. *Id. Cato.*

Exalted Socrates! divinely brave!
Injured he *fell*, and dying he forgave;
Too noble for revenge. *Creech's Juvenal.*

The best men *fall* under the severest pressures.
Wake.

And you have known none in health who have pitied you? and behold, they are gone before you, even since you *fell* into this distemper. *Id.*

He died calmly, and with all the easiness of a man *falling* asleep. *Atterbury.*

From the pound weight, as Pliny tells us, the As *fell* to two ounces in the first Punick war; when Hannibal invaded Italy, to one ounce; then, by the Papirian law, to half an ounce. *Id.*

Cæsar therefore gave orders to build his gallies on the Loir, and the rivers that *fall* into it. *Id.*

Birds and fowls, that rest one foot to ease the other, naturally lay their heads under their wings, that the centre of gravity may *fall* upon the foot they stand on. *Cheyne.*

I *fell* in love with the character of Pomponius Atticus; I longed to imitate him. *Blount to Pope.*

He, careless now, of interest, fame, or fate,
Perhaps forgets that Oxford e'er was great;
Or, deeming meanest what we greatest call,
Beholds thee glorious only in thy *fall*.
Pope to Parnel.

The swain, in barren deserts, with surprize
Sees lilies spring, and sudden verdure rise;
And starts, amidst the thirsty wilds, to hear
New *falls* of water murmuring in his ear. *Pope.*

If to her share some female errors *fall*,
Look on her face, and you'll forget them all. *Id.*

Ulysses let no partial favours *fall*,
The people's parent, he protected all.
Id. Odyssey.

In their spiritual and temporal courts the labour *falls* to their vicars-general, proctors, apparitors, and seneschals. *Swift.*

I had more leisure, and disposition, than have since *fallen* to my share. *Id.*

Some expressions *fell* from him, not very favourable to the people of Ireland. *Id.*

Some were hurt by the *falls* they got by leaping upon the ground. *Gulliver's Travels.*

See the leaves around us *falling*,
Dry and withered to the ground,
Thus to thoughtless mortals calling,
With a sad and solemn sound.
Sons of Adam once in Eden,
Blighted when like us you *fell*,
Hear the lecture we are reading,
'Tis alas! the truth we tell. *Bp. Horne.*

There as sad Philomel, alike forlorn,
Sings to the night from her accustomed thorn;
While at sweet intervals each *falling* note
Sighs in the gale, and whispers round the grot;
The sister-wo shall calm her aching breast,
And softer slumbers steal her cares to rest.
Darwin.

Fallen, fallen, a silent heap! her heroes all
Sunk in their urns; behold the pride of pomp,

The throne of nations, *fallen!* obscured in dust;
Even yet majestical. *Byron.*

Up Juan sprung to Haidee's bitter shriek,
And caught her *falling*, and from off the wall
Snatched down his sabre, in hot haste to wreak
Vengeance on him who was the cause of all.
Id.

To fall away. To decline gradually; to fade; to languish; to apostatise; to sink into wickedness; to perish; to be lost; to revolt.

The fugitives *fell away* to the king of Babylon.
2 *Kings.*

Say not thou, it is through the Lord that I *fell away*; for thou oughtest not to do the things that he hateth. *Ecclus.* xv.

These for a while believe, and in time of temptation *fall away*. *Luke* viii. 13.

Still propagate; for still they *fall away*:
'Tis prudence to prevent entire decay.
Dryden's Virgil.

In a curious brede of needlework one colour *falls away* by such just degrees, and another rises so insensibly, that we see the variety, without being able to distinguish the total vanishing of the one from the first appearance of the other. *Addison.*

Watery vegetables are proper, and fish rather than flesh: in a Lent diet people commonly *fall away*.
Arbuthnot on Diet.

To fall back To fail of a promise or purpose; recede.

We have often *fallen back* from our resolutions.
Taylor.

To fall down. (*Down* is sometimes added to *fall*, though it adds little to the signification.) To prostrate himself in adoration; to sink; not to stand; to bend as a suppliant.

He that herith and doith not is lyk to a man bildinge his hous on erthe withouten foundement, into which the flood was hurlid; and anoon it *fel doun*, and the *fallyng doun* of that hous was maad gret.
Wiclif. Luk 6.

Shall I *fall down* to the stock of a tree?
Isaiah xliv. 11.

All kings shall *fall down* before him; all nations shall serve him. *Psalm* lxxii. 11.

As she was speaking, she *fell down* for faintness.
Esther xv.

Down fell the beauteous youth; the yawning wound
Gushed out a purple stream, and stained the ground.
Dryden.

To fall from. To revolt; to depart from adherence.

Clarence
Is very likely to *fall from* him.
Shakspeare. Henry VI.

The emperor being much solicited by the Scots not to be a help to ruin their kingdom, *fell* by degrees *from* the king of England. *Hayward.*

Through many insensible declinations, do we *fall* from virtue; and, at the first, are so gently led by vice that we cannot believe our accusers. *Bp. Hall.*

To fall in. To concur; to coincide; to comply; to yield to.

Our fine young ladies readily *fall in* with the direction of the graver sort. *Spectator.*

It is a double misfortune to a nation, which is thus given to change, when they have a sovereign that is prone to *fall in* with all the turns and veerings of the people. *Addison.*

Any single paper that *falls in* with the popular taste, and pleases more than ordinary, brings one in a great return of letters. *Id.*

Objections *fall in* here, and are the clearest and most convincing arguments of the truth. *Woodward.*

His reasonings in this chapter seem to *fall in* with each other; yet, upon a closer investigation, we shall find them proposed with great variety and distinction.
Atterbury.

When the war was begun, there soon *fell in* other incidents at home, which made the continuance of it necessary. *Swift.*

That prince applied himself first to the church of England; and, upon their refusal to *fall in* with his measures, made the like advances to the dissenters.
Id.

To fall off. To apostatise; to revolt; to forsake; to perish; to die away; to separate; to be broken.

Love cools, friendship *falls off*, brothers divide; in cities, mutinies; in countries, discord.
Shakspeare.

Oh, Hamlet, what a *falling off* was there! *Id.*

They, accustomed to afford at other times either silence or short assent to what he did purpose, did then *fall off*, and forsake him. *Hayward.*

What cause
Moved our grand parents, in that happy state,
Favoured of heaven so highly, to *fall off*
From their Creator, and transgress his will?
Milton.

Those captive tribes *fell off*
From God to worship calves.
Id. Paradise Lost.

Languages need recruits to supply the place of those words that are continually *falling off* through disuse. *Felton.*

To fall on. To make an assault; to begin the attack: to begin eagerly to do any thing.

Ech that schal *falle on* that stoon schal be so brisid, but *on* whom it schal *falle* it schal alto breke him.
Wiclif. Luk. 20.

They *fell on*, I made good my place; at length they came to the broomstaff with me; I defied 'em still.
Shakspeare. Henry VIII.

Fall on, fall on, and hear him not;
But spare his person for his father's sake. *Dryden.*

Draw all; and when I give the word, *fall on*.
Dryden. Oedipus.

Some coarse cold sallad is before thee set;
Bread with the bran, perhaps, and broken meat;
Fall on, and try thy appetite to eat. *Dryden. Pers.*

He pretends, among the rest, to quarrel with me, to have *fallen* foul *on* priesthood. *Dryden.*

To fall over. To revolt; to desert from one side to the other.

And dost thou now *fall over* to my foes?
Thou wear a lion's hide! doff it, for shame,
And hang a calve's skin on those recreant limbs.
Shakspeare. King John.

To fall out. To quarrel; to jar; to grow contentious: to happen; to befall.

It many times *falls out*, that we deem ourselves much deceived in others, because we first deceived ourselves. *Sir P. Sidney.*

Now, for the most part, it so *falleth out*, touching things which generally are received, that although in themselves they be most certain, yet, because men presume them granted of all, we are hardliest able to bring proof of their certainty. *Hooker*

It so *fell out*, that certain players
We o'er-rode on the way; of those we told him.
Shakspeare

Meeting her of late behind the wood,
Seeking sweet favors for this hateful fool,
I did upbraid her, and *fall out* with her. *Id.*

How *fell* you *out*, say that?
—No contraries hold more antipathy,
Than I and such a knave. *Id. King Lear.*

The cedar, by the instigation of the loyalists, *fell out* with the homebians, who had elected him to be their king. *Howel.*

A prince who *falleth out* with laws, breaketh with his best friends. *Saville.*

Yet so it may *fall out*, because their end
Is hate, not help to me. *Milton's Agonistes.*

If it so *fall out* that you are miserable for ever, thou hast no reason to be surprised, as if some unexpected thing had happened. *Tillotson.*

There *fell out* a bloody quarrel betwixt the frogs and the mice. *L'Estrange.*

Who think you is my Dorus *fallen out* to be? *Sidney.*

Little needed those proofs to one who would have *fallen out* with herself, rather than make any conjectures to Zelmane's speeches. *Id.*

A soul exasperated in ills, *falls out*
With every thing, its friend, itself.
Addison's Cato.

It has been my misfortune to live among quarrelsome neighbours: there is but one thing can make us *fall out*, and that is the inheritance of lord Strut's estate. *Arbuthnot's John Bull.*

To fall to. To begin eagerly to eat; to apply himself to.

Having been brought up an idle horseboy, he will never after *fall to* labour: but is only made fit for the halter. *Spenser.*

I know thee not, old man; *fall to* thy prayers:
How ill white hairs become a fool and jester.
Shakspeare.

Seven times already hath Israel mutinied against Moses, and seven times hath either been threatened or punished; yet now they *fall to* it afresh.
Bp. Hall's Contemplations.

They *fell to* raising money under pretence of the relief of Ireland. *Clarendon.*

They would needs *fall to* the practice of those virtues which they before learned. *Sidney.*

The men were fashioned in a larger mould,
The women fit for labour, big and bold;
Gigantick hinds, as soon as work was done,
To their huge pots of boiling pulse would run;
Fall to, with eager joy, on homely food. *Dryden.*

My lady *falls to* play: so bad her chance,
He must repair it. *Pope.*

To fall under. To be subject to; to become the subject of. To be ranged with; to be reckoned with.

We know the effects of heat will be such as will scarce *fall under* the conceit of men, if the force of it be altogether kept in. *Bacon's Nat. Hist.*

Those things which are wholly in the choice of another, *fall under* our deliberation. *Taylor.*

The idea of the painter and the sculptor is undoubtedly that perfect and excellent example of the mind, by imitation of which imagined form all things are represented which *fall under* human sight.
Dryden's Dufresnoy.

No rules that relate to pastoral can affect the Georgicks, which *fall under* that class of poetry which consists in giving plain instructions to the reader.
Addison on the Georgicks.

To fall upon. To attack; to invade; to assault; to rush against; to attempt.

I do not intend to *fall upon* nice philosophical disquisitions about the nature of time. *Holder.*

Auria *falling upon* the gallies, had with them a cruel and deadly fight. *Knolles.*

An infection in town first *falls upon* children, weak constitutions, or those that are subject to other diseases; but, spreading further, seizes upon the most healthy. *Temple.*

Man *falls upon* every thing that comes in his way; not a berry or mushroom can escape him.
Addison's Spectator.

At the same time that the storm bears upon the whole species, we are *falling* foul *upon* one another.
Addison.

To get rid of fools and scoundrels was one part of my design in *falling upon* these authors. *Pope.*

Fall of Man. See Theology.

FAL'LACY, *n. s.* FALLA'CIOUS, *adj.* FALLA'CIOUSLY, *adv.* FALLA'CIOUSNESS, *n. s.* } French, *fallâce*; Ital. *fallacia*; Span. and Port. *falacéa*; Lat. *fallacia*, *fallax*, deceitful. A deceit; sophism; logomachy; deceitful or unfounded argument. Fallacious is misleading or deceitful.

Until I know this sure uncertainty,
I'll entertain the favoured *fallacy*. *Shakspeare.*

It were a mere *fallacy* and mistaking, to ascribe that to the force of imagination upon another body, which is the force of imagination upon the proper body. *Bacon.*

The force of that *fallacious* fruit,
That with exhilarating vapour bland
About their spirits had played, and inmost powers
Made err, was now exhaled.
Milton's Paradise Lost.

False philosophy inspires
Fallacious hope. *Id.*

We shall so far encourage contradiction, as to promise not to oppose any pen that shall *fallaciously* refute us. *Browne.*

The inconstant opinions, uncertain resolutions, mutable affections, and *fallacious* pretences of men, upon which the accomplishment of most projects rely, may easily deceive and disappoint us. *Barrow.*

Most princes make themselves another thing from the people by a *fallacy* of argument, thinking themselves most kings when the subject is most basely subjected. *Sidney.*

All men, who can see an inch before them, may easily detect gross *fallacies*. *Dryden.*

The Jews believed and assented to things neither evident nor certain, nor yet so much as probable, but actually false and *fallacious*; such as the absurd doctrines and stories of their rabbies. *South's Sermons.*

We have seen how *fallaciously* the author has stated the cause, by supposing that nothing but unlimited mercy, or unlimited punishment, are the methods that can be made use of. *Addison.*

But as a scale by which the soul ascends
From mighty means to more important ends;
Securely, though by steps but rarely trod,
Mounts from inferior beings up to God,
And sees, by no *fallacious* light or dim,
Earth made for man, and man himself for him.
Cowper.

Fallacy, in philosophy, false appearance. The Epicureans deny that there is any such thing as a fallacy of the senses. According to them, all our sensations and perceptions, both of sense and phantasy, are true; whence they make sense the primary criterion of truth. The Cartesians, on the other hand, maintain, that we should suspect as false, or at most as dubious, every thing that presents itself to us by means only of the external senses, because they frequently deceive us; and that our senses, as being fallacious,

were never given us by nature for the discovery of truth, or the contemplation of the principles of things; but only for pointing out to us what things are convenient or hurtful to our bodies. The Peripatetics keep a middle course. They say, that, if a sensible object be taken in its common or general view, the sense cannot be deceived about it; but that, if the object be taken under its specific view, the sense may be mistaken about it, from the want of the dispositions necessary to a just sensation, as a disorder in the organ, or any thing uncommon in the medium: thus, in some disorders of the eye, all objects appear yellow: a stick in water appears broken or crooked, &c.

FAL'LIBLE, *adj.* } French, *faillible*, from
FALLIBIL'ITY, *n. s.* } Lat. *fallo*; Gr. σφαλλω. Ainsworth. To slip or slide. Liable to error, or to be deceived.

Do not falsify your resolution with hopes that are *fallible*: to-morrow you must die. *Shakspeare.*

He that creates to himself thousands of little hopes, uncertain in the promise, *fallible* in the event, and depending upon a thousand circumstances, often fails in his expectations. *Taylor.*

Our intellectual or rational powers need some assistance, because they are so frail and *fallible* in the present state. *Watts.*

There is a great deal of *fallibility* in the testimony of men; yet some things we may be almost as certain of, as that the sun shines, or that five twenties make a hundred. *Id.*

To take our religious sentiments only from his gospel, in opposition to all the authoritative dictates of men, who are weak and *fallible* as ourselves. *Mason.*

FALLOPIAN TUBES. See ANATOMY.

FALLOPIUS (Gabriel), a celebrated physician and anatomist, born at Modena in 1523, and descended of a noble family. He made several discoveries in anatomy, one of which was that of the vessels, called after him the Fallopian tubes. He travelled through the greatest part of Europe: was made professor of anatomy at Pisa in 1548, and at Padua in 1551, where he died in 1562, aged thirty-nine. His writings, which are numerous, were first printed separately, and afterwards collected under the title of 'Opera genuina omnia, tam practica quam theoretica, in tres tomos distributa.' They were printed at Venice in 1585, and in 1606; at Francfort in 1600, and in 1606, in folio.

FAL'LOW, *adj. n. s.* & } Sax. ꝑaleye; Isl.
FAL'LOWNESS, *n. s.* [*v. a.* } *faulur*; Bel. *faal*; Swed. *fal*; Lat. *fulvus*, a pale yellow. A 'fallow field' is so called, according to Minsheu, 'because it looketh of fallow color.' This, however, seems doubtful, as there is a Saxon noun fealga, a kind of plough; and Teut. *falgen* is to plough; Arab. *falaha*, is also ploughing; tillage; 'and the Falahs or Foulahs of Africa,' as Mr. Thomson observes, 'are boors.' Pale, yellow, or red; unsowed; ploughed but not sowed: hence unoccupied; neglected. As a substantive, fallow is ground in any of these last-mentioned states. To fallow is to plough in order to a second aration; to grow yellow; fade. Fallowness is barrenness; fruitlessness.

How does your *fallow* greyhound, sir?
I heard say, he was out run at Cotsale.
Shakspeare.

The bare *fallow* brings to teeming foysen.
Id. Measure for Measure.

Her *fallow* lees
The darnel, hemlock, and rank fumitory,
Doth root upon. *Id. Henry V.*

The ridges of the *fallow* field lay traversed, so as the English must cross them in presenting the charge. *Hayward.*

Like one, who, in her third widowhood, doth profess
Herself a nun, tyed to retiredness,
S' affects my muse now a chaste *fallowness*. *Donne.*

Her predecessors, in their course of government, did but sometimes cast up the ground; and so leaving it *fallow*, it became quickly overgrown with weeds. *Howel's Vocal Forest.*

The king, who was excessively affected to hunting, had a great desire to make a great park for red as well as *fallow* deer between Richmond and Hampton-court. *Clarendon.*

Shall saints in civil bloodshed wallow
Of saints, and let the cause lie *fallow*? *Hudibras.*

Within an ancient forest's ample verge,
There stands a lonely but a healthful dwelling,
Built for convenience, and the use of life;
Around it *fallows*, meads, and pastures fair,
A little garden, and a limpid brook,
By nature's own contrivance seem disposed. *Rowe.*

The plowing of *fallows* is a benefit to land. *Mortimer.*

The best ploughs to plow up Summer *fallow* with. *Id.*

Begin to plow up *fallows*: this first *fallowing* ought to be very shallow. *Id. Husbandry.*

Then o'er the *fallowed* ground
How leisurely they work, and many a pause
The' harmonious concert breaks, till more assured,
With joy redoubled the low vallies ring. *Somerville.*

FALMOUTH, a town of Cornwall, on a fine bay of the English Channel. The town consists principally of one street, extending nearly a mile along the beach, and is tolerably well built. It is the richest sea-port and market town of the county, and larger than any three of its other boroughs. It has so commodious a harbour, that ships of the greatest burden come up to its quay. It is guarded by the castles of St. Mawes and Pendennis, on high rocks at the entrance; both of which are now strongly fortified, and garrisoned by invalids, with an establishment for a governor at £300 per annum, and a deputy governor at £91. The roadstead is deep, and the shelter afforded by the number of creeks in it is so good, that the whole British navy may ride safely here in any wind, it being, next to Plymouth and Milford Haven, the best road for shipping on our coasts. It is well built; and its trade is considerably increased since the establishment of packet boats for Spain, Portugal, and the West Indies. The custom-house for most of the Cornish towns, as well as the head collector, is settled here, where the duties, including those of the other ports, are very considerable. A considerable pilchard fishery is carried on here. It is a corporation, governed by a mayor and alderman; and has a market on Thursday, and fairs July 27th and October 30th. Falmouth is ten miles south of Truro, and 269 west by south of London.

FALMOUTH, a sea-port town of Antigua, on the south shore, between English Harbour and Rendezvous Bay, seven miles south-east of St. John's.

FALMOUTH, a town of Jamaica, called also the Point, on the south side of Martha Brae Harbour. Long. 61° 28′ W., lat. 17° 9′ N.

FALMOUTH, a town of the United States, in the district of Maine, Cumberland county, seated on Casco Bay, 120 miles N. N. E. of Boston.

FALMOUTH, a township of Massachusetts, in Barnstaple county, fifty miles south-east by south of Boston, on the north-east of Vineyard Sound. It was burnt by the British in 1775.

FALMOUTH, a township of Nova Scotia, in Hants county, opposite Windsor, twenty-eight miles north-west of Halifax.

FALMOUTH, a town of Pennsylvania, in Lancaster county, twenty miles west of Lancaster.

FALMOUTH, a town of Virginia, in Stafford county, on the north bank of the Rappahannock; twenty-three miles south-west of Dumfries.

FALSE, *adj.*, *adv.* & *v. a.*
FALSEFA'CED, *adj.*
FALSE'HEART,
FALSE'HEARTED,
FALSEHEART'EDNESS, *n. s.*
FALSE'HOOD, *n. s.*
FALSE'LY, *adv.*
FALSE'NESS, *n. s.*
FALSE'R,
FALSIFI'ABLE, *adj.*
FALSIFICA'TION, *n. s.*
FAL'SIFIER,
FAL'SIFY, *v. a.* & *v. n.*
FAL'SITY, *n. s.*

Sax. ꝼalꝼe; Fr. *faux*, *fausse*; Ital. Span. and Port. *falso*; Goth. *fals* (from *fela*, to cover or conceal, says Mr. Thomson); Lat. *falsus*; deceived. Untrue; supposititious; deceitful; dishonest; treacherous; not according to rule: as an adverb, not truly, honestly, or exactly (a barbarism). To false is an obsolete verb, expressing, to make false (a pledge or promise implied); to deceive; evade: falsefaced, falseheart, and falsehearted, all mean deceitful, the first being applied to appearances, the last two to motives: as our great bard says, 'False face must hide what the false heart doth know.' Falsehood, falseness, and falsity, are want of, or contrariety to truth; duplicity: sometimes falsehood and falsity express simply want of verbal truth; sometimes intentional deception; a lie; counterfeit; imposture. See the extract from Dr. Paley. (We only hope it will be felt that his list of non-criminal falsehoods is sufficiently copious). Falsifiable is liable to be counterfeited: falsification, the act of counterfeiting or making any thing appear what it is not, as well as that of making the falsehood of any deceitful thing appear; confutation: to falsify is used also in these different senses, viz. it signifies to confute; to counterfeit, forge, or corrupt; as well as to violate a pledge given: as a neuter verb it meaus to tell falsehoods. Dryden's labored defence (see below) of his use of the verb active, seems almost needless: a shield is falsified when it is pierced, in the same sense as an argument when it is confuted, i. e. the falshood of its assumed character is made to appear. Dr. Johnson says, 'Dryden, with all this effort, was not able to naturalise the new signification, which I have never seen copied, except once by some obscure nameless writer, and which, indeed deserves not to be received.' We have copied a far more barbarous use of falsify as a substantive, first quoted by Mr. Todd, from Beaumont and Fletcher.

In your answers there remains *falshood*. *Job.*

Falsifying the balance by deceit. *Amos.*

Can you on him such *falsities* obtrude?
And as a mortal the most wise delude? *Sandys.*

Such end had the kid; for he would weaned be
Of craft coloured with simplicity;
And such end, pardie, does all them remain,
That of such *falser's* friendship been fain. *Spenser.*

The Irish bards use to forge and *falsify* every thing as they list, to please or displease any man. *Id.*

Fair seemly pleasance each to other makes,
With goodly purposes there as they sit;
And in his *falsed* fancy he her takes
To be the fairest light that lived yet.
Id. Faerie Queene.

Is't not enough that to this lady mild,
Thou *false* hast thy faith with perjury? *Id.*
And *falsed* oft his blows t' illude him with such bait. *Id.*

He fell, as a huge rocky cliff,
Whose *false* foundation waves have washed away,
With dreadful poise is from the main land reft. *Id.*

Concerning the word of God, whether it be by misconstruction of the sense, or by *falsification* of the words, wittingly to endeavour that any thing may seem divine which is not, is very plainly to abuse, and even to *falsify* Divine evidence, which injury, offered but unto men, is most worthily counted heinous. *Id.*

Neither are they able to break through those errours wherein they are so determinately settled, that they pay unto *falsity* the whole sum of whatsoever love is owing unto God's truth. *Id.*

He suddenly *falsified* his faith, and villainously slew Selymes the king, as he was bathing himself, mistrusting nothing less than the *falsehood* of the pirate. *Knolles's History.*

Now, fy upon my *false* French; by mine honour, in true English, I love thee, Kate. *Shakspeare.*

King Richard might create a perfect guess,
That great Northumberland, then *false* to him,
Would of that seed grow to a greater *falseness*.
Id.

Time's glory is to calm contending kings,
To unmask *falsehood*, and bring truth to light,
To stamp the seal of time on aged things,
To wake the morn, and centinel the night,
To wrong the wronger, till he render right.
Id.

I grant him bloody,
Luxurious, avaricious, *false*, deceitful,
Sudden, malicious, smacking of every sin
That has a name. *Id. Macbeth.*

What thou wouldest highly,
That thou wouldest holily; wouldest not play *false*,
And yet wouldest wrongly win. *Id.*

May these same instruments, which you profane,
Never sound more! When drums and trumpets shall
I' the field prove flatterers, let courts and cities be
Made all of *false-faced* soothing.
Id Coriolanus.

I am thy king, and thou a *falsehearted* traitor.
Id. King Henry VI. p. 11.

——A *falsity* may spoil his cringe,
Or making of a leg, in which consists
Much of his court perfection.
Beaumont and Fletcher. Coronation.

Take a vessel, and make a *false* bottom of coarse canvass: fill it with earth above the canvass.
Bacon.

A man to whom he had committed the trust of his person, in making him his chamberlain, this man, no ways disgraced, no ways discontent, no ways put in fear, turns *false* unto him. *Id. Henry VI.*

The traitorous or treacherous, who have misled others, are severely punished; and the neutrals and *falsehearted* friends and followers, who have started aside like a broken bow, he noted. *Id.*

To counterfeit the dead image of a king in his coin is an high offence; but to counterfeit the living image of a king in his person, exceedeth all *falsifications*; except it should be that of a Mahomet, that counterfeits Divine honour. *Id.*

Club and coffee-house gentlemen, petty merchants of small conceits, who have an empty habit of prating without meaning, always aim at wit, and generally make *false* fire. *Saville.*

For how can that be *false* which every tongue
Of every mortal man affirms for true?
Which truth hath in all ages been so strong,
As, loadstone like, all hearts it ever drew. *Davies.*

Men are spunges, which, to pour out, receive;
Who know *false* play, rather than lose, deceive.
Donne.

Piety is opposed to hypocrisy and insincerity, and all *falseness* or foulness of intention, especially to personated devotion. *Hammond's Fundamentals.*

To seek to the second means, with neglect of the first, is the fruit of a *false* faith.
Bp. Hall's Contemplations.

Artificer of fraud; he was the first
That practised *falsehood* under saintly show.
Milton.

That Danubius ariseth from the Pyrenean hills, and that the earth is higher towards the North, are opinions truly charged on Aristotle by the restorer of Epicurus, and all easily confutable *falsities*.
Glanville's Scepsis.

It shall be thy work, thy shameful work, which is in thy power to shun, to make him live to see thy faith *falsified*, and his bed defiled. *Sidney.*

Thou dost kill me with thy *falsehood*: and it grieves me not to die, but it grieves me that thou art the murtherer. *Id.*

Suppose the reverse of virtue were solemnly enacted, and the practice of fraud and rapine, and perjury and *falseness* to a man's word, and all vice were established by a law, would that which we now call vice gain the reputation of virtue, and that which we now call virtue grow odious to human nature?
Tillotson.

There was no hypocrisy or *falseheartedness* in all this. *Stillingfleet.*

So hast thou cheated Theseus with a wile,
Against thy vow, returning to beguile
Under a borrowed name; as *false* to me,
So *false* thou art to him who set thee free.
Dryden.

A farce is that in poetry which grotesque is in a picture: the persons and actions of a farce are all unnatural, and the manners *false*; that is, inconsistent with the characters of mankind. *Id.*

Tell him, I did in vain his brother move,
And yet he *falsely* said he was in love;
Falsely; for had he truly loved, at least
He would have given one day to my request. *Id.*

His crest is rashed away, his ample shield
Is *falsified*, and round with jav'lins filled. *Id.*

I used the word *falsify*, in this place, to mean that the shield of Turnus was not proof against the spears and javelins of the Trojans, which had pierced it through and through in many places. The words which accompany this new one, makes my meaning plain:

Ma si l' Usbergo d' Ambi era perfetto,
Che mai poter *falsarlo* in nessum canto.
Ariosto, cant. xxvi.

Falsar cannot otherwise be turned than by *falsified*: for, his shield was *falsed*, is not English. I might indeed have contented myself with saying, his shield was pierced, and bored, and stuck with javelins. *Id.*

The heart of man looks fair, but when we come to lay any weight upon it, the ground is *false* under us.
L'Estrange.

Boasters are naturally *falsifiers*, and the people of all others, that put their shams the worst together.
Id.

This point have we gained, that it is absolutely and universally unlawful to lie and *falsify*. *South.*

Probability does not make any alteration, either in the truth or *falsity* of things; but only imports a different degree of their clearness or appearance to the understanding. *Id.*

All deception in the course of life is, indeed, nothing else but a lie reduced to practice, and *falsehood* passing from words to things. *Id.*

Simeon and Levi spake not only *falsely* but insidiously, nay hypocritically, abusing proselytes and religion. *Government of the Tongue.*

The poet invents this fiction to prevent posterity from searching after this isle, and to preserve his story from detection of *falsification*. *Broome.*

There are *falsehoods* which are not lies; that is, which are not criminal: as, where no one is deceived; which is the case in parables, fables, novels, jests, tales to create mirth, ludicrous embellishments of a story, where the declared design of the speaker is not to inform but to divert, &c. In such instances no confidence is destroyed, because none was reposed.
Paley. Moral Philosophy.

Our Saviour's prophecy stands good in the destruction of the temple, and the dissolution of the Jewish economy, when Jews and Pagans united all their endeavours, under Julian the apostate, to baffle and *falsify* the prediction. *Addison.*

Such as are treated ill, and upbraided *falsely*, find out an intimate friend that will hear their complaints, and endeavour to sooth their secret resentments.
Id. Spectator.

He knows that to be inconvenient, which we *falsely* think convenient for us. *Smalridge's Sermons.*

The prince is in no danger of being betrayed by the *falseness*, or cheated by the avarice of such a servant.
Rogers.

False happiness is like *false* money, it passes for a time as well as the true, and serves some ordinary occasions; but, when it is brought to the touch, we find the lightness and alloy, and feel the loss. *Pope.*

This superadds treachery to all the other pestilent ingredients of the crime; 'tis the *falsifying* the most important trust. *Decay of Piety.*

When Satire flies abroad on *falsehood's* wing,
Short is her life, and impotent her sting;
But, when to truth allied, the wound she gives
Sinks deep, and to remotest ages lives. *Churchill.*

It is more from carelessness about truth, than from intentional lying, that there is so much *falsehood* in the world. *Johnson.*

Many seek to hide their sins from themselves by *false* glosses, and from others by excuses or *false* colours. *Mason.*

Falsest of womankind, canst thou declare,
All thy fond plighted vows—fleeting as air?
To thy new lover hie,
Laugh o'er the perjury,
Then in thy bosom try,
What peace is there! *Burns.*

And much and oft, he warned him, to eschew *Falsehood* and guile, and aye maintain the right,
By pleasure unseduced, unawed by lawless might. *Beattie.*

Let not the goddess find that thou
Hast dared to *falsify* a vow!
With vengeance every crime she treats,
But never perjury forgets. *Sheridan.*

For when sparkling wine went round,
Never saw I *falsehood's* mask;
But still honest truth I found
At the bottom of each flask. *Id.*

FALSE BAY, a bay lying east of the Cape of Good Hope; frequented by vessels during the prevalence of the north-west winds, which begin to blow in May, and render it dangerous to remain in Table Bay. It is terminated on the east by False Cape, and on the west by the Cape of Good Hope. It is eighteen miles wide at its entrance; and the two capes bear due east and west from each other.

FALSE IMPRISONMENT is a trespass committed against a person by arresting and imprisoning him without just cause, contrary to law; or where a man is unlawfully detained without legal process: it is also used for a writ which is brought for this trespass. If a person be any way unlawfully detained it is false imprisonment: and considerable damages are recoverable in those actions. See IMPRISONMENT.

FALSE NEWS, SPREADING OF, in order to make discord between the king and nobility, or concerning any great man of the realm, is punishable by common law with fine and imprisonment; which is confirmed by statutes Westm. 1, 3 Edw. I. cap. 34; 2 Rich. II. stat. 1, cap. 5: and 12 Rich. II. cap. 11.

FALSI CRIMEN, in the civil law, is fraudulent subornation or concealment, with design to darken or hide the truth and make things appear otherwise than they are. The crimen falsi is committed, 1. By words, as when a witness swears falsely. 2 By writing, as when a man antedates a contract, or the like. 3. By deed, as when he sells by false weights and measures.

FALSIFYING A RECORD signifies showing it to be erroneous. Thus lawyers teach, that a person purchasing land of another, who is afterwards outlawed of felony, &c., may falsify the record, not only as to the time wherein the felony is supposed to have been committed, but also as to the point of the offence. But, where a man is found guilty by verdict, a purchaser cannot falsify as to the offence, though he may for the time where the party is found guilty generally in the indictment, because the time is not material upon evidence.

FALSTER, an island of the Baltic belonging to Denmark, is separated from the east end of Laaland by Guldborg Sound, and from Mœn by Grensund. It is eight leagues long, and from one to four broad, containing 150 square miles and 15,000 inhabitants. The south point, called Gieddesby Head, is high and remarkable. It is well watered and fertile, exporting 40,000 tons of corn, and, from the great quantity of fruit it produces, is called the Orchard of Denmark. It has a mineral spring, celebrated for its cures. The towns are Stubbekœbing on the north, and Nykœbing on the west: the latter is considered the chief place, and has a royal castle; it has besides thirteen villages. The Trindel Reef, with but eight feet water, runs out to the south-east of the island.

FALTER, *v. a.* & *v. n.* } Isl. *vaulttur*, a
FALTERINGLY. } stammerer; Span. *faltar*, *fortè* à Lat. *fallendo*, Minsheu. To fail frequently in utterance; to stammer; hesitate; hence to fail generally: the use of falter, as an active verb, we should imagine to be a corruption from filter, in the instance Dr. Johnson supplies.

Trembling every joynt did inly quake,
And *faltering* tongue at last these words seemed forth to shake. *Spenser's Faerie Queene.*

This earth shall have a feeling; and these stones
Prove armed soldiers, ere her native king
Shall *falter* under foul rebellious arms. *Shakspeare*

The pale assistants on each other stared,
With gaping mouths for issuing words prepared;
The still-born sounds upon the palate hung,
And died imperfect on the *faltering* tongue. *Dryden.*

How far idiots are concerned in the want or weakness of any or all faculties, an exact observation of their several ways of *faltering* would discover. *Locke.*

He changes, gods! and *falters* at the question:
His fears, his words, his look declare him guilty. *Smith.*

Barley for malt must be bold, dry, sweet, and clean *faltered* from foulness, seeds, and oats. *Mortimer's Husbandry.*

He found his legs *falter*. *Wiseman's Surgery.*

How melts my beating heart! as I behold
Each lovely nymph, our island's boast and pride,
Push on the generous steed, that strokes along,
O'er rough, o'er smooth, nor heeds the steepy hill,
Nor *falters* in the extended vale below. *Somervile.*

These arts in vain our rugged natives try,
Strain out with *faltering* diffidence a lye,
And gain a kick for aukward flattery. *Johnson.*

The bright tear starting in the impassioned eyes
Of silent gratitude; the smiling gaze
Of gratulation *faltering* while he tries
With voice of transport to proclaim thy praise. *Beattie.*

For well did she know that my heart meant no wrong;
It sunk at the thought but of giving her pain:
But trusted its task to a *faultering* tongue,
Which erred from the feelings it could not explain. *Sheridan.*

Then, soft as Elim's well,
The precious tears of new-born freedom fell.
And he, whose hardened heart alike had borne
The house of bondage and the oppressor's frown,
The stubborn slave, by hope's new beams subdued,
In *faltering* accents sobbed his gratitude. *Bp. Heber.*

FALUGA, a town in the pachalic of Bagdad, on the west bank of the Euphrates, whence an arm of that river issues to join the Tigris. It is twenty-five miles south of Bagdad.

FAMA CLAMOSA, in the judicial procedure of the church of Scotland, a ground of action before a presbytery against one of its members, independent of any regular complaint by a particular accuser. Any person of a good character may give to the presbytery a complaint against one of its members; but the presbytery is not to proceed to the citation of the person accused, until the accuser gives in the complaint, under his hand, with some account of its probability, and undertakes to make out the libel, under the pain of being considered as a slanderer. But, besides this, the presbytery considers itself obliged to proceed against any of its members, if a fama clamosa of the scandal is great This they can do without any particular accuser, after they have enquired into the rise, occasion, and authors of the report; it being a maxim in the kirk of Scotland that religion must suffer if the scandalous or immoral actions of a minister are not corrected. After they have considered the accusation, the rule is to order the party accused to be cited, and to draw out a full copy of what is reported, with a list of the witnesses' names. He is now to be formally summoned to appear; and has at least ten days' notice to give in his answers to the libel. If the minister appear, at the time appointed, the libel is to be read to him, and his answers are also to be read; and, if the libel be found relevant, then the presbytery is to endeavour to bring him to a confession. Should the matter confessed be of a scandalous nature, the presbytery generally depose him from his office, and appoint him in due time to appear before the congregation where the scandal was given, and make public confession of his crime and repentance. If a minister absent himself by leaving the place, and be contumacious, without making any relevant excuse, a new citation is given, and intimation is made at his own church when the congregation is met, that he is to be holden as confessed, since he refused to appear before them; and he is accordingly deposed from his office.

FAMAGUSTA, a sea-port town on the east coast of Cyprus. It is about two miles in circumference; stands on a rock; and is surrounded by strong walls and a deep ditch, twenty paces in breadth. The walls, which are very thick, are flanked by twelve noble towers. This fortress serves as a prison for the chief malefactors of the island and other parts of the Turkish dominions. The town has two gates, with drawbridges, one to the land the other to the sea side. Famagusta was fortified in 1193 by Guy de Lusignan, and still farther strengthened during the period of ninety years when it was in the possession of the Venetians and Genoese. Many of the churches are now destroyed; and the whole place is in decay. The Latin cathedral of St. Nicholas is converted into a mosque; and the harbour is little frequented. Here reside an aga, a cadi, and a governor of the castle. Famagusta is said to be the ancient Arsinoe. Here the Lusignans caused themselves to be crowned kings of Jerusalem. After belonging for a considerable time to different states of Italy, it was besieged by the Turks in 1570, and surrendered, after having sustained six assaults, in August 1571. The victors flayed the commander of the garrison alive. During the siege 75,000 of the Turkish army, it is said, perished: and 140,000 bomb shells were expended.

FAMARO, or FAMARS, a town of France, in the department of the North, three miles south of Valenciennes. The French had a strong camp at this town on the 23rd of May, 1793, when they were defeated and driven from it by the combined forces, under the late duke of York and the prince of Saxe-Cobourg.

FAM'BLE, *v. n.* Dan. *famler;* Belg. *fomeler*, from Goth. *fa*, deficiency; paucity, and *mal* speech, says Mr. Thomson. To hesitate in the speech. 'This word I find only in Skinner.—Dr. Johnson.

FAME, *n. s.*
FA'MED, *part. adj.*
FAME'LESS,
FAMOS'ITY, *n. s.*
FA'MOUS, *adj.*
FA'MOUSED,
FA'MOUSLY, *adv.*
FA'MOUSNESS, *n. s.*

French, *fame;* Ital. Span., Port., and Lat. *fama;* Dor. Gr. φαμα; φημι, to speak, probably from Chald. פה, the mouth. — Parkhurst. Common report; celebrity; universal and acknowledged distinction: famosity is synonymous with fame: fameless is without fame: famed, famous, and famoused, celebrated; renowned; much talked of

And Jhesus turnede agen in the vertue of the spirite into Galilee, and the *fame* went forth of him thorough al the cuntree. *Wiclif. Luk.* iv.

There rose up before Moses two hundred and fifty princes of the assembly, *famous* in the congregation, men of renown. *Numb.* xvi. 2.

The house to be builded for the Lord must be exceeding magnifical, of *fame* and of glory throughout all countries. *Chronicles.*

He is *famed* for mildness, peace, and prayer.
Shakspeare

Henry the Fifth, too *famous* to live long;
England ne'er lost a king of so much worth. *Id.*

Then this land was *famously* enriched
With politick grave counsel; then the king
Had virtuous uncles to protect his grace. *Id.*

I shall shew what are true *fames*. *Bacon.*

Pyreius was only *famous* for counterfeiting all base things; as earthen pitchers, a scullery, rogues together by the ears, and swine tumbling in the mire; whereupon he was surnamed Rupographus.
Peacham on Drawing.

Detraction's a bold monster, and fears not
To wound the *fame* of princes, if it find
But any blemish in their lives to work on.
Massinger.

I shall be named among the *famousest*
Of women, sung at solemn festivals.
Milton's Agonistes.

They looked on the particulars as things *famously* spoken of and believed, and worthy to be recorded and read. *Grew's Cosmologia.*

New ways I must attempt, my grovelling name
To raise aloft, and wing my flight to *fame*. *Dryden.*

Many, besides myself, have heard our *famous* Waller own, that he derived the harmony of his numbers from the Godfrey of Bulloign, turned into English by Fairfax. *Id.*

Aristides was an Athenian philosopher, *famed* for his learning and wisdom; but converted to Christianity.
Addison.

The desire of *fame* will not suffer endowments to lie useless. *Id. Spectator.*

Then let me, *fameless*, love the fields and woods,
The fruitful watered vales and running floods.
May.

What is this *fame*, for which we thoughts employ,
The owner's wife, which other men enjoy? *Pope.*

That *fame* is wealth, fantastic poets cry;
That wealth is *fame*, another clan reply;
Who know no guilt, no scandal, but in rags,
And swell in just proportion to their bags.
Young.

I courted *fame* but as a spur to brave
And honest deeds; and who despises *fame*,
Will soon renounce the virtues that deserve it.
Mallet.

Happy are those princes who are educated by men who are at once virtuous and wise, and have been for some time in the school of affliction; who weigh happiness against glory, and teach their royal pupils the real value of *fame*. *Goldsmith.*

If parliament were to consider the sporting with reputation of as much importance as sporting on manors, and pass an act for the preservation of *fame*, there are many would thank them for the bill. *Sheridan.*

His British *fame*; the popular celebrity of his despicable work, had preceded him, and rendered a particular report to his co-plotters unnecessary.
Cheetham's Life of Paine.

FAMIL'IAR, *adj.* & *n. s.* FAMIL'IARLY, *adv.* FAMIL'IARIZE, *v. a.* FAMIL'LE, (Fr.) FAM'ILY, *n. s.* & *adj.* Fr. *familier, famille*; Ital. *famigliare, famiglia*; Span. and Port. *familiar, familia*; Lat. *familiaris, familia*. Domestic; relating to a family: hence affable; unceremonious; intimate with; frequent; easy: as a substantive, an intimate friend, acquaintance, or supposed attendant spirit: to familiarise is to make easy by habit or custom: a family, Lat. *familia*, from *famul*, or *famulus*, a servant, 'anciently and properly the servants belonging to one common master,' says Ainsworth. Those who dwell together; hence those who descend from a common stock or progenitor (for they commonly dwell together), and a course of descent or genealogy; and, in a very correct sense, a tribe, class, or species. *En famille* is a French phrase for in the manner of a family.

Of Gershon was the *family* of the Libnites.
Numbers.

I see not how the Scripture could be possibly made *familiar* unto all, unless far more should be read in the people's hearing than by a sermon can be opened.
Hooker.

Let us chuse such noble counsel,
That war, or peace, or both at once, may be
As things acquainted and *familiar* to us.
Shakspeare.

Be thou *familiar*, but by no means vulgar. *Id.*

The king is a noble gentleman, and my *familiar*.
Id.

Love is a *familiar*; there is no evil angel but love.
Id.

Because that I *familiarly* sometimes
Do use you for my fool, and chat with you,
Your sauciness will jest upon my love. *Id.*

A man must first govern himself, ere he be fit to govern a *family*. and his *family*, ere he be fit to bear the government in the commonwealth. *Raleigh.*

Lesser mists and fogs than those which covered Greece with so long darkness, do *familiarly* present our senses with as great alterations in the sun and moon. *Id. History.*

The governor came to us, and, after salutations, said *familiarly*, that he was come to visit us, and called for a chair, and sat him down. *Bacon.*

There be two great *families* of things, sulphureous and mercurial, inflammable and not inflammable, mature and crude, oily and watry. *Id.*

A poor man found a priest *familiar* with his wife, and because he spake it abroad, and could not prove it, the priest sued him for defamation. *Camden.*

It is mischief enough, if they can be drawn to a less dislike of ill; which now, by long acquaintance, is grown so *familiar* to their eyes, that they cannot think it so loathsome, as at the first view.
Bp. Hall.

God loves at once *familiarity* and fear; *familiarity* in our conversation, and fear in his commands.
Id. Contemplations.

Or changed at length, and to the place conformed
In temper and in nature, will receive
Familiar the fierce heat, and void of pain.
Milton.

The senses at first let in particular ideas; and the mind, by degrees, growing *familiar* with some of them, they are lodged in the memory, and names got to them. *Locke.*

Kalandar streight thought he saw his niece Parthenia, and was about in such *familiar* sort to have spoken unto her; but she, in grave and honourable manner, gave him to understand that he was mistaken.
Sidney.

He unreins
His muse, and sports in loose *familiar* strains.
Addison.

The genius smiled upon me with a look of compassion and affability that *familiarized* him to my imagination, and at once dispelled all fear and apprehensions. *Id. Spectator.*

When he finds himself avoided and neglected by his *familiars*, this affects him. *Rogers.*

We contract at last such an intimacy and *familiarity* with them, as makes it difficult and irksome for us to call off our minds. *Atterbury.*

They range *familiar* to the dome. *Pope.*

They say any mortals may enjoy the most intimate *familiarities* with these gentle spirits. *Id.*

Horace still charms with graceful negligence,
And without method talks us into sense;
Will, like a friend, *familiarly* conve
The truest notions in the easiest wa *Id.*

If thy ancient but ignoble blood
Has crept through scoundrels ever since the flood,
Go and complain thy *family* is young,
Nor own thy fathers have been fools so long. *Id.*

He was amazed how so impotent and groveling an insect as I could entertain such inhuman ideas, and in so *familiar* a manner, as to appear wholly unmoved at all the scenes of blood and desolation.
Gulliver's Travels.

Deluded mortals, whom the great
Chuse for companions tete a-tete;
Who at their dinners, *en famille*,
Get leave to sit whene'er you will. *Swift.*

The night made little impression on myself; but I cannot answer for my whole *family*; for my wife prevailed on me to take somewhat. *Id.*

One idea which is *familiar* to the mind, connected with others which are new and strange, will bring those new ideas into easy remembrance. *Watts.*

Prudent men lock up their motives; letting *familiars* have a key to their heart, as to their garden.
Shenstone.

That he became at last ridiculously cautious, and would scarcely answer the most plain and *familiar* question without previously asking me. *Franklin.*

Therefore in contemplation is his bliss,
Whose power is such, that whom she lifts from earth
She makes *familiar* with a Heaven unseen,
And shows him glories yet to be revealed. *Cowper.*

Yet to the accomplished orator all this is so *familiar*, in consequence of being habitual, that, without thinking of his rules, or violating any one of them, he applies them all. *Beattie.*

SIR P. I am convinced of it—Ah! it is a happiness to have a friend whom we can trust even with one's *family* secrets. *Sheridan.*

FAMILIARS, in the inquisition, persons who assisted in apprehending the accused, and carrying them to prison. They were assistants to the inquisitor, and called familiars, because belonging to his family. See INQUISITION.

FAM'INE, *n. s.* } Fr. *famine;* old Fr.
FAM'ISH, *v. a.* & *v. n.* } *famis;* Ital. *fame;* Lat.
FAM'ISHMENT, *n. s.* } *fames*, hunger. Dearth; hunger; distress from want of food: to famish (apparently derived from the substantive) is to kill with hunger; to starve; hence to deprive of any thing essential to life.

Our castle's strength
Will laugh a siege to scorn: here let them lie,
'Till *famine* and the ague eat them up.
Shakspeare.

You are all resolved rather to die than to *famish*.
Id.

Apicius, thou did'st on thy gut bestow
Full ninety millions; yet, when this was spent,
Ten millions still remained to thee; which thou,
Fearing to suffer thirst and *famishment*,
In poisoned potion drankest.
Hakewill on Providence.

Thin air
Above the clouds will pine his entrails gross,
And *famish* him of breath if not of bread. *Milton.*

Famines have been of late observed to be rare, partly because of the industry of mankind, partly by those supplies that come by sea, but principally by the goodness of God. *Hale.*

The pains of *famished* Tantalus he'll feel,
And Sisyphus, that labours up the hill
The rowling rock in vain; and curst Ixion's wheel.
Dryden.

This city never felt a siege before,
But from the lake received its daily store;
Which now shut up, and millions crowded here,
Famine will soon in multitudes appear. *Id.*

Tyranny and superstition, like those other destroyers of mankind, *famine* and pestilence, are nearly allied.
Robertson's Sermon.

What though their Phœbus kinder warms,
While fragrance blooms and beauty charms!
When wretches range, in *famished* swarms,
The scented groves.
Burns.

So, when the cold damp shades of night prevail,
Worms may be caught by either head or tail;
Forcibly drawn from many a close recess,
They meet with little pity, no redress;
Plunged in the stream, they lodge upon the mud,
Food for the *famished* rovers of the flood. *Cowper.*

Famine, and Pestilence, her first-born son,
Attend to finish what the sword begun;
And echoing praises, such as fiends might earn,
And Folly pays, resound at your return. *Id.*

Loud o'er the camp the fiend of *famine* shrieks,
Calls all her brood, and champs her hundred beaks.
Darwin.

So when the *famished* wolves at midnight howl,
Fell serpents hiss, or fierce hyenas growl;
Indignant lions rear their bristling mail,
And lash their sides with undulating tail. *Id.*

Onward sweep the varied nations!
Famine long hath dealt their rations. *Byron.*

FAN, *n. s.* & *v. a.* Sax. fann; Fr. *van* (for grain); Lat. *vannus* (that which causes light things to fly). An instrument used by ladies to cool themselves; an agricultural instrument for winnowing corn; any thing by which the air is agitated; any thing of the shape, appearance, or used for the purposes, of these instruments. To fan is to cool, ventilate, or winnow; also to increase, or make more vehement, a flame (as the agitation of the surrounding air does).

Asses shall eat clean provender, winnowed with the shovel and with the *fan*. *Isaiah* xxx. 24.

Nature worketh in us all a love to our own counsels: the contradiction of others is a *fan* to inflame that love. *Hooker.*

In the wind and tempest of fortune's frown,
Distinction, with a broad and powerful *fan*,
Puffing at all, winnows the light away. *Shakspeare.*

With scarfs, and *fans*, and double change of bravery,
With amber bracelets, beads, with all this knavery.
Id.

The Norweyan banners flout the sky,
And *fan* our people cold. *Id. Macbeth.*

Let every feeble humour shake your hearts;
Your enemies, with nodding of their plumes,
Fan you into despair. *Id. Coriolanus.*

I have collected some few, therein *fanning* the old, not omitting any. *Bacon's Apothegms.*

Flaile, strawfork, and rake, with a *fan* that is strong. *Tusser.*

Not so the wicked; but as chaff, which, *fanned*,
The wind drives, so the wicked shall not stand
In judgment. *Milton.*

Calm as the breath which *fans* our eastern groves,
And bright, as when thy eyes first lighted up our loves
Dryden.

The *fanning* wind upon her bosom blows;
To meet the *fanning* wind the bosom rose:
The *fanning* wind and purling streams continue her repose. *Id. Cimon and Iphigenia.*

As a peacock and crane were in company, the peacock spread his tail, and challenged the other to shew him such a *fan* of feathers. *L'Estrange.*

She was *fanned* into slumbers by her slaves.
Spectator.

For the cleansing of corn is commonly used either a wicker *fan*, or a *fan* with sails.
Mortimer's Husbandry.

Flavia, the least and slightest toy
Can with resistless art employ:
In other hands the *fan* would prove
An engine of small force in love;
But she, with such an air and mien,
Not to be told or safely seen,
Directs its wanton motions so,
That it wounds more than Cupid's bow;
Gives coolness to the matchless dame,
To every other breast a flame. *Atterbury.*

The modest *fan* was lifted up no more,
And virgins smiled at what they blushed before.
Pope.

And now his shorter breath, with sultry air,
Pants on her neck, and *fans* her parting hair.
Id.

There sits quiescent on the floods, that show
Her beauteous form reflected clear below,

While airs impregnated with incense play
Around her, *fanning* light her streamers gay;
So thou, with sails how swift! hast reached the shore
Where tempests never beat nor billows roar.'
Cowper.

While on light step enamoured Zephyr springs,
And *fans* their glowing features with his wings,
Imbibes the fragrance of the vernal flowers,
And speeds with kisses sweet the dancing Hours.
Darwin.

FAN, in husbandry. The machine used for this purpose by the ancients seems to have been of a form similar to ours. The fan, which Virgil calls mystica vannus Iacchi, was used at initiations into the mysteries of the ancients: for, as the persons who were initiated into any of the mysteries, were to be particularly good, this instrument, which separates the wheat from the chaff, was the fittest emblem that could be of setting apart the good and virtuous from the vicious and useless part of mankind. It is figuratively applied in a similar manner Luke iii. 17.

FANS, ANCIENT. That the use of the fan was known to the ancients is very evident from what Terence says, Cape hoc flabellum, et ventulum huic sic facito: and from Ovid, De Arte Amandi, i. 161.

Profuit et tenues ventos movisse flabello.

The fans of the ancients were made of different materials; but the most elegant were composed of peacocks' feathers, or perhaps painted so as to represent a peacock's tail.

FANS, MODERN. The custom which prevails among European ladies, of wearing fans, was borrowed from the east, where the hot climate renders the use of them almost indispensable. In the east they chiefly use those of large size, and made of feathers, to keep off the sun and flies. In Italy and Spain they have a sort of square fan, suspended in the middle of their apartments, and particularly over the tables: these, by a motion given them, which they retain a long time on account of their perpendicular suspension, help to cool the air and drive off insects. In the Greek church, a fan is put into the hands of the deacons in the ceremony of their ordination, in allusion to a part of the deacon's office in that church, which is to keep the flies off the priests during the celebration of the sacrament.

FANA'TIC, *adj.* & *n. s.*
FANAT'ICAL, *adj.*
FANAT'ICALLY, *adv.*
FANAT'ICISM, *n. s.*
} Fr. *fanatique*; Lat. *fanaticus*, possessed. Wildly enthusiastic; superstitiously wild, or mad.

Osiris, Isis, Orus, and their train,
With monstrous shapes and sorceries abused
Fanatic Egypt, and her priests, to seek
Their wandering gods disguised in brutish forms.
Milton.

When a man is once possessed with a certain *fanatic* spirit, he imagines, if a shoulder do but itch, that the world has galled it with leaning upon it too long. *Marvell.*

I remember an ingenious physician, who told me, in the *fanatic* times, he found most of his patients so disturbed by troubles of conscience, that he was forced to play the divine with them, before he could begin the physician. *Sir W. Temple.*

A church whose doctrines are derived from the clear fountains of the Scriptures, whose polity and discipline are formed upon the most uncorrupted models of antiquity, which has stood unshaken by the most furious assaults of Popery on the one hand, and *fanaticism* on the other; has triumphed over all the arguments of its enemies, and has nothing now to contend with but their slanders and calamities.
Rogers.

The double armature of St. Peter is a more destructive engine, than the tumultuary weapon snatched up by a *fanatick*. *Decay of Piety.*

It is the new *fanatical* religion, now in the heat of its first ferment, of the rights of man, which rejects all establishments, all discipline, all ecclesiastical, and in truth all civil order, which will triumph, and which will lay prostrate your church; which will destroy your distinctions; and which will put all your properties to auction, and disperse you over the earth.
Burke.

The living they pursued was neither hypocritically nor *fanatically* followed. *Id.*

Thy country, Wilberforce, with just disdain,
Hears thee by cruel men and impious called
Fanatic, for thy zeal to loose the enthralled
From exile, public sale, and slavery's chain.
Cowper.

FANATICS. The ancients called those fanatici, who passed their time in fana, temples, and being, or pretending to be, often seized with a kind of enthusiasm, as if inspired by the divinity, showed wild and antic gestures. Prudentius represents them as cutting and slashing their arms with knives. Shaking the head was also common among the fanatici; for Lampridius informs us that the emperor Heliogabalus was arrived to that pitch of madness, as to shake his head with the gashed fanatics.

FANCOURT (Samuel), a dissenting minister, born in the west of England in 1678. He became pastor of a congregation at Salisbury, whence he was obliged to remove for rejecting the Calvinistic opinions of election and reprobation. He then went to London, where he established the first circulating library, about the year 1740, but in this he was not greatly encouraged. He wrote some controversial tracts, and died in low circumstances in 1768.

FAN'CY, *n. s.*, *v. n.* & *v. a.*
FAN'CIFUL, *adj.*
FAN'CIFULLY, *adv.*
FAN'CIFULNESS, *n. s.*
FAN'CYFREE, *adj.*
FAN'CYMONGER, *n. s.*
FAN'CYSICK, *adj.*
} Fr. *fantasie*; Italian *fantasia*; Latin *phantasia*; Greek φαντασια: See FANTASY. This is evidently a contraction of that word. Imagination; the mental power of framing to ourselves images or representations of things or persons: hence an imaginary as distinct from a well-founded opinion; and the image made; conception; supposition: also liking; inclination; attachment; humor or caprice; love: to fancy, as a verb neuter, signifies to imagine or believe on slight grounds: as an active verb to pourtray in the mind; to imagine; be pleased or gratified with. Fancy-free is used by Shakspeare for free from love; fancy-monger is one who deals in imaginary conceits or tricks; fancy-sick, one of unsound imagination.

Men's private *fancies* must give place to the higher judgment of that church which is in authority over them. *Hooker.*

For you, fair Herma, look you arm yourself,
To fit your *fancies* to your father's will;
Or else the law of Athens yields you up
To death, or to a vow of single life. *Shakspeare.*

There is a man haunts the forest, that abuses our young plants with carving Rosalind on their barks; hangs odes upon hawthorns, and elegies on brambles; all forsooth, deifying the name of Rosalind. If I could meet that *fancymonger*, I would give him some good counsel; for he seems to have the quotidian of love upon him. *Id.*

How now, my lord, why do you keep alone;
Of sorriest *fancies* your companions making,
Using those thoughts which should indeed have died
With them they think on? *Id. Macbeth.*

Tell me where is *fancy* bred,
Or in the heart, or in the head?
How begot, how nourished?
It is engendered in the eyes,
With gazing fed, and *fancy* dies
In the cradle where it lies.
Id. Merchant of Venice.

Ninus both admiring her judgment and valour, together with her person and external beauty, *fancied* her so strongly, as, neglecting all princely respects, he took her from her husband. *Raleigh.*

The altering of the scent, colour, or taste of fruit, by infusing, mixing, or cutting into the bark or the root of the tree, herb, or flower, any coloured, aromatical, or medicinal substance, are but *fancies:* the cause is, for that those things have passed their period, and nourish not. *Bacon's Natural History.*

What treasures did he bury in his sumptuous buildings? and how foolish and *fanciful* were they?
Hayward.

Albertus Magnus, with somewhat too much curiosity, was somewhat transported with too much *fancifulness* towards the influences of the heavenly motions, and astrological calculations. *Hale.*

It would show as much singularity to deny this, as it does a *fanciful* facility to affirm it. *Garth.*

Shakespeare, *fancy's* sweetest child!
Warbled his native wood-notes wild. *Milton.*

In the soul
Are many lesser faculties, that serve
Reason as chief: among these *fancy* next
Her office holds: of all external things,
Which the five watchful senses represent,
She forms imaginations, airy shapes,
Which reason joining, or disjoining, frames
All what we affirm, or what deny, and call
Our knowledge, or opinion. *Id. Paradise Lost.*

A person of a full and ample fortune, who was not disturbed by any *fancies* in religion. *Clarendon.*

True worth shall gain me, that it may be said
Desert, not *fancy*, once a woman led. *Dryden.*

But he whose noble genius is allowed,
Who with stretched pinions soars above the crowd;
Who mighty thought can clothe with manly dress,
He whom I *fancy*, but can ne'er express. *Id.*

One that was just entering upon a long journey, took up a *fancy* of putting a trick upon Mercury.
L'Estrange.

'Tis not necessity, but opinion, that makes men miserable; and when we come to be *fancysick*, there's no cure. *Id.*

If our search has reached no farther than simile and metaphor, we rather *fancy* than know, and are not yet penetrated into the inside and reality of the thing; but content ourselves with what our imaginations furnish us with. *Locke.*

I have always had a *fancy*, that learning might be made a play and recreation to children. *Id.*

It was an imperfect view of reason, or, perhaps, the decayed remains of an ancient tradition, which seemed rather to float on men's *fancies* than sink deep into their hearts. *Id.*

Love is by *fancy* led about,
From hope to fear, from joy to doubt:
Whom we now a goddess call,
Divinely graced in every feature,
Strait's a deformed, a perjured creature;
Love and hate are *fancy* all. *Granville.*

The little chapel called the Salutation is very neat, and built with a pretty *fancy*. *Addison.*

The politician would be contented to lose three years in his life, could he place things in the posture which he *fancies* they will stand in after such a revolution of time. *Id.*

Some *fanciful* men have expected nothing but confusion and ruin from those very means, whereby both that and this is most effectually prevented.
Woodward's Natural History.

A resemblance in humour or opinion, a *fancy* for the same business or diversion, is a ground of affection.
Collier.

London-pride is a pretty *fancy* for borders.
Mortimer.

Though no evidence affects the *fancy* so strongly as that of sense, yet there is other evidence which gives as full satisfaction, and as clear a conviction to our reason. *Atterbury.*

The sultan of Egypt kept a good correspondence with the Jacobites towards the head of the Nile, for fear they should take a *fancy* to turn the course of that river. *Arbuthnot.*

Imaginary evils soon become real ones by indulging our reflections on them; as he who in a melancholy *fancy* sees something like a face on the wall or the wainscot, can, by two or three touches with a lead pencil, make it look visible, and agreeing with what he *fancied*. *Swift.*

Who lives to Nature rarely can be poor;
Who lives to *fancy* never can be rich. *Young.*

He seemed, through the day, to be swallowed up in profound meditation, and, through the night, he was disturbed with those visionary terrors which make an impression upon a weak understanding only or a disordered *fancy*. *Robertson's History of Scotland.*

To thee my *fancy* took its wing,
I sat, but neither heard or saw:
Though this was fair, and that was braw,
And yon the toast of a' the town. *Burns.*

That a people beset with such real and imaginary bugbears, should *fancy* themselves dreaming, even when awake, of corpses, and graves, and coffins, and other terrible things, seems natural enough; but that their visions ever tended to any real or useful discovery, I am much inclined to doubt. *Beattie.*

O'er *fancied* injury Suspicion pines,
And in grim silence gnaws the festering wound;
Deceit the rage-imbittered smile refines,
And Censure spreads the viperous hiss around.
Id.

Pulci was sire of the half-serious rhyme,
Who sang when chivalry was more Quixotic,
And revelled in the *fancies* of the time,
True knights, chaste dames, huge giants, kings despotic. *Byron.*

Not that against her *fancied* weal
His heart though stern could ever feel;
Affection chained her to that heart;
Ambition tore the links apart. *Id.*

At intervals, some bird from out the brakes
Starts into voice a moment, then is still.
There seems a floating whisper on the hill,
But that is *fancy*, for the starlight dews

All silently their tears of love instill,
Weeping themselves away, till they infuse
Deep into Nature's breast the spirit of her hues.
Id. Childe Harold.

FAND for found. It is retained in Scotland.

This when as true by tryal he out *fand*,
He bade to open wide his brazen gate. *Spenser.*

FANE, *n. s.* Fr. *fane*; Lat. *fanum*. A temple; a place consecrated to religion. A poetical word.

Nor *fane* nor capitol,
The prayers of priests, nor times of sacrifice,
Embarments all of fury, shall lift up
Their rotten privilege. *Shakspeare. Coriolanus.*

Old Calibe, who kept the sacred *fane*
Of Juno, now she seemed. *Dryden's Æneid.*

Yet some to *fanes* repaired, and humble rites
Performed to Thor and Woden, fabled gods,
Who with their votaries in one ruin shared.
Philips.

A sacred *fane* in Egypt's fruitful lands,
Hewn from the Theban mountain's rocky womb.
Tickell.

The fields are ravished from the industrious swains,
From men their cities, and from gods their *fanes*.
Pope.

In every storm that either frowns or falls,
What an asylum has the soul in prayer!
And what a *fane* is this in which to pray!
And what a God must dwell in such a *fane!*
Young.

Fanes, bulwarks, mountains, worlds, their tempest whelms:
Yet glory braves unmoved the' impetuous sweep,
Fly then, ere, hurled from life's delightful realms,
Thou sink t' Oblivion's dark and boundless deep.
Beattie.

FA'NFARON, *n. s.* } French, from the Spa-
FA'NFARONADE. } nish. Originally in Arabic it signifies one who promises what he cannot perform. A bully; a hector; a blusterer.

Virgil makes Æneas a bold avower of his own virtues, which, in the civility of our poets, is the character of a *fanfaron* or hector. *Dryden.*

The bishop copied this proceeding from the *fanfaronade* of Monsieur Bouffleurs. *Swift.*

There are *fanfarons* in the trials of wit too, as well as in feats of arms; and none so forward to engage in argument or discourse as those that are least able to go through with it. *L'Estrange.*

FANG, *v. a.* & *n. s.* }
FANG'LED, *adj.* }
FANG'LE, *n. s.* } Sax. fangen, fengen, to seize; Goth. *fanga*; Belg. *vangen*: *vang* is still used in the West of England. To seize; grasp; gripe: as a substantive, it means that by which an animal seizes or lays hold of its prey; hence the tusks of the boar, the teeth of the lion, &c., have this name; and any remarkable tooth-like protuberance: fanged is furnished with fangs or long teeth: a fangle is an attempt; a scheme: fangledness, idle scheming; fangled, fashioned; made; hence 'new fangled,' is new fashioned; trifling: fangless, toothless.
FANGLED'NESS, *n. s.* }
FANG'LESS, *adj.* }

Quick wits be in desire new *fangled*, and in purpose unconstant. *Ascham.*

—In his hand a burning hart he bare,
Full of vaine follies and new *fanglednesse*;
For he was false and fraught with ficklenesse.
Spenser's Faerie Queene.

Destruction *fang* mankind!
Shakspeare. Timon.

My two schoolfellows,
Whom I will trust as I will adders *fanged*,
They bear the mandate. *Id. Hamlet.*

The king hath wasted all his rods
On late offenders, that he now doth lack
The very instruments of chastisement;
So that his power, like to a *fangless* lion,
May offer, but not hold. *Id. Henry IV.*

A book! oh, rare one!
Be not, as in this *fangled* world, a garment
Nobler than that it covers. *Id. Cymbeline.*

Some creatures have overlong or outgrowing teeth, which we call *fangs* or tusks; as boars, pikes, salmons, and dogs, though less.
Bacon's Natural History.

The *fangs* of a bear, and the tusks of a wild boar, do not bite worse, and make deeper gashes, than a goosequill sometimes: no not even the badger himself, who is said to be so tenacious of his bite, that he will not give over his hold till he feels his teeth meet, and the bones crack. *Howell.*

Prepar'd to fly,
The fatal *fang* drove deep within his thigh,
And cut the nerves: the nerves no more sustain
The bulk; the bulk unpropped, falls headlong on the plain. *Dryden.*

Then charge, provoke the lion to the rage
Of *fangs* and claws, and, stooping from your horse,
Rivet the panting savage to the ground. *Addison.*

A hatred to *fangles* and French fooleries.
A. Wood.

Not Scythians, nor fierce Dacians, onward rush
With half the speed, nor half so swift retreat:
In chariots, *fanged* with scythes, they scour the field,
Drive through our wedged battalions with a whirl,
And strew a dreadful harvest on the plain. *Philips.*

The protuberant *fangs* of the yuca are to be treated like the tuberoses. *Evelyn's Kalendar.*

FA'NNEL, *n. s.* Fr. *fanon*. A sort of ornament like a scarf, worn about the left arm of a mass-priest when he officiates.

Item, a suite of vestmentes of blewe velvette; with albes, stoles, and *fannels*, agreeable.
Will of S. T. Pope.

FANO, a well built manufacturing town and bishop's see of the papal state, in the legation of Ancona. It is walled, and contains a noble square, and several churches, with elegant paintings; also an academy, a library, and opera-house. Silk is the staple commodity. The town contains, among other remnants of antiquity, the ruins of a triumphal arch; and was anciently called Fanum Fortunæ, from a temple built here to Fortune, after the defeat of Asdrubal by the Romans. Near this place also Narses obtained a victory over Theia, king of the Goths. It was destroyed by Totila, and rebuilt by Belisarius. Population 7500. Sixteen miles E. N. E. of Urbino, and thirty-two north-west of Ancona.

FANO (the ancient Othanus, Uphanus, and Calypso), a small rocky island, north-west of Cape Sidero, in the island of Corfu. It commands a complete view of the adjacent navigation of the Adriatic. Population 500, chiefly Greeks. Long. of the northern extremity, 19° 32′ E., lat. 39° 45′ N.

FANO, CAPE, a promontory of Norway, in lat. 70° 30′ N.

FANOE, a small island of Denmark, near North Jutland, opposite the town of Rypen. It is about fifteen miles in circumference, and has a

considerable shipping trade. Population 2300. Long. 9° 43′ E., lat. 55° 25′ N.

FANSHAW (Sir Richard), a celebrated ambassador, was the son of Sir Henry Fanshaw of Ware Park in Hertfordshire, and was born about 1607. In 1635 he was employed by king Charles I., and sent resident to the court of Spain; whence, being recalled in 1641, he adhered to the royal interest, and was employed in several important matters of state. At the restoration he was made master of the requests; a station in those times of considerable profit. In 1661 he was sent envoy to Portugal; and, in 1662, with the title of ambassador; when he negociated the marriage of Charles II. with the infanta Catherina. Upon his return he was made a privy counsellor. In 1664 he was sent ambassador to both Spain and Portugal; at which time the foundation of peace betwixt those crowns and England was laid by him. His conduct during his former employments in those courts gained him such esteem, that his reception was magnificent, beyond any thing before known; and which those kings declared was not to be a precedent to succeeding ambassadors. He died at Madrid in 1666, on the day he had fixed for his return to England. Besides some original poems, he published a translation of Bathista Guarini's Pastor Fido, and another of the Lusiad of Camoens. Among his posthumous publications are, Letters during his embassies in Spain and Portugal; with his life prefixed.

FANSHAW, CAPE, a cape on the north side of Frederick's sound, and on the west coast of North America. Long. 226° 44′ E., lat. 57° 11′ N.

FANTASIA, in the Italian music, signifies fancy; and is used for a composition, wherein the composer ties himself to no particular time, but ranges according as his fancy leads, amidst various movements, different airs, &c. This is otherwise called the capricious style: before sonatas were used, there were many of this kind, some of which still remain.

FANTASY, *n. s.*
FAN'TASIED, *adj.*
FAN'TASM, *n. s.*
FANTAS'TIC, *adj.*
FANTAS'TICAL,
FANTAS'TICALLY, *adv.*
FANTAS'TICNESS, *n. s.*
FANTAS'TICALNESS.

Fr. *fantasie*: Ital. Span., Port., and Lat. *fantasia*; Gr. φαντασια, show, parade. Fancy; imagination; idea; whim: fantasm, fantasticness, and fantasticalness, have the same meaning: fantasied is filled with wild imaginations, or conceits: fantastic, and fantastical, imaginary; irrational; not real; capricious; uncertain.

Let us shewe our *fantasies* in such wordes as we lerneden of our dame's tonge. *Chaucer.*

O who does know the bent of women's *fantasy*.
Spenser's Faerie Queene.

And with the sug'ry sweet thereof allure,
Chaste ladies ears to *fantasies* impure. *Hubbard.*

I would wish that both you and others would cease from drawing the Scriptures to your *fantasies* and affections. *Whitgift.*

I talk of dreams,
Which are the children of an idle brain,
Begot of nothing but vain *fantasy*;
Which is as thin of substance as the air,
And more inconstant than the wind. *Shakspeare.*

Go you, and where you find a maid,
That ere she sleep hath thrice her prayers said,
Rein up the organs of her *fantasy*,
Sleep she as sound as careless infancy. *Id.*

I'll knit it up in silken strings,
With twenty odd conceited true love knots:
To be *fantastick* may become a youth
Of greater time than I.
Id. Two Gentlemen of Verona.

Present feats
Are less than horrible imaginings:
My thought, whose murther yet is but *fantastical*,
Shakes so my single state of man, that function
Is smothered in surmise; and nothing is,
But what is not. *Id. Macbeth.*

Are ye *fantastical*, or that indeed
Which outwardly ye shew? *Id.*

England is so idly kinged,
Her sceptre so *fantastically* borne,
By a vain, giddy, shallow, humourous youth,
That fear attends her not. *Id. Henry V.*

Vain delight, thou feeder of my follies,
With light *fantasticness*, be thou my favor!
Beaumont and Fletcher.

These spirits of sense, in *fantasy's* high court,
Judge of the forms of objects, ill or well;
And so they send a good or ill report
Down to the heart, where all affections dwell.
Davies.

They put such words in the mouths of one of these *fantastical* mind-infected people that children and musicians call lovers. *Sidney.*

I dare not assume to myself to have put him out of conceit with it, by having convinced him of the *fantasticalness* of it. *Tillotson. Preface.*

One cannot so much as *fantastically* chuse, even or odd, he thinks not why. *Grew's Cosmologia.*

We are taught to clothe our minds as we do our bodies, after the fashion in vogue: and it is accounted *fantasticalness*, or something worse, not to do so. *Locke.*

The delight that a man takes from another's sin, can be nothing else but a *fantastical*, preternatural complacency, arising from that which he really has no feeling of. *South.*

Duumvir is provided with an imperious, expensive, and *fantastick* mistress: to whom he retires from the conversation of a discreet and affectionate wife. *Tatler.*

Mankind may be divided into the merry and the serious, who, both of them, make a very good figure in the species, so long as they keep their respective humours from degenerating into the neighbouring extreme; there being a natural tendency in the one to a melancholy moroseness, and in the other to a *fantastic* levity. *Addison.*

We are apt to think your medallists a little *fantastical* in the different prices they set upon their coins, without any regard to the metal of which they are composed. *Id.*

Nor happiness can I, nor misery feel,
From any turn of her *fantastic* wheel. *Prior.*

By the power of *fantasy* we see colours in a dream, or a mad man sees things before him which are not there. *Newton.*

Men are so possessed with their own fancies, that they take them for oracles; and are arrived to some extraordinary revelations of truth, when indeed they do but dream dreams, and amuse themselves with the *fantastick* ideas of a busy imagination. *Decay of Piety.*

A heavenly mind
May be indifferent to her house of clay,
And slight the hovel as beneath her care;

But how a body so *fantastic*, trim,
And quaint in its deportment and attire,
Can lodge a heavenly mind—demands a doubt.
Cowper.

Your playful trains, on sultry islands born,
Turn on *fantastic* toe at eve and morn;
With soft susurrant voice alternate sweep
Earth's green pavilions and encircling deep.
Darwin.

There with a little tinge of Phantasy,
Fantastic faces moped and mowed on high,
And then a mitre or a shrine would fix
The eye upon its seeming crucifix. *Byron.*

FANTEES, once a numerous and powerful race of Africans, on the Gold Coast, extended their influence from Cape Coast to Acra, and in the interior to the frontier of Ashantee. Many years ago they were subject to the latter power; but threw off their allegiance: latterly the Ashantees have poured down upon them in such numbers, that they have almost extirpated this race. They are in the immediate neighbourhood of our forts, and governed by several magistrates called pynins, generally chosen by the public; but some claim an hereditary right to their office. The laws are strictly executed; and great crimes are said to be rare, especially since the cessation of the slave trade. Yet these people are described as very litigious, and often plead their own cause with great ability. Polygamy prevails amongst them universally; girls become women at the early age of ten, and boys men at twelve. Their decline is equally quick, and begins at the period when both sexes, in temperate climates, arrive at full maturity. The first wife, however, generally has the sole management of the domestic concerns. Any female whose virtue is suspected is made to swallow a quantity of a certain species of bark, to which large draughts of water are added; when if the whole be retained on the stomach she is considered guilty, if otherwise, innocent. The dress of each sex consists of a piece of cloth wrapped loosely about the body. This garment is fastened round the waist by a girdle or zone, called a tombah, to which women of rank have a number of silver keys suspended. A Fantee may be known from other Africans, by small scarifications on the upper part of the cheek bones, and on the back of the neck. Both men and women are cleanly. Pepper is a universal ingredient in all their dishes, of which the principal is fish, or poultry made into soup. It is eaten with a pudding of yams or plantains, or with the bread of the country, which is made of maize.

The Assins, a smaller nation, were fixed in 1806 between the Fantees and Ashantees, and agitated at that time with internal divisions; one of the parties appealed to the monarch of the Ashantees, who, being thus furnished with a ground for interfering in the disputes, from an arbitrator soon became a party, and, attacking the adversaries of his clients, compelled them to retire into the country of the Fantees, where the Ashantees resolved to follow and punish the Fantees for affording their enemies an asylum. This brought them into the vicinity of one of our forts, the governor of which wished to send a flag of truce to treat with the invaders, who had advanced to within fifteen miles of our garrison. The Fantees disapproved of the mission, and in consequence of it the mediation of the British officer was not proposed: when it was afterwards offered it was rejected. The Fantees in Anamaboe, a town surrounding our fort, were confident in their powers to resist the attack of the Ashantees; but when it was made they behaved with great cowardice, and were defeated with a slaughter, by which two-thirds of a population of 15,000 were destroyed. Part of the fugitives took shelter under the guns of our fort, whilst the aged, the infirm, and infants, were secure within it. In the heat of the battle accidental rather than designed hostilities passed between the conquerors and the English garrison. They soon ceased, however, and a good understanding was established. Soon afterwards a meeting took place between the king of the Ashantees and colonel Torrane, the governor-in-chief of the English forts, which led to some amicable arrangements, and especially saved from death the numerous poor creatures secured within the fort. These circumstances led to the mission of Mr. Bowdich to Ashantee, noticed under that article. The first part of his journey was through the country before possessed by the Fantees. It had felt the scourge of war; and though the soil was good, and the vegetation flourishing, there was a great scarcity of food for the few remaining inhabitants. At a village called Payntree, the mission first began to see something of the domestic life of these half civilised negroes. They remained there a day to procure provisions for their journey; and Mr. Bowdich says, 'I walked with Mr. Tadlie along a very neat path, well fenced and divided by stiles, to a corn plantation of at least twenty acres, and well cultivated. Payntree's farm-house was situated here, and afforded superior conveniences; a fowl-house, a pigeon-house, and a large granary raised on a strong stage. As we returned we paid him a visit, and were refreshed with some excellent palm wine; his dwelling was a square of four apartments, which were entered from an outer one, where a number of drums were kept; the angles were occupied by the slaves; and his own room, which had a small inner chamber, was decked with muskets, blunderbusses, cartouch belts fantastically ornamented, and various insignia. The order, cleanliness, and comfort surprised us: the sun had just set, and a cheerful fire on a clean hearth supported the evening meal. The old man was seated in his state chair, diverting himself with his children and younger wives; the elder one was looking on from the opposite apartment, with happy indifference: it was the first scene of domestic comfort I had witnessed among the natives.' p. 18. As the journey proceeds Mr. Bowdich describes the face of this country, and the prospects around them, in glowing colors.

FANUM, among the Romans, a temple or place consecrated to some deity. The demigods among the heathens had likewise their fana; and even Cicero erected one to his daughter Tullia.

Fanum Vacunæ, in ancient geography, a village of the Sabines, situated between Cures and Mandela; where stood the temple of Vacuna, goddess of the idle or unemployed, in an old de-

cayed state; and hence the epithet putre, used by Horace. It is now called Vocone.

FAOUA, or Foua, a town of Lower Egypt, on the east bank of the western or Rosetta branch of the Nile. It is supposed to be the ancient Naucratis, and was built by the Milesians in the reign of Psammitichus; it formerly communicated with Alexandria by the canal, but this is no longer navigable. Long. 31° E., lat. 31° 10′ N.

FAOUET, a town of Brittany, France, on the Elle; in the department of the Morbihan. Population 2600. Twenty-eight miles west by south of Pontivy.

FAP, *adj.* Fuddled; drunk. It seems to have been a cant word in the time of Shakspeare.

The gentleman had drunk himself out of his five senses; and being *fap*, sir, was, as they say, cashiered. *Shakspeare.*

Faquier County, in Virginia, United States, is bounded north by London, and east by Prince William county. It is about fifty-five miles long, and twenty broad; and contained, in 1816, 22,689 inhabitants. Warren Town is the chief place.

FAR. *adv.* & *adj.* / Far'fetch, *n. s.* / Far'fetched, *adj.* / Far'fet, / Far'most. / Far'ness, *n. s.* / Far'piercing, *adj.* / Far'shooting, / Far'ther, / Far'thest. — Sax. ꝑeoꝛ; Isl. *far*; Belg. *varre*, *ver*; Goth. *fiar*; all, perhaps, from the Gr. πορρω, longe. To a great extent, in any direction; to a distance; in great part or proportion; in a certain point or degree. As an adjective, far means distant; remote; further: it is used also elliptically, for from a distant place; 'far off' expresses a great distance, or to a great distance; and off is joined with far, when the latter is not followed by a preposition, as, 'I set the nets far off,' meaning far *from* a supposed object. Respecting the comparative and superlative degrees of far, Dr. Johnson says (under 'farther'), that no analogy can make far into farther or farthest; but the fact is, the Saxon language is the direct origin of all these forms of the word, and has *feor*, *feorre*, and *feorrest*, in the three degrees. A far-fetch is a deep stratagem or trick. Far-fetched, brought from far, or over-labored; far-fet, a compound of far and fet, an obsolete synonyme of fetch. See Fet: far-most, is a redundant superlative of far: the examples will explain the other compounds.

And Zacarye seyde to the aungel: whereof schal Y wyte this? for Y am old: and my wyf hath gon *fer* in hir dayes. *Wiclif, Luk* vii.

The yongere sone wente forth in pilgrimage into a *fer* cuntree and ther he wastide hise goodis: in lyuynge lecherously. *Id. Luk* xv.

The Lord shall bring a nation against thee *from far*, from the end of the earth. *Deut.* xxvii. 49.

When they were by Jebus the day was *far* spent. *Judges.*

A man taking a *far* journey. *Mark.*

Beare the not proude, nor take not out of measure,
Bylde not thyne house on heyth vp in the skye,
Nonne falleth *farre*, but he that climbeth hye.
Sir T. More.

But yet more mindfull of his honour deare,
Then of the grievous smart which him did wring,
From loathed soile he gan him lightly reare,
And strove to loose the *far*-infixed sting.
Spenser. Faerie Queene.

And after that long strayed here and there,
Through every field and forest *far* and near.
Hubbard.

In a kingdom rightly ordered, after a law is once published, it presently takes effect *far* and wide; all states framing themselves thereunto. *Hooker.*

Yet it must be withal considered, that the greatest part of the world are they which be *farthest* from perfection. *Id.*

He sent light-horsemen into Mesopotamia with a guide, because the country was unto him best known; following not *far* after himself with all his army. *Knolles.*

Answer them
How *far* forth you do like their articles.
Shakspeare.

These things seem small and undistinguishable,
Like *far off* mountains turned into clouds. *Id.*

York, with all his *farfet* policy. *Id.*

Is it *far* you ride?
—As *far*, my lord, as will fill up the time
'Twixt this and supper. *Id. Macbeth.*

Be factious for redress of all these griefs,
And I will set this foot of mine as *far*
As who goes *farthest*. *Id. Julius Cæsar.*

I do not think
So fair an outward, and stuff within,
Endows a man but him.
——You speak him *far*.
——I don't extend him, sir. *Id. Cymbeline*

If we may behold in any creature any one spark of that eternal fire, or any *far off* dawning of God's glorious brightness, the same in the beauty, motion, and virtue of this light may be perceived. *Raleigh.*

Not to resolve, is to resolve; and many times it breeds as many necessities, and engageth as *far* in some other sort, as to resolve. *Bacon.*

Those countries have *far* greater rivers, and *far* higher mountains to pour down waters, than any part of the old world. *Id*

Far be it from me to justify the cruelties used towards them, which had their reward soon after. *Id. Holy War.*

Such a communication passeth *far* better through the water than air. *Id. Natural History.*

And yet the lights which in my tower do shine,
Mine eyes, which view all objects nigh and *far*,
Look not into this little world of mine. *Davies.*

Of this I need not many words to declare how *far* it is from being so much as any part of repentance. *Hammond.*

And he, like some imperious Maronist,
Conjures the Muses that they him assist;
Then strives he to bumbast his feeble lines
With *farre-fetcht* phrase. *Bp. Hall's Satires.*

Cherubic watch, and of a sword the flame
Wide-waving, all approach *far off* to fright,
And guard all passage to the tree of life. *Milton.*

God hath bid dwell *far off* all anxious cares,
And not molest us; unless we ourselves
Seek them with wandering thoughts, and notions vain. *Id.*

Of these things others quickly will dispose,
Whose pains have earned the *farfetched* spoil. *Id.*

Then, to perform the care so well begun,
To him I showed this glorious setting sun,
How, by her people's looks pursued from *far*,
She mounted on a bright celestial car,
Outshining Virgo, or the Julian star. *Marvell.*

But Jesuits have deeper reaches,
In all their politick *farfetches*;
And from their Coptick priest, Kircherus,
Found out this mystick way to jeer us.
Hudibras.

He meant to travel into *far* countries, until his friend's affection either ceased or prevailed. *Sidney.*

The face of war,
In ancient times, doth differ *far*
From what our fiery battles are. *Waller.*

Of negatives we have *far* the least certainty, and they are usually hardest, and many times impossible to be proved. *Tillotson.*

The nations *far* and near contend in choice,
And send the flower of war by publick voice.
Dryden.

But from the reading of my book and me,
Be *far*, ye foes of virtuous poetry!
Who fortune's fault upon the poor can throw,
Point at the tattered coat and ragged shoe. *Id.*

The field is spacious I design to sow,
With oxen *far* unfit to draw the plough. *Id.*

Far off you view them with a longing eye
Upon the topmost branch. *Id.*

By his command we boldly crossed the line,
And bravely fought where southern stars arise:
We traced the *farfetched* gold into the mine,
And that which bribed our fathers made our prize.
Id.

Then loud he called Æneas thrice by name;
The loud-repeated voice to glad Æneas came;
Great Jove, he said, and the *farshooting* god,
Inspire thy mind to make thy challenge good. *Id.*

The painted lizard and the birds of prey,
Foes of the frugal kind, be *far* away. *Id. Virgil.*

A spacious cave, within its *farmost* part,
Was hewed and fashioned by laborious art,
Through the hill's hollow sides. *Id. Æneid.*

No true Egyptian ever knew in horses
The *far* side from the near. *Id. Cleomenes.*

Their nearness on all quarters to the enemy, and their *farness* from timely succour by their friends, have forced the commanders to call forth the uttermost number of able hands to fight. *Carew.*

They contented themselves with the opinions, fashions, and things of their country, without looking any *farther*. *Locke.*

The custom of these tongues sometimes so *far* influences the expressions, that in these epistles one may observe the force of the Hebrew conjugations.
Id. On St. Paul's Epistles.

I had always a curiosity to look back into the sources of things, and view in my mind, so *far* as I was able, the beginning and progress of a rising world.
Burnet's Theory.

Till on the Po his blasted corps was hurled,
Far from his country in the western world.
Addison.

Inured to blood; the *far* destroying dart,
And the best weapon, an undaunted heart. *Id.*

Vast and great
Is what I love; the *far*-extended ocean
To a little rivulet I prefer. *Prior.*

Pay sacred rev'rence to Apollo's song,
Lest wrathful the *far-shooting* god emit
His fatal arrows. *Id.*

For *far-fetched* rhymes make puzzled angels strain,
And in low prose dull Lucifer complain. *Smith.*

With costly cates Rome stained her frugal board;
Then with ill-gotten gold she bought a lord:
Corruption, discord, luxury combined,
Down sunk the *far*-famed mistress of mankind.
Arbuthnot.

Besides he's lovely *far* above the rest,
With you immortal, and with beauty blest.
Pope.

Ah! hope not yet to breathe thy native air;
Far other journey first demands thy care. *Id.*

From the same lineage stern Æetes came,
The *far*-famed brother of the enchantress dame.
Id.

Atlas, her sire, to whose *farpiercing* eye
The wonders of the deep expanded lie;
The' eternal columns which on earth he rears,
End in the starry vault and prop the spheres. *Id.*

Under this head we may rank those words which signify different ideas, by a sort of an unaccountable *far-fetched* analogy, or distant resemblance, that fancy has introduced between one thing and another; as when we say, the meat is green when it is half roasted. *Watts.*

His style was well suited to his thoughts, which are never subtilized by nice disquisitions, decorated by a sparkling conceit, elevated by ambitious sentences, or variegated by *far-sought* learning.
Johnson. Life of Swift.

In shining rays the scaly monster spreads
O'er ten square leagues his *far*-diverging heads;
Or in one trunk entwists his tangled form,
Looks o'er the clouds, and hisses in the storm.
Darwin.

FAR, *n. s.* Contracted from farrow. The offspring of a sow; young pigs.

Sows, ready to farrow at this time of the year,
Are for to be made of and counted full dear;
For now is the loss of the *far* of the sow
More great than the loss of two calves of the cow.
Tusser.

FARADEESE, a town of Tunis, Northern Africa, not far from the sea-coast. It was an old Roman town, probably Veneria or Aphrodisium. The inhabitants in the sixteenth century were celebrated pirates and seamen. It is twelve miles west of Hamamet, and thirty south of Tunis.

FARCE, *v. a.* & *n. s.* } Fr. *farcer*; Italian, *farcire*; Lat. *farcio*, to stuff. The verb has been rarely used in our language, except for what we now express by 'force' in respect to meat and pastry; to fill with mingled ingredients; but Shakspeare uses it for to extend or swell out. The substantive is applied to an irregular and mixed dramatic representation, 'stuffed with wild and ludicrous conceits,' as Dr. Johnson says; but the old French verb *farcer* signifies to mock or laugh at.
FAR'CICAL' *adj.* }
FAR'CICALLY, *adv.* }

'Tis not the balm, the sceptre, and the ball,
The sword, the mace, the crown imperial,
The entertissued robe of gold and pearl,
The *farced* title running 'fore the king. *Shakspeare*

Wrestling is a pastime which either the Cornishmen derived from Corineus, their first pretended founder, or at least it ministred some stuff to the *farcing* of that fable. *Carew.*

The first principles of Christian religion should not be *farced* with school points and private tenets.
Bp. Sanderson.

There is yet a lower sort of poetry and painting, which is out of nature; for a *farce* is that in poetry which grotesque is in picture: the persons and actions of a *farce* are all unnatural, and the manners false; that is, inconsistent with the characters of mankind: grotesque painting is the just resemblance of this.
Dryden's Dufresnoy.

What should be great, you turn to *farce*. *Prior.*

They object against it as a *farce*, because the irregularity of the plot should answer to the extravagance of the characters, which they say this piece wants, and therefore is no *farce*. *Gay.*

They deny the characters to be *farcical*, because they are actually in nature. *Id.*

It is not necessary that he should have recourse to images *farcically* low. *Langhorne.*

To suit our author, and his *farce*,
Short let me be, for wit is scarce;
Nor would I show it, had I any;
The reasons why are strong and many.
Garrick.

Farce, comedy, and tragedy, Wilkes, Foote, and Junius, united at the same time against one poor parson, are fearful odds. *H. Tooke.*

FARCE was originally a droll, petty show, exhibited by charletans, and their buffoons, in the open street to gather a crowd together. The word is French, and signifies literally, stuffing; from the Latin farcio, to stuff. It was applied to this species of entertainment on account of the variety of jests, gibes, tricks, &c., with which it was interlarded. At present it is acted by comedians in the theatre, and becomes the entertainment of a polite audience. In other words, poets have reformed the wildness of the primitive farces, and brought them to the taste and manner of comedy. The difference between the two is, that comedy keeps to nature and probability, and therefore is confined to certain laws prescribed by ancient critics; whereas farce disallows all laws. Its end is purely to entertain; and it gathers some of its most effective materials from the wild and extravagant. Hence the dialogue is usually low, the persons of inferior rank, the fable or action trivial, and nature and truth every where heightened and exaggerated to afford the more palpable ridicule. See DRAMA.

FAR'DEL, *n. s.* Ital. *fardello*; Fr. *fardeau*. A bundle; a little pack.

Let us to the king: there is that in this *fardel* will make him scratch his beard. *Shakspeare.*

Who would *fardels* bear,
To groan and sweat under a weary life? *Id.*

FARE, *v. n.* & *n. s.* } Sax. ꝼaꝛan; Goth.
FAREWELL, *adv.* } and Swed. *faran*, *fara*; Isl. *fan*, a journey. To go; to proceed; to succeed; to be in any state, good or bad; to be sustained; to take food: the substantive signifies, maintenance; food for the table; journey; passage; hence price of a passage, journey, or stage: as also the person carried or conveyed. Farewell is the imperative of fare, and well: we preserve the words separate in the plural 'fare you well,' and the Dutch and Swedish unite them as we do, in their vaarwel and farwal. It is a parting salute, with various degrees of compliment and kindness implied.

He found a ship going to Tarshish; so he paid the *fare* thereof, and went down into it, to go with them unto Tarshish. *Jonah.*

The rich man *fared* sumptuously every day. *Luke.*

One knocked at the dore, and in would *fare*;
He knocked fast, and often curst and sware,
That ready entrance was not at his call.
Spenser's Faerie Queene.

So bids thee well to *fare* thy nether friend. *Id.*

At last, resolving forward still to *fare*,
Until the blustering storm is overblown. *Id.*

Thus it *fareth* when too much desire of contradiction causeth our speeches rather to pass by number than to stay for weight. *Hooker.*

See how the morning opes her golden gates,
And takes her *farewell* of the glorious sun.
Shakspeare.

Whether we shall meet again, I know not,
Therefore our everlasting *farewell* take;
For ever, and for ever, *farewell*, Cassius. *Id.*

Feast your ears with the musick awhile, if they will *fare* so harshly as on the trumpet's sound.
Id. Timon.

So on he *fares*, and to the border comes
Of Eden. *Milton's Paradise Lost.*

So *fares* it when with truth falsehood contends.
Milton.

But come, so well refreshed, now let us play,
As meet is, after such delicious *fare*. *Id.*

If chance the radiant sun with *farewell* sweet
Extend his evening beam, the fields revive,
The birds their notes renew, and bleating herds
Attest their joy, that hill and valley ring. *Id.*

Men think they have *fared* hardly, if, in times of extremity, they have descended so low as to eat dogs; but Galen delivereth, that, young, fat, and gelded, they were the food of many nations.
Browne's Vulgar Errours.

But as a barque, that in foul weather,
Tossed by two adverse winds together,
Is bruised and beaten to and fro,
And knows not which to turn him to;
So *fared* the knight between two foes,
And knew not which of them t' oppose.
Hudibras.

So *fares* the stag among the enraged hounds;
Repels their force, and wounds returns for wounds.
Denham.

So in this throng bright Sacharissa *fared*,
Oppressed by those who strove to be her guard:
As ships, though never so obsequious, fall
Foul in a tempest on their admiral. *Waller.*

Well *fare* the hand, which to our humble sight
Presents that beauty. *Id.*

Treading the path to nobler ends,
A long *farewell* to love I gave;
Resolved my country and my friends
All that remained of me should have. *Id.*

His spirits pure were subject to our sight,
Like to a man in shew and shape he *fared*.
Fairfax.

He passage begs with unregarded prayer,
And wants two farthings to discharge his *fare*.
Dryden.

This is what nature's want may well suffice;
He that would more is covetous not wise:
But since among mankind so few there are,
Who will conform to philosophick *fare*,
This much I will indulge thee for thy ease,
And mingle something of our times to please.
Id.

Farewell, says he; the parting sound scarce fell
From his faint lips, but she replied *farewell*. *Id.*

Thus *fares* the queen, and thus her fury blows
Amidst the crowd. *Id. Æneid.*

If you do as I do, you may *fare* as I *fare*.
L'Estrange.

When the hand finds itself well warmed and covered, let it refuse the trouble of feeding the mouth, or guarding the head, till the body be starved or killed, and then we shall see how it will *fare* with the hand.
South.

Several ingenious writers, who have taken their leave of the publick in *farewell* papers, will not give

over so, but intend to appear again; though perhaps under another form, and with a different title.
Spectator.

English ministers never *fare* so well as in a time of war with a foreign power, which diverts the private feuds and animosities of the nation. *Addison.*

Upon his rising up he ordered the peasant to set before him whatever food he had in his house: the peasant brought out a great deal of coarse *fare*, of which the emperor eat very heartily. *Id.*

Before I take my *farewell* of this subject, I shall advise the author for the future to speak his meaning more plainly. *Id.*

Sadly they *fared* along the sea-beat shore;
Still heaved their hearts. *Pope.*

O queen, *farewell!* be still possest
Of dear remembrance, blessing still and blest.
Id.

Some are comforted that it will be a common calamity, and they shall *fare* no worse than their neighbours. *Swift.*

Farewell, thou fair day, thou green earth, and ye skies
Now gay with the bright setting sun;
Farewell, loves and friendships, ye dear, tender ties,
Our race of existence is run! *Burns.*

Farewell! if ever fondest prayer
For other's weal availed on high,
Mine will not all be lost in air,
But waft thy name beyond the sky.
'Twere vain to speak—to weep—to sigh:
Oh! more than tears of blood can tell,
When wrung from guilt's expiring eye,
Are in that word—*Farewell!*—*Farewell!*
Byron.

FAREHAM. See Foreham.

FAREL (William), a protestant divine, born at Gap in Dauphiny, in 1498. He studied at Paris, but, having embraced the reformed religion, he thought it adviseable to leave France; and, after visiting several parts of Germany and Switzerland, he went to Geneva, where he labored with great zeal against popery, and was principally instrumental in establishing the reformation there. He was, however, banished thence, together with Calvin, in 1538, for refusing to submit to the synod of Berne. Farel afterwards settled at Neufchatel, where he died in 1565.

FARELLONES, rocks in the North Pacific Ocean, in two distinct clusters of three or four rocks in each, lying in a south-east and north-west direction from each other. The highest of the northern group lies fourteen miles S.S.W.; the southern cluster lies seventeen miles S.S.W. from Punta de los Reyes; a third cluster, scarcely above water, lies twelve miles S.S.W. from Punta de los Reyes.

Farellones, five islands of the archipelago or gulf of Chiloe. They are barren and desert.

FARGANI, Alfragan, or Alfergani, a celebrated Arabian astronomer, who flourished about A. D. 800; so named from his birth-place, Fergan, in Samarcand. He is also named Ahmed Ben Cothair, or Katir. He wrote Elements of Astronomy, in thirty chapters, wherein he chiefly adopts Ptolemy's hypothesis, using his terms and often quoting him. Of this work there are three Latin translations; the last and best by professor Golius of Leyden, published in 1669, after his death. It is accompanied with the Arabic original, and with many learned notes on the first nine chapters, which Golius's death prevented him from continuing to the end of the work.

FARIA Sousa (Manuel de), a celebrated Portuguese historian and poet, was born in 1590 in the province of Entre Minho y Douro. He devoted the early part of his life to the study of painting, but afterwards devoted himself to Greek and Roman literature, and was made secretary to the bishop of Oporto. Not inclined to the church, he left the service of that prelate, and obtaining the patronage of Pereira, secretary of state to the king of Spain, procured admission into the Portuguese order of the knights of Christ. He was employed in 1631 as secretary to the Spanish ambassador at Rome, whom he so offended, that on his return to Spain, in 1634, he was arrested, and at first closely confined. He was for several years a kind of prisoner at large at Madrid, where he died in 1649. Faria was the author of an Epitome of the History of Portugal; a political and geographical survey of the territories belonging to the crown of Portugal in the various quarters of the globe, entitled Asia Portuguesa, 3 vols. folio; Europa Portuguesa, 2 vols. folio; Africa Portuguesa, folio; and America Portuguesa; Commentaries on the Luciad of Camoens, Poems, &c.

FARINA Foecundans, among botanists, the impregnating dust on the apices or antheræ of flowers. See Pollen. The manner of gathering the farina of plants for microscopical observations is this: Gather the flowers in a dry sunshiny day at mid day, when the dew is perfectly off; then gently shake off the farina, or lightly brush it off with a soft hair pencil, upon a piece of white paper; then take a single talc or isinglass between the nippers, and, breathing on it, apply it instantly to the farina, and the moisture of the breath will make that light powder stick to it. If too great a quantity adhere to the talc, blow a little of it off; and, if too little, breathe upon it again, and take up more. Then, put the talc into the hole of a slider, and, applying it to the microscope, see whether the little grains are properly laid; lastly, cover them up with another talc, and fix the ring; but be careful that the talcs do not press upon the farina, so as to alter its form.

FARINA'CEOUS, *adj.* From Lat. *farina*. Mealy; tasting like meal, or flower of corn.

The properest food of the vegetable kingdom for mankind is taken from the *farinaceous* or mealy seeds of some culmiferous plants; as oats, barley, wheat, rice, rye, maize, panick, and millet.
Arbuthnot on Aliments.

In the roots of growing vegetables, as in the process of making malt, the *farinaceous* part of the seed is converted into sugar by the vegetable power of digestion, in the same manner as the *farinaceous* matter of seeds is converted into sweet chyle by the animal digestion. *Darwin.*

FARINATO (Paul), a celebrated painter of Verona, whose works exhibited the same freedom of design, and boldness of coloring and execution, to nearly the close of his life, which was protracted to the length of eighty-four years. He died in 1606. His mother is said to have died in childbed previous to his birth, which was effected by the Cæsarian operation. A romantic

story is told of his last moments. When on his death-bed he said to his wife, who was lying near him dangerously ill, 'Oh, my wife, I am going!' 'I will go with thee!' replied she; and they died, it is added, almost at the same moment.

FARM, *n. s.* & *v. a.* } Sax. ꝑeopm, provision
FARM'ER, *n. s.* } or feeding; Fr. *ferme;* Goth. and Swed. *fara* (to cultivate). Ground cultivated, or let out for cultivation; the state of lands let out for culture: to farm is either to cultivate or let out land at certain rates for cultivation; hence to let out or bargain for the culture or current expenses of things or persons generally; thus we hear of 'farming out the poor,' but find, happily, no instance of it: it is also a common phrase among the agriculturalists of some districts that a man 'farms his own land.' A farmer is the actual cultivator of ground, whether his own or another's; one who rents any thing.

It is great wilfulnes in landlords to make any longer *farms* unto their tenants. *Spenser.*

The lords of land in Ireland do not use to set out their land in *farm*, for term of years, to their tenants; but only from year to year, and some during pleasure. *Id. on Ireland.*

Thou hast seen a *farmer's* dog bark at a beggar, and the creature run from the cur: there thou might'st behold the great image of authority; a dog's obeyed in office. *Shakspeare.*

We are enforced to *farm* our royal realm,
The revenue whereof shall furnish us
For our affairs in hand. *Id. Richard II.*

Touching their particular complaint for reducing lands and *farms* to their ancient rents, it could not be done without a parliament. *Hayward.*

They received of the bankers scant twenty shillings for thirty, which the Earl of Cornwall *farmed* of the king. *Camden's Remains.*

Nothing is of greater prejudice to the *farmer* than the stocking of his land with cattle larger than it will bear. *Mortimer's Husbandry.*

I entered on this *farm* with a full resolution, "Come, go to, I will be wise!" I read *farming* books; I calculated crops; I attended markets; and, in short, in spite of "the devil, and the world, and the flesh," I believe I should have been a wise man. *Burns.*

For gold the merchant ploughs the main,
The *farmer* ploughs the manor;
But glory is the sodger's prize;
The sodger's wealth is honour. *Id.*

FARM, FARIN, or FERM, (Firma,) in law, signifies a country messuage or district; containing house and land, with other conveniences; hired, or taken by lease, either in writing, or parole, under a certain yearly rent. See LEASE. This in some parts is differently termed: in Scotland, it is a tack; in Lancashire, fermeholt; in some parts of Essex a wike, &c. In corrupted Latin firma signified a place enclosed or shut in; whence in some provinces, Menage observes, they call closerie or closure, what in others they call a farm. We find locare ad firmam signifies to let to farm; probably on account of the sure hold the tenant here has in comparison of tenants at will. Spelman and Skinner however, derive the word farm from the Saxon fearme, or feorme, provision; because the country people and tenants anciently paid their rents in victuals and other necessaries, which were afterwards converted into the payment of a sum of money. Whence a farm was originally a place that furnished its landlord with provisions. And among the Normans they still distinguish between farms that pay in kind, i. e. provisions, and those which pay in money; calling the former simply fermes, and the latter blanche ferme, white ferm. Spelman shows, that the word firma anciently signified not only what we now call a farm, but also a feast or entertainment, which the farmer gave the proprietor, for a certain number of days, and at a certain rate, for the lands he held of him. Thus fearme in the laws of king Canute is rendered, by Mr. Lambard, victus; and thus we read of reddere firmam unius noctis; and, reddebat unum diem de firma; which denote provision for a night and day, the rents about the time of the conquest being all paid in provisions; which custom is said to have been first altered under Henry I.

It might have been expected, that the first essays of improvement on a farm, should have been, to make it both advantageous and delightful; but the fact was otherwise: a small spot was appropriated to pleasure; the rest was reserved for profit only. And this seems to have been a principal cause of the vicious taste which long prevailed in gardens. See GARDENING. It was imagined that a spot apart from the rest should not be like them; this introduced deviations from nature, which were afterwards carried to such an excess, that hardly any objects truly rural were left within the enclosure, and the view of those without was generally excluded. The first step, therefore, towards a reformation, was by opening the garden to the country, and that immediately led to assimilating them; but still the idea of a spot appropriated to pleasure only prevailed, and one of the latest improvements has been to blend the useful with the agreeable: even the ornamental farm was prior in time to the more rural; and we have at last returned to simplicity by force of refinement.

The country in the time of our ancestors was neither entirely cleared nor distinctly divided; the fields were surrounded by woods, not by hedges; and, if a considerable tract of improved land lay together, it still was not separated into a number of enclosures. The farms, therefore, most approaching to this character, are those in which cultivation seems to have encroached on the wild, not to have subdued it; those, for instance, at the bottom of a valley where the sides are still overgrown with wood: and the outline of that wood is indented by the tillage creeping more or less up the hill. If the pastures are here broken by straggling bushes, thickets, or coppices, and the scattered trees beset with brambles and briars, these are circumstances which improve the beauty of the place; yet appear to be only remains of the wild, not intended for embellishment. Such interruptions must, however, be less frequent in the arable parts of a farm; there the opening may be divided into several lands, distinguished, as in common fields, only by different sorts of grain. These will sufficiently break the sameness of the space; and tillage does not furnish a more pleasing scene, than such a space so broken, if

the extent be moderate, and the boundary beautiful. As much wood is essential to the imitation of the farms of our ancestors, a spot may easily be found, where turrets rising above the covert, or some arches seen within it, may have the resemblance of a castle or abbey. The partial concealment is almost necessary to both; for to accord with the age, the buildings must seem to be entire; the ruins of them belong to later days: the disguise is, however, advantageous to them as objects; none can be imagined more picturesque than a tower bosomed in trees, or a cluster appearing between the stems and the branches. Pieces of water are also a great additional beauty in such a scene; and all the varieties of rills are consistent with every species of farm.

Farming is, however, a serious and very important pursuit with a large portion of our countrymen; who can but very slightly regard the mere external beauties of the scene of their labors. In our article AGRICULTURE we have largely discussed the scientific basis and connections of that pursuit; and referred, as we must here do, to that of HUSBANDRY for the practical rules and details of farming. We shall only in this place suggest a few principal considerations on the laying out of farm-lands, the construction of farm-buildings, or farmeries, as they have been called of late, and the keeping of farm accounts; topics, which may with propriety be thus detached from our larger articles.

1. *On the Laying out of Farm Lands.*—On the supposition of our being able to follow nature in the distribution of farm lands, or indeed in almost any ordinary departure from her dictates, the first object of attention to the proprietor of an estate should be its natural characteristics. He should consider it as in a state of nature, and without inhabitants; observing the elevation and general turn of its surface, whether it consists of mountain, upland, vale, or water-formed land; ascertaining at the same time its soils, the absorbency or retentiveness of the substrata, determining to what uses its several parts are adapted. Having, for instance, determined on the sheep-walk and grazing ground, he should trace the natural and fortuitous lines of the culturable lands; as the feet of steep hills, the ridges of uplands, large rivers, public roads, &c. Where an extent of newly appropriated lands is concerned, he must endeavour to lay them out into what may be termed natural farms, of such sizes as will bring the most permanent rent at the least expense of buildings, yards, separate roads, and fences.

A first object of consideration will now be, the most natural or eligible sites for farm-steads; laying to those which are the most eligible such lands as by natural situation and quality belong to them. The principal requisites of a home-stall, for a farm in mixed cultivation, are shelter and water for domestic and farm-yard purposes, with some permanent grass ground below the yards, to receive the overflowings of the dung-basins, that nothing of manure may escape or be lost. If lands lie in a shelving situation, it is desirable to have the home-stead near the midway of the slope; thus having lands above as well as below the yards; so that neither the whole of the crops, nor of the dung, may require to be drawn against the hill at one time. A dip, or shallow valley, with a natural stream falling down it, and with lands in the lower part of it, which are capable of being converted into watered mowing-ground, will, speaking generally, prove a desirable site for a home-stead.

An inhabited estate however, with the farm-steads and fences fixed, and the buildings substantial, requires much thought and care to reform as to its general distribution. The lands of different farms often lie scattered and intermixed through circumstances perhaps that were originally unavoidable; through indulgencies to favorite tenants; or through the ignorance or negligence of managers; but something may generally be done towards lessening or remedying this evil; opportunities may be watched, and amicable changes between tenants made. Lands which lie compact and convenient to the home-stall are worth far more to an occupier than those of the same intrinsic value, scattered at a distance; so that by this sort of exchange an advantage may sometimes be secured to two or more tenants at the same time.

Where the farms are too large, or the farm-steads very improperly placed, but the existing buildings are in a substantial state, it requires to be calculated whether the increase of rent, by any proposed alteration of them, will pay for the money required to be laid out in making it, taking into the account the superiority of new buildings. The erecting of an entire range of farm-buildings, with the requisite appendages, is an undertaking which of course demands mature consideration. There are cases, however, in which it may be effected with profit, and many in which it may be done with credit and respectability to those employed.

Where the farms of an estate have been made too small, suitable consolidations should be made, and each of these be colored on the maps as one farm, the alterations being afterwards made as circumstances may direct; preference being ever given to the most deserving managers, and every fair opportunity taken to dismiss the undeserving. By this easy means, giving the most impressive lesson on good management to the tenantry of the estate, the best effects are produced.

It is to be further remarked, on the subject of laying out farm-lands into suitable tenements, that although compactness of form, and centrality of home-stall are always desirable, they are not the only objects to be attended to. The specific qualities of the lands of the estate are another subject of consideration. If the lands of an estate are naturally adapted to different purposes, as cool strong lands, fit for perennial mowing-grounds, especially if they can be profitably watered, and dry uplands that are suitable for mixed cultivation only; a portion of each ought, according to long-established ideas, to be included in every farm: a principle this, however, which is very often destructive of the compactness of form. A more modern opinion is, that perennial grass-lands are not at all necessary to profitable farming, cultivated herbage and roots being equal to all the wants of modern

husbandry. Nevertheless, where a suit of meadow and pasture-grounds can be properly united with arable lands, it will generally be for their mutual benefit. But this is to be done by a general arrangement, not by making up disjointed farms with lands lying in distinct and perhaps distant parts of a parish, as we not unfrequently see. For the extra carriage of crops and manure, or the unnecessary and injurious drift of stock, and the waste of manure incurred, together with the mischiefs arising from stock being left at a distance from the eye, and the time lost in passing, on every occasion, between distinct parts of a scattered farm, eventually fall on the proprietor. In fact, where an estate consists of arable lands of different sub-strata, so that some parts are retentive of moisture, and others not, it ought to be the aim of the planner to include portions of each in every farm, in order that each occupier may have a regular succession of employment for his teams in a moist season, and in order that, whether the summer prove wet or dry, he may not be destitute either of grass or herbage. In districts of a mixed nature or strata, where a variety of lands are found, this, by due attention, may not unfrequently be done, without much deranging the compactness of the farms.

In the distribution of particular fields, the benefit of having a water meadow below the home-stead has already been pointed out. When this cannot be accomplished, the yard-liquor may be profitably expended on a farm garden ground, to be watered by means of parallel trenches, formed across the slope or descent of the ground to receive it; thus conveying the nutritious particles which have escaped from the dung-yards immediately to the fibrils of the plants while growing, or to the base of the soil into which they are required to strike. And, on every farm in which there is not a sufficiency of watered garden ground, a garden field of some acres for the culture of green herbage and roots with the plough, for horses, cattle, and swine, as well as for culinary purposes, ought to be laid out near the farm-yard. A pasturing paddock or two near the house is likewise a requisite appendage to a home-stead.

Where the dairy is a principal object, dairy-grounds ought in like manner to be laid out near the house, and open into the lobby, green, or milking-yard. But the meadows, or perennial mowing-grounds, may be laid out at a distance with better effect, as it is always convenient to stack hay in the field; and, if not wanted near the spot, it may generally be brought home, with little inconvenience and expense, as it is wanted. But arable lands cannot lie at a distance from home with propriety; as, in this case, not only the crops and manure require a length of draught, but the time taken up by the plough-teams in passing to and fro, is an inconvenience. Nor should the pasture-grounds for working stock, whether oxen or horses (where these are pastured) be far from the home-stall. But those for store cattle and sheep, woodlands, coppice-grounds, &c., may lie at a distance.

Arable lands must be laid out according, as we have before noticed, to their sizes, the absorbent or retentive nature of their soils, &c. Where two sets of arable fields can be laid out, the works of tillage and semination will not be liable to be interrupted by a shower, and the stock of the farm, be the season wet or dry, will not be distressed for pasturage. On a large farm, the lands of which are uniformly absorbent, and consequently adapted to the turnip husbandry, it is proper to have more than one set of arable fields, in order that a sufficient choice of contiguous or near fields may be had, over which to distribute the crop, and thus prevent an unnecessary length of carriage. But on rich retentive lands, in situations where a good supply of extraneous manure can be procured, or where such lands are united with marsh and meadow grounds, to furnish a sufficiency of hay and pasturage, without the assistance of arable land, one set of arable fields may be sufficient: four or five fields or divisions are generally found on a small farm. On those numerous English farms, on which a number of manure-making stock are necessary to be supported by the arable lands, a greater diversity of fields is required. It is in this case necessary that the land should be in a state of cultivated herbage two, three, four, or five years. If the arable rotation occupy four years, therefore, taking three crops of corn with a fallow crop or fallow intervening, the number of arable fields required for one set of lands would be six, seven, eight, or nine. The conclusive argument in favor of large arable fields, is, that where fields are small, much time and labor are wasted by short turnings; and it is now ascertained, 'that if fields are of a regular shape, and the ridges of a proper length, five ploughs may do as much work as six ploughs in fields of a small size, and of an irregular shape; while every other branch of labor (such as dunging, sowing, harrowing, reaping, and carrying in the harvest), can be executed, though not altogether, yet nearly in the same proportion.' *Husb. of Scot.* vol. i. p. 41.

Sometimes, in a bleak situation, it will be found requisite to subdivide the arable fields not only for shelter, but for the greater convenience of shifting and separating stock. The shape, even, of an arable field ought not, in all cases, to be thought a matter of indifference. It should be regulated mainly by the water-courses and roads of the farm, as well as by the nature of its lands, the turn of its surface, and its aspect or exposure. A perfect square, or parallelogram, is a desirable shape, if circumstances admit of it. Two sides at least ought to run parallel to each other; and it is equally, or more desirable, that each field should have a uniformity of soil and sub-soil, as on these depend the uses to which it is applicable. Yet, where the natural line of division is irregular, it is improper always to follow its windings. The planner ought rather to draw a judicious line between the two, and the cultivator to alter the qualities of the lands, which happen to be unnaturally severed, by draining, manuring, &c.

The general direction of the fields should be the same as that in which the land ought to be ploughed for a crop. On a level surface, or on one which is gently inclining, the direction of the beds of retentive lands that require to be laid up in round ridges ought to be nearly north and

south; in order that the crops on either side of them may receive equal sun. In this case, consequently, the fences, which form the two longer sides of the quadrangle, should take that direction. But, where the surface is steep, this principle of direction must give way to another of great importance. If the land be retentive, and the soil require to be laid up into round beds, across the slope, the direction of the ridges must be guided by the face of the slope; and the fences, on the general principle, ought to take the same direction; observing, in this case, where circumstances will admit, to let them wind to the right of a person standing on the brink of the slope, and facing towards it; as the beds ought to take that direction for the greater ease in ploughing them. Where the face of a hill is steep, and the land absorbent, the soil requires to be turned downwards of the slope with a turnwrest or Kentish plough; and the fences to be directed by the natural lines of the hill.

The supply of water is the main consideration in laying out grazing grounds, cow grounds, and pasture grounds in general. Wherever good water is found naturally, or can be conveniently brought by art, to that point a pasture ground ought to tend, in order to enjoy the supply as much as possible. In laying out water-meadows, where they are situated on sloping grounds, or the higher sides of which adjoin to upper lands, the main conductor (where a proper fall from the source of the water will admit of it) ought to define the outline of the meadow on that side; and the fence which separates the meadow lands from the dry grounds ought to run immediately along the upper side of the water-course; the two thus becoming natural guards to each other. Within an extended flat, or an extent of gently shelving meadow grounds, belonging to different proprietors, and where deep ditches are required to be sunk on the upper sides of the fences, to drain the lands that lie above them, the plan here recommended would be improper. But in the situations described above it is perfectly eligible, and ought not, in ordinary cases, to be departed from.

The size of fields, it has been observed by a modern writer, must bear some proportion to the strength of the farmer with regard to ploughs and horses. 'For instance, where six two-horse ploughs are kept, and where it is difficult, from the nature of the soil, to have the fields of a large extent sufficiently dry, from eighteen to twenty-five English acres are considered to be a convenient size. With twelve horses a field of this extent can always be finished in four, or at the utmost in five days. There is less risk, therefore, of being overtaken by bad weather, and prevented from completing the preparation of the land for the internal crop. When the fields are of too great an extent, in proportion to the stock kept, a considerable interval must occur between the sowing of the first and of the last part; and it will in general be desirable to have each field cleared at the same time in harvest. The harrowing also is done more economically, when the field is sown at once, than in several portions; and where rolling is required, that operation being most effectually done across, it cannot well be accomplished till the field has been completed. Hence the advantages of having the size of the fields in some degree commensurate to the stock of working animals upon the farm.'

'Though on large farms,' continues this writer, 'fields should, in general, be formed on an extensive scale, there is a convenience in having a few smaller fields near the farm-house for keeping the family cows; for turning out young horses, mares, and foals; for raising a great variety of vegetables; and for trying experiments on a small scale, which may afterwards be extended, if they shall be found to answer. Where enclosures are too large for particular purposes, and where no small fields, as above recommended, have been prepared, large fields may be subdivided by sheep-hurdles, a sort of portable fence well known to every turnip-grower. In this way great advantage may be derived from the constant use of land that would otherwise have been occupied by stationary fences; and the expense of subdivisions, which, on a large farm, would necessarily have been numerous, is thereby avoided. This fence is perfectly effectual against sheep, though it is not so well calculated for stronger animals. On dry soils, where sheep are generally pastured, it is not unlikely that, by using moveable hurdles, the expense of permanent fences might, in a great measure, be saved.'

In the Code of Agriculture it is observed, that 'when a whole farm is divided into fields of various sizes, it is difficult to form a plan, so as to suit a regular rotation of crops, or to keep very accurate accounts. Whereas, by having the fields in general of a large size, the whole strength of a farm, and the whole attention of the farmer, is directed to one point; while an emulation is excited among the ploughmen, when they are thus placed in circumstances which admit their work to be compared. Some small fields are certainly convenient on any farm, for grazing and other purposes, to be afterwards explained. On elevated situations, also, the shelter derived from small enclosures is of use.

Sometimes a farm is situated on both sides of a highway; in which case all the fields may be made to open into it, either directly or through an intervening field. Here no private road is wanting, excepting a few yards to reach the farmery. But when, as is most generally the case, the lands are situated at a distance from a great road, and approached by a lane or bye-road, then from that bye-road a private road is required to the farmery, and a lane or lanes from it so contrived as to touch at most of the fields of the farm. In wet and clayey soils, these lanes must be formed of durable materials; but in dry soils, provided attention be paid to fill in the cart ruts as they are formed (by the leading out of dung, or home of corn,) by small stones, gravel, or even earth, the lane may remain green; and being fed with sheep or cattle will not be altogether lost. It is essentially necessary to make a piece of road at the gate of every enclosure, being the spot which is most frequently in use. Without this precaution, it often becomes a mire where corn is thrown down and spoiled in harvest, or if it is attempted to avoid the mire, the gate-posts and neighbouring fence are

often damaged. (Communications to the board of Agriculture, vol. ii.) With good private roads a farmer will perform his operations at much less expense; the labor of the horses will be much easier; a greater quantity or weight of grain and other articles may be more expeditiously carried over them; manure can be more easily conveyed to the fields; the harvest can be carried on more rapidly; and wear and tear of every description will be greatly reduced. (Code of Agriculture, p. 158.) The gates of fields, it has been observed, should in most cases be placed in the middle of that side of the field which is nearest the road; and not in an angle, or at one corner, unless particular circumstances point out this as the preferable mode.

On the subject of fences in general see HUSBANDRY. Respecting one conspicuous boundary of some farms, hedge-row trees, a great difference of opinion prevails. While they improve the landscape, it seems to be agreed by the most intelligent agriculturists that they are extremely hurtful to the fence, and for some distance to the crops on each side; and it is evident, that in many instances the highways, on the sides of which they often stand, suffer greatly from their shade. It has therefore been doubted, whether such trees be profitable to the proprietor, or beneficial to the public; to the farmer they are almost in every case injurious, to a degree beyond what is commonly imagined. (Supplement to the Encyclopædia Britannica article AGRICULTURE.) Loch, however, a well informed improver of landed property, is of a different opinion. He says, there is no change in the rural economy of England more to be regretted, than the neglect which is now shown to the cultivation and growth of hedge-row timber. The injury which it does to the cultivation of the land is much exaggerated, especially if a proper selection of trees is made; but even the growth of the ash, so formidable to agriculturists, might be defended on the ground that, without it, the best implements employed in the cultivation of the soil could not be made. It is well known that good hedge-row timber is by far the most valuable both for naval and domestic purposes. Its superior toughness rendering it equally valuable to the ship and to the plough-wright. The value which it is of, in affording shelter, is also of material use; besides, the raising of grain is not the only purpose of life, or the only matter to be attended to, nor the only object worthy of attention. The purposes of war and the national glory, the protection and extension of our commerce, the construction and repair of buildings, and even the enjoyment arising from the rich and beautiful effect produced by such decoration and ornament, are all objects of material importance to the well-being and constitution of a highly cultivated state of society. Even upon the more narrow basis of individual utility, this practice might be defended and recommended; for it is not useless to consider how many families and estates have been preserved, when pressed by temporary difficulties (from which none are exempted), from a fall of hedge-row timber. One of the best legacies, that a great proprietor can leave his country and his family, is an estate well stocked with such trees.

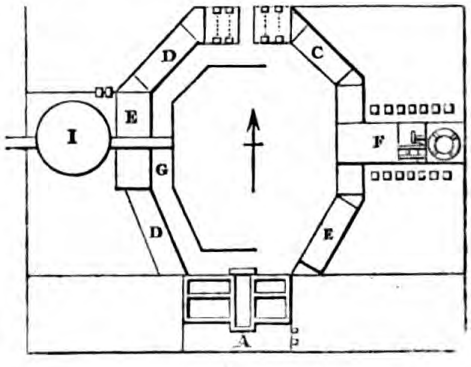
2. *Of the arrangement of farm buildings, and the enclosures of a farmery.*—According to Beatson, the first thing to be taken into consideration upon this subject is the nature and produce of the farm: hence may be judged the different kinds of accommodation that will be necessary. Every farm, for example, must have, 1. A dwelling-house; 2. A barn suitable to the extent of arable land in the farm, either with or without a threshing mill, but always with one if possible; and it should be endeavoured to place it so that it may go by water, if a supply can be had; 3. Stables, the dimensions of which must be determined according to the number of horses necessary for the farm; 4. Cow-houses, or feeding-houses, or both, according to the number of cows and cattle, and so on, till the whole accommodations and their dimensions are fixed upon.

Having ascertained these, and the situation for building on being also settled, the ground must be carefully and attentively viewed; and, if not very even, the different levels must be observed, and the best way of conducting all the necessary drains, and carrying off all superfluous moisture. Also the best situation for dung and urine-pits, or reservoirs, which will, in a great degree, ascertain at once where the cattle-houses and stables should be. These being fixed on, the barn should be as near them as possible, for the convenience of carrying straw to the cattle; and the barn-yard should be contiguous to the barn. These main points being determined on, the others will easily be found; always observing this rule, to consider what is the nature of the work to be done about each office, and then the easiest and least laborious way to perform that work, so far as it is connected with other offices. In case this should not be sufficiently explicit, suppose, by way of illustration, the situation of a feeding-house is to be considered of. The nature of the work to be performed here is, bringing food and litter to the cattle, and taking away their dung. The place from whence the greatest part perhaps of their food and all their litter comes, is the barn; therefore the feeding-house should be as near the barn as possible. If turnips, or other roots, or cabbages, make a part of their food, the most commodious way of giving these must be determined on; whether by having a root-house adjoining the cattle-house, and that filled occasionally, or by having a place to lay them down in, near the heads of the stall, from whence they are thrown in at holes left in the wall for that purpose. The easiest method of clearing away the dung must also be considered, and the distance from the main dung-pit and urine reservoir. The same general rule being observed in determining on the site of all the other offices or accommodations, together with a careful examination of the ground to be occupied (upon which the arrangement of the offices in a great measure should depend), any person conversant in rural affairs, who attends to these particulars, and can lay down his ideas in a drawing, may easily direct the planning and building of a very commodious set of offices. With respect to the

site of the dwelling-house, it may be remarked, that, although a house being situate in the middle of a regular front is, in some points of view, the most pleasing way, and in many situations perhaps the best, yet, unless the ground and other circumstances in every respect favor such a disposition, it should not invariably be adhered to; for it may often happen, that a much better situation for the dwelling-house may be obtained at a little distance from the offices, a pleasing uniformity be observed in them at the same time, and the house be more healthy and agreeable. In some cases, and for some kinds of farms, it may be particularly necessary to have the house so placed, in respect to the offices and farm-yard, as to admit of their being constantly inspected, and the labor that is to be performed in them attended to and overlooked.

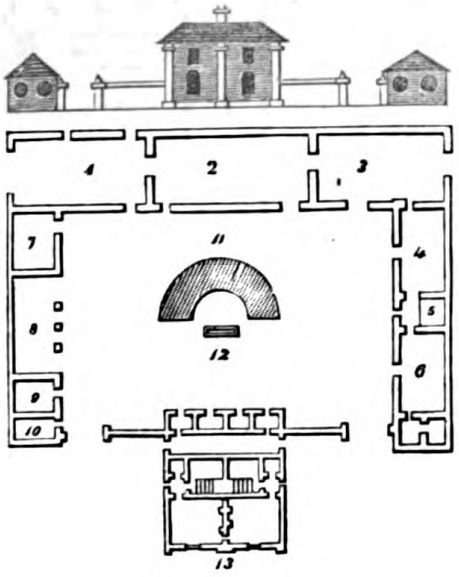
'The requisites of a farmstead,' says Mr. Marshall, 'are as various as the intentions of farms. A sheep-farm, a grazing-farm, a hay-farm, a dairy-farm, and one under mixed cultivation, may require different situations, and different arrangements of yards and buildings. On a farm of the last species, which may be considered as the ordinary farm of this kingdom, the principal requisites are shelter, water, an area or site sufficiently flat for yards and buildings; with meadow land below it, to receive the washings of the yards; as well as sound pasture grounds above it for a grass-yard and paddocks; with private roads nearly on a level to the principal arable lands; and with suitable outlets to the nearest or best markets.'

For a mixed husbandry farm, the particulars, to be arranged, according to Marshall, are thus enumerated; 1. A suit of buildings, adapted to the intended plan of management;—as a dwelling-house, barns, stables, cattle-sheds, cart-shed. 2. A spacious yard, common to the buildings, and containing a receptacle of stall-manure, whether arising from stables, cattle-sheds, hog-styes, or other buildings; together with separate folds, or straw-yards, furnished with appropriate sheds, for particular stock, in places where such are required. 3. A reservoir, or catchpool, situated on the lower side of the buildings and yards, to receive their washings, and collect them in a body for the purpose of irrigating the lands below them. 4. A corn yard, convenient to the barns; and a hay-yard contiguous to the cow or fatting-sheds. 5. A garden and fruit ground near the house. 6. A spacious grass-yard or green, embracing the whole or principal part of the conveniences; as an occasional receptacle for stock of every kind; as a common pasture for swine, and a range for poultry; as a security to the fields from stock straying out of the inner yards; and as an ante-field or lobby, out of which the home grounds and driftways may be conveniently entered. 'An accurate delineation of the site which is fixed on, requires,' he observes, 'to be drawn out on a scale; the plannist studying the subject, alternately, upon the paper, and on the ground to be laid out; continuing to sketch and correct his plan, until he has not a doubt left on his mind; and then to mark out the whole upon the ground, in a conspicuous and permanent manner, before the foundation of any particular building be attempted to be laid. It may, he adds, 'be conceived by a person who has not turned his attention to this subject, that there must be some simple, obvious, and fixed plan to proceed upon. But seeing the endless variety in the mere dwelling-places of men, it is not to be wondered at if a still greater variety of plans should take place where so many appurtenances are required, and these on sites so infinitely various; nor that men's opinions and practices should differ so much on the subject, that on a given site, no two practical men, it is more than probable, would make the same arrangement.' 'There are, however,' he says, 'certain principles which no artist ought to lose sight of in laying out such buildings and conveniences. The barns, the stables, and the granary, should be under the eye,—should be readily seen from the dwelling-house. The prevailing idea, at present, is, that the several buildings ought to form a regular figure, and enclose an area or farm-yard, either as a fold for loose cattle, or, where the stalling of cattle is practised, as a receptacle for dung, and the most prevailing figure is the square. But this form is, he thinks, more defective than the oval or circle, the angles being too sharp, and the corners too deep. Besides, the roadway, necessary to be carried round a farm-yard in order to have a free and easy passage between the different buildings, is inconveniently lengthened or made at greater expense. The view of the whole yard and buildings from the house, on one side of it, is likewise more confined.' He on the whole prefers the complete octagon, the dwelling-house *a* being on one side, and the entrance gateway and granary opposite; the remaining six sides being occupied by stables and cattle-sheds, and other out-buildings, *c*, *d*, *e*, a barn and threshing machine, *f*, with a broad-way, dipping gently from the buildings, *g*, and surrounding a wide shallow dung-basin, *h*, which occupy the rest of the area of the yard. Externally is a basin for the drainings of the yard, *i*; and grass enclosures for calves, poultry, fruit trees, and rick-yard.



The following plan of the arrangement of a small farm-house and offices, which he considers very convenient, is given by Beatson. At the north-west corner is the barn (1), with a water threshing-mill; a straw-house (2), being a continuation of the barn above, for holding a quantity of straw after it is threshed, or hay, that it may be at hand to give to the cattle in the feeding-house below. The upper part of this

straw-house may consist of pillars to support the roof, with about eight feet space between them, whereby a good deal of building will be saved. In the floor should be hatches, at convenient distances, to put down the straw to the cattle below.



A court for the dung-hill (3) has a door to it from the feeding-house, and a large entry at the other end to admit carts to take away the dung: on the outside of this should be a urine-pit, in the most convenient place, according to the form of the ground; a cow-house (4) has a door also to the dung-court; and a calf-pen (5) with a rail across to keep in the calves, even though the doors are all open, adjoins; there is a stable, with a harness-room, and a place for keeping corn (6); a root-house (7), over which, or over the barn, may be a granary; a shed for carts (8); a place for keeping large implements, as ploughs and harrows (9); for keeping smaller implements, as spades, shovels, rakes, forks, &c., and for laying by old iron and many other useful things that might otherwise be lost or thrown away (10); a pond for washing the horses' feet (11); which slopes down from each extremity towards the middle, where it is deepest, that the horses may easily go in at one end, and come out at the other, with a rail at each end, to prevent their going in during frost, or when not wanted to go; a pump, with a trough for the horses or cattle to drink in, especially while other water is frozen, or when the water in the pond is dirty (12); but, if it can be contrived so that the water which drives the mill may run through this pond, it will be preferable as being at all times clean and wholesome. One advantage of this arrangement, as Beatson remarks, is, that the fodder consumed upon the farm goes progressively forward from the barn-yard through the cattle-houses to the dung-hill, without the unnecessary labor generally occasioned by carrying it backwards and forwards. For it comes from the barn-yard into the barn, where it is threshed; it is then put in the straw-house, and given to the cattle immediately below; and after passing through them, it is thrown into the dung-court. A rick of straw, or hay, built behind the stable or cow-house, or in a shed contiguous to either, with proper conveniences, will have the same progressive course to the dung-hill; for, it will be observed, the communication from these is equally easy from without or within; the rail across the calf-pen being intended chiefly to keep in the calves, while the doors on each side are open when conveying the dung that way from the stable to the dung-hill.

The ground floor of the dwelling-house to this farmery (13), has a dairy, pantry, and various conveniences behind for keeping swine, poultry, coals, &c. The stair to the upper chambers rises from either side to the same landing-place; from whence are a few steps up to the chamber-floor.

The following diagrams represent the elevation, and two ground plans, of a farm-house on a large scale, and which might be extended to any size. The ground plan, fig. 2, is divided into *a*, the principal entry; *b*, the parlour; *c*, the family bed-room; *d*, the kitchen; *e*, the dairy; *f*, the pantry and cellar; the three latter being attached to the back part of the house by a continuation of the same roof downwards. By permitting the ceilings to be seven and a half or eight feet in height, some small bed rooms may be provided above them, having a few steps down from the floor of the front rooms, or a few steps up from the first landing place.

Fig. 1.

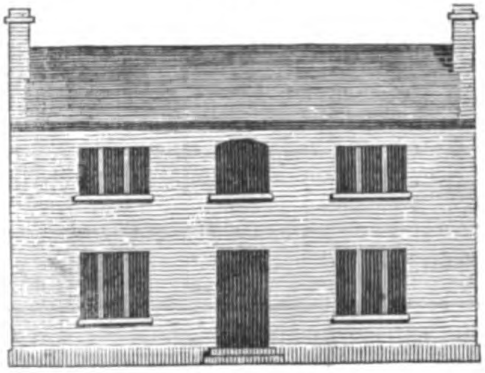
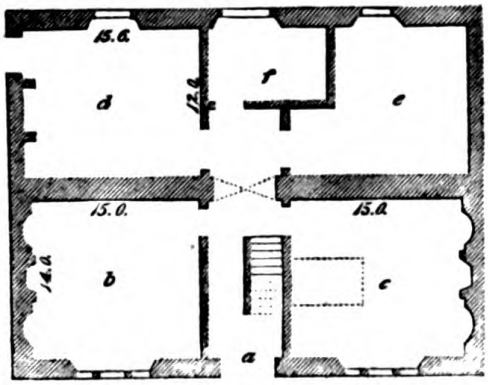


Fig. 2.

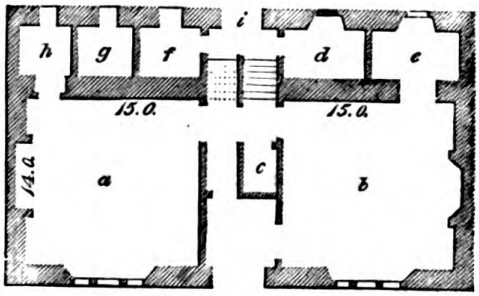


The earl of Winchelsea, at Burleigh, has a farm-house erected nearly in this way; but in it

the back door of the kitchen enters into a brew-house and wash-house; the fire place and copper being behind the kitchen vent. Beyond this brew-house is a place for holding fire-wood, &c.; in the back walls of which are openings to feed the swine at. In the kitchen is an oven; and below the grate an excellent contrivance for baking occasionally, but chiefly employed for the purpose of keeping the servants' meat warm. It consists of a plate of cast iron, with a door similar to that of an oven. The up-stairs part is divided in the front into two good rooms, and into two small ones on the back part, but may be easily subdivided where necessary.

Fig. 3 exhibits another mode of dividing the ground floor, in which *a* is the parlour; *b*, the kitchen; *c*, the closet; *d*, the dairy; *e*, the pantry; *f*, the coal-house; *g*, the poultry-house; *h*, the pig-sty, which has an opening into the kitchen; *i*, the back entry. The chamber-floor may be divided likewise, where it is requisite, into two good bed-rooms, and a light closet capable of holding a bed, or in any other way that may be thought more convenient.

Fig. 3.



3. *On keeping Farming Accounts.*—Sir John Sinclair strongly recommends accuracy to the gentleman farmer, as well as to the tenant, and furnishes the following models, chiefly adapted to the former, in his Code of Agriculture, 1820.

WEEKLY JOURNAL OF TRANSACTIONS, FROM TO .

		State of Weather.			
		Baro.	Ther.	Wind.	Rain.
Monday.					
Tuesday.					
Wednesday.					
Thursday.					
Friday.					
Saturday.					
Sunday.					

WEEKLY STATE OF LABOR, FROM TO .

Names of Men and Horses.	Mon.	Tues.	Wed.	Thur.	Frid.	Sat.	No. of Days.	Rate per Day.	Total.		
									£	s.	d.
Daily Laborers . . .											
Farm Servants . . .											
Horses											
Task Work											
Work by Tradesmen .											

Cash Account.

Dr. Cash received.						Cash paid Cr.					
When received.	Of whom received.	On what account received.	Amount. £	s.	d.	When paid.	To whom paid.	On what account paid.	Amount. £	s.	d.
						Articles from the Farm consumed (Amount of)					
						When.	By whom.	What Articles. £. s. d.			
		Total received.						Total paid - - -			

Management of Arable Land.

No. of Years.	What Year.	What Crop.	Acres.	When begun.	Preparing. Ploughing, Harrowing, Rolling. No. of Men.	Days.	At per day.	Amount. £	s.	d.	Manure. Sort.	Quantity.	Price.	Amount. £	s.	d.	Sowing Seed. Sort.	Quantity.	Price.	Amount. £	s.	d.

Management of Pasture Land.

No. of Years.	What Year.	How many Head of Cattle fed. Oxen.	Horses.	Sheep.	Cows.	At per Head.	Amount. £	s.	d.	Produce of Hay, &c. When begun.	No. of Hands.	Amount paid. £	s.	d.	How many Loads, at per Load.	Amount. £	s.	d.	Posted to Folio.

Management of Woodland.

No. of years.	What year.	Quantity of Bark.									Underwood.						Timber Sold.							
		No. of Men.	At per Day.	Amount.			Quantity.	Price.	Amount.			Cost cutting down.	Quantity sold	Amount.			Sort.	Quantity.	Price.	Amount.			Post to Bark & timber.	Underwood.
				£.	s.	d.			£.	s.	d.			£.	s.	d.				£.	s.	d.		

Account of Crops.

Sort.	Threshed.		Bought.		Sold.		Sown.		Consumed.		Where, and by whom consumed.				Where sown.			Ground.	
	Quarters. Bushels.	£.s.d.	Quarters. Bushels.	£.s.d.	Quarters. Bushels.	£.s.d.	Quarters. Bushels.	£.s.d.	Quarters. Bushels.	£.s.d.	Sort.	By whom.	Bushels. Pecks.	£.s.d.	No of Field	Quarters. Bushels.	£.s.d.	Bushels. Pecks.	£.s.d.
Wheat .																			
Barley .																			
Oats . .																			
Hay . .																			
Potatoes.																			

Dairy Account of Milk, Butter, Cheese.

		Sunday.		Mon.		Tues		Wed.		Thurs.		Friday.		Sat.		Total price.		Amount.		
		Qts.	Pts.	Qts.	Pts.	Qts.	Pts.	Qts.	Pts.	Qts.	Pts.	Qts.	Pts.	Qts.	Pts.	s.	d.	£.	s.	d.
Milk.	Milked . .																			
	Made into Butter and Cheese .																			
	Consumed .																			
Butter.	Made . . .		lbs.		lbs.		lbs.		lbs.		lbs.		lbs.		lbs.					
	Sold . . .																			
	Consumed .																			
Cheese.	Made . . .																			
	Sold . . .																			
	Consumed .																			

STOCK ACCOUNT

Increase and Decrease of Live Stock.								What part of the Farm occupied by the Cattle.				
Description.			Increase by		Decrease by		Total.	Date when sent in.	When taken out.	Number and Description of Cattle.	No. of field.	Nature of the Crop in the Field.
		No.	Purchase.	Birth.	Death.	Sale.						
Sheep.	Rams											
	Ewes	Spaniard										
	Wethers											
	R. Lambs	Spaniards										
	E. Lambs	Ditto										
Cattle.	Bulls											
	Cows											
	Oxen											
	Heifers											
	B. Calves											
	C. Calves											
Pigs.	Boars											
	Sows											
	Barrows											
	Pigs											
Horses.	Horses											
	Mares											
	Colts											
Poultry and Eggs.	Turkies											
	Poults											
	Fowls											
	Chickens											
	Geese											
	Goslings											
	Ducks											
	Ducklings											
	Pigeons											
	Eggs											

'The account books of a common farmer,' says Mr. Loudon, 'may be a cash book for all receipts and payments, specifying each; a ledger for accounts with dealers and tradesmen; and a stock book for taking an inventory and valuation of stock, crop, manures, tillages (and every thing that a tenant could dispose of or be paid for on quitting his farm), once a year. Farming may be carried on with the greatest accuracy and safety, as to money matters, by means of the above books, and a few pocket memorandum books for laborers' time, jobs, &c. With the exception of a time book (such as is hereafter described), we should never require more, even from a proprietor's bailiff; to many of whom the nine forms just given would only puzzle;—to some we have known them lead to the greatest errors and confusion. No form of books, or mode of procedure, will enable a farmer to know whether he is losing or gaining, but that of taking stock.'

The Time Book, Mr. Loudon recommends, may be made useful, as he suggests, in every department of agriculture and on every scale of management, though most necessary for bailiffs, where a number of day laborers are employed on improvements. It is a folio volume, ruled so as to read across both pages, with columns titled, as in the specimen annexed. In this the bailiff or master inserts the name of every hand; and the time in days, or proportions of a day, which each person under his care has been at work, and the particular work he or she has been engaged in. At the end of each week the bailiff or master sums up the time from the preceding Saturday or Monday, to the Friday or Saturday inclusive; the sum due or to be advanced to each man is put in one column, and when the man receives it he writes the word received in the column before it, and signs his name as a receipt in the succeeding column. The Time Book, therefore, will show what every man has been engaged in during every hour in the year for which he has been paid, and it will also contain receipts for every sum, however trifling, which has been paid by the bailiff for rural labor.' 'In short, it would be difficult to contrive a book more satisfactory for both master and servant than the Time Book, as it prevents, as far as can well be done, the latter from deceiving either himself or his employer, and remains an authentic indisputable record of work done, and of vouchers for money paid during the whole period of the bailiff's services.'

TIME-BOOK. 1824, Sept. 8th to 15th. Time, Expense, and Occupation of hired Servants and Laborers employed at ———, under the Bailiff A. D.

Sept.	8, 9, 10, 11, 12, 13, 14, 15. Time.								Rate per Day.	Amount of Money.	Advances on Account, obs, &c.	Receipts and Signatures.	Daily Occupation.						Remarks.
Names.	Sun.	Mon.	Tues.	Wed.	Thu.	Fri.	Total					L. s. d.	Saturday.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	
H. Todd.	Foreman of the ploughmen hired by the year.								0 0	0 0 0	1 5 0	Recd. 1 5 0 H. Todd.	Ploughing in Elms Vale.	At church, and reading at home.	Carting oats and beans from No 2 and 3.	Carting oats from 203.	In the fallow field No. 7.	In the fallow field No. 7.	In the fallow field No. 8.	There have been only two days of sunshine this week, when the thermometer was at 50 deg. and 52 deg. the rest of the week cloudy and cold, the thermometer not above 48 deg. The fallows work well, and the clay burns with less fuel than usual. Crop now half got in. Hall the lime-burner, has got one of Booker's new lime kilns nearly completed. Cow Charlotte died on Thursday evening.
J. Moor.	Ploughman hired by the year.									0 16 6		Recd. 0 16 6 J. Greig.	Superintending the women at turnip hoeing.	On a visit.	Carting turf.	In the rick yard.	Levelling in No. 7.	Carting lime.	Carting lime.	
J. Greig.	1	0	1	1	1	1	1	5½	3s. 0d.				Carting wheat from Peter's Piece.	At church, and reading at home.	Carting wheat from Peter's piece.	At the grubber in fallow piece.	In the fallow field No. 7.	Carting burnt clay to No. 7.	Carting lime to No. 8.	
Plough-man by day.													The same.	The same.	At dung cart.	At dung cart.	The same.	Carting lime.	Carting lime.	
J. Reid, do.	1	0	1	1	1	1	1	6	2s. 6d.	0 15 0		Recd 0 15 0 J. Rud.	Superintending the women at turnip hoeing.	On a visit.	Stooking wheat.	In the rick yard.	Levelling in No. 7.	In the garden.	Buried the cow Charlotte.	
R. Hill, do.	Laborer hired by the year.								0 0	0 0 0	1 6 6	Recd 1 6 6 R. Hill.								
Asa Hall.	1	0	1	1	1	1	1	1 6	1s. 0d.	0 6 0		Recd. 0 6 0 A. Hall.	Attending the poultry, pigs, &c.	At church in the evening.	Attending Charlotte the new-calved cow.	Sifting in the barn.	Attending the cow Charlotte, and the pigs.	At the cow and the routine work of the yard.	Set a hen with nine eggs.	
Fox & Co.	Laborers by the job.										5 0 0	Recd. 5 0 0 Fox & Co.	At the new road at Bawdry.		At the new road at Bawdry.	At the new road at Bawdry.	At the new road at Bawdry.	At the new road at Bawdry.	At the new road at Bawdry.	
H. Smith.	Laborer by the job.										1 0 0	Recd. 1 0 0 H. Smith.	Digging drains in fallow field, No. 7.		Digging drains in fallow field, No. 7.	Digging drains in fallow field, No. 7.	Digging drains in fallow field No. 7.	Digging drains in fallow field No. 7.	Digging drains in fallow field No. 7.	
	Amount.....									1 17 6	8 11 6	Total 10 9 0								

FARMER (Hugh), a learned dissenting minister, born at Shrewsbury in 1714. He was descended from a respectable family in North Wales; and, after receiving the first part of his education at a school in Llangerin, was for some time under the tutorage of Dr. Charles Owen. When about sixteen years of age, he was sent to prosecute his studies under the celebrated Dr. Doddridge, at Northampton. Mr. Farmer first became chaplain in the family of William Coward, Esq. of Walthamstow in Essex, and minister to a dissenting congregation in that village. He next resided with William Snell, Esq., a respectable dissenter of the neighbourhood; and in his family Mr. Farmer lived for thirty years, still continuing his connexion with the congregation at Walthamstow. Upon the day of thanksgiving appointed for the suppression of the rebellion, in 1745, he delivered a very apposite sermon, which he was induced to publish the following year. His next publication was entitled An Enquiry into the Nature and Design of our Lord's Temptation in the Wilderness, 8vo. In this work Mr. Farmer labors to demonstrate that the whole of the temptations were transacted in vision, and that they were particularly intended to point out to Jesus the difficulties and duties of his subsequent ministry. Whatever singularity of opinion appeared in this work, the originality of thought and profound erudition with which it was supported, gained it a rapid and extensive circulation, and called forth the abilities of those who were of a different opinion. It is generally thought, however, that of all Mr. Farmer's literary productions, his Dissertation on Miracles, designed to show that they are arguments of a divine interposition, and absolute proofs of the mission and doctrine of a prophet, published in 1771, is the most masterly. Notwithstanding the many able treatises upon that subject, which have appeared, some have considered this work in many respects as without a rival. His next publication was An Essay on the Demoniacs of the New Testament, which he maintains to have been only natural diseases. This work seems to be a completion of what the author had designed in his Dissertation on Miracles. Mr. Farmer was for several years the sole pastor of the congregation at Walthamstow, but in 1761 an able colleague was appointed him, in consequence of which he became the afternoon preacher to the congregation of Salter's Hall, London, and, in a short time after, the Tuesday lecturer at the same place. As he advanced in years, he resigned his ministerial employments, much to the regret of the people under his charge. His last performance was entitled The General Prevalence of the Worship of Human Spirits in the Ancient Heathen Nations Asserted and Proved; which was attacked by Mr. Fell, in an acute and learned treatise in 1785. In the same year Mr. Farmer was afflicted with a disease in his eyes, which almost deprived him of sight. From this time, however, his infirmities increased, and he died at Walthamstow in 1787, in the seventy-third year of his age. In his last will his executors were directed to burn all his manuscripts; but some of his letters and fragments of a Dissertation on the Story of Balaam, were published in 1804 with his life prefixed.

FARMER (Richard), an English divine and antiquary, born at Leicester in 1735. His father was a hosier in that town, and, after receiving the rudiments of his education there, he became a student at Cambridge, and pensioner of Emanuel College. Here his diligence and success in obtaining a knowledge of books, as well as the quickness of his memory, were early observed; and he was made B.A. in 1757, and M.A. in 1760, in which year also he was appointed classical tutor. After officiating some time as a curate, he, in 1767, took the degree of B.D. and became one of the preachers at Whitehall. While Mr. Farmer paid considerable attention to Grecian and Roman authors, he also applied himself particularly to old English literature; and An Essay on the Learning of Shakspeare, published in 1766, contributed principally to his literary fame. Of this performance, which was much admired for the sprightliness of its composition, three editions were sold in a very short time. Mr. Farmer was now noticed and patronised in his profession: by the influence of bishop Hurd, he was promoted to the chancellorship and a prebend in the cathedral of Litchfield; and in 1775 was chosen master of Emanuel College, and took his degree of D.D. Not long after, he was appointed principal librarian to the university, and served in turn the office of vice-chancellor. Lord North, at that time prime-minister, made him prebendary of Canterbury, and Mr. Pitt repeatedly offered him a bishopric; but the constraints and solemnity of the episcopal character did not suit his natural disposition, and he not only declined accepting a bishopric, but resigned his office as prebendary for a residentaryship of St. Paul's. By this it was necessary he should reside three months annually in London, and these he spent in the company of literary characters with pleasure and advantage. He was particularly instrumental in amending the police of Cambridge, with regard to the paving and lighting the streets. He had collected ample materials for a history of the town and antiquities of Leicester, which he intended to publish by subscription, but relinquished the design; and Mr. Nichols being engaged in writing a history of that county, the doctor gave what he had collected, with the plates, to him. Dr. Farmer died at Emanuel College, in 1797, in the sixty-second year of his age. His collection of scarce and curious books, which was very extensive, was disposed of a short time after his death.

FARMINGTON, a large, pleasant, and wealthy town in Hartford county, Connecticut. The river meanders delightfully through charming intervales, which beautify and enrich this town. The houses, in the compact part of the town, stand chiefly on the street that runs north and south along the gentle declivity of a hill which ascends east of the vallies. About the centre of the street there is a large and handsome congregational church. This town was settled as early as 1645, and its boundaries were then very extensive. Several towns have been since taken from it. It lies ten miles south-west of Hartford.

FARN ISLANDS, two groups of little islands and rocks, seventeen in number, opposite to Bamborough castle in Northumberland. At low water the points of several others are visible besides the seventeen just mentioned. The nearest island to the shore is called the House Island, and lies exactly one mile and sixty-eight chains from the coast. The most distant is about seven or eight miles. Their produce is kelp, feathers, and a few seals, which the tenants watch and shoot for the sake of the oil and skins. Some of them yield a little grass that serves to feed a cow or two; which the people transport over in their little boats.

FARNABIE, or FARNABY (Thomas), an eminent grammarian, son of a London carpenter, was born in 1575. While at Oxford, being enticed to abandon his religion, he went to Spain, and was there educated in a college belonging to the Jesuits. Being weary of their severe discipline, he went with Sir John Hawkins and Sir Francis Drake in their last voyage in 1595. He was afterwards a soldier in the Low Countries: but being reduced to great want, returned to England, where after wandering about for some time, under the name of Thomas Bainrafe (the anagram of his name), he settled at Mattock in Somersetshire, and taught grammar with reputation. He removed to London, and opened a school. While here he was made M.A. at Cambridge, and incorporated into the university of Oxford. Thence he removed, in 1636, to Seven-Oaks in Kent; and raised a respectable school. Upon the breaking out of the civil war, in 1641, he was cast into prison. It was debated, in the house of commons, whether he should be sent to America; but, this motion being rejected, he was removed to Ely-house in Holborn, where he died, June 12th, 1647. Many writers have spoken with great approbation of his labors. M. Bayle says, 'his notes upon most of the ancient Latin poets have been of very great use to young beginners; being short, learned, and designed chiefly to clear up the text.'

FARNESE, the name of a distinguished family in Italy, of which the most remarkable were, 1. Peter Louis Farnese, the son of Alexander, afterwards pope Paul III. He was created duke of Parma and Placentia in 1545, but, becoming universally hated for his tyranny and debauchery, fell by the hands of an assassin in 1547. 2. His eldest son, Alexander, born 1520, was raised by Clement VII. to the see of Parma, and created a cardinal by his grandfather, Paul III. He was also dean of the Sacred College, and distinguished both by his learning and virtues. He was repeatedly employed as nuncio to the courts of Vienna and Paris, and died at Rome in 1589. 3. Alexander, third duke of Parma, was a nephew of his, and distinguished as a military commander under Philip II. of Spain. He succeeded Don John of Austria in the government of the Low Countries in 1578; and was designed to have commanded the Spanish army which embarked with the Armada for the conquest of England. He died in 1592 at Arras, aged forty-six.

FARNHAM, or FERNHAM, a market town of Surry, thirty-eight miles from London, and twelve west from Guildford. It is a populous place, situated on the Wey, and supposed to

have its name from the fern which abounded here. It was given by Ethelbald, king of the West Saxons, to the see of Winchester; the bishops of which have generally resided in the castle here, in summer, since the reign of king Stephen, whose brother, the then bishop, first built it. It was a magnificent structure, with deep moats, strong walls, towers, and a fine park; but it is much decayed. Adjoining the park is Jay's tower, the ascent to which is by sixty-three stone steps. This was partly beaten down by Cromwell's cannon. It now contains about forty-eight rods of land on its top, which is converted into a kitchen garden. This spot was annually visited by their late majesties durin the life of the late bishop Thomas. The town, which has many handsome houses, and well paved streets, is governed by twelve masters, of whom two are bailiffs, chosen annually. They have the profits of the fairs and markets, and the assize of bread and beer; and hold a court every three weeks, which has power of trying and determining all actions under 40*s*. From Michaelmas to Christmas there is a good market for oats; and a considerable wheat market between All Saint's day and Midsummer; but it is diminished since the people about Chichester and Southampton have so largely communicated with London by sea. This loss, however, is amply made up by the vast growth of hops, of which there are 700 or 800 acres of plantations about this town, said to excel the Kentish grounds both in quantity and quality. This town sent members to parliament in the reign of Edward II. but never since. The market is on Thursday; fairs on Holy Thursday, June 24th, and Nov. 2nd. There is also a market for Welsh hose.

FARNOVIUS (Stanislaus), a dissenter from the other Unitarians in 1568, who was followed by several persons eminent for their learning. He was induced by Gonesius to prefer the Arian system to that of the Socinians, and consequently asserted, that Christ had been produced out of nothing by the Supreme Being before the creation. He warned his disciples against paying religious worship to the Divine Spirit. He died in 1615.

FARO, an island of Sweden, to the north-east of Gothland, in the Baltic. It is about thirty miles in circumference; and has a chief town of the same name on the east coast. Long. 19° 32′ 55″ E., lat. 57° 56′ N.

Faro, a sea-port and bishop's see of Portugal, in Algarve, near Cape Santa Maria. It stands in a fertile plain; is fortified, and tolerably well built. Population 7000. The harbour is almost blocked up, but the roadstead has good anchorage; and a considerable export trade is carried on with England and other countries in sumach, wine, and cork. There are packet boats between this place and Gibraltar. It suffered severely from the earthquake of 1755; and is eighteen miles south-west of Tavira, and 130 south-east of Lisbon.

Faro of Messina, a strait of the Mediterranean, between Sicily and Calabria, about seven miles across; so named from Cape Faro; remarkable for its tide ebbing and flowing with great rapidity every six hours. In this strait the French obtained a naval victory over the Spaniards in 1675.

FAROE Islands. See Ferroe Isles.

FARON, a mountain of France, in the department of Var, near Toulon, with a fort and redoubt on its top, which is 1718 feet above the sea level, and almost inaccessible, being nearly perpendicular. The British troops, under lord Mulgrave, were in possession of the fort, on the 30th September, 1793, when the French, by a very daring manœuvre, seized the redoubt, but were driven from it on the 1st October, by the combined forces, with the loss of 2000 men.

FARQUHAR (George), an ingenious poet and dramatic writer, the son of an Irish clergyman, was born at Londonderry in 1678. He was sent to Trinity College, Dublin; but his volatile disposition soon led him to the stage; where, having dangerously wounded a brother actor in a tragic scene, by forgetting to change his sword for a foil, it affected him so much that he left the Dublin theatre and went to London. Here, by the interest of the earl of Orrery, he procured a lieutenant's commission; which he held several years, and gave many proofs both of courage and conduct. In 1698 he wrote his first comedy, called Love and a Bottle; which, for its sprightly dialogue and busy scenes, was well received. In 1700, the jubilee year at Rome, he brought out his Constant Couple, or a Trip to the Jubilee: and suited Mr. Wilkes's talents so well, in the character of Sir Henry Wildair, that the player gained almost as much reputation as the poet. This induced him to continue it in another comedy called Sir Harry Wildair, or The Sequel of the Trip to the Jubilee; in which Mrs. Oldfield acquired great applause. In 1703 appeared The Inconstant, or The Way to Win him; in 1704 a farce called The Stage-coach; in 1705 The Twin Rivals; and in 1706 The Recruiting Officer, founded on his own observations while on a recruiting party at Shrewsbury. His last comedy was The Beaux Stratagem, of which he did not live to enjoy the full success. Mr. Farquhar married in 1703. Before this time his manner of life had been dissipated; and the lady, who became his wife, having fallen violently in love with him, contrived to circulate a report that she was possessed of a large fortune. Interest and vanity, therefore, got the better of Farquhar's passion for liberty, and the lady and he were united in the hymeneal band. To his honor, however, it is recorded, that though he soon found himself deceived, he was not known to upbraid his wife with it; but became a most indulgent husband. Mrs. Farquhar, however, did not long enjoy the happiness she had thus purchased by this stratagem. The involvement of her husband, and the treachery of a court patron who persuaded him to sell his commission, brought on a decline, which at length carried him off in 1707, in the twenty-ninth year of his age. His plays still continue to be represented to full houses.

FARR (Samuel), M. D., was a native of Taunton, Somersetshire, and born in 1741. He was educated at Warrington grammar-school, and the universities of Edinburgh and Leyden. He afterwards established himself in his native

town, and was the author of several medical tracts of merit, as An Inquiry into the propriety of Phlebotomy in cases of Consumption, 8vo.; An Essay on Acids; The History of Epidemics, translated from the Greek of Hippocrates, 4to.; The Elements of Medical Jurisprudence, 8vo.; and Aphorismi de Marasmo, ex summis Medicis collecti, 12mo. He died in 1795.

FARRA'GO, *n. s.* } Lat. A mass formed
FARRA'GINOUS, *adj.* } confusedly of several ingredients; a medley formed of different materials.

Being a confusion of knaves and fools, and a *farraginous* concurrence of all conditions, tempers, sexes, and ages, it is but natural if their determinations be monstrous, and many ways inconsistent with truth.
Browne's Vulgar Errours.

When we sleep, the faculty of volition ceases to act, and in consequence the uncompared trains of ideas become incongruous, and form the *farrago* of our dreams; in which we never experience any surprise, or sense of novelty. *Darwin.*

FARRANT (Richard), an English musical composer of eminence, held situations in the Chapel Royal and St. George's chapel at Windsor, from 1564 to 1580, and was remarkable for the devout and solemn style of his church music, much of which is found in the collections of Boyce and Barnard. His full anthem, 'Lord, for thy tender mercy's sake,' is still in use.

FAR'RIER, *n. s.* & *v. n.* } Fr. *ferrier;* Ital.
FAR'RIERY. } *ferraro;* Lat. *ferrarius,* of *ferrum,* iron. A shoer of horses; a horse-doctor: to farrier is to practice either or both of these callings: farriery is the art or calling thus practised. Which see below.

But the utmost exactness in these particulars belongs to *farriers,* saddlers, smiths, and other tradesmen. *Digby.*

There are many pretenders to the art of *farriering* and cowleeching, yet many of them are very ignorant.
Mortimer.

If you are a piece of a *farrier,* as every groom ought to be, get sack, or strong-beer, to rub your horses.
Swift.

Most satirists are indeed a public scourge
Their mildest physic is a *farrier's* purge;
Their acrid temper turns, as soon as stirred,
The milk of their good purpose all to curd.
Cowper.

FARRIER, MILITARY, is a man appointed to do the duty of farriery in a troop of horse. These troop farriers are under the immediate superintendence of a veterinary surgeon, to whom they must apply whenever a horse is ill or lame, that he may report the same to the officer commanding the troop. When the farrier goes round, after riding out, or exercise on horseback, he must carry his hammer, pincers, and some nails, to fasten any shoe that may be loose. When horses at out-quarters fall particularly ill, or contract an obstinate lameness, the case must be reported to the head-quarters of the regiment; and the veterinary surgeon must, if time and distance will permit, be sent to examine the horse. No farrier must presume to make up any medicine, or any external application, without, or contrary to, the receipt given him by the veterinary surgeon. If any farrier, through carelessness or inattention, lames a horse belonging to another troop, he ought to be at all the expense in curing the horse so lamed. Farriers are in every respect liable to be tried according to the Articles of War.

FARRIERY. The treatment of the diseases of horses we refer to the article VETERINARY ART, fully feeling the propriety of seeking that superior professional treatment for horses of value which the English gentleman no longer expects to find either with his groom or his blacksmith. But farriery (Lat. *ferrarius,* from *ferrum,* iron) may with strict propriety describe a very useful and important employment of the latter, i. e. the *shoeing of horses:* we therefore propose to offer our observations on that art in this place.

Shoeing is a method of preserving the feet of horses. Some other auxiliary methods may first be noticed. For instance, when young horses are first taken from the field, their hoofs are observed to be cool, sound, and tough: but they are no sooner introduced into the stable, than their hoofs are greased or oiled two or three times a week: and if they are kept much in the house standing upon hot dry litter, without being frequently led abroad, and without having an opportunity of getting their hoofs cooled and moistened in wet ground, their hoofs grow so brittle, dry, and hard, that pieces frequently break off, like chips from a hard stone; and, when driving the nails in shoeing, pieces will split off, even although the nails are made very fine and thin. If these same horses with brittle shattered hoofs are turned out to graze in the fields, their hoofs in time will become as sound, tough, and good, as they were at first.

Mr. Clarke of Edinburgh ascribes this change to the wet and moisture which the hoofs are exposed to in the fields, of which water is the principal ingredient; and it is a certain fact, of which we have daily proofs, that, when all other means fail, horses, turned out to grass, will recover their decayed brittle hoofs. It is known, he observes, that the hoofs of horses are porous; and that insensible perspiration is carried on through these pores, in the same manner, and according to the same laws as take place in other parts of the body. Now every body knows, that greasy or oily medicines applied to the skin of the human body prevent perspiration, which is frequently attended with the worst consequences. The same reasoning will hold with respect to the hoofs of horses; for greasy applications close the pores of the hoof, by being absorbed into its inner substance. Hence the natural moisture, which should nourish the hoof, is prevented from arriving at its surface; which, on that account, becomes as it were dead, and consequently dry, brittle, and hard. The original practice of greasing horses' hoofs has probably taken its rise from observing, that grease or oil softens dead substances, such as leather, &c. But this will by no means apply to the hoofs of horses, as there is a very great difference between the living and dead parts of animals; the former having juices, &c., necessary for their own nourishment and support, whilst the latter require such applications as will preserve them only from decaying and rotting.

Another practice, equally pernicious, is the stuffing up (as it is called) horses' hoofs with hot

resinous and greasy mixtures, under the notion of cooling and softening them. Various are the prescriptions recommended for this purpose, many of which are of a quite opposite nature to the purpose intended. There is likewise a great impropriety in stuffing up the hoofs with rotten dung and stale urine: this, it is true, is moisture; but of the very worst kind, on account of the salts contained in the urine, which of itself greatly contributes towards hardening and drying their hoofs, in place of softening them; besides the other bad effects which may arise to the frog, &c., from the rottenness of the dung.

Without commenting upon the various compositions or pompous prescriptions recommended in books, or those handed about as receipts for the softening and stuffing horses' hoofs, we would recommend one which is more natural, and ought not to be despised for its simplicity. This is only to cool and moisten the hoofs with water morning and evening: and, to those who are fond of stuffing, we would prescribe bran and water, or clay, &c. made into the consistency of a poultice; and in particular cases, where horses stand much in the stable, and the hoofs are disposed to be very hard, dry, and brittle, a poultice of this kind, or any other emollient composition in which water is a principal ingredient, may be applied all round the hoof; or, in imitation of some dealers, to keep a puddle of water at the watering place, which will answer equally well, if not better. From this manner of treatment, the hoofs will be preserved in their natural state, and a free and equal perspiration kept up, by which the nourishment natural to the hoof will have free access to its surface; as it is this only which causes that cohesion of the parts which constitutes a firm, sound, and tough hoof.

Horses are shod with iron to defend and preserve their hoofs. As feet differ, so should shoes accordingly. 'The only system of farriers,' lord Pembroke observes, 'is to shoe in general with excessive heavy and clumsy ill-shaped shoes, and very many nails, to the total destruction of the foot. The cramps they annex, tend to destroy the bullet; and the shoes made in the shape of a walnut shell prevent the horse's walking upon the firm basis which God has given him for that end, and thereby oblige him to stumble and fall. They totally pare away also and lay bare the inside of the animal's foot with their detestable butteries, and afterwards put on very long shoes, whereby the foot is hindered from having any pressure at all upon the heels; which pressure might otherwise still perchance, notwithstanding their dreadful cutting, keep the heels properly open, and the feet in good order. The frog should never be cut out; but as it will sometimes become ragged, it must be cleaned every now and then, and the ragged pieces pared off with a knife. In one kind of foot indeed a considerable cutting away must be allowed of, but not of the frog: we mean, that very high feet must be cut down to a proper height; because, if they were not, the frog, though not cut, would still be so far above the ground as not to have any bearing upon it, whereby the great tendon must inevitably be damaged, and consequently the horse would go lame.

'The weight of shoes must greatly depend on the quality and hardness of the iron. If the iron be very good, it will not bend; and in this case the shoes cannot possibly be made too light: care, however, must be taken, that they be of a thickness so as not to bend; for bending would force out the nails, and ruin the hoof. That part of the shoe which is next the horse's heel, must be narrower than any other; that stones may be thereby prevented from getting under it, and sticking there; which otherwise would be the case; because the iron, when it advances inwardly beyond the bearing of the foot, forms a cavity, wherein stones being lodged would remain, and, by pressing against the foot, lame the horse. The part of the shoe which the horse walks upon should be quite flat, and the inside of it likewise; only just space enough being left next the foot to put in a picker (which ought to be used every time the horse comes into the stable), and also to prevent the shoe's pressing upon the sole. Four nails on each side hold better than a greater number, and keep the hoof in a far better state. The toe of the horse must be cut short, and nearly square (the angles only just rounded off); nor must any nails be driven there: this method prevents much stumbling, especially in descents; and serves, by throwing nourishment on the heels, to strengthen them: on them the horse should in some measure walk, and the shoe be made of a proper length accordingly; by these means, narrow heels are prevented, and many other good effects produced. Many people drive a nail at the toe, but it is an absurd practice. Leaving room to drive one there causes the foot to be of an improper length; and moreover, that part of the hoof is naturally so brittle, that even when it is kept well greased, the nail there seldom stays in, but tears out and damages the hoof.

'In wet, spongy, and soft ground, where the foot sinks in, the pressure upon the heels is of course greater than on hard ground; and so indeed it should be upon all accounts. The hinder feet must be treated in the same manner as the fore ones, and the shoes the same; except in hilly and slippery countries, they may not improperly be turned up a little behind; but turning up the fore shoes is of no service, and is certain ruin to the fore legs, especially to the bullets. In descending hills, cramps are apt to throw horses down, by stopping the fore legs, out of their proper basis and natural bearing, when the hinder ones are rapidly pressed; which unavoidably must be the case, and consequently cannot but push the horse upon his nose. With them, on a plain surface, a horse's foot is always thrown forwards on his toe, out of its proper bearing, which is very liable to make the horse stumble. The notion of their utility in going up hills is a false one. In ascending, the toe is the first part of the foot which bears on, and takes hold of the ground; and whether the horse draws or carries, consequently the business is done before the part where the cramps are comes to the ground. Ice nails are preferable to any thing to prevent slipping, as also to help horses up hill, the most forward ones taking hold of the ground early, considerably before the heels touch the

ground. They must be so made, as to be, when driven in, scarcely half an inch above the shoe, and also have four sides ending at the top in a point. They are of great service to prevent slipping on all kinds of places; and by means of them a horse is not thrown out of his proper basis. They must be made of very good iron; if they are not, the heads of them will be perpetually breaking off. From the race horse to the cart horse, the same system of shoeing should be observed. The size, thickness, and weight of them only should differ. The shoe of a race horse must of course be lighter than that of a saddle horse; that of a saddle horse lighter than that of a coach or bat horse; and these last more so than a cart, waggon, or artillery horse. At present all shoes in general are too heavy; if the iron is good, shoes need not be so thick as they are now generally made. The utmost severi y ought to be inflicted upon all those who clap shoes on hot. This unpardonable laziness of farriers, in making feet thus fit shoes instead of shoes fitting feet, dries up the hoof, and utterly destroys them. Frequent removals of shoes are detrimental, and tear the foot; but sometimes they are very necessary: this is an inconvenience to which half shoes are liable; for the end of the shoe, being very short, is apt to work soon into the foot, and consequently must then be moved.'

In a judicious treatise on this subject, by Mr. Clarke, the common form of shoes, and method of shoeing, are, with great reason, totally exploded, and a new form and method recommended, which seem founded on rational principles, and to have been confirmed by experience.

'In preparing the foot for the shoe,' our author observes, 'the frog, the sole, and the bars or binders, are pared so much that the blood frequently appears. The shoe by its form (being thick on the inside of the rim, and thin upon the outside), must of consequence be made concave or hollow on that side which is placed immediately next the foot, in order to prevent its resting upon the sole. The shoes are generally of an immoderate weight and length, and every means is used to prevent the frog from resting upon the ground, by making the shoe-heels thick, broad, and strong, or raising cramps or caukers on them. From this form of the shoe, and from this method of treating the hoof, the frog is raised to a considerable height above the ground, the heels are deprived of that substance which was provided by nature to keep the crust extended at a proper wideness, and the foot is fixed as it were in a mould.

'By the pressure from the weight of the body, and resistance from the outer edges of the shoe, the heels are forced together, and retain that shape impressed upon them, which it is impossible ever afterwards to remove; hence a contraction of the heels, and of course lameness. But farther, the heels, as has been observed, being forced together, the crust presses upon the processes of the coffin and extremities of the nut bone: the frog is confined, and raised so far from the ground, that it cannot have that support upon it which it ought to have: the circulation of the blood is impeded, and a wasting of the frog, and frequently of the whole foot, ensues. Hence proceed all those diseases of the feet, known by the names of foundered, hoof-bound, narrow heels, running thrushes, corns, high soles, &c.

'I have likewise frequently observed, from this compression of the internal parts of the foot, a swelling of the legs immediately above the hoof, attended with great pain and inflammation, with a discharge of thin, ichorous, fetid matter: from which symptoms, it is often concluded, that the horse is in a bad habit of body (or what is termed a grease falling down), and must therefore undergo a course of medicine, &c. The bad effects of this practice are still more obvious upon the external part of the hoof. The crust towards the toe, being the only part of the hoof free from compression, enjoys a free circulation of that fluid necessary for its nourishment, and grows broader and longer; from which extraordinary length of toe, the horse stumbles in his going, and cuts his legs. The smaller particles of sand insinuate themselves between the shoe and the heels, which grind them away, and thereby produce lameness. All this is entirely owing to the great spring the heels of the horse must unavoidably have upon the heels of a shoe made in this form.

'This concave shoe in time wears thin at the toe, and, yielding to the pressure made upon it, is forced wider, and of consequence breaks off all that part of the crust on the outside of the nails. Instances of this kind daily occur, insomuch that there hardly remains crust sufficient to fix a shoe upon them. It is generally thought that the broader a shoe is, and the more it covers the sole and frog, a horse will travel the better. But, as has been formerly remarked, the broader a shoe is of this form, it must be made the more concave; and, of consequence, the contracting power upon the heels must be the greater. It is likewise to be observed that, by using strong broad-rimmed concave shoes in the summer season, when the weather is hot and the roads very dry and hard, if a horse is obliged to ride fast, the shoes, by repeated strokes or frictions against the ground, acquire a great degree of heat, which is communicated to the internal parts of the foot, and together with the contraction upon the heels, occasioned by the form of the shoe, must certainly cause exquisite pain. This is frequently succeeded by a violent inflammation in the internal parts of the hoof, and is the cause of that disease in the feet, so fatal to the very best of our horses, commonly termed a founder. This is also the reason why horses, after a journey of a hard ride, are observed to shift their feet so frequently and to lie down much. If we attend further to the convex surface of this shoe, and the convexity of the pavement upon which horses walk, it will then be evident, that it is impossible for them to keep their feet from slipping in this form of shoe, especially upon declivities of streets.

'It is also a common practice to turn up the heels of the shoes into what is called cramps or caukers, by which means the weight of the horse is confined to a very narrow surface, viz. the inner round edge of the shoe-rim and the points or caukers of each heel, which soon wear round and blunt; besides, they for the most part are made by far too thick and long. The consequence

is, that it throws the horse forward upon the toes, and is apt to make him slip and stumble. To this cause we must likewise ascribe the frequent and sudden lameness horses are subject to in the legs, by twisting the ligaments of the joints, tendons, &c. I do not affirm that caukers are always hurtful, and ought to be laid aside: on the contrary, I grant that they, or some such like contrivance, are extremely necessary, and may be used with advantage upon flat shoes where the ground is slippery; but they should be made thinner and sharper than those commonly used, so as to sink into the ground, otherwise they will rather be hurtful than of any advantage.

'The Chinese are said to account a small foot an ornament in their women, and for that purpose, when young, their feet are confined in small shoes. This, no doubt, produces the desired effect; but must necessarily be very prejudicial to them in walking, and apt to render them entirely lame. This practice, however, very much resembles our method of shoeing horses; for if we looked upon it as an advantage to them to have long feet, with narrow low heels, and supposing we observed no inconvenience to attend, or bad consequence to follow it, we could not possibly use a more effectual means to bring it about than by following the method already described.

'In shoeing a horse, therefore, we should in this, as in every other case, study to follow nature: and certainly that shoe which is made of such a form as to resemble as near as possible the natural tread and shape of the foot, must be preferable to any other. But it is extremely difficult to lay down fixed rules with respect to the proper method to be observed in treating the hoofs of different horses: it is equally difficult to lay down any certain rule for determining the precise form to be given their shoes. This will be obvious to every judicious practitioner, from the various constructions of their feet, from disease, and from other causes that may occur; so that a great deal must depend upon the discretion and judgment of the operator, in proportioning the shoe to the foot, by imitating the natural tread, to prevent the hoof from contracting a bad shape. In order, therefore, to give some general idea of what may be thought most necessary in this matter, I shall endeavour to describe that form of shoe and method of treating the hoofs of horses, which from experience I have found most beneficial.

'It is to be remembered that a horse's shoe ought by no means to rest upon the sole, since this it will occasion lameness; therefore it must rest entirely on the crust; and, in order that we may imitate the natural tread of the foot, the shoe must be made flat (if the height of the sole does not forbid it); it must be of an equal thickness all round the outside of the rim. For a draught horse about half an inch thick, and larger in proportion for a saddle horse. And on that part of it which is to be placed immediately next the foot, a narrow rim or margin is to be formed, not exceeding the breadth of the crust upon which it is to rest, with the nail-holes placed exactly in the middle; and from this narrow rim the shoe is to be made gradually thinner towards its inner edge. See plate FARRIERY, fig. 1.

'The breadth of the shoe is to be regulated by the size of the foot, and the work to which the horse is accustomed; but, in general, should be made rather broad at the toe, and narrow towards the extremity of each heel, in order to let the frog rest with freedom upon the ground. The necessity of this has been already shown. The shoe being thus formed, and shaped like the foot, the surface of the crust is to be made smooth, and the shoe fixed on with eight or at most ten nails, the heads of which should be sunk into the holes, so as to be equal with the surface of the shoe. The sole, frog, and bars, as I have already observed, should never be pared, farther than taking off what is ragged from the frog, and any excrescences or inequalities from the sole. And it is very properly remarked by Mr. Osmer, 'That the shoe should be made so as to stand a little wider at the extremity of each heel than the foot itself; otherwise as the foot grows in length, the heel of the shoe in a short time gets within the heel of the horse; which pressure often breaks the crust, and produces a temporary lameness, perhaps a corn.' This method of shoeing horses I have followed long before Mr. Osmer's treatise on that subject was published; and for these several years past I have endeavoured to introduce it into practice. But so much are the farriers, grooms, &c., prejudiced in favor of the common method of shoeing and paring out the feet, that it is with difficulty they can even be prevailed upon to make a proper trial of it.

'They cannot be satisfied unless the frog be finely shaped, the sole pared, and the bars cut out, in order to make the heels appear wide. Wide open heels are looked upon as a mark of a sound good hoof. This practice gives them a show of wideness for the time; yet that, together with the concave form of the shoe, forwards the contraction of the heels, which, when confirmed, renders the animal lame for life. In this flat form of shoe, its thickest part is upon the outside of the rim, where it is most exposed to be worn; and being made gradually thinner towards its inner edge, it is therefore much lighter than the common concave shoe: yet it will last equally as long, and with more advantage to the hoof; and as the frog or heel is allowed to rest upon the ground, the foot enjoys the same points of support as in its natural state. It must therefore be much easier for the horse in his way of going, and be a means of making him surer footed. It is likewise evident that, from this shoe, the hoof cannot acquire any bad form; when, at the same time, it receives every advantage that possibly could be expected from shoeing. In this respect it may very properly be said, that we make the shoe to the foot, and not the foot to the shoe, as is but too much the case in the concave shoes, where the foot very much resembles that of a cat's fixed into a walnut-shell.

'It is to be observed, that the hoofs of young horses, before they are shoed, for the most part are wide and open at the heels, and that the crust is sufficiently thick and strong to admit of the nails being fixed very near the extremities of each. But, as I have formerly remarked, from

the constant use of concave shoes, the crust of this part of the foot grows thinner and weaker; and when the nails are fixed too far back, especially upon the inside, the horse becomes lame: to avoid this, they are placed more towards the fore part of the hoof. This causes the heels of the horse to have the greater spring upon the heels of the shoe, which is so very detrimental as to occasion lameness; whereas, by using this flat form of shoe, all these inconveniences are avoided; and if the hoofs of young horses, from the first time that they were shoed, were continued to be constantly treated according to the method here recommended, the heels would always retain their natural strength and shape. By following this flat method of shoeing, and manner of treating the hoofs, several horses now under my care, that were formerly tender footed, and frequently lame, while shoed with broad concave shoes, are now quite sound, and their hoofs in as good condition as when the first shoes were put upon them. In particular the horse that wore the broad concave shoes, from which the drawings of figs. 2 and 3 were taken, now goes perfectly sound in the open narrow kind of shoes, as represented figs. 1 and 4.

'If farriers considered attentively the design of shoeing horses, and would take pains to make themselves acquainted with the anatomical structure of the foot, they would then be convinced that this method of treating the hoofs, and this form of shoe, is preferable to that which is so generally practised.

'It has been alleged that, in this form of shoe, horses do not go so well as in that commonly used. This objection will easily be laid aside, by attending to the following particulars. There are but few practitioners that can or will endeavour to make this sort of shoe as it ought to be. The iron, in forming it, does not so easily turn into the circular shape necessary as in the common shoe; and perhaps this is the principal reason why farriers object to it, especially where they work much by the piece. And, as many horses that are commonly shoed with concave shoes have their soles considerably higher than the crust, if the shoe is not properly formed, or if it be made too flat, it must unavoidably rest upon the sole and occasion lameness. The practice of paring the sole and frog is also prevalent, and thought so absolutely necessary that it is indiscriminately practised, even to excess, on all kinds of feet: and while this method continues to be followed, it cannot be expected that horses can go upon hard ground (on this open shoe) with that freedom they would do if their soles and frogs were allowed to remain in their full natural strength. Experience teaches us that, in very thin-soled shoes, we feel an acute pain from every sharp-pointed stone we happen to tread upon. Horses are sensible of the same thing in their foot, when their soles, &c., are pared too thin. Hence they who are prejudiced against this method, without ever reflecting on the thin state of the sole, &c. are apt to condemn it, and draw their conclusions more from outward appearances than from any reasoning or knowledge of the structure of the parts. From a due attention likewise to the structure of a horse's foot in a natural state, it will be obvious, that paring away the sole, frog, &c., must be hurtful, and in reality is destroying that substance provided by nature for the defence of the internal parts of the foot: from such practice it must be more liable to accidents from hard bodies, such as sharp stones, nails, glass, &c. From this consideration we shall likewise find, that a narrow piece of iron, adapted to the shape and size of the foot, is the only thing necessary to protect the crust from breaking or wearing away: the sole &c., require no defence if never pared.

'There is one observation I would farther make, which is, that the shoe should be made of good iron, well worked, or what smiths call hammer-hardened, that is, beaten all over lightly with a hammer when almost cold. The Spaniards and Portuguese farriers use this practice greatly, insomuch that many people, who have seen them at work, have reported that they form their horses shoes without heating them in the fire as we do. It is well known, that heating of iron till it is red softens it greatly; and when shoes thus softened are put upon horses' feet, they wear away like lead. But when the shoes are well hammered, the iron becomes more compact, firm, and hard; so that a well-hammered shoe, though made considerably lighter, yet will last as long as one that is made heavier; the advantage of which is obvious, as the horse will move his feet with more activity, and be in less danger of cutting his legs. The common concave shoes are very faulty in that respect; for, in fitting or shaping them to the foot, they require to be frequently heated, in order to make them bend to the unequal surface which the hoof acquires from the constant use of these shoes: they thereby become soft; and to attempt to harden them by beating or hammering, when they are shaped to the foot, would undo the whole. But flat shoes, by making them, when heated, a little narrower than the foot, will, by means of hammering become wider, and acquire a degree of elasticity and firmness which it is necessary they should have, but impossible to be given them by any other means whatever; so that any farrier, from practice, will soon be able to judge, from the quality of the iron, how much a shoe, in fitting it to the circumference of the hoof, will stretch by hammering when it is almost cold; this operation, in fitting flat shoes, will be the less difficult, when it is considered, that as there are no inequalities on the surface of the hoof (or at least ought not to be) which require to be bended thereto, shoes of this kind only require to be made smooth and flat; hence they will press equally upon the circumference or crust of the hoof, which is the natural tread of a horse.'

Mr. St. Bel, the first professor appointed at the Veterinary College, London, constructed a shoe different from the common style, in being somewhat convex on that side which is placed in contact with the horse's foot, but considerably so on that surface which is presented to the ground. On this plan, the horses sent for shoeing to the college were for some time shod; and it cannot be denied, that if every horse so sent had had the advantage of a perfectly natural hoof, Mr. St. Bel's shoe might have been found

worthy the name of an improvement, since its formation was certainly adapted to what the shape of the horse's foot naturally is, and ought to be, if the farriers would permit. See fig. 5. As the case was otherwise, however, in a great majority of instances, many who had sanguine expectations from the invention, were disappointed. Nevertheless this shoe has its advantages, which are set forth at large, by the author in a 4to. volume on the subject, to which we refer the reader.

Taplin recommends a form of a shoe, which differs little from that of Mr. St. Bel, except that it is broader in the rim, and concave where the other is convex on the side next the foot. See fig. 6. He advises that 'the shoe should be uniformly supported by the hoof only, entirely round the foot, and brought so regularly into contact, that it should not press more upon one part than another. It should also be formed with a concave inner surface to keep it perfectly clear of the sole, that the point of the picker may occasionally pass under the inner part of the web, to free it from every extraneous substance. The shoe should not be made too wide in the web, or too weighty in the metal; and the heel of the shoe should always rather exceed the termination of the hoof behind, and be formed something wider than the heel itself.'

Some modern authors, particularly Osmer, instead of attempting to improve the horse-shoe, propose to lay aside the use of it altogether, for which they are severely censured by Mr. Taplin. They 'seem,' says he, 'extravagantly fond of an idea, borrowed from antiquity, of the practicability of horses travelling the road, and doing their constant work, without any shoeing at all.' Osmer insists, 'that horses are adequate to their different services in a state of nature, without the officious obtrusions of art;' venturing to affirm 'that they will travel even upon the turnpike roads about London without injury to their feet.' As Mr. Taplin, however, observes, 'such an economical plan may be admirably calculated for the theoretical journey of some literary speculatist, but no such excursion can take place of any duration, without material injury to the hoof.'

Mr. Coleman, a late ingenious professor at the Veterinary College, has made a material improvement on the horse-shoe. In his lectures he observes that, for a good natural foot (see fig. 7), all that is required of a shoe is, to guard the crust by a small and narrow piece of iron, which should be attached principally towards the toe, and should not be extended so far back as the heel. The sole itself should not be covered by the shoe; for dirt and stones will get between, and will form a permanent and partial pressure on the sole, which will produce disease. According to the present mode of shoeing, those diseases which affect the horse's foot constantly take place on that portion of it which is covered by the extended breadth of the shoe, while the exposed parts remain uninjured. The reason is, that the covered parts, besides being exposed to permanent pressure from the cause already related, become tender by being covered. If these parts, therefore, are exposed, they get hardened and thick; and, if the horse happens to tread on a hard and rough body, the inconvenience is but momentary, and the pain will make him remove his foot, so as to prevent mischief.

Common shoeing is very liable to produce corns by the hoofs spreading out, and leaving the shoe in close contact with the sole, where it acts as a fixed point, and will not allow the elasticity of the insensible sole to act. The nails of the shoe should not be placed near the heels; for it disposes the heel to contract, especially when the bars are cut away. The narrow shoe has another advantage. The horse is less likely to slip than with the broad one, on any ground on which the foot makes an impression. But it would not perhaps be quite so proper for horses always treading on a pavement, such as the streets of London; nor for horses that are calculated for heavy draught, such as dray or cart horses, which require not only a stouter shoe, but also to be turned up behind, in order to resist the descent of heavy loads in passing down a hill, &c.

Fig. 8 represents Mr. Coleman's shoe, the principle of which rests not only on the advantages attending the exposure of the horny sole, but likewise on an objection to which all shoes are liable that require to be nailed all round, as in common instances. The nails at the quarters form so many fixed points, and prevent that expansion which is natural to the hoof in consequence of its growth; and the effect of this confinement is that of contracting the whole foot, and particularly the heel; to which many of the diseases of that part may be attributed. In Mr. Coleman's shoe this material objection seems to be removed; for it requires to be fixed to the wall of the foot only by a few nails at the toe, which leaves the growth of the quarters entirely to take their natural direction.

Almost every veterinary professor has his favorite shoe: one of the most ingenious of the present day is endeavouring to force on our notice, and introduce into our stables, the French method; which, with the exception of the mode of nailing on, White observes, is the very worst he ever saw. The French shoe, fig. 9 (*a*), has a wide web towards the toe; is concave above and convex below (*b*), on the ground surface, by which neither the toe nor heel touch the ground; but the horse stands pretty much in the same way as an unhappy cat, shod by unlucky boys with walnut shells.

The improved shoe for general use, fig. 10, which Mr. Loudon recommends, is rather wider than what is usually made. 'Its nail holes (*a*) extend no further towards the heels than is actually necessary for security; by which the expansion of these parts is encouraged, and contraction is avoided. To strengthen the attachment, and to make up for this liberty given to the heels, the nails shouldi be carried round the front of the shoe (*c*). The nail holes, on the under or ground surface of the shoe (*a*) are usually formed in a gutter, technically called the fullering; but in the case of heavy treading powerful horses, this gutter may be omitted; or, if adopted, the shoe in that part may be steeled. The web should be

quite even on the foot or hoof surface (*b*), and not only be rather wider, but it should also have rather more substance than is common: from half an inch to five eighths in thickness, according to circumstance, forms a fair proportion; when it is less it is apt, in wearing, to bend to pressure and force out the clinches.'

The bar shoe, fig. 11, is a defence to thin weak feet, which Mr. L. regrets there should be so much prejudice against using. It removes a part of the pressure from the heels and quarters, which can ill bear it, to the frog which can well bear it: a well formed bar shoe should not have its barred part raised into an edge behind, but such part should be of one uniform thickness throughout the web of the bar, which, instead of being the narrowest, should be the widest part of the shoe. The thickness of the bar should be greater or less (*a*), so as to be adapted to take only a moderate pressure from the frog. When the frog is altogether ulcerated away, by thrush, the bar may be altogether plain; but this form of shoe is still the best for these cases, as it prevents the tender surface from being wounded. In corns this shoe is invaluable, and may then be so made as to lie off the affected part, which is the great desideratum in corns.

The hunting shoe is a light horse-shoe, and it should be made to sit flat to the foot. 'Hunting fore shoes,' says the above ingenious writer, 'should also be as short at the heels as is consistent with safety to the foot, to avoid the danger of being pulled off by the hinder shoes: nor should the web project at all. It is the custom to turn up the outer heel to prevent slipping; which is done sometimes to both fore and hind feet, and sometimes only to the latter. As this precaution can hardly be avoided in hilly slippery grounds, it should be rendered as little hurtful as possible by making the tread equal; for which purpose thicken the inner heel and turn up the outer. This is better than lowering the outer heel to receive the shoe, which still leaves both the tread and foot uneven. The racing shoe, or plate, is one made as light and slender as will bear the weight of the horse, and the operations of forging, grooving, and punching: to enable it to do which, it ought to be made of the very best Swedish iron. Three, or at most four nails, are sufficient on each side; and, to avoid the interfering of the hind with the fore feet, the heels of the fore shoes are made as short as they can safely be. As racers are shod in the stable, the owners should be doubly careful that the plate is an exact fit. Many pairs ought to be brought and tried before any are suffered to be put on, and which is more important than is at first considered.' *Loudon's Agriculture*, 8vo.

Grass shoes, or tips, are short pieces sometimes placed on the toe in horses turned to grass in summer; at which time it is necessary to guard the fore feet, which otherwise become broken away. They should be looked at occasionally, to see that they do not become indented into the soles of the feet.

When the roads are covered with ice it is necessary to have the heels of a horse's shoes turned up, and frequently sharpened, to prevent him from slipping and falling: but this cannot be done without the frequent moving of the shoes, which breaks and destroys the crust of the hoof where the nails enter. To prevent this, it is recommended to those who are willing to be at the expense, to have steel points screwed into the heels or quarters of each shoe, which might be taken out and put in occasionally. To do this properly, Clark advises, first, to have the shoes fitted to the shape of the hoof; then to make a small round hole in the extremity of each heel, or in the quarters, about three-eighths of an inch in diameter, or more, in proportion to the breadth and size of the shoe; in each of these holes a screw is to be made; the steel points are likewise to have a screw on them, exactly fitted to that in the shoes. Care must be taken that the screw in the points is no longer, when they are screwed into the shoe, than the thickness of the latter. The steel points are to be made sharp; they may either be made square, triangular, or chisel-pointed, as may be most agreeable; the height of the point above the shoe should not exceed half an inch for a saddle horse; they may be made higher for a draught horse. The key or handle for screwing them in and out, occasionally, is represented in fig. 13, and is made of a sufficient size and strength; at the bottom of the handle a socket or cavity must be made, properly adapted to the shape of the steel point, and so deep as to receive the whole head of the point that is above the shoe.

To prevent the screw from breaking at the neck, it is necessary to make it of a gradual taper; the same is likewise to be observed of the female screw that receives it, that is, the hole must be wider on the upper part of the shoe than the under part; the sharp points may be tempered or hardened, in order to prevent them from growing too soon blunt; but where they become blunt they may be sharpened as at first. These points should be unscrewed when the horse is put into the stable, as the stones will do them more injury in a few minutes than a day's riding on ice. A draught horse should have one on the point of each shoe, as that gives him a firmer footing in drawing on ice; but for a saddle horse, when points are put there they are apt to make him trip and stumble.

When the shoes are provided with these points, a horse will travel on ice with the greatest security and steadiness, much more so than on causeway or turnpike roads, as the weight of the horse presses them into the ice at every step he takes.

Dr. Moore has suggested a frost clip, fig. 12, to be made distinct and moveable by means of a female screw *b*, worked into it, to which is fitted a knob or wedge *c*, and male screw *d*; a key, *e*, being used to fix and remove it.

FARRINGDON, a market town and parish of Berkshire, fourteen miles west from Abingdon, and sixty-eight W. N. W. from London. The town stands on the side of a hill, and has a very large and handsome church, the east end of which is of great antiquity: the windows are similar to those of the Temple in London; it contains several very handsome monuments, and on the south side is that of the founder. The

town is governed by a bailiff. The ruins of an ancient castle are still observable here; and here King John founded an abbey for Cistercian monks. The principal business of this town is in hogs and bacon, not less than 4000 hogs being slaughtered here in some years. Here is a good market on Tuesday.

FAR'ROW, *n. s.* & *v. a.* Sax. ꝑæꝛꝛ (a small pig); Swed. *farre*. A litter of pigs: to bring forth pigs.

Pour in sow's blood that hath littered
Her nine *farrow*. *Shakspeare. Macbeth.*

Sows ready to *farrow* this time of the year.
Tusser.

The swine, although multiparous, yet being bisulcous, and only cloven-hoofed, is *farrowed* with open eyes, as other bisulcous animals. *Browne.*

Even her, who did her numerous offspring boast,
As fair and fruitful as the sow that carried
The thirty pigs at one large litter *farrowed*. *Dryden.*

FARS, a considerable province of Persia, is bounded on the north by Irak, on the east by Kerman and Lar, by Kuzistan on the west, and on the south by the Persian Gulf. The rivers by which it is watered are the Tabris, formed by the junction of two streams both rising in the mountains; but which becomes brackish on approaching within sixteen miles of the sea; and the Jerak, from which numerous artificial channels are made, after which it flows into the salt lake Bertegan, ten miles south-east of Schiras.

Fars is divided into the Germaseen and Schud, or the hot and cold climates, the latter comprehending the mountainous portion, which is covered with wood, and almost uninhabited. Those parts of the province to the east are well cultivated, and populous. Grain and the finest fruits are produced in abundance in the neighbourhood of the towns, and the sides and summits of the hills are covered with vineyards. The tobacco is considered the finest in the world. In general the inhabitants are a civilised people.

The principal towns are Schiras the capital, containing, perhaps, 40,000 inhabitants; Bushire, the chief port on the Persian gulf; Darabjerb, and Bebahan. Within its confines are the ruins of the cities of Persepolis and Shapour. The former is about thirty miles from Schiras, on the road to Ispahan. This province participated deeply in the wars which seated the reigning family on the throne.

FARTHEL, or FARTHELLING, among seamen, was used for the same with what they commonly call furl, or furling, which is taking up the sails, and binding them close to the yards.

FAR'THER, *v. a.* & *adj.* } Sax. ꝑoꝛe, forth, further, furthest
FAR'THERANCE, *n. s.* } (See FURTHEST),
FAR'THERMORE, *adv.* }

are clearly the origin of these words, which should therefore be written further, furtherance, &c. We have, in fact, confounded in our language the degrees of far with those of forth, from the Saxon verb fore, to advance. To farther or further means to promote; facilitate: farther or further, as an adjective, more remote or advanced; longer: fartherance or furtherance, encouragement; facility; advancement: farthermore or furthermore, something over and above, or beyond.

That was the foundation of the learning I have, and of all the *fartherance* that I have obtained.
Ascham's Schoolmaster.

Farthermore the leaves, body, and boughs of this tree, by so much exceed all other plants, as the greatest men of power and worldly ability surpass the meanest. *Raleigh's History.*

To make a perfect judgment of good pictures, when compared with one another, besides rules, there is *farther* required a long conversation with the best pieces. *Dryden's Dufresnoy.*

Let me add a *farther* truth, that without ties of gratitude, I have a particular inclination to honour you.
Dryden.

He had *farthered* or hindered the taking of the town. *Id.*

FAR'THING, *n. s.* } Sax. ꝑeoꝛðunȝ, fourth-
FAR'THINGSWORTH. } thing, i. e. the fourth part of a penny; our smallest current coin: hence, any trifling sum of money. It seems to have been used formerly also for a measure of land; see the example from Carew.

I seye to thee thou schalt not go fro thennes; til thou yelde the laste *ferthing*. *Wiclif. Luk* xii.

Too popular is tragicke poesie,
Strayning his tip-toes for a *farthing* fee.
Bp. Hall.

Thirty acres make a *farthing*-land; nine *farthings* a Cornish acre; and four Cornish acres a knight's fee.
Carew.

His son builds on, and never is content,
Till the last *farthing* is in structure spent.
Dryden.

Else all those things we toil so hard in,
Would not avail one single *farthing*. *Prior.*

The parish find, 'tis true; but our churchwardens
Feed on the silver, and give us the *farthings*. *Gay.*

They are thy customers; I hardly ever sell them a *farthingsworth* of any thing. *Arbuthnot.*

You are not obliged to take money not of gold or silver; not the halfpence or *farthings* of England.
Swift.

A *farthing* is the least denomination or fraction of money used in England. *Cocker's Arithmetick.*

FAR'THINGALE, *n. s.* Belg. *verdegarde*, *fartegarde*; Fr. *vertugalle*, *vertugaden*; Span. *vertugado*, the guard of virtue, say some of the dictionaries: but Mr. Thomson traces these words to the Gothic *fara*; Belg. *vaaren*; Sax. finan, and Teut. *vert*: *vaaren*, signifying to carry; to go with child; and the Teut. *vert*, the burden borne. A hoop of whalebone, originally used as a protection by women with child.

Tell me,
What compass will you wear your *farthingale*?
Shakspeare.

Arthur wore in hall
Round table like a *farthingal*. *Hudibras.*

Some will have it that it portends the downfal of the French king; and observe, that the *farthingale* appeared in England a little before the ruin of the Spanish monarchy. *Addison.*

She seems a medley of all ages,
With a huge *farthingale* to swell her fustian stuff,
A new commode, a topknot, and a ruff. *Swift.*

FA'SCES, *n. s.* Lat. Rods anciently carried before the Roman consuls as a mark of their authority.

To kisse the precious case of his proude toe:
And for the lordly *fasces* borne of olde,
To see two quiet crossed keyes of golde;
Or Cybele's shrine, the famous Pantheon's frame
Turn'd to the honour of our Ladie's name.
Bp. Hall's Satires.

The duke beheld, like Scipio, with disdain,
That Carthage, which he ruined, rise once more;
And shook aloft the *fasces* of the main,
To fright those slaves with what they felt before.
Dryden.

Fasces, in Roman antiquity, were axes tied up with rods. According to Florus, the fasces were introduced by Tarquin I., the fifth king of Rome; and were then the mark of the sovereign dignity. In after-times they were borne before the consuls, but by turns only, each his day; they had each of them twelve, borne by as many lictors. These fasces consisted of branches of elm; having in the middle a securis or axe, the head of which stood out beyond the rest. Publicola took the axe out of the fasces, as Plutarch says, to remove from the people all occasion of terror. After the consuls, the pretors assumed the fasces. In the government of the decemvirs, it was the practice at first for only one of them to have the fasces. Afterwards each of them had twelve, after the manner of the kings. When the magistrates, who by right had the axes carried before them, wished to show some deference to the people, or any person of singular merit, they either sent away the lictors, or commanded them, submittere fasces, to lower the fasces before them. Many instances of this occur in the Roman history.

FASCIA Lata, in anatomy, a thick strong tendon, sent off from the back, the glutæi, &c., to surround the muscles of the thigh. It is the thickest on the outside of the thigh and leg, and a little below the trochanter major, it is firmly fixed to the linea aspera; it is again fastened further down, to that part of the head of the tibia that is next the fibula, where it sends off the tendinous expansion along the outside of the leg. It serves to strengthen the action of the muscles, by keeping them firm in their proper places when in action.

FASCIA'TED, *adj.* } Lat. *fascia*, a band
Fascia'tion, *n. s.* } or fillet. Bound with fillets: bandage; the act or manner of binding wounds.

Three especial sorts of *fasciation*, or rowling, have the worthies of our profession commended to posterity. *Wiseman.*

FAS'CINATE, *v. a.* } Fr. *fasciner*; Lat. *fas-*
Fascina'tion, *n. s.* } *cino*, à Gr. *βασκαινω*;
Fas'cinous, *adj.* } to bewitch with the eye.

To enchant; bewitch; influence secretly and unaccountably: fascinous is an obsolete word for caused or acting by enchantment.

There be none of the affections which have been noted to *fascinate* or bewitch, but love and envy. *Bacon.*

He had such a crafty and bewitching fashion, both to move pity and induce belief, as was like a kind of *fascination* and enchantment to those that saw him or heard him. *Id.*

The Turks hang old rags, or such like ugly things, upon their fairest horses, and other goodly creatures, to secure them against *fascination*. *Waller.*

I shall not discuss the possibility of *fascinous* diseases, farther than refer to experiment. *Harvey.*

There is a certain bewitchery of *fascination* in words, which makes them operate with a force beyond what we can naturally give an account of. *South.*

Such a *fascinating* sin this is, as allows men no liberty of consideration. *Decay of Piety.*

First her sweet voice in plaintive accents chains
The Muse's ear with *fascinating* strains. *Darwin.*

It was as if their little looks could poison
Or *fascinate* whome'er they fixed their eyes on.
Byron.

Fascination, from the Greek *βασκαινειν*, to fascinate or bewitch, a sort of witchcraft supposed to operate either by the eye or the tongue. Ancient writers distinguish two sorts of fascination, one performed by looking, or the efficacy of the eye. Such is that spoken of by Virgil in his third eclogue:

Nescio quis teneros oculus mihi fascinat agnos.

The second by words: such is that mentioned in his seventh eclogue:

Aut si ultra placitum laudarit, baccare frontem
Cingite, ne vati noceat mala lingua futuro.

Horace touches on both kinds in his first book of epistles:

Non istic obliquo oculo mea commoda quisquam
Limat, non odio obsculo, morsuque venenat.

Fascination, in natural history, an extraordinary power said to be possessed by serpents, and more especially by the rattle snake, over animals and birds it destines for its prey. The evidences of the fact are numerous and well supported, but in accounting for the causes of it there is great difference of opinion; Kulser and some others, have endeavoured to say that the animals, &c., must have received some previous bite; La Cepede and others, again, think the rattle snake possessed of peculiar miasmata the odor of which may at pleasure stupify, and some have ascribed it entirely to its rattle; See Coluber and Serpent.

FA'SCINE, *n. s.* Fr. A military faggot.

The Black Prince passed many a river without the help of pontoons, and filled a ditch with faggots as successfully as the generals of our times do with *fascines*. *Addison's Spectator.*

Fascines, in fortification, are faggots, made of small branches of trees tied in three or four places, and of various dimensions, according to the purposes intended. Those that are for making epaulements or chandeliers, for raising works, or filling up ditches, are ten feet long, and one or one and a quarter foot in diameter. They are made in the following manner: six small pickets are stuck into the ground, two and two, forming little crosses, well fastened in the middle. On these trestles the branches are laid, and are bound round with withes at the distance of every two feet. Six men are employed in making a fascine: two cut the boughs, two gather them, and the remaining two bind them.

FASCIOLA, in zoology, the fluke or gourd worm: a genus of insects of the order of vermes intestina: the body is flattish, and has a vent hole at the extremity and on the belly. There are forty-six-species:

F. barbata, is white, with transverse papillæ in the mouth. It is of an oblong shape, and about the size of a cucumber seed. It is found in the intestines of the sepia lotigo.

F. hepatica, the liver fluke, grows to two-thirds of an inch in length, though it is more usually met with not half that size; and its breadth is nearly equal to two-thirds of its length: it is flattish, but somewhat rounded on the back, and has about eight deep longitudinal furrows in two series; its skin is soft and whitish, with a tinge of brown. The hinder part is rounded, the fore part is furnished with a large mouth; it bears some resemblance to the seed of the common gourd, whence it has acquired the name of the gourd-worm. It is found in fresh waters, in ditches, at the roots of stones, sometimes in the intestines, and often in the substance of the other viscera in quadrupeds. It often infests the livers of sheep, and on that account is called hepatica. Bags with salt in them should be placed in the fold that the sheep may lick them, which is the only remedy.

F. intestinalis, or intestinal fluke, is of a long slender form, when extended; when contracted, of a suboval form. It inhabits the intestines of fresh water fish, particularly breams.

FASHION, *n. s.* & *v. a.*
FASH'IONABLE, *adj.*
FASH'IONABLY, *adv.*
FASH'IONABLENESS, *n. s.*
FASH'IONER,
FASH'IONIST,
FASH'ION-MONGERING, *adj.*

French, *façon*; Norman Fr. *facion*; Ital. *fazo, fattione*; Latin, *facio*, to make. Form; make; appearance; manner; mode; custom of dress or ornament: hence any thing worn; a distemper of horses. To fashion is to make or form; fit; adapt; accommodate to the reigning custom or mode; counterfeit. A fashioner is a former or maker of any thing. Fashionist and fashion-monger, a fop; a 'dandy;' a foolish observer of all fashions. Fashion-mongering, behaving as a fashion-monger.

Did not he that made me in the womb, make him? And did not one *fashion* us in the womb? *Job.*

The *fashion* of his countenance was altered. *Luke.*

Laws ought to be *fashioned* unto the manners and conditions of the people for whom they are meant, and not to be imposed upon them according to the simple rule of right. *Spenser.*

Ne do, I doubt, but that ye well can *fashion*
Yourselves thereto, according to occasion. *Hubberd's Tale.*

They pretend themselves grieved at our solemnities in erecting churches, at their form and *fashion*, at the stateliness of them and costliness, and at the opinion which we have of them. *Hooker.*

It better fits my blood to be disdained of all, than to *fashion* a carriage to rob love from any. *Shakspeare.*

Nature, as it grows again towards earth,
Is *fashioned* for the journey, dull and heavy. *Id.*
Stand these poor people's friend.
—I will,
Or let me lose the *fashion* of a man. *Id.*
Here's the note
How much your chain weighs to the utmost carat,
The fineness of the gold, the chargeful *fashion*. *Id.*
For that I love your daughter
In such a righteous *fashion* as I do,
Perforce against all checks, rebukes, and manners
I must advance. *Id. Merry Wives of Windsor.*
This cardinal,
Though from an humble stock undoubtedly,
Was *fashioned* to much honour from his cradle. *Id. Henry VIII.*

I'll be at charges for a looking-glass,
And entertain a score or two of taylors,
To study *fashions* to adorn my body. *Id.*

Now, by this maiden blossom in my hand,
I scorn thee, and thy *fashion*, peevish boy. *Id.*

His horse is possest with the glanders, infected with the *fashions*, and full of windgalls. *Id.*

Time is like a *fashionable* host,
That slightly shakes his parting guest by th' hand;
But with his arms outstretched, as he would fly,
Grasps in the comer: welcome ever smiles,
And farewell goes out sighing. *Id.*

Scambling, out-facing, *fashion-mong'ring* boys,
That lie, and cog, and flout, deprave and slander,
Go antickly, and show outward hideousness. *Id.*

Exceed not the humour of rags and bravery, for these will soon wear out of *fashion*; but money in thy purse will ever be in *fashion*. *Raleigh.*

It is strange that men of *fashion*, and gentlemen, should so grossly belie their own knowledge. *Id.*

The graves of the rebellious generations were already *fashioned* in the clouds, which soon after should swallow up all living creatures. *Id.*

The commissioners either pulled down or defaced all images in churches; and that in such unseasonable and unseasoned *fashion*, as if it had been done in hostility against them. *Hayward.*

Where is my *fashioner*? my feather-man?
My linener, perfumer, barber? *Ben Jonson.*

The way of outward *fashionableness* in religion, and inward liberty of heart, cannot but seem fair to nature. *Bp. Hall.*

Balaam's suit and Israel's quails had both one *fashion* of grant, in anger. *Id. Contemplations.*

The rib he formed and *fashioned* with his hands;
Under his forming hands a creature grew,
Manlike, but different sex. *Milton's Paradise Lost.*

Zelmane again, with great admiration, began to speak of him; asking whether it were the *fashion* or no, in Arcadia, that shepherds should perform such valorous enterprizes? *Sidney.*

Though the truth of this hath been universally acknowledged, yet because the *fashion* of the age is to call every thing into question, it will be requisite to satisfy men's reason about it. *Tillotson.*

The eminence of your condition will invite gentlemen to the study of nature, and make philosophy *fashionable*. *Glanville.*

A certain air of pleasantry and humour, which prevails now-a-days in the *fashionable* world, gives a son the assurance to tell his father, he has lived too long. *Shaftesbury.*

This *fashion-monger* each morn 'fore he rise,
Contemplates suit-shapes. *Marston.*

Rich, *fashionable* robes her person deck;
Pendants her ears, and pearls adorn her neck. *Dryden.*

Inability will every one find in himself, who shall go about to *fashion* in his understanding any simple idea, not received by his senses from external objects, or by reflection from the operation of his mind about them. *Locke.*

A young gentleman accommodates himself to the innocent diversions in *fashion*. *Id.*

The value of the labour employed about one parcel of silver more than another, makes a difference in their price; and thus *fashioned* plate sells for more than its weight. *Id.*

But if ever frequency of oaths shall make them be looked on as formalities of law, or the custom of straining of truth (which men's swearing in their own cases is apt to lead them to), has once dipped men in perjury, and the guilt, with the temptation, has spread itself very wide, and made it almost *fashionable* in some cases, it will be impossible for the society (these bonds being dissolved) to subsist. *Id.*

Why should they not continue to value themselves for this outside *fashionableness* of the taylor or tire-woman's making, when their parents have so early instructed them to do so? *Id.*

He must at length die dully of old age at home, when here he might so *fashionably* and genteelly have been duelled or fluxed into another world. *South.*

How could this noble fabrick be designed,
And *fashioned*, by a maker brute and blind?
Could it of art such miracles invent,
And raise a beauteous world of such extent?
Blackmore.

No wonder that pastorals are fallen into disesteem, togethsr with that *fashion* of life upon which they were grounded. *Walsh.*

Examine how the *fashionable* practice of the world can be reconciled to this important doctrine of our religion. *Rogers.*

A different toil another forge employs,
Here the loud hammer *fashions* female toys
Each trinket that adorns the modern dame,
First to these little artists owed its frame.
Gay's Fan.

It was not easily reconciled to the common method; but then it was the *fashion* to do such things. *Arbuthnot.*

'Tis prevailing example hath now made it *fashionable*. *Bentley.*

His panegyricks were bestowed only on such persons as he had familiarly known, and only at such times as others cease to praise, when out of power, or out of *fashion*. *Pope.*

Look on this globe of earth, and you will find it to be a very complete and *fashionable* dress. *Swift.*

Spirit is now a very *fashionable* word; to act with spirit, to speak with spirit, means only to act rashly, and to talk indiscreetly. An able man shows his spirit by gentle words and resolute actions; he is neither hot nor timid. *Chesterfield.*

Whatever has, by any accident, become *fashionable*, easily continues its reputation, because every one is ashamed of not partaking it. *Johnson.*

Whilst you are discussing *fashion*, the *fashion* is gone by. The very same vice assumes a new body. The spirit transmigrates; and, far from losing its principle of life by the change of its appearance, it is renovated in its new organs with the fresh vigour of a juvenile activity. *Burke.*

Nor for its own sake merely, but for his
Much more, who *fashioned* it, he gives it praise;
Praise that from earth resulting, as it ought,
To earth's acknowledged Sovereign, finds at once
Its only just proprietor in Him. *Cowper.*

Yet what can satire, whether grave or gay?
It may correct a foible, may chastise
The freaks of *fashion*, regulate the dress,
Retrench a sword-blade, or displace a patch. *Id.*

For he, with all his follies, has a mind
Not yet so blank, or *fashionably* blind,
But now and then perhaps a feeble ray
Of distant wisdom shoots across his way. *Id.*

In Kensington Gardens to stroll up and down,
You know was the *fashion* before you left town;
The thing's well enough, when allowance is made
For the size of the trees and the depth of the shade.
Sheridan.

FAST', *adj.*, *adv.*, *v. n.* & *n. s.*
FAST'EN, *v. a.* & *v. n.*
FAST'ER, *n. s.*
FAST'ENER, *n. s.*
FAST'ENING, *n. s.*
FAST'HANDED, *adj.*
FAST'ING, *n. s.*
FAST'ING-DAY,
FAST'LY, *adv.*
FAST'NESS, *n. s.*

Gothic and Swed. *fast*; Isl. *fastr*; Saxon ꝼæꝛt; Belgic *vast*; Teutonic *fest*, *fast*, *vast*. Firm; strong; steady; close; fixed; abiding; persisting; swift; speedy; i. e. with an abiding or unrelaxed pace: fast is also found frequently in our language as an adverb, following these senses, or synonymous with fastly. To fast, the verb, also means to adhere to a rule or resolution of abstinence, from whatever motive: fast and fasting, as substantives, signify imposed abstinence: 'fast and loose,' sometimes the one and sometimes the other; variable; inconstant. To fasten, according to a common use of the termination en, signifies to makes fast or firm; to unite inseparably; to affix, and hence to impress: as a neuter verb, to fix itself: a faster, one who practises abstinence: a fastener is a person, and a fastening a thing, which makes fast or firm: fast-handed, avaricious; 'close-fisted': fastness, closeness; state of being firm; fixed; secure; hence a strong military place or position; a fortress; conciseness.

Thanne the disciplis of John camen to him and seiden, whi *fasten*, and the Farisees ofte? but thi disciplis *fasten* not. *Wiclif. Matt.* ix.

And it was doon whanne the dayes of his taking up weren fulfillid he settide *faste* his face to go to Jerusalem. *Id. Luk* ix.

Moses reared up the Tabernacle, and *fastened* his sockets. *Exodus.*

This work goeth *fast* on, and prospereth.
Ezra v. 8.

He by his strength setteth *fast* mountains.
Psalm lxv. 6.

When thou *fastest*, anoint thy head and wash thy face, that thou appear not unto men to *fast*.
Matt. vi.

Surely the stone from the wall crieth out;
And the beam (marg. *fastning*) from the timber answereth it. *Hab.* ii. 11. *Abp. Newcome's Trans.*

Quick wits be in desire new-fangled; in purpose, unconstant; light to promise any thing, ready to forget every thing, both benefit and injury; and thereby neither *fast* to friend nor fearful to foe.
Ascham's Schoolmaster.

Bring his stile from all loose grossness to such firm *fastness* in Latin, as in Demosthenes. *Ascham.*

But who can turn the stream of destiny,
Or break the chain of strong necessity,
Which *fast* is tied to Jove's eternal seat?
Spenser's Faerie Queene.

And dieted with *fasting* every day,
The swelling of his woundes to mitigate. *Id.*

England, by report of the chronicles, was infested with robbers and outlaws; which, lurking in woods and *fast* places, used often to break forth to rob and spoil. *Id. On Ireland.*

Lodronius, with the breaking in of the horsemen, was driven into a marsh; where, after that he, being

almost *fast* in the deep mud, had done the uttermost, he yielded himself. *Knolles.*

Barbarossa left fourteen galleys in the lake; but the tacklings, sails, oars, and ordnance, he had laid up in the castle *fast* by. *Id.*

This love of theirs myself have often seen,
Haply when they have judged me *fast* asleep.
Shakspeare.

Last night the very god shewed me a vision:
I *fast*, and prayed for their intelligence. *Id.*

A thousand men have broke their *fasts* to-day,
That ne'er shall dine, unless thou yield the crown.
Id.

Bind the boy, which you shall find with me,
Fast to the chair. *Id. King John.*

I would give a thousand pound I could run as *fast* as thou can'st. *Id. Henry IV.*

Thinking, by this face,
To *fasten* in our thoughts that they have courage;
But 'tis not so. *Id. Julius Cæsar.*

He *fastened* on my neck; and bellowed out,
As he'd burst heaven. *Id. King Lear.*

The king being *fasthanded*, and loth to part with a second dowry, prevailed with the prince to be contracted with the princess Catharine. *Bacon.*

The prince groweth up *fast* to be a man, and is of a sweet and excellent disposition: it would be a stain upon you if you should mislead, or suffer him to be misled. *Id. to Villiers.*

We have some meats, and breads, and drinks, which taken by men enable them to *fast* long after. *Id. New Atlantis.*

Such as had given the king distaste, did contend by their forwardness to shew it was but their *fastness* to the former government, and that those affections ended with the time. *Id.*

Skill comes so slow, and life so *fast* doth fly,
We learn so little, and forget so much. *Davies.*

All the places are cleared, and places of *fastness* laid open, which are the proper walls and castles of the Irish, as they were of the British in the times of Agricola. *Id. on Ireland.*

She had all magnetick force alone,
To draw and *fasten* sundred parts in one. *Donne.*

Happy and innocent were the ages of our forefathers, who broke their *fasts* with herbs and roots; and, when they were permitted flesh, eat it only dressed with hunger and fire. *Taylor.*

Do not call it a *fastingday*, unless also it be a day of extraordinary devotion and of alms. *Id.*

He that was the meekest man upon earth, in a sudden indignation abandons that, which in cold blood he would have held *faster* than his life.
Bp. Hall's Contemplations.

I see Moses the receiver of the Law, Elias the restorer of the Law, Christ the fulfiller of the old Law and author of the new, all *fasting* forty days; and these three great *fasters* I find together glorious in Mount Tabor. *Id.*

Last, the sire and his three sons,
With their four wives; and God made *fast* the door.
Milton.

Silo's brook that flowed
Fast by the oracle of God.
Id. Paradise Lost.

Where will this end? Four times ten days I've passed,
Wandering this woody maze, and human food
Nor tasted, nor had appetite; that *fast*
To virtue I impute not, or count part
Of what I suffer here. *Id. Paradise Regained.*

It (religion) alone *fasteneth* our thoughts, affections, and endeavours, upon occupations worthy the dignity of our nature. *Barrow.*

It (piety) tieth all relations more *fastly* and strongly, assureth and augmenteth all endearments, enforceth and establisheth all obligations by the firm bands of conscience. *Id.*

A rope of fair pearl, which now hiding, now hidden by the hair, did, as it were, play at *fast and loose* each with other, giving and receiving richness. *Sidney.*

A mantle coming under her right arm, and covering most of that side, had no *fastening* on the left side.
Id.

There streams a spring of blood so *fast*,
From those deep wounds, as all embrued the face.
Daniel.

If she perceived by his outward cheer,
That any would his love by talk bewray,
Sometimes she heard him, sometimes stopt her ear,
And played *fast and loose* the live-long day.
Fairfax.

This paucity of blood may be observed in other sorts of lizards, in frogs, and other fishes; and therefore an horse-leech will hardly *fasten* upon a fish.
Browne's Vulgar Errours.

A man in a boat, who tugs at a rope that's *fast* to a ship, looks as if he resolved to draw the ship to him.
Temple.

Let purling streams be in her fancy seen,
And flowery meads, and vales of cheerful green;
And in the midst of deathless groves
Soft sighing wishes lie,
And smiling hopes *fast by*,
And just beyond 'em ever-laughing loves.
Dryden.

She's gone unkindly, and refused to cast
One glance to feed me for so long a *fast*. *Id.*

By chance a ship was *fastened* to the shore,
Which from old Clusium king Osinius bore. *Id.*

The foes had left the *fastness* of their place,
Prevailed in fight, and had his men in chace. *Id.*

Could he *fasten* a blow, or make a thrust, when not suffered to approach? *Id. Æneid, Dedication.*

The folly and wickedness of men, that think to play *fast and loose* with God Almighty! *L'Estrange.*

The wrong judgment that misleads us, and makes the will often *fasten* on the worse side, lies in misreporting upon comparisons. *Locke.*

We may trade, and be busy, and grow poor by it, unless we regulate our expenses; if to this we are idle, negligent, dishonest, malicious, and disturb the sober and industrious in their business, let it be upon what pretence it will, we shall ruin the *faster*. *Id.*

We humble ourselves before God this day, not merely by the outward solemnities of a *fast*, but by afflicting our souls as well as bodies for our sins.
Atterbury.

If they cohered, yet by the next conflict with other atoms they might be separated again; and so on in an eternal vicissitude of *fast and loose*, without ever consociating into the huge condense bodies of planets.
Bentley.

Being tried only with a promise, he gave full credit to that promise, and still gave evidence of his fidelity as *fast* as occasions were offered.
Hammond's Practical Catechism.

Well-known to me the palace you inquire;
For *fast beside* it dwells my honoured sire. *Pope.*

Fast by the throne obsequious fame resides,
And wealth incessant rolls her golden tides. *Id.*

Nor prayers nor *fasts* its stubborn pulse restrain;
Nor tears, for ages, taught to flow in vain. *Id.*

The heaviest muse the swiftest course has gone,
As clocks run *fastest* when most lead is on. *Id.*

You are to look upon me as one going *fast* out of the world. *Swift.*

The words Whig and Tory have been pressed to the service of many successions of parties, with very different ideas *fastened* to them. *Id. Examiner.*

Their oppressors have changed the scene, and combated the opinions in their true shape, upon which they could not so well *fasten* their disguise.
Decay of Piety.

If his adversary be not well aware of him, he entrenches himself in a new *fastness*, and holds out the siege with a new artillery. *Watts on the Mind.*

Industry needs not wish, and he that lives upon hope will die *fasting*. *Franklin.*

Not a little sore
At this most strange and unexplained 'hiatus'
In Don Alfonso's facts, which just now wore
An awkward look; as he revolved the case
The door was *fastened* in his legal face. *Byron.*

FASTS, RELIGIOUS. Religious fasting has been practised by most nations from the remotest antiquity. Some divines derive its origin from the terrestrial paradise, where our first parents were forbidden to eat of the tree of knowledge. The Jewish church has observed fasts ever since its first institution; nor were the neighbouring heathens, viz. the Egyptians, Phœnicians, and Assyrians, without their fasts. The Egyptians, according to Herodotus, sacrificed a cow to Isis, after having prepared themselves by fasting and prayer: a custom which he likewise ascribes to the women of Cyrene. Porphyry affirms, that the Egyptians, before their stated sacrifices, always fasted many days, sometimes six weeks; during all which time the priests and devotees not only abstained from flesh, fish, wine, and oil, but even from bread, and some kinds of pulse. These austerities were communicated by them to the Greeks, who observed their fasts much in the same manner. The Athenians had the Eleusinian and Thesmophorian fasts, the observation of which was very rigorous, especially among the women, who spent one whole day sitting on the ground in a mournful dress, without taking any nourishment. In the island of Crete, the priests of Jupiter were obliged to abstain all their lives from fish, flesh, and baked meats. Apuleius informs us, that whoever wished to be initiated in the mysteries of Cybele, were obliged to prepare themselves by fasting ten days; and, in short, all the pagan deities, whether male or female, required this duty of those that desired to be initiated into their mysteries, of their priests and priestesses that gave the oracles, and of those that came to consult them. Among the heathens fasting was also practised before some of their military enterprises. Aristotle informs us that the Lacedemonians, having resolved to succour a city of the allies, ordained a fast throughout the whole extent of their dominions, without excepting even the domestic animals: and this they did for two ends; one to spare provisions in favor of the besieged; the other to draw down the blessing of heaven upon their enterprise. The inhabitants of Tarentum, when besieged by the Romans, demanded succours from their neighbours of Rhegium, who immediately commanded a fast throughout their whole territories. Their enterprise having proved successful, by their throwing a supply of provisions into the town, the Romans were obliged to raise the siege; and the Tarentines, in memory of this deliverance, instituted a perpetual fast. At Rome fasting was practised by kings and emperors. Numa Pompilius, Julius Cæsar, Augustus, Vespasian, &c., had their stated fast days; and Julian the Apostate was so exact in this observance as to outdo the priests themselves, and even the most rigid philosophers. The Pythagoreans kept a continual lent; but with this difference, that they believed the use of fish to be equally unlawful with that of flesh. Besides their constant temperance, they also frequently fasted rigidly for a very long time. In this respect, however, they were all outdone by their master Pythagoras, who continued his fasts for no less than forty days together. The brahmins are very remarkable for their severe fastings; and the Chinese have also their stated fasts, with forms of prayer for preserving them from barrenness, inundations, earthquakes, &c. The Mahommedans are very remarkable for the strict observance of their fasts; and the exactness of their dervises in this respect is extraordinary. Fasting was often used by the heathens for superstitious purposes; sometimes to procure the interpretations of dreams; at others to be an antidote against their pernicious consequences. The modern Jews, though expressly forbidden to fast on Sabbath days, think themselves at liberty to dispense with this duty when they have frightful dreams the night preceding, that threaten them with great misfortunes. On these occasions, they observe a formal fast the whole day. They have also added several fasts to the law of Moses, particularly three, in memory of sore distresses their nation has suffered at different times. The abstinence of the ancient Jews commonly lasted twenty-seven or twenty-eight hours at a time; beginning before sun-set, and not ending till some hours after sun-set next day. On these days they wore white robes in token of grief and repentance; covered themselves with sackcloth, or their worst clothes; lay on ashes; sprinkled them on their heads, &c. Some spent the whole night and day following in the temple or synagogue, in prayers and other devotions, barefooted, scourging themselves. To complete their abstinence, at night they were to eat nothing but a little bread dipped in water, with some salt for seasoning; except they chose to add to their repast some bitter herbs and pulse. The ancients, both Jews and Pagans, had also their fasts for purifying the body, particularly the priests, and such as were any way employed at the altars; for when nocturnal disorders happened to these, it was unlawful for them to approach all the next day, which they were bound to employ in purifying themselves. On this account, at great festivals, where their ministry could not be dispensed with, it was usual for them, on the eve thereof, not only to fast, but also to abstain from sleep. For this purpose the high-priest had under-officers to wake him, if overtaken with sleep.

FASTI, in Roman antiquity, a chronicle or register of time, wherein the several years were denoted by the respective consuls, with the principal events that happened during their consulates; these were called also fasti consulares.

Fasti, or Dies Fasti, also denoted court days. The word fasti is formed of the verb fari, 'to speak,' because during those days the courts were opened, causes might be heard, and the prætor was allowed to pronounce the three words, do, dico, addico: the other days wherein this was prohibited, were called Nefasti: thus Ovid,

Ille nefastus erit, per quem tria verba silentur:
Fastus erit, per quem lege licebit agi.

These dies fasti were noted in the kalendar by the letter F: but there were some days ex parte fasti, partly fasti, partly nefasti, i. e. justice might be distributed at certain times of the day, and not at others. These days were called intercisi, and were marked in the calendar thus, F. P. fasto primo, where justice might be demanded during the first part of that day.

Fasti signified also the kalendar wherein were expressed the several days of the year, with their feasts, games, and other ceremonies. There were two sorts of fasti, the magistrales and kalendares, or the greater and less.

I. Fasti Kalendares, which were what was properly and primarily called fasti, are defined by Festus Pompeius to be books containing a description of the whole year: i. e. Ephemerides, or diaries, distinguishing the several kinds of days, festi, profesti: fasti, nefasti, &c. The institutor was Numa, who committed the care and direction of the fasti to the Pontifex Maximus, whom the people used to go and consult on every occasion. This custom held till A. U. C. 450, when C. Flavius, secretary to the pontifices, exposed in the forum a list of all the days whereon it was lawful to work: which was so acceptable to the people, that they made him curule ædile. These less fasti were of two kinds, urbani and rustici. 1. Fasti rustici, the country fasti, expressed the several days, feasts, &c. to be observed by the country people; for as these were occupied in tilling the ground, fewer feasts, sacrifices, ceremonies, and holidays, were enjoined them than the inhabitants of cities; and they had also some peculiar ones not observed at Rome. These rustic fasti contain little more than the ceremonies of the kalends, nones, and ides; the fairs, signs of the zodiac, increase and decrease of the days, the tutelary gods of each month, and certain directions for rural works to be performed each month. 2. Fasti urbani, the fasti of the city, were those which obtained or were observed in the city. Some will have them thus called because they were exposed publicly in divers parts of the city; though, by the various inscriptions or gravings thereof on antique stones, one would imagine that private persons had them likewise in their houses. Ovid undertook to illustrate these fasti urbani, and comment on them, in his Libri Fastorum, whereof we have the first six books still remaining; the last six, if they were ever written, being lost.

II. Fasti Magistrales, the greater fasti, expressed the several feasts, with every thing relating to the gods, religion, and the magistrates; the emperors, their birth-days, offices, days consecrated to them, and feasts and ceremonies established in their honor, or for their prosperity, &c. With a number of such circumstances did flattery at length swell the fasti; when they became denominated Magni, to distinguish them from the bare kalendar, or fasti kalendares.

FASTI'DIOUS. *adj.* } French, *fastidieux*,
Fasti'diously, *adv.* } *fastidieuse*; Lat. *fas-*
Fasti'diousness, *n. s.* } *tidiosus*. Disdain-
Fasti'diosity. } ful; squeamish; delicate to a fault; over-nice.

Reasons plainly delivered, and always after one manner, especially with fine and *fastidious* minds, enter but heavily and dully. *Bacon.*

Let their *fastidious* vain
Commission of the brain,
Run on and rage, sweat, censure, and condemn,
They were not made for thee, less thou for them.
Ben Jonson.

And if nearness and presence be the cause of our dislike, why do we not hate ourselves, which are ever in our own bosom? why do we not hate this *fastidious* curiosity, which is too close to us. *Bp. Hall.*

Less licentious and more discerning times will repair the omissions and *fastidiousness* of the present. *Boyle.*

A squeamish *fastidious* niceness, in meats and drinks, must be cured by starving. *L'Estrange.*

All hopes, raised upon the promises or supposed kindnesses of the *fastidious* and fallacious great ones of the world, shall fail. *South.*

Their sole talent is pride and scorn: they look *fastidiously*, and speak disdainfully, concluding, if a man shall fall short of their garniture at their knees and elbows, he is much inferior to them in the furniture of his head. *Government of the Tongue.*

His diseases being *fastidiosity*, amerphy, and oscitation. *Swift.*

Proud youth! *fastidious* of the lower world!
Man's lawful pride includes humility. *Young.*

And to abate the *fastidiousness* of some critics, with respect to the Hebrew style of poetry, I shall produce a few similar instances, among many which occur in the Eneid itself. *Archbp. Newcome.*

Fasting. See Abstinence.

FASTOLFFE (Sir John), an English general who obtained some reputation in France, in the fifteenth century. He served in Ireland under Sir Stephen Scrope, and on his death, in 1408, married his widow, an heiress of the Tibtot family, of whose rich estates in Gloucestershire and Wiltshire he consequently became possessed. He soon after obtained the honor of knighthood and the order of the garter; and having been wounded at the battle of Agincourt, was rewarded with a grant of territorial property in Normandy. In 1429 he defeated 6000 Frenchmen with only 1500 English, and brought relief to the army before Orleans. But the same year he shamefully fled before Joan of Arc at the battle of Patay, for which he was deprived of his garter by the regent. He died in 1469. This officer has been supposed, by the resemblance perhaps of the names, to have been the prototype of Shakspeare's Falstaff. But he is introduced by name as fleeing at Patay, and his garter is torn off at the coronation scene in Henry VI., part 1, at which time the Sir John Falstaff of Henry IV. and V. was dead. Vide King Henry V., act 2, scene III. Nor does the character of Fastolffe appear to have been that of a debauchee.

FAS'TUOUS, *adj.* Fr. *fastueux*, *fastueuse*; Lat. *fastuosus*. Proud; haughty.

It (piety) feneeth him from insolence, and *fastuous* contempt of others. *Barrow.*

FAT, *n. s.*, *adj.*, *v. a.* & *v. n.*
FAT'BRAINED, *adj.*
FAT'KIDNEYED,
FAT'LING, *n. s.*
FAT'NER,
FAT'NESS,
FAT'TEN, *v. a.* & *v. n.*
FAT'TY, *adj.*
FAT'WITTED.

Teut. *vet* or *fett*; Swed. *fett*; Belg. *vet*; Saxon, fat, the past participle of fæðan, to feed, says Mr. H. Tooke. The concrete oily matter of the flesh of animals; metaphorically the best or choicest part of things. Fat, as an adjective, signifies well-fed; plump; fleshy; also rich; wealthy; coarse; dull. To fatten, signifies to make fat or plump; to feed abundantly or to excess. As a verb neuter, to grow fat or full-fleshed. Fat-brained; fat-kidneyed, fat-witted, are terms of reproach, importing dulness, stupidity, or vulgarity. A fatling is a young animal fed for slaughter. A fatner, that which causes fatness. Fatness, the quality or state of being fat in any way; fertility. Fatty, unctuous; oleaginous; greasy.

God give thee of the dew of heaven, and the *fatness* of the earth, and plenty of corn and wine. *Gen.* xxvii. 28.

The calf and the young lion, and the *fatling* shall lie down together, and a little child shall lead them. *Is.* xi. 6.

Such traitery is in false curates, that given mede or hire to come into such wordly offices, and couchen in lord's courts for to get mo *fatte* benefices, and purposen not spedly to do their ghostly office. *Wickliffe on Symony.*

And by his side rode loathsome gluttony,
Deformed creature, on a filthy swine;
His belly was upblown with luxury,
And eke with *fatness* swollen were his eyen.
Faerie Queene.

Oh how this villany
Doth *fat* me with the very thoughts of it!
Shakspeare.

Let our wives
Appoint a meeting with this old *fat* fellow. *Id.*

When gods have hot backs, what shall poor men do? For me, I am here a Windsor stag, and the *fattest*, I think, i' th' forest. *Id.*

Clarence, he is well repaid;
He is franked up to *fatting* for his pains. *Id.*

Ere this
I should have *fatted* all the region kites
With this slave's offal. *Id. Hamlet.*

What a wretched and proud fellow is this king of England to mope with his *fat-brained* fellows, &c. *Id. Henry V.*

Peace, ye *fatkidney'd* rascal; what a brawling dost the keep! *Id. Henry IV.*

Thou art so *fatwitted* with drinking old sack, and unbuttoning thee after supper, and sleeping upon benches in the afternoon, that thou hast forgotten. *Id.*

In this ointment the strangest and hardest ingredients to come by, are the moss upon the scull of a dead man unburied, and the *fats* of a boar and a bear, killed in the act of generation. *Bacon.*

Earth and water, mingled by the help of the sun, gather a nitrous *fatness*. *Id. Nat. Hist.*

The like cloud, if oily or *fatty*, will not discharge; not because it sticketh faster, but because air preyeth upon water, and flame and fire upon oil. *Id.*

They *fat* such enemies as they take in the wars, that they may devour them. *Abbot.*

It is good so to diet the body, that the soul may be *fattened*. *Bp. Hall's Contemplations.*

Some are allured to law, not on the contemplation of equity, but on the promising and pleasing thoughts of litigious terms, *fat* contentions, and flowing fees. *Milton.*

All agree to spoil the public good,
And villains *fatten* with the brave man's labour. *Otway.*

We're hurry'd down
This lubrique and adult'rate age;
Nay, added *fat* pollutions of our own,
T' increase the steaming ordures of the stage. *Dryden.*

O souls! in whom no heav'nly fire is found,
Fat minds, and ever-grov'ling on the ground. *Id.*

Dare not, on thy life,
Touch ought of mine;
This falchion else, not hitherto withstood,
These hostile fields shall *fatten* with thy blood. *Id.*

Yet then this little spot of earth well till'd,
A num'rous family with plenty filled,
The good old man and thrifty housewife spent
Their days in peace, and *fatten'd* with content;
Enjoy'd the dregs of life, and liv'd to see
A long-descending healthful progeny. *Id.*

Apollo check'd my pride, and bade me feed
My *fatt'ning* flocks, nor dare beyond the reed. *Id.*

'Tis a fine thing to be *fat* and smooth. *L'Estrange.*

The one labours in his duty with a good conscience; the other, like a beast, but *fatting* up for the slaughter. *Id.*

The Caribbees were wont to geld their children, on purpose to *fat* and eat them. *Locke.*

An old ox *fats* as well, and is as good, as a young. *Mortimer.*

When around
The clouds drop *fatness*, in the middle sky
The dew suspended staid, and left unmoist
The execrable glebe. *Philips.*

The gourd
And thirsty cucumber, when they perceive
Th' approaching olive, with resentment fly
Her *fatty* fibres, and with tendrils creep
Diverse, detesting contact. *Id.*

These were terrible alarms to persons grown *fat* and wealthy by a long and successful imposture. *South.*

Spare diet and labour will keep constitutions, where this disposition is the strongest, from being *fat*: you may see in an army forty thousand foot soldiers without a *fat* man; and I dare affirm, that by plenty and rest twenty of the forty shall grow *fat*. *Arbuthnot.*

The wind was west on which that philosopher bestowed the encomium of *fatner* of the earth. *Id.*

Cattle *fatted* by good pasture, after violent motion, sometimes die suddenly. *Id. on Diet.*

The common symptoms of the muriatick scurvy are, a saline taste in the spittle, and a lixivial urine, sometimes with a *fatty* substance like a thin skin a-top. *Id. on Alim.*

Tygers and wolves shall in the ocean breed,
The whale and dolphin *fatten* on the mead,
And every element exchange its kind,
When thriving honesty in courts we find. *Granville.*

A *fat* benefice is that which so abounds with an estate and revenues, that a man may expend a great deal in delicacies of eating and drinking. *Ayliffe.*

Vapours and clouds feed the plants of the earth with the balm of dews and the *fatness* of showers. *Bentley.*

Some, lucky, find a flowery spot,
For which they never toiled nor swat;
They drink the sweet, and eat the *fat.*
Burns.

I am of small stature, like Alexander the Great; I am somewhat inclinable to *fatness*, like Dr. Arbuthnot and Aristotle; and I drink brandy and water, like Mr. Boyd. *Sheridan.*

FAT, *n. s.* Sax. ꝼæt; Swed. *fat;* Belg. *vatte;* generally written VAT, which see. A fermenting or other large vessel to hold liquids.

The *fats* shall overflow with wine and oil.
Joel ii. 24.

A white stone used for flagging floors, for cisterns, and tanners' *fats.* *Woodward on Fossils.*

FAT, in medicine. A great number of fats have been kept in the shops, for making ointments, plasters, and other medicinal compositions; as hog's lard, the fat of the boar, the fox, hare, dog, wild cat, Alpine mouse, beaver; that of hens, ducks, geese, storks; of the whale, pike, serpents, viper, &c., as also human fat!—These are now, of course, abandoned. To obtain fat pure, it must be cut into pieces, and melted with a gentle heat in a proper vessel with an equal quantity of water. It is afterwards to be put into an earthen pot, where the fat rises to the top, and becomes solid when cold. In this state it is exceedingly white, and sufficiently pure for the purposes of pharmacy or chemical examination. See PHARMACY. Fat thus purified has very little taste, and a weak but peculiar smell. The uses of fat in the animal economy have not been clearly ascertained. One of the chief probably is, to blunt and correct a great part of the acids of the aliments, and which are more than are requisite to the composition of the nutritive juice. This is certain, that animals which are castrated, which are not much exercised, or which are come to an age when the production and loss of the seminal fluid is less, and which at the same time consume much succulent aliment, generally become fatter, and sometimes exceedingly so. Although fat is very different from truly animalised substances, and appears not easily convertible into nutritive juices, it being generally difficult of digestion, and apt to become rancid, yet in certain cases it serves to the nourishment and reparation of the body. Animals certainly become lean, and live upon their fat, when they have too little food, and when they have diseases which prevent digestion and nutrition. In these cases the fatter animals hold out longer than the leaner. The fat appears to be then absorbed, and transformed into nutritive juice. In infancy it is white, insipid, and not very solid; in the adult it is firm and yellowish, and in animals of an advanced age its color is deeper, its consistence various, and its taste in general stronger.

FAT, in sea language, signifies the same with broad. Thus a ship is said to have a fat quarter, if the trussing in or tuck of her quarter be deep.

FAT likewise denotes an uncertain measure of capacity Thus a fat of isinglass contains from 3¼ cwt. to 4 cwt.; a fat of unbound books half a maund or four bales; of wire from 20 to 25 cwt.; and of yarn from 220 to 221 bundles.

FATA MORGANA, a very remarkable aerial phenomenon, which is sometimes observed from the harbour of Messina, and adjacent places, at a certain height of the atmosphere. The name, which signifies Fairy Morgana, is derived from an opinion of the superstitious Sicilians, that the whole spectacle is produced by fairies, or such like visionary invisible beings. The populace are delighted whenever it appears, and run about the streets shouting for joy, calling every body out to partake of the glorious sight. This singular meteor has been described by various authors; but the first who mentioned it with any degree of precision was Father Angelucci, who gives the following account of it as quoted by Swinburne: 'On the 15th of August, 1643, as I stood at my window, I was surprised with a most wonderful delectable vision. The sea, that washes the Sicilian shore, swelled up, and became, for ten miles in length, like a chain of dark mountains; while the waters near our Calabrian coast grew quite smooth, and in an instant appeared as one clear polished mirror, reclining against the aforesaid ridge. On this glass was depicted, in chiaro scuro, a string of several thousands of pilasters, all equal in altitude, distance, and degree of light and shade. In a moment they lost half their height, and bent into arcades, like Roman aqueducts. A long cornice was next formed on the top, and above it arose castles innumerable, all perfectly alike. These soon split into towers, which were shortly after lost in colonnades, then windows, and at last ended in pines, cypresses, and other trees, even and similar. This is the Fata Morgana, which, for twenty-six years, I had thought a mere fable.'

As soon as the sun surmounts the eastern hills behind Reggio, and rises high enough to form an angle of forty-five degrees on the water before the city, every object existing or moving at Reggio is repeated 1000 fold upon this marine looking glass; which, by its tremulous motion, is as it were cut into facets. Each image passes rapidly off in succession as the day advances, and the stream carries down the wave on which it appeared. Thus the parts of this moving picture will vanish in the twinkling of an eye. Sometimes the air is, at that moment, so impregnated with vapors, and undisturbed by winds, as to reflect objects in a kind of aerial screen, rising about thirty feet above the level of the sea. In cloudy heavy weather, they are drawn on the surface of the water, bordered with fine prismatical colors. The following is the account given by M. Houel: 'In fine summer days, when the weather is calm, there rises above the great current a vapor which acquires a certain density, so as to form in the atmosphere horizontal prisms, whose sides are disposed in such a manner that, when they come to their proper degree of perfection, they reflect and represent successively, for some time (like a moveable mirror), the objects on the coast or in the adjacent country. They exhibit by turns the city and suburbs of Messina, trees, animals, men, and mountains. They are

certainly beautiful aerial moving pictures. There are sometimes two or three prisms, equally perfect; and they continue in this state eight or ten minutes. After this, some shining inequalities are observed upon the surface of the prism, which render confused to the eye the objects which had been before so accurately delineated, and the picture vanishes. The vapor forms other combinations, and is dispersed in air. Different accounts have been given of this singular appearance; which, for my part, I attribute to a bitumen that issues from certain rocks at the bottom of the sea, and which is often seen to cover a part of its surface in the canal of Messina. The subtle parts of this bitumen being attenuated, combined, and exhaled with the aqueous globules that are raised by the air, and formed into bodies of vapor, give to this condensed vapor more consistence; and contribute, by their smooth and polished particles, to the formation of a kind of aerial crystal, which receives the light, reflects it to the eye, and transmits to it all the luminous points which color the objects exhibited in this phenomenon, and render them visible.' Francis Antonio Minasi, who observed this curious spectacle three times in 1793, gives the following account of it:—

'When,' says Minasi, 'the rising sun shines from that point whence its incident ray forms an angle of about forty-five degrees on the sea of Reggio, and the bright surface of the water in the bay is not disturbed either by the wind or the current, the spectator being placed on an eminence of the city, with his back to the sun, and his face to the sea; on a sudden there appear in the water, as in a catoptric theatre, various multiplied objects, viz. numberless series of pilasters, arches, castles well delineated, regular columns, lofty towers, superb palaces, with balconies and windows, extended alleys of trees, delightful plains with herds and flocks, armies of men on foot and horseback, and many other strange figures in their natural colors and proper actions, passing rapidly in succession along the surface of the sea, during the whole of the short period of time while the above-mentioned causes remain.

'But if, in addition to the circumstances before described, the atmosphere be highly impregnated with vapor, and dense exhalations not previously dispersed by the action of the wind or waves, or rarefied by the sun, it then happens that in this vapor, as in a curtain extended along the channel to the height of about four or five and twenty feet, and nearly down to the sea, the observer will behold the scene of the same objects not only reflected from the surface of the sea, but likewise in the air, though not so distinct or well defined as the former objects from the sea.

'Lastly, if the air be slightly hazy and opaque, and at the same time dewy, and adapted to form the iris, then the above-mentioned objects will appear only at the surface of the sea, as in the first case, but all vividly colored, or fringed with red, green, blue, and other prismatic colors.'

FATATENDA, a considerable town on the Gambia, Western Africa, about 500 miles from its mouth. The African Company had once a factory here, situated on a rock, and overlooking a fine country; but the violent conduct of the king of Tomani determined them to break it up in the year 1734.

FATE, *n. s.*
FA'TED, *adj.*
FA'TAL, *adj.*
FA'TALISM, *n. s.*
FA'TALIST,
FATAL'ITY,
FA'TALLY, *adv.*
FA'TALNESS, *n. s.*

Fr. *fatalité, fatal;* Ital. *fata;* Pers. *fat* (death); Lat. *fatum*, from *for, fari* (à Gr. $\phi\alpha\omega$), to pronounce (the supposed decree of God). Destiny; sometimes meaning a kind of deified chance; sometimes a fixed series of causes; predetermined event; cause of death; death: fated, means decreed by fate or destiny; invested with the powers of fate, or fatal determination; endued with any power or quality by fate. Fatal is decisive; inevitable; deadly; mortal; appointed by destiny; causing sure destruction or death: fatalism, the doctrine of necessitarian philosophers, or of the fatalists, who maintain that all things happen by necessity: fatality is predetermination; predestination; tendency to danger or evil: fatalness, inevitable necessity.

Tell me what *fates* attend the duke of Suffolk?
By water shall he die, and take his end?
Shakspeare.

The *fated* sky
Gives us free scope. *Id.*

If I'm traduced by tongues which neither know
My faculties nor person, yet will be
The chronicles of my doing, let me say
'Tis but the *fate* of place, and the rough brake
That virtue must go through. *Id. Henry VIII.*

It was *fatal* to the king to fight for his money; and though he avoided to fight with enemies abroad, yet he was still enforced to fight for it with rebels at home.
Bacon's Henry VII.

By a strange *fatality* men suffer their dissenting to be drawn into the stream of the present vogue.
King Charles.

In using the terms *fate*, decree, or destiny, we speak after the manner of men; for it being customary with us, whenever we resolve upon some distant work, to declare our intentions to persons under our influence, we conceive of God as making the like declared or mental determination.
Search, 1763.

Viewing a neighbouring hill, whose top of late
A chapel crowned, 'till in the common *fate*
The' adjoining abbey fell. *Denham.*

The stream is so transparent, pure, and clear,
That had the self-enamoured youth gazed here,
So *fatally* deceived he had not been,
While he the bottom, not his face, had seen. *Id.*

Necessity or chance
Approach not me; and what I will is *fate.*
Milton.

Some concurrence of their own will is requisite to produce their virtue, God rarely working with irresistible power, or *fatal* efficacy. *Barrow.*

It was
Still *fatal* to stout Hudibras,
In all his feats of arms, when least
He dreamt of it, to prosper best. *Hudibras.*

Seven times seven, or forty-nine, nine times nine, or eighty-one, and seven times nine, or the year sixty-three, is conceived to carry with it the most considerable *fatality.* *Browne.*

Others delude their trouble by a graver way of reasoning, that these things are *fatal* and necessary, it being in vain to be troubled at that which we cannot help. *Tillotson.*

There is a necessity in *fate*
Why still the brave bold man is fortunate.
Dryden.

When empire in its childhood first appears,
A watchful *fate* o'ersees its rising years. *Id.*

Looking, he feeds alone his famished eyes;
Feeds lingering death, but looking not he dies;
Yet still he chose the longest way to *fate*,
Wasting at once his life and his estate. *Id.*

O race divine!
For beauty still is *fatal* to the line. *Id.*

Behold the destined place of your abodes;
For thus Anchises prophesied of old,
And thus our *fatal* place of rest foretold. *Id.*

O *fatal* maid! thy marriage is endowed
With Phrygian, Latian, and Rutilian blood. *Id.*

'Tis the procession of a funeral vow,
Which cruel laws to Indian wives allow,
When *fatally* their virtue they approve;
Cheerful in flames, and martyrs of their love.
Id.

She fled her father's rage, and with a train,
Driven by the Southern blasts, was *fated* here to reign. *Id.*

With full force his deadly bow he bent,
And feathered *fates* among the mules and sumpters sent. *Id.*

All the father's precautions could not secure the son from the *fatality* of dying by a lion. *L'Estrange.*

The stoicks held a *fatality*, and fixed unalterable course of events; but then they held also, that they fell out by a necessity emergent from and inherent in the things themselves, which God himself could not alter. *South.*

Random chance, or wilful *fate*,
Guides the shaft from Cupid's bow.
A. Philips.

O think what anxious moments pass between
The birth of plots, and their last *fatal* periods.
Oh, 'tis a dreadful interval of time,
Filled up with horror all, and big with death.
Addison.

Her aukward love indeed was oddly *fated*;
She and her Polly were too near related. *Prior.*

A palsy in the brain is most dangerous; when it seizeth the heart, or organs of breathing, *fatal*.
Arbuthnot on Diet.

To say that the world was made casually by the concurrence of atoms, is to affirm that the atoms composed the world mechanically and *fatally*; only they were not sensible of it. *Bentley.*

The whizzing arrow sings,
And bears thy *fate*, Antinous, on its wings. *Pope.*

Will the obstinate *fatalist* find sufficient apology?
Watts.

All should be prophets to themselves; foresee
Their future *fate*; their future *fate* foretaste:
This art would waste the bitterness of death.
The thought of death, alone, the fear destroys.
Young.

O majestic Night!
Nature's great ancestor! Day's elder-born!
And *fated* to survive the transient sun. *Id.*

Wickedness and weakness; is one of the *fatalest* mistakes desperation can hurry a man into. *Sterne.*

Our poet, it must be confessed, left several passages so expressed, as to be favorable to *fatalism* and necessity. *Warton.*

Yes, to deep sadness sullenly resigned,
He feels his body's bondage in his mind;
Puts off his generous nature; and, to suit
His manners with his *fate*, puts on the brute.
Cowper.

Free in his will to choose or to refuse,
Man may improve the crisis or abuse;
Else, on the *fatalist's* unrighteous plan,
Say to what bar amenable were man? *Id.*

Then grieve not thou to whom the' indulgent Muse
Vouchsafes a portion of celestial fire,
Nor blame the partial *fates*, if they refuse
The' imperial banquet and the rich attire.
Beattie.

Of *fate*, and chance, and change in human life,
High actions and high passions best describing.
Byron.

I feel the impulse—yet I do not plunge;
I see the peril—yet do not recede;
And my brain reels—and yet my foot is firm:
There is a power upon me which withholds,
And makes it my *fatality* to live. *Id.*

FATE denotes an inevitable necessity depending upon a superior cause. The word is formed from fari, fatum, to speak; and primarily implies the same with effatum, viz. a word or decree pronounced by God; or a fixed sentence whereby the Deity has prescribed the order of things, and allotted to every person what shall befal him. The Greeks called it *ειμαρμενη*, as it were a chain or necessary series of things indissolubly linked together. All things, says Plato, are in fate; i. e. within its sphere or scheme, but all things are not fated; and he thus explains the distinction: it is not in fate, says he, that one man shall *do* so and so, and another *suffer* so and so, for that would be destructive of our free agency and liberty; but if any one should choose such a life, and do such or such things, then it is in fate that such things and such consequences shall ensue upon it. The soul, therefore, is *αδεσποτον*, free and uncontrolled, and it lies within itself to act or not; and there is no compulsion or necessity here; but what follows upon the action shall be accomplished, *καθ' ειμαρμενην*, according to fate, or the constitution of things. Thus, that Æneas should marry Lavinia was a thing in which he was free and independent, but the consequent war with Turnus was a *fated* circumstance. To this fate even the gods themselves were subject.

FATEMITES, FATHEMITES, or FATHIMITES, the descendants of Mahomet by Fathema, or Fatima, his daughter. They never enjoyed the khalifat of Mecca or Begdad, but reigned in Barbary and Egypt. See KHALIFS.

FATES, in mythology. See PARCÆ

FA'THER. *n. s.* & *v. a.*
FA'THERHOOD,
FA'THER-IN-LAW,
FA'THERLESS, *adj.*
FA'THERLINESS, *n. s.*
FA'THERLY, *adj.* & *adv.*

Saxon, fæder; Goth. and Swed. *fader*; Belg. and Isl. *vader*; Teut. *vatter*, or *vater*; Sans. *patara*; Per. *phader*, or *puedar*; Ital. *padre*; Fr. *pere*; Lat. *pater*; Gr. *πατηρ*. The male parent of a child; the earliest ancestor; the inventor, or first contriver, of any thing: a title given to aged and honorable persons, generally; to the ecclesiastical writers of the first centuries; to a senator of Rome; a jesuit, &c., particularly: and, supremely, to God; and to the first person of the adorable Trinity: to father, is to adopt, or treat, as a child; to supply with a father; to adopt a composition; to acknowledge any one as his child,

or production: a fatherhood is the character, or authority, of a father; a father-in-law is the father of one's husband or wife: fatherless, destitute of a father; unprotected: fatherly; tenderly; with paternal care: fatherliness, paternal kindness.

In the hous of my *fadir*, ben manye dwellingis, if ony thing lasse I hadde seid to you: for I go to make redi to you a place. *Wiclif. Jon* xiv.

Jubal was the *father* of all such as handle the harp and organ. *Gen.* iv. 21.

He hath made me a *father* to Pharaoh, and lord of all his house. *Gen.* xlv. 8.

Ye shall not afflict any widow, or *fatherless* child. *Ex.* xxii.

We have one *Father*, even God. *John.* viii. 41.

Abraham is the *father* of us all. *Rom.* iv. 16.

The *fatherless* hath no friend. *Sandys.*

And lest we seem to *father* any thing *upon* them more than is their own, let them read. *Hooker.*

It was said
It should not stand in thy posterity;
But that myself shall be the root and *father*
Of many kings. *Shaksp. Macbeth.*

Formal in apparel,
In gait and countenance surely like a *father*. *Id.*

Ay, good youth,
And rather *father* thee than master thee. *Id.*

I am no stronger than my sex,
Being so *father'd* and so husbanded. *Id. J. Cæs.*

You shall find one well accompanied
With reverend *fathers* and well learned bishops. *Id. Richard III.*

Our *fatherless* distress was left unmoan'd;
Your widow dolours likewise be unwept. *Id.*

Let me but move one question to your daughter,
And, by that *fatherly* and kindly power
That you have in her, bid her answer truly. *Id.*

A poor blind man was accounted cunning in prognosticating weather: Epsom, a lawyer, said in scorn, Tell me, *father*, when doth the sun change? The old man answered, When such a wicked lawyer as you goeth to heaven. *Camden.*

Son of Bensalem, thy *father* saith it; the man by whom thou hast breath and life speaketh the word. *Bacon.*

Who can abide, that against their own doctors, both of the middle and latest age, six whole books should by their *fatherhoods* of Trent be, under the pain of a curse, imperiously obtruded upon God and his church? *Hall.*

The eternal Son of God esteemed it his meat and drink to do the will of his *Father*, and for his obedience alone obtained the greatest glory. *Taylor.*

After the delivery of your royal *father's* person into the hands of the army, I undertaking to the queen mother that I would find some means to get access to him, she was pleased to send me. *Denham.*

He shall forget
Father and mother, and to his wife adhere. *Milton.*

Thus Adam, *fatherly* displeas'd;
O execrable son! so to aspire
Above his brethren! *Id.*

To *father* on God the mischiefs issuing from our sin and folly, may savour of profaneness. *Barrow.*

Magical relations comprehend effects derived and *fathered upon* hidden qualities, whereof, from received grounds of art, no reasons are derived. *Brown.*

Men may talk of the *fathers*, and magnify the *fathers*, and seem to make the authority of the *fathers* next to infallible; and yet expose them to contempt. *Stillingfleet.*

From hence the race of Alban *fathers* come,
And the long glories of majestick Rome. *Dryden.*

The part which describes the fire, I owe to the piety and *fatherly* affection of our monarch to his suffering subjects. *Id.*

Father is a notion superinduced to the substance, or man, and refers only to an act of that thing called man, whereby he contributed to the generation of one of his own kind. *Locke.*

God, who knows our frailty, pities our weakness, and requires of us no more than we are able to do, and sees what was, and what was not, in our power, will judge as a kind and merciful *father*. *Locke.*

We might have had an entire notion of this *fatherhood*, or fatherly authority. *Id.*

There was a *father* of a convent, very much renowned for his piety and exemplary life; and, as persons under any great affliction applied themselves to the most eminent confessors, our beautiful votary took the opportunity of confessing herself to this celebrated *father*. *Addison.*

I must make my *father-in-law* a visit with a great train and equipage. *Id. Spectator.*

He caught his death the last county sessions, where he would go to see justice done to a poor widow woman and her *fatherless* children. *Id.*

Father of verse, *Pope.*

My name was made use of by several persons, one of which was pleased to *father* on me a new set of productions. *Swift.*

Men of wit,
Often *fathered* what he writ. *Id.*

Consider a kingdom as a great family, whereof the prince is *father*, and it will appear plainly, that mercenary troops are only servants armed either to awe the children at home, or else to defend from invaders. *Id.*

Stretched on the ground awhile entranced he lay,
And pressed warm kisses on the lifeless clay;
And then upsprung with wild convulsive start,
And all the *father* kindled in his heart. *Darwin.*

FATHER. See CHILDREN, and PARENT. By the laws of Romulus, a father had an unlimited power over his children. Among the Lacedemonians, as we learn from Aristotle's politics, the father of three children was excused from the duty of mounting guard for the security of the city; and a father of four children was exempted from every public burden. The Poppæan law, amongst the Romans, granted many valuable privileges to the fathers of three children; amongst which one was, that he should be excused from civil offices, and that the mother should have liberty, in her father's life-time, to make a will, and manage her estate without the authority of tutors.

FATH'OM, *n. s.* & *v. a.* } Sax. fæbm, fæbem;
FATH'OMLESS, *adj.* } Goth. *fatm*, *fadm*; Belg. *vadem*, perhaps from Sax. fettan; Belg. *vattan*, to contain. The space which the extended arms can contain; six feet: the usual measure of the depth of the sea: reach; penetration; depth or compass generally. Fathomless, that which can never be measured or bounded.

Another of his *fathom* they have none
To lead their business. *Shakspeare. Othello.*

Will you with counters sum
The vast proportion of his infinite;

And buckle in a waste most *fathomless*,
With spans and inches so diminutive
As fears and reasons?
Id. Troilus and Cressida.

Dive into the bottom of the deep,
Where *fathom-line* could never touch the ground.
Id. Henry IV.

The extent of this *fathom*, or distance between the extremity of the fingers of either hand upon expansion, is equal unto the space between the sole of the foot and crown. *Browne.*

The arms spread cross in a straight line, and measured from the end of the long finger on one hand, to that of the other, a measure equal to the stature, is named a *fathom*. *Holder.*

Leave, leave to *fathom* such high points as these;
Nor be ambitious, ere the time, to please. *Dryden.*

'Tis too strong for weak heads to try the heights and *fathom* the depths of his flights. *Felton.*

How into the ground
A pit they sink, full many a *fathom* deep.
Somervile.

Our depths who *fathoms*. *Pope.*

What but the *fathomless* of thought divine
Could labour such expedient from despair,
And rescue both? *Young.*

All his hopes
Tend downward; his ambition is to sink,
To reach a depth profounder still, and still
Profounder, in the *fathomless* abyss
Of folly, plunging in pursuit of death. *Cowper.*

The image of Eternity—the throne
Of the Invisible; even from out thy slime
The monsters of the deep are made; each zone
Obeys thee; thou goest forth, dread, *fathomless*, alone.
Byron.

FATHOM, in commerce, &c., is a long measure, comprising six feet, being taken from the utmost extent of both arms, when fully stretched out into a right line. It is made use of in the measurements of mines, quarries, wells, and pits. This measure is chiefly used at sea, or by seafaring people, for expressing depths of the sea, lengths of cables, &c. It is hardly ever used on land, except by miners.

FAT'IGATE, *v. a.* & *adj.* } Fr. *fatiguer*, *fatigue*; Lat. *fatigo*, of *fatim* and *ago*, to do or perform (a thing)
FAT'IGABLE, *adj.* }
FATIGA'TION, *n. s.* }
FATIGUE', *n. s.* & *v. a.* }

abundantly. To weary; tire; exhaust with labor: this is also the signification of the more usual verb, fatigue: fatigable is susceptible of fatigue; easily wearied: fatigation and fatigue, weariness; lassitude; or the causes of either.

By and by the din of war 'gan to pierce
His ready sense, when straight his doubled spirit
Requickened what in flesh was *fatigate*,
And to the battle came he. *Shakspeare. Coriolanus.*

The earth alloweth man nothing but at the expense of his labor and *fatigation*. *Montague*, 1648.

The great Scipio sought honours in his youth, and endured the *fatigues* with which he purchased them.
Dryden.

The man who struggles in the fight,
Fatigues left arm as well as right. *Prior.*

Cursed be the gold and silver which persuade
Weak men to follow far *fatigueing* trade!
The lily peace outshines the silver store,
And life is dearer than the golden ore. *Collins.*

LORD F. Very possibly, Mr. Mendlegs; but that was in the beginning of the winter, and you should always remember, Mr. Hosier, that if you make a nobleman's spring legs as robust as his autumnal calves, you commit a monstrous impropriety, and make no allowances for the *fatigues* of the winter.
Sheridan.

FATTECONDA, the capital of the kingdom of Bondou, Western Africa. It lies near the eastern bank of the river Faleme. Long. 10° 20′ W., lat. 14° 20′ N.

FATTICK, a sea-port of Western Africa, capital of the kingdom of Joal, or Joul. It is about sixty miles north of the Gambia.

FATUA, in mythology, the wife of the god Faunus, who was supposed to inspire women with the knowledge of futurity, as Faunus himself did the men. Fatua had her name from fari, q. d. vaticinari, to prophesy. See FAUNA.

FATU'ITY, *n. s.* } Fr. *fatuité*; Lat. *fatuus*,
FAT'UOUS, *adj.* } insipid. Stupidity; foolishness; feebleness or prostration of mind: fatuous is the corresponding adjective.

It had argued a very short sight of things, and extreme *fatuity* of mind in me, to bind my own hands at their request. *King Charles.*

And when that flame finds combustible earth,
Thence *fatuous* fires and meteors take their birth.
Denham.

We pity or laugh at those *fatuous* extravagants, while yet ourselves have a considerable dose of what makes them so. *Glanville.*

These symptoms were so high in some as to produce a sort of *fatuity* of madness.
Arbuthnot on Air.

His madness was compounded of rage and *fatuity*.
Johnson. Life of Swift.

FAUCHET (Claude), a French antiquarian, born in 1529. He was the author of treatises on Gaulish and French antiquities; on the Liberties of the Gallican church; on the Origin of Knights, Armorial Bearings, and Heralds; Origin of Dignities and Magistrates in France. He died in 1601, and his works were collected and printed at Paris in 4to in 1610.

FAUCHET (Claude), a French priest, born at Dorne, in the Nivernois, in 1744. Having taken upon him the ecclesiastical habit, he became vicar-general to the archbishop of Bruges, and preacher to Lewis XVI.; but his excessive vanity disgusted the king, and from this no doubt Fauchet the more eagerly embraced the revolutionary cause. He was a principal instigator to the storming of the bastile, and he preached a thanksgiving sermon on the occasion; and in another sermon he had the audacity to call Jesus Christ the first sans culotte of Judea. He entered among the Illuminati, and in 1791 became what was called constitutional bishop of Bayeux. He was likewise chosen deputy to the national assembly for the department of Calvados, and was afterwards a member of the convention; but was one of the many who met the first fruits of the doctrines they propagated at the guillotine, in 1793. Fauchet wrote a Panegyric on St. Lewis, pronounced before the French Academy; a Funeral Oration for the Duke of Orleans; Eloge on Benjamin Franklin; Discourse on Universal Manners, &c.

FA'UCHION, *n. s.* See FALCHION. A crooked sword.

A stately tomb, whose top a trumpet bore;
A soldier's *fauchion*, and a seaman's oar.
Dryden.

FA'UCET, *n. s.* Fr. *fausset*; Lat. *fauces*. The pipe inserted into a vessel to give vent to the liquor, and stopped up by a peg or spigot: improperly written fosset.

You were out a good wholesome forenoon in hearing a cause between an orange-wife and a *fosset*-seller, and adjourned a controversy of three-pence to a second audience. *Shakspeare.*

If you are sent down to draw drink, and find it will not run, blow strongly into the *faucet*, and it will immediately pour into your mouth. *Swift.*

FAUCIGNY, or FAUSSIGNY, a ci-devant province of Savoy which has been annexed to France, and included in the department of Mont Blanc. The name is derived from an ancient castle, situated near the Arve, about three miles and a half north from Bonne Ville. It was bounded on the north by Chablais, east by Valais, and Aosta; south and west by Genevois. It was divided into upper and lower Faucigny, and belonged anciently to the dauphin Humbert II. from whom it went to the house of Savoy by marriage in 1233. It abounds in wood and pastures. Its chief towns were Salanche and Cluse.

FAVERSHAM. See FEVERSHAM.

FAVIDA, an island in the gulf of Georgia, discovered by the Spaniards in the year 1791. It is near the west coast of North America, from which it is separated by a channel, called Canal del Nuestra Signora del Rosario. Thirty miles in length from north-west to south-east, and from two to five in breadth.

FAVIER (——), an eminent French statesman of the eighteenth century, was a native of Toulouse. At the age of twenty he succeeded his father as secretary general to the states of Languedoc, but afterwards sold the office, and applied himself to the study of history and politics. He was now nominated secretary to Chatardie, the ambassador to Turin, after whose death he was patronised by M. d'Argenson, and wrote Reflexions contre le Traité de 1756. This work being highly esteemed, Favier was employed on several missions in Spain and Russia, under the ministry of the duke de Choiseul. He was also engaged in several of the intrigues of the count de Broglio, which involved him in difficulties, and obliged him to leave France. He was arrested, however, at Hamburgh, and taken to Paris. M. de Broglio procured his liberation in 1773; and on the accession of Louis XVI. he obtained a pension. He died in 1784. De Segur has inserted part of his works in his Politique de tous les Cabinets de l'Europe pendant les Regnes de Louis XV. et de Louis XVI. 1793, 2 vols. 8vo. Favier was engaged with Freron, J. J. Rousseau, the abbé Arnaud, Suard, and others, in conducting the Journal Etranger.

FAVIGNANA, the ancient Ægusa, one of the Ægates islands, nine miles west of Trapani, and about five from the western coast of Sicily. It is seventeen miles in circumference, and has a fort called St. Catharine. On each side of the island there is good anchorage.

FAVI'LLOUS, *adj.* Lat. *favilla*. Consisting of ashes.

As to foretelling of strangers, from the fungous particles about the wicks of the candle, it only signifieth a moist air about them, hindering the avolation of light and the *favillous* particles. *Browne.*

FAVISSÆ, in antiquity, were, according to Festus and Gellius, cisterns to keep water in: but the favissæ in the capital at Rome were dry cisterns or subterraneous cellars, where they laid up the old statues, broken vessels, and other things used in the temple. These were much the same with what, in some modern churches, are called the Archives and Treasury.

FAULCON. See FALCON.

FAULCONRY. See FALCONRY.

FAULKNER (George), a celebrated Irish printer at Dublin, the friend of dean Swift. He carried on business many years with great reputation. Having the misfortune to lose a leg, Foote caricatured him in his Orators in 1762, under the title of Peter Paragraph. Faulkner commenced an action against the poet, but the affair was terminated by lord Townshend. He was chosen one of the aldermen of Dublin, and died there in 1775.

FAULKNER (Jonathan), an English naval officer, of whom the first notice we have is his promotion to the rank of lieutenant on the 24th of August, 1753; in which character he served on board the Alderney sloop in 1755. In 1758 he acted as commander of the Furnace bomb-ketch, one of the squadron under commodore Keppel on the expedition against Goree. In July, 1759, he was advanced to be captain of the Mercury, in which he continued till after the conclusion of the war. In 1767 he was appointed to the Superbe of seventy-four guns, the flag ship of rear-admiral Sir John Moore; whence he was removed to the Royal Oak in 1777. Prior to the actual commencement of hostilities with France, in 1778, Mr. Faulkner was appointed second captain of the Victory, the flag ship of admiral Keppel, under whom he so remarkably distinguished himself, that he received from the commander-in-chief, and admiral Campbell, the most exalted encomiums on his cool intrepidity and conduct, in the engagement with the French fleet off Ushant, on the 29th of the ensuing July. In 1782 he was appointed to the Princess Royal of ninety-eight guns, and in that ship joined the fleet sent to Gibraltar, under lord Howe, for the relief of that fortress, and was placed in the line as one of the seconds to the commander-in-chief. The cessation of hostilities soon after taking place, and the Princess Royal being refitted and re-commissioned as one of the guard-ships at Portsmouth, he was re-appointed to the same ship; but on quitting it, before the expiration of the usual period of such command, he was appointed to the Triumph of seventy-four guns, also a guard-ship at that port. This was the last commission he ever held; but he received the following honorable appointments: on the 24th September, 1787, he was made rear-admiral of the white; in September, 1790, rear-admiral of the red; in February, 1793, vice-admiral of the blue; in April, 1794, vice-admiral of the red;

and lastly, he was made admiral of the blue on the 1st of June, 1795. He did not, however, long survive this last promotion. After he became a flag-officer he had spent the greater part of his time at his seat in Havant Park in Hants; but repairing to London on the 22nd to be presented to his majesty, on his last promotion, he was suddenly struck with an apoplexy at colonel Stanhope's, and expired the next morning. The nautical abilities of admiral Faulkner were universally acknowledged and admired; and by his death the country lost a gallant and meritorious officer.

FAULKNER (Robert), was the son of captain Samuel Faulkner, who was unfortunately drowned in the Victory with Sir John Balchen. Robert was bred to the sea service by his father, and was promoted to be a lieutenant on the 5th of October, 1741. On the 19th of January, 1757, he was made captain of the Marlborough of ninety guns, apparently for the purpose of giving him rank, for he almost immediately quitted that ship, and remained for a short time out of commission. In 1760 he commanded the Mercury; and early in the ensuing year was removed to the Bellona of seventy-four guns; soon after which he was ordered on a cruise off the coast of France, in company with the Brilliant frigate, commanded by captain Logie. On the 14th of August, 1761, he fell in with the Courageux, a French ship of war, carrying seventy-four guns, and 700 men; together with the Malicieuse and Hermione, of thirty-two guns each. A desperate action ensued; the particulars of which are officially given in a letter from captain Faulkner, dated Lisbon River, August 21st, 1761, in the following words:—'Be pleased to acquaint my lords commissioners of the admiralty, that, on the 14th instant, at three P. M. we saw three sail in the south-west quarter, Cape Finisterre, bearing north-east half east distant ten leagues; we immediately gave chase, and, by their crowding sail from us, soon suspected they were enemies; we came up but slowly with them and continued the chase all night. At five A. M. we got almost up with the frigates; at six the Brilliant began to engage one of them, and soon after the other also; at twenty-five minutes past six we came along side the large ship, and began to engage as near as possible; at thirty-four minutes after six our mizen mast went away by the enemy's shot, and at forty-five minutes after six the large ship struck, which proved Le Courageux of seventy-four guns commanded by Dugue L'Ambert, having on board 700 men from St. Domingo. The Brilliant continued to engage the two frigates, till half past seven, when they bore away, and neither of our ships were in a condition to pursue them; at the same time the prize's main-mast went away. We found our lower rigging much cut, the fore-mast, main-mast, and main-top-mast much shattered; we lost in the action six men and twenty-eight wounded: the enemy had 240 men slain, and 110 men wounded. We sent our first lieutenant Mr. Male, with other officers, and 150 men to take possession of the prize, and received 224 prisoners on board; the Brilliant sent fifty men and received 100 prisoners on board; she had five men killed, and sixteen wounded; among the slain is the master.' The disparity of loss sustained by the two ships was almost incredible, being altogether in killed and wounded 330 to thirty-four. On the passage to Lisbon the Courageux was accidentally set on fire, from the sentinel having incautiously carried a candle too near the bung of a cask of spirituous liquor. The alarm of fire being suddenly spread over the ship, struck such terror among the prisoners, that twenty of them jumped into the sea, and perished. The Bellona and her prize being refitted, captain Faulkner returned to England; and afterwards proceeded to the West Indies, in the Mercury of twenty-four guns. Nothing of importance occurred respecting this gentleman; nor does he appear after his return to England, on the cessation of hostilities, to have accepted of any subsequent command. After this period he resided principally at Bath, but died in France on the 19th of May, 1769.

FAULQUEMONT, a town of France, in the department of the Moselle, seated near the Nied; nine miles south-east of Boulay, and sixteen and a half east of Metz.

FAULT, *n. s.*, *v. a.* & *v. n.*
FAULT'ER, *n. s.*
FAULT'FINDER,
FAULT'FUL, *adj.*
FAULT'ILY, *adv.*
FAULT'INESS, *n. s.*
FAULT'LESS, *adj.*
FAULT'LESSNESS, *n. s*
FAULT'Y, *adj.*

Fr. *faut*, *faute*; Old Fr. *faulte*; Ital. *falta*; Lat. *falleu*. This word seems to have come to us from the French verb *falloir*, it fails. Offence; venial crime; defect; loss: to fault is to fail, or to charge with a fault, or failure; to accuse: a faulter is an offender: fault finder, an accuser: faultful, abounding in faults: faultless, without them: faulty is defective; wrong; blameable: the other formations do not appear to require explanation.

The former impression was very *faultily* printed.
Abp. Cranmer.

Which moved him rather in eclogues than otherwise to write, minding to furnish our tongue in this kind wherein it *faulteth*. *Spenser.*

The prophet chuseth rather to charge them with the *fault* of making a law unto themselves, than the crime of transgressing a law which God had made.
Hooker.

The inhabitants will not take it in evil part, that the *faultiness* of their people heretofore is laid open.
Id.

The form of polity by them set down for perpetuity, is three ways *faulty*; *faulty* in omitting some things which in Scripture are of that nature, as namely, the difference that ought to be of pastors, when they grow to any great multitude; *faulty* in requiring doctors, deacons, and widows, as things of perpetual necessity by the law of God, which in truth are nothing less; *faulty* also in urging some things by Scripture mutable, as their lay elders. *Id*

'Tis a very great *fault* to be more forward in setting one's self off, and talking to show one's parts, than to learn the worth, and to be truly acquainted with the abilities of other men. *Charron.*

So fares it with this *faulty* lord of Rome.
Shakspeare.

I could tell to thee, as to one it pleases me, for *fault* of a better, to call my friend, I could be sad, and sad indeed too. *Id.*

If little *faults*, proceeding on distemper,
Shall not be winked at, how shall we stretch our eye
At capital crimes? *Id. Henry V.*

Thou mayest be sure that he that will in private tell thee of thy *faults*, is thy friend, for he adventures thy dislike, and doth hazard thy hatred. *Raleigh.*

By accident of a *faulty* helmet that Parker had on, he was stricken into the mouth at the first course, so that he died presently. *Bacon's Henry VII.*

For that I will not *fault* thee,
But for humbleness exalt thee. *Old Song.*

He cannot mislike the love of his countrymen: he cannot *fault* their carriage. *Bp. Hall.*

If the *fault-finding* with the vices of the times may honestly accord with the good will of the parties, I had as lieve ease myself with a slender apology, as wilfully bear the brunt of causeless anger in my silence. *Id. Satires.*

Then she, Behold the *faulter* here in sight;
This hand committed that supposed offence. *Fairfax.*

Can thus
The image of God in man, created once
So goodly and erect, though *faulty* since,
To such unsightly sufferings be debased? *Milton.*

When her judgment was to be practised in knowing *faultiness* by his first tokens, she was like a young fawn, who coming in the wind of the hunters, doth not know whether it be a thing or no to be eschewed. *Sidney.*

Pleasant *faultfinders*, who will correct the verb before they understand the noun. *Id.*

He finds no *fault* with their opinion about the true God, but only that it was not clear and distinct enough. *Stillingfleet.*

It is a very poor, though common, pretence to merit, to make it appear by the *faults* of other men. *Sir W. Temple.*

They wholly mistake the nature of criticism, who think its business is principally to find *fault*. *Dryden.*

They are hardly to be prevailed with to amend the acknowledged *faults* in the frame they have been accustomed to. *Locke.*

Which of our thrum-capped ancestors found *fault*,
For want of sugar-tongs, or spoons for salt? *King.*

To be desirous of a good name, and careful to do every thing that he innocently may to obtain it, is so far from being a *fault*, even in private persons, that it is their great and indispensable duty. *Atterbury.*

The best way to prove the clearness of our mind, is by showing its *faults*; as when a stream discovers the dirt at the bottom, it convinces us of the transparency and purity of the water. *Pope.*

Whoever thinks a *faultless* piece to see,
Thinks what ne'er was, nor is, nor e'er shall be. *Id.*

Being void of all friendship and enmity, they never complain, nor find *fault* with the times. *Swift.*

FAUNA, a deity among the Romans. She was daughter of Picus, and was originally called Marica. Her marriage with Faunus procured her the name of Fauna, and her knowledge of futurity those of Fatua and Fatidica. It is said, that her chastity occasioned her being ranked among the gods after her death. She is the same, according to some, with Bona Mater.

FAUNALIA, in antiquity, Roman feasts celebrated in honor of the god Faunus, who was the same among the Romans with Pan of the Greeks. The Faunalia were held on the nones or 5th of December. The principal sacrifice was a roe-buck; or rather, according to Horace, a kid, attended with libations of wine and burning of incense. It was properly a country festival, being performed in the fields and villages with peculiar joy and devotion. Horace gives a description of it, in his eighteenth ode of the third book, beginning,

Faune, nympharum fugientûm amator,
Per meos fines et aprica rura
Lenis incedas, abeasque parvis
Æquus alumnis.

Struvius in his Roman kalendar marks the feast of Faunus on the ides of February, or 30th day of that month; and the Faunalia he places on the 5th of the ides of December, or the 9th of that month: thus there were really two Faunalia; the one in February, mentioned by Ovid, Fast. lib. vi. ver. 246.; the other on the 9th December, described by Horace.

FAUNI, Fauns, among the ancients, were a species of demi-gods, inhabiting the forests; called also Sylvani, and little differing from the Satyrs. They were said to delight in vineyards; and generally appear as attendants of Bacchus, in the representations of Bacchanal feasts and processions. They were represented as half men, half goats; having the horns, ears, feet, and tail of a goat, a very flat nose, and the rest human. Though the Fauns were held for demi-gods, yet they were supposed to die after a long life. Arnobius shows that their father, Faunus himself, lived only 120 years.

FAUNUS, in fabulous history, the son of Picus, who reigned in Italy, about 1300 years before the Augustan age. His bravery, as well as wisdom, gave rise to the tradition, that he was the son of Mars. His great popularity, and his fondness for agriculture, made his subjects revere him as one of their country deities after his death. He was represented with all the equipage of the satyrs, and was consulted to give oracles. See Fauna.

FAVORINUS, an ancient orator and philosopher of Gaul, who flourished under Adrian, and taught with high reputation both at Athens and Rome. Many works are attributed to him: among the rest, a Greek miscellaneous history, often quoted by Diogenes Laertius. Being reproached by his friends with having submitted to the emperor, in a dispute on some literary topic, he exclaimed, with more wit than principle, 'Would you have me pretend to be wiser than the commander of thirty legions?'

FAVORITA, or Favorito, a palace of Italy, near Mantua, in the ci-devant Cisalpine republic, and department of Mincio. It was taken by the French in May, 1796; and on the 16th of January, 1797, a battle was fought near it between the French, under Buonaparte, and the Austrians, under Wurmser; wherein the latter were defeated with great slaughter, and general Provere taken, with 6000 men, and twenty pieces of cannon. This battle decided the fate of Mantua.

FAVOR, or
FA'VOUR, *v. a.* & *n. s.*
FA'VOURABLE, *adj.*
FA'VOURABLENESS, *n. s.*
FA'VOURABLY, *adv.*
FA'VOURED, *part. adj.*
FA'VOUREDNESS, *n. s.*
FA'VOURER,
FA'VOURITE, *n. s.* & *adj.*
FA'VOURISM, *n. s.*
FA'VOURLESS, *adj.*

Fr. *faveur*; Ital. *favore*; Span. and Port. *faver*; Lat. *favor*; from Greek φαω, to shine. To regard kindly; support; assist; countenance; appear like. As a substantive, it signifies kindness or kind regard; assistance; deference; benevolence; lenity; leave given; object of kindness; token or pledge of favor: and in an obsolete sense, countenance literally; feature. A favorer is he who shows, and a favorite he who receives, marks of favor: favoritism, a modern word for systematic favor or partiality: the other compounds follow the senses of favor.

The *ill-favoured* and lean-fleshed kine did eat up the seven *well-favoured* and fat kine. *Genesis.*

Thou shalt not sacrifice any bullock or sheep wherein is blemish or evil *favouredness*. *Deut.* xvii. 1.

The child Samuel was in *favour*, both with the Lord, and also with men. 1 *Sam.* ii. 26.

They got not the land by their own sword; but thy right hand and thine arm, and the light of thy countenance, because thou hast a *favour* unto them.
Ps. xliv 3.

The race is not to the swift, nor yet *favour* to men of skill. *Eccl.* ix. 3.

Whiles that false fortune *fauoryed* me with her transitorye goodes, then the howre of death had almost ouercome me. *Colvile.*

Of all the race of silver-winged flies
Which do possess the empire of the air,
Was none more *favourable* nor more fair,
Than Clarion the eldest son and heir
Of Muscarol. *Id.*

Of that goddess I have sought the sight,
Yet no where can her find; such happiness
Heaven doth me envy, and fortune *favourless*.
Faerie Queene.

Of her there bred
A thousand young ones, which she daily fed;
Sucking upon her poisonous dugs, each one
Of sundry shape, yet all *ill-favoured*. *Id.*

Touching actions of common life, there is not any defence more *favourably* heard than theirs who allege sincerely for themselves, that they did as necessity constrained them. *Hooker.*

If we should upbraid them with irreligious, as they do us with superstitious *favourers*, the answer which herein they would make us, let them apply unto themselves. *Id.*

Fortune so *favoured* him, that the town at his first coming, surrendered unto him. *Knolles.*

The same gods that armed the queen of Troy,
May *favour* Tamora the queen of Goths. *Shakspeare.*

It pleased your majesty to turn your looks
Of *favour* from myself, and all our house. *Id.*
Disseat thy *favour* with an usurped beard. *Id.*
Worthy Macbeth, we stay upon your leisure.
—Give me your *favour*; my dull brain was wrought
With things forgot. *Id.*

And every one his lovesuit will advance
Unto his several mistress, which they'll know
By *favours* several which they did bestow. *Id.*

Bid her steal into the plashed bower,
Where honey-suckles, ripened by the sun,
Forbid the sun to enter; like to *favourites*,
Made proud by princes that advance their pride
Against that power that bred it. *Id.*

Here, Fluellen, wear thou this *favour* for me, and stick it in thy cap. *Id. Henry V.*

Famous Plantagenet! most gracious prince,
Lend *favourable* ear to our requests.
Id. Richard III.

Do I not know you for a *favourer*
Of this new sect? ye are not sound.
Id. Henry VIII.

Then since fortune's *favours* fade,
You that in her arms do sleep,
Learn to swim and not to wade,
For the hearts of kings are deep. *Bacon.*

A youth of fine *favour* and shape. *Id.*

It is received that it helpeth to continue love, if one wear the hair of the party beloved; and perhaps a glove, or other like *favour*, may as well do it.
Id. Natural History.

Men *favour* wonders. *Id.*

Yet ere we enter into open act,
With *favour*, 'twere no loss, if't might be inquired
What the condition of these arms would be.
Ben Jonson.

Nothing is more vigilant, nothing is more jealous than a *favourite*, especially towards the waning time, and suspect of satiety. *Wotton.*

I have been since with all your friends and tenants,
And, on the forfeit of your *favour* charged them,
Though a crust of mouldy bread would keep him from starving,
Yet they should not relieve him.
Massinger. A New Way to pay Old Debts, act ii. *sc.* 1.

Conjure their friends they had, labour for more,
Solicit all reputed *favourers*. *Daniel's Civil War.*

It is just with God to deny us those *favours* which we were careless in keeping, and which we undervalued in enjoying. *Bp. Hall's Contemplations.*

To the *favourableness* of your ladyship's answer be pleased to add the *favour* of your pardon.
Bp. Taylor.

Many good officers were willing to stay there, as a place very *favourable* for the making levies of men.
Clarendon.

This man was very capable of being a great *favourite* to a great king. *Id.*

All these his wondrous works, but chiefly man,
His chief delight and *favour*; him, for whom
All these his works so wondrous he ordained.
Milton.

That is only suitable in laying a foul complexion upon a filthy *favour*, setting forth both in sluttishness.
Sidney.

All *favours* and punishments passed by him, all officers and places of importance were distributed to his *favourites*. *Id.*

I was a Thessalian gentleman, who, by mischance, having killed a *favourite* of the prince of that country, was pursued so cruelly, that in no place but by *favour* or corruption they would obtain my destruction. *Id.*

His dreadful navy, and his lovely mind,
Gave him the fear and *favour* of mankind.
Waller.

Would you both please, and be instructed too,
Watch well the rage of shining to subdue;
Hear every man upon his *favourite* theme,
And ever be more knowing than you seem.
Stillingfleet.

They were invited from all parts for the use of kings, princes, and ministers. And in short the *favour* of learning was the humour and mode of the age.
Temple.

People are multiplied in a country by the temper of the climate, *favourable* to generation, health, and long life. *Id.*

Come down, said Reynard, let us treat of peace: A peace, with all my soul, said Chanticleer; But, with your *favour*, I will treat it here. *Dryden.*

The good Æneas am I called; a name,
While fortune *favoured*, not unknown to fame. *Id.*

None can have the *favourable* thought,
That to obey a tyrant's will they fought. *Id.*

The violent will condemn the character of Absalom, as either too *favourably* or too hardly drawn. *Id.*

When truths are once known to us, though by tradition, we are apt to be *favourable* to our own parts; and describe to our own understandings the discovery of what, in reality, we borrowed from others. *Locke.*

O, my royal master!
The gods, in *favour* to you, made her cruel. *Philips.*

By their virtuous behaviour they compensate the hardness of their *favour*, and by the pulchritude of their souls, make up what is wanting in the beauty of their bodies. *South.*

A blue ribband tied round the sword-arm, I conceive to be the remains of that custom of wearing a mistress's *favour* on such occasions of old. *Spectator.*

The porter owned that the gentleman *favoured* his master. *Id.*

No one place about it is weaker than another, to *favour* an enemy in his approaches. *Addison.*

All the *favourers* of magick were the most profest and bitter enemies to the Christian religion. *Id.*

Every particular master in criticism has his *favourite* passages in an author. *Id. Spectator.*

Our happiness is bound up in God's *favour*. If we have that, we have enough, whatever else we want. *Henry.*

The pleasures which these Scriptures ascribe to religion, are of a kind very different from those in *favour* of which they are here alleged. *Rogers.*

We are naturally inclined to think *favourably* of those we love. *Id.*

Huntsman! her gait observe; if in wide rings
She wheel her mazy way, in the same round
Persisting still, she'll foil the beaten track;
But if she fly, and with the *fav'ring* wind
Urge her bold intercourse, less intricate thy task. *Somervile.*

Oft with some *favoured* traveller they stray,
And shine before him all the desert way. *Pope.*

What *fav'rites* gain, and what the nation owes,
Fly the forgetful world. *Id.*

I could not discover the lenity and *favour* of this sentence; but conceived it rather to be rigorous than gentle. *Swift.*

When a philosopher has once laid hold of a *favourite* principle, which, perhaps, accounts for many natural effects, he extends the same principle over the whole creation, and reduces it to every phenomenon, though by the most violent and absurd reasoning. *Hume.*

The *favourers* of the reformation being the most numerous and spreading body of the regent's enemies, she applied to them with a particular attention. *Robertson's History of Scotland.*

The young women in the neighbourhood with bride *favours* at their breasts, and nosegays in their hands, attended the bride on her wedding day in the morning. *Brand's Antiquities.*

I have some *favourite* flowers in spring, among which are the mountain-daisy, the hare-bell, the foxglove, the wild-brier-rose, the budding birch, and the hoary hawthorn, that I view and hang over with particular delight. *Burns.*

A plan of *favouritism* is essentially at variance with the plan of our legislature. *Burke.*

But he, the *favorite* and the flower,
Most cherished since his natal hour,
His mother's image in fair face,
The infant love of all his race. *Byron.*

FA'USEN, *n. s.* A sort of large eel.

He left the waves to wash;
The wave sprung entrails, about which *fausens* and other fish
Did shoal. *Chapman's Iliads.*

FA'USSEBRAYE, *n. s.* In fortification: a small mount of earth, four fathoms wide, erected on the level round the foot of the rampart, to fire upon the enemy, when he is so far advanced that you cannot force him back; and also to receive the ruins which the cannons make in the body of the place.—*Harris.*

Fausse-bray, is a low rampart going quite round the body of the place, about three feet at most above the level ground; its parapet is about four or five toises distant from that of the body of the place. *Muller.*

FAUSSE-BRAY works have been rejected by all but Vauban, in modern fortifications. They are made at a very great expense: their faces are very easily enfiladed: the enemy is under cover the minute he becomes master of them; and a great quantity of shells which may be thrown into them, and must lodge, will most probably make a breach, or at least drive every one out.

FAUST, or FUST, a goldsmith of Mentz, and one of the three earliest printers to whom the invention of this most useful art has been ascribed. Some say, he only assisted Guttemberg at Strasburg, in his attempts to make moveable types, in 1444. Be this as it may, he had the policy to conceal his art; and to this we are supposed to be indebted for the tradition of the Devil and Doctor Faustus, handed down to the present times. Faust, in partnership with Peter Schoeffer, having, in 1462, printed off a considerable number of copies of the Bible, to imitate those which were sold in MS., undertook the sale of them at Paris, where the art of printing was then unknown. At first he sold his copies for so high a sum as 500 or 600 crowns, the prices usually demanded by the transcribers. He afterwards lowered his price to sixty crowns, which created universal astonishment; but when he produced copies as fast as they were wanted, and lowered the price to half that amount, all Paris was agitated. The uniformity of the copies increased the wonder; informations were given into the police against him as a magician; his lodgings were searched; and a great number of copies being found, they were seized: the red ink with which they were embellished, was said to be his blood; it was seriously adjudged that he was in league with the devil; and, if he had not fled, most probably he would have shared the fate of those whom the ignorance and superstition of the age condemned for witchcraft. See PRINTING. Dr. Watkins, in his Biographical and Historical Dictionary, says 'this story is a fable,' but assigns no authority for discrediting it. Faust is said to have died of the plague at Paris, about 1466.

FAU'TOR, *n. s.* } Lat. *fautor, fautrix;* Fr.
FAU'TRESS. } *fauteur* Favorer; countenancer; supporter.

I am neither author or *fautor* of any sect: I will have no man addict himself to me; but if I have any thing right, defend it as truth's, not mine.
Ben Jonson.

The new mountain in the Lucrine lake, which is alleged, by the *fautors* of this opinion, as an instance in behalf of it, was not raised thus. *Woodward.*

It made him pray and prove
Minerva's aid his *fautress* still. *Chapman's Iliads.*

He comes from banishment to the *fautress* of liberty, from the barbarous to the polite. *Garth.*

FAWKES (Francis), an English poet and divine, educated at Leeds, whence he was transplanted to Jesus College, Cambridge, where he took his degree of M. A. Entering into orders, he settled first at Bramham, in Yorkshire, near Mr Lane's elegant seat. His first poetical publications were Gawin Douglas's Description of May and Winter modernised. Removing afterwards to Croydon, in Surry, he recommended himself to the notice of archbishop Herring, to whom he addressed an Ode on his recovery in 1754, printed in Dodsley's collection; and who collated him, in 1755, to the vicarage of Orpington. Mr. Fawkes lamented his patron's death in 1757, in a pathetic Elegy, entitled Aurelius, first printed in 1763. He married at this time Miss Purrier, of Leeds. In April, 1774, he exchanged his vicarage for the rectory of Hayes. He was also one of the chaplains to the princess dowager of Wales. He published a volume of Poems by subscription, in 8vo. 1761; the Poetical Kalendar in 1763; and Poetical Magazine, 1764, in conjunction with Mr. Woty; Partridge-Shooting, an Eclogue, 1767, 4to.; and a Family Bible, with notes, in 4to. a compilation. He also published translations of fragments of Menander, the Works of Anacreon, Sappho, Bion, Moschus, and Musæus, 12mo. 1760; the Idylliums of Theocritus, 8vo. 1767; and the Argonautics of Apollonius Rhodius. He died August 26th, 1777.

FAWN. Fr. *faon;* Old Fr. *fan*, a child; probably from Lat. *infans*, says Dr. Johnson: Mr. Thomson, more probably, traces it to Fr. *fauve*, fallow, from its color. A young deer.

Looking my love I go from place to place,
Like a young *fawn* that late hath lost the hind;
And seek each where, where last I saw her face,
Whose image yet I carry fresh in mind.
Spenser.

The buck is called the first year a *fawn*, the second year a pricket. *Shakspeare. Love's Labour Lost.*

The colt hath about four years of growth; and so the *fawn*, and so the calf. *Bacon's Natural History.*

Who for thy table feeds the wanton *fawn*,
For him as kindly spreads the flowery lawn. *Pope.*

Fawn, among hunters, is the name generally given to the buck or doe of the first year, or the young one of the buck's breed in its first year.
Dr. A. Rees.

FAWN, *v. n.* & *n. s.* FAWNER, FAWNING, FAWNINGLY, *adv.* } Sax. fægenian; M. Goth. *faigean.* To wheedle; caress; fondle: hence to court servilely: as a substantive fawn signifies a servile cringe, or bow; flattery: a fawner is a flatterer: fawning, and fawningly, nave also been chiefly used in this sense.

Instead thereof he kissed her weary feet,
And licked her lily hands with *fawning* tongue,
As he her wronged innocence did weet. *Faerie Queene.*

Hatred hatched at home is a tame tyger,
May *fawn* and sport, but never leaves his nature.
Beaumont and Fletcher.

You will rather shew our gentle lowts
How you can frown, than spend a *fawn* upon them for the inheritance of their loves.
Shakspeare. Coriolanus.

Be not fond
To think that Cæsar bears such rebel blood
That will be thawed from the true quality,
With that which melteth fools; I mean sweet words,
Low crooked curtesies, and base spaniel *fawning.*
Id. Julius Cæsar.

And thou, sly hypocrite, who now wouldest be
Patron of liberty, who more than thou
Once *fawned*, and cringed, and servilely adored
Heaven's awful monarch? *Milton's Paradise Lost.*

The dog straight *fawned* upon his master for old knowledge. *Sidney.*

Whom Ancus follows, with a *fawning* air;
But vain within, and proudly popular. *Dryden.*

Is it not strange that a rational man should worship an ox? that he should *fawn* upon his dog? bow himself before a cat? and adore leeks and garlick?
South.

Courage, in an ill-bred man, has the air, and escapes not the opinion of brutality; learning becomes pedantry; wit, buffoonery; plainness, rusticity; good-nature, *fawning.* *Locke.*

By softness of behaviour we have arrived at the appellation of *fawners.* *Spectator.*

See there with countenance blithe,
And with a courtly grin, the *fawning* hound
Salutes thee cow'ring. *Somervile.*

Dexterous the craving *fawning* croud to quit,
And pleased t' escape from flattery to wit. *Pope.*

It is success that colours all in life:
Success makes fools admired, makes villains honest.
All the proud virtue of this vaunting world
Fawns on success, and power, howe'er acquired.
Thompson.

The whole of the speech is hypocritical, *fawning*, time-serving, and pusillanimous. He felt that in the terrible republic, whose course and conduct he had recommended to England, there was neither freedom nor safety. p. 173. *Cheetham's Life of Paine.*

FA'XED, *adj.* Sax. fæx, hair. Hairy. Obsolete.

They could call a comet a *faxed* star, which is all one with stella crinita, or cometa.
Camden's Remains.

FAY, *n. s.* Fr. *fée.* See FAIRY.

And the yellow-skirted *fays*
Fly after the night steeds,
Leaving their moon-loved maze *Milton.*

Ye sylphs and sylphids, to your chief give ear;
Fays, fairies, genii, elves, and demons hear! *Pope.*

Attendant *fays* around her throng,
And trace the dance, or raise the song.
Darwin.

Or, when the setting Moon, in crimson dyed,
Hung o'er the dark and melancholy deep,
To haunted stream, remote from man, he hied,
Where *fays* of yore their revels wont to keep;
And there let Fancy rove at large, till sleep
A vision brought to his entranced sight. *Beattie.*

FAY, *n. s.* Fr. *fay*, Span. *fe.* Faith. Obsolete.

Their ill 'haviour garres men missay,
Both of their doctrine and their *fay.* *Spenser.*

FAYAL, the most western of the Azores. It is about twenty-seven miles long and nine broad; and abounds in cattle, fowls, fish, and beech trees. The chief town is Villa Horta. It has a

fort and a Portuguese garrison. It was taken by the English, under the earls of Cumberland and Essex, with a rich squadron of ships. Its trade has been extended since the wine of the Pico has been so much improved as to be in great demand in the West Indies. In good years from 8000 to 10,000 pipes are exported, besides corn and provisions to freight seventy vessels of from eighty to 100 tons each. There are several British and Irish settlers. Long. 10° 45′ E. of Ferro, lat. 38° 32′ N.

FAYETTE (Marie Madeleine Pioche de la Verge), countess of, wife of the count de la Fayette, in the reign of Louis XIV., was a lady of considerable literary attainments, and intimately acquainted with the men of literature of that period. Segrais, on leaving his residence with Mademoiselle Montpensier, entered upon a residence with Madame de la Fayette, and was her chief director. In his name her celebrated romances of Zaide and the Princess of Cleves were published. Voltaire speaks of them as the first romances in which the manners of persons of condition were truly painted. On the appearance of Zaide, Huet wrote his Origin of Romances, and exposed himself to some censure by the importance which he attached to them. Madame de la Fayette died in 1693. Besides the works already mentioned, she wrote, The Princess of Montpensier; Memoirs of the Court of France in the years 1688 and 1689; The History of Henriette of England; and Divers Portraits of Persons about the Court. Madame de Genlis has given a very sprightly account of Madame de la Fayette as the friend of the duc de la Rochefoucault, from whom she stated herself to have derived her wit, and to have paid him by reforming his heart. Our authoress says that she reformed also many of his Maxims. We are of opinion that it would have been a better service to the cause of virtue and humanity if she had persuaded that nobleman to abstain altogether from a work which is calculated only to make men distrustful of all appearances of good, to relax the springs of virtuous action, to extinguish mutual benevolence, and to reconcile the heart to its own turpitude, by teaching it to suppose an equal degree of it at the bottom of every character. The remarks of Madame de Genlis on the princess de Cleves are very lively and sensible. See her De l'Influence des Femmes sur la Literature Française, comme Protectrices des Lettres et comme Auteurs; ou Précis de l'Histoire des Femmes Françaises les plus célèbres. Paris, 1811.

FAYETTE, a county of Kentucky, surrounded by Clarke, Bourbon, Scott, Franklin, Woodford, Maddison, and Mercer counties. Lexington is the capital.

FAYETTE, a county of Pennsylvania, bounded on the north by Westmoreland, east by Somerset, south by the states of Maryland and Virginia, and west by the Monongahela. It is thirty-nine miles long, twenty-nine broad, and contains 473,280 acres; divided into eleven townships, of which Union is the chief. The western parts are fertile; the eastern mountainous, abounding in iron ore. Two iron manufactories are established in it

FAYETTE, a district of North Carolina, comprehending six counties, bounded on the north by Hillsborough, south-east by Wilmington and Newbern, south by South Carolina, and west by Salisbury. It is 120 miles long, and fifty broad.

FAYETTE, a settlement of New York, in Tioga county, between the Unadilla and the chief branch of the Chenengo, containing 100 square miles.

FAYETTEVILLE, a flourishing town of North Carolina, the capital of Cumberland county, and of Fayette district; seated in a settlement of Scots Highlanders, on the north-west branch of Cape Fear River. It is regularly laid out in four streets of 100 feet wide; and two squares of 300 feet each.

FAYOUM, or FEIUM, a province of Egypt, on the west side of the Nile, extending from that river to Mœris, now Birket el Kerun. It was anciently called Arsinoe, and intersected by canals, cut by the ancient Egyptians between the river and the lake of Mœris; but, though formerly very wealthy and fertile, it greatly declined, through the oppressions of the Mamelukes, and, instead of flourishing cities, exhibits only mud-walled villages. The canals are almost dry, and the Birket el Kerun, whose ancient name was Mœris, reduced to two-thirds of its former extent. Notwithstanding all this, wherever the waters can penetrate, the same productions are found in similar abundance. The Copts still cultivate the vines and olives which their forefathers planted; and gather excellent grapes, of which they make a most agreeable white wine. The whole country is covered with wheat, barley, and dourra, which rise in succession, uninterruptedly, for seven or eight months. The tall flax, the sugar cane, and vegetables of all kinds, sprout up almost without culture; cucumbers, and nearly twenty species of melons, melting, sweet, and wholesome, adorn the banks of the rivulets; clustering fruit trees are scattered over the plain. Amid a diversity of trees and plants, the villages are regaled with forests of rose-bush. In other provinces this fine shrub only ornaments gardens, but here it are cultivated, and the rose water, distilled from its odoriferous flower, forms a considerable branch of commerce. The canals and lakes swarm with fish, which are caught in prodigious quantities, and eaten in the province, or carried to the neighbouring cities, and are as cheap as at Damietta. When the frost and snow of winter are felt in the northern countries, innumerable flocks of birds resort to the lake Mœris, and the canals of Fayoum. The people catch abundance of geese with golden plumage, and a most agreeable flavor, fat and delicate; ducks, teal, swans (the skins of which are used like furs), and pelicans.

FAYOUM, the capital of the above province, formerly contained public baths, markets, and colleges; was divided by Joseph's canal, and surrounded by gardens. At present it is only half a league in circumference, and stands on the eastern shore of the canal. The remainder is destroyed, and the colleges are no more. Houses built of sun-dried bricks, present a gloomy assemblage of huts; their inhabitants

are poor and deprived of energy; their arts are reduced to some manufactures of mats, coarse carpets, and the distillation of rose water. It is forty-nine miles S. S. W. of Cairo.

FAZIO (Bartholomew), an Italian historian of the fifteenth century, was a native of Spezia on the coast of Genoa. He was patronised by Alphonso, king of Naples, at whose instance he translated Arrian's History of Alexander into Latin, and wrote the history of that prince in ten books, printed 1560. He composed likewise a History of the War between the Genoese and Venetians in 1377, and De Viris Illustribus, containing brief accounts of the most famous of his contemporaries. This last production long remained in MS. and was published by the abbé Mehus, who added some MS. letters of Fazio's that are valuable

FE SANTA, or Santa Fé de Bogota, a province of Colombia, South America, is bounded on the north by Santa Marta and Merida; on the east by the lofty summits of the eastern part of the Cordillera of the Andes, and the province of San Juan de los Llanos; on the south by Popayan; and on the west by Santa Fé de Antioquia. It is exceedingly mountainous, and situate in the very centre of Cundinamarca, on the west of the eastern branch or parallel of the main chain of the Andes, and on both sides of the great river Magdalena. None of the mountains here, however, attain the height of perpetual snow. Two of the curiosities of this province, Lake Guatavita and the cataract of the Tequendama, we have described in the article Colombia, which see.

The rivers of Santa Fé are very numerous, but most of them are innavigable on account of the great declivity of the land towards the Magdalena. The Suarez, the Gallinazo or Sogamozo, the Rio Negro, and the Bogota or Funza, are the chief streams, which, rising in the eastern Cordillera, descend into and swell the Magdalena.

Between the top and the bottom of this fall of Tequendama may be observed a curious variety of climate. The plain of Bogota is covered with crops of wheat, with oaks, elms, and other productions of a temperate region. At the foot of the fall are seen the palms of the equinoctial low-lands. The face of the rock, which finishes and borders the vast plain of Bogota, near the cataract, is so steep that it takes three hours to descend from the river Funza to the Rio Meta; and the basin or gulf cannot be approached very close, as the rapidity of the water, the deafening noise of the fall, and dense mass of vapor, render it impossible to get nearer the edges of the abyss than 400 or 500 feet. The loneliness of the spot, the dreadful noise, and the beauty of the vegetation, render this situation one of the wildest and most picturesque scenes in the whole range of the Andes.

The outlets from Popayan or Quito to Santa Fé, are by means of roads traversing broken ground; and the pass of the Paramo de Guanacas, which lies across the Cordillera of Antioquia, is the most frequented, from which the traveller crosses the Magdalena, and arrives at the metropolis by Tocayma and Meza, or the natural bridges of Icononza. These bridges are, however, not much frequented, excepting by the Indians, and travellers whose curiosity inspires them to venture on such desolate regions. They are the formation of nature's ever-varying hand; and are situate west of the Suma Paz, in the direction of a small river which rises in the mountain of that name. This torrent rolls through a deep and narrow valley, which would have been inaccessible, but for the arches thrown across it in so wonderful a manner. The little village of Pandi is the nearest inhabited place to this pass, being a quarter of a league distant, and the whole road from the capital is one of the most difficult in the Andes.

The province is noted for the production of gold (in small quantities), silver, gems, salt, and coal, and for the fertility of the plain near the capital. The woods abound with game, wild beasts, and birds; the plains with horses and mules; and the rivers with alligators and fish.

Fe Santa, de Bogota, the metropolis of Cundinamarca, is in N. lat. 4° 6′, and W. long. 78° 30′, near the river Funza, or Pati. It is situate in a spacious and luxuriant plain, to the east of the great chain of the Andes, and between it and its first parallel branch. It is also to the west of the Paramo of Chingasa, on an elevation; on the western declivity of which is the celebrated fall of the Tequendama. Though this city is only four degrees from the equator, the elevation of 8694 feet above the level of the sea renders the temperature of the air so equable, that the Bogotians enjoy a perpetual spring. It is large and handsomely built, containing four great squares; with wide, regular, and well laid out streets. Two small rivers, the San Francisco, and San Augustin, run through the town, and join the main stream of the Funza at a short distance. Over these rivulets, five handsome bridges are erected. The cathedral is a magnificent structure, and forms the chief ornament of the place, which also contains three other churches, eight convents, four nunneries, and an hospital. The university was founded in the year 1610, since which time two colleges have been endowed for public education; and a library was established in 1772. There is also a mint, several courts of justice, and state offices.

The inhabitants, who are said to amount to 30,000, are represented as possessing agreeable manners, and much good sense, combined with a considerable degree of industry. The latter quality is manifested by the appearance of the plain surrounding the city, which they take so much pains with, as to cause it to produce two harvests in the year. In the environs are some mines of gold, as well as of Peruvian emeralds. Salt and coal are found also in considerable quantities; but the difficulty of carriage renders the latter very expensive.

Fe Santa, de Antioquia, called also Antioquia, is a province of Colombia, bounded on the north by Carthagena and Darien; on the east by Choco; on the west by Santa Fé; and on the south by Popayan.

It consists almost entirely of mountainous land, having part of the central ridge of the Andes, which divides the valley of the Magda-

lena from that of the Cauca, within its limits. The mountains of this country attain the greatest elevation of any of the three parallel chains in this part of the Andes. They reach the period of perpetual congelation, and in some of their summits greatly exceed it. Indeed the whole country is so thickly surrounded with these mountains, that those who are not strong enough to travel on foot, or dislike being carried on the backs of men, must pass their whole lives within its bounds.

It is famous for its mines of gold, &c. Gold is found in veins in micaceous slate at Buritoca, San Pedro, and Arenas, but is not worked on account of the difficulty in procuring laborers, as the province is accessible only on foot. Gold is also collected in grains in great abundance on the alluvial grounds of the valley of Santa Rosa, the valley de la Trinidad, and the valley de los Onos. It is chiefly found by negroes, employed for that purpose, and sent to Mompox, which is the great mart where the gold found in this province is disposed of. The gold of Antioquia is only of nineteen or twenty carats fineness, and it has been computed that 3400 marcs of this precious metal are annually exported. The silver of Cundinamarca is chiefly produced in this province at Vega de Supia, a mine which has been lately discovered twenty leagues from Carthago. Quicksilver, that precious article in a mining country, is occasionally discovered in Antioquia; as sulphureted mercury is found in the valley of Santa Rosa on the east of the Rio Cauca. The number of negroes who inhabit the gold district of the valley of Cauca, is said to be 8000; dispersed in small villages near the mining stations.

Fe Santa, de Antioquia, the capital of the above province, is situated about two leagues distance from the river Cauca, and 270 miles north by east from Popayan, in 6° 48′ N. lat., and 74° 36′ W. long.

Fe Santa, a city of Mexico, capital of the intendancy of New Mexico, is situated on a creek which comes down from the mountains, and runs west into the Rio del Norte. It is about a mile in length, and consists of three streets. It has two churches, with magnificent spires. The public square, on the north side of which is the government house, is in the centre of the town. Pike estimates the population at 5000; Humboldt with more probability at 3600. Long. 104° 54′ W., lat. 36° 13′ N.—There are other settlements of this name in Spanish America, consisting chiefly of a few Indian families.

FE'ABERRY, *n. s.* Grossularia. A gooseberry.

FEAGUE, *v. a.* Gower uses to feige, for to censure; Germ. *fegen*, to sweep; Dut. *fyken*, to strike. To whip; to chastise; to beat.

When a knotty point comes,—I *feague* it away i'faith. *Buckingham. Rehearsal.*

FEAL, *adj.* } Fr. *feal, fealty;* Ital. *fedelte;*
Feal'ty, *n. s.* } Span. *fieldeldad;* Lat. *fidelis, fidelitatis.* Faithful: faithfulness; duty to a superior feudal lord, or master; loyalty.

Let my sovereign
Command my eldest son, nay, all my sons,
As pledges of my *fealty* and love.
Shakspeare. Henry IV.

The tenants by knight service did swear to their lords to be *feal* and leal, i. e. to be faithful and loyal. *Spelman. De Parliament.*

Man disobeying,
Disloyal, breaks his *fealty*, and sins
Against the high supremacy of Heav'n. *Milton.*
Each bird and beast behold
After their kinds: I bring them to receive
From thee their names, and pay thee *fealty*
With low subjection. *Id. Paradise Lost.*

He prevailed on all who were present, not excepting Bruce and Baliol, the competitors, to acknowledge Scotland to be a fief of the English crown, and to swear *fealty* to him as their sovereign or liege lord. *Robertson's History of Scotland.*

Feal, a river of Ireland, which rises near Coolnakenny, in Limerick, and joins the Gale in Kerry county; after which it is called Cashin, and falls into the Shannon.

Feal Dikes, a cheap sort of fence common in Scotland; built with feal, or sod dug up by the spade, from the surface of grass ground, consisting of the upper mould rendered tough and coherent by the matted roots of the grass thickly interwoven with it. If only a very thin bit of the upper surface is pared off with the paring spade, the pieces are called divots. These, being of a firmer consistence, are more durable when built into dikes than feal, but much more expensive also.

Fealty, in law, an oath taken on the admittance of any tenant, to be true to the lord of whom he holds his land; by this oath the tenant holds in the freest manner, on account that all who have fee hold per fidem et fiduciam, that is, by fealty at least. This fealty, at the first creation of it, bound the tenant to fidelity, the breach of which was the loss of his fee. It has been divided into general and special: general, that which is to be performed by every subject to his prince; and special, required only of such as, in respect of their fee, are tied by oath to their lords. To all tenures, except tenancy at will and frank almoing, fealty is incident, though it chiefly belongs to copyhold estates held in fee and for life. The form of this oath is ordained by statute 17th Edward II.

FEAR, *n. s., v. a.* & *v. n.* }
Fear'ful, *adj.* }
Fear'fully, *adv.* }
Fear'fulness, *n. s.* }
Fear'less, *adj.* }
Fear'lessly, *adv.* }
Fear'lessness, *n. s.* } Sax. fæp; Goth. *faurhtan*, to fear; Teut. *vaer*; Swed. *fara*; Isl. *far*; Norm. Fr. *feer.* Dread; dismay; terror; awe; apprehension of danger; sorrow; the object or cause of fear: in a theological sense, 'a reverential awe of the holy and infinite majesty of God.' (Bp. Hall). See the fine description of this feeling in the extract from that author. To fear is applied in all the various senses of the noun: as a neuter verb it signifies to live in dread or anxiety; to be afraid. The other derivations are varied by their terminations in the regular manner.

And the *fear of* you, and the dread of you, shall be upon every beast. *Gen.* ix. 2.

Except the God of Abraham, and the *fear* of Isaac had been with me. *Id.* xxxi. 42.

Who is like thee, glorious in holiness, *fearful* in praises? *Exodus.*

He who fleeth from the noise of the *fear* shall fall into the pit, and he that cometh up out of the midst of the pit, shall be taken in the snare. *Is.* xxiv. 18.

Them that are of a *fearful* heart. *'d.*

Neither fast to friend, nor *fearful* to foe.
Ascham.

Trembling *fear* still to and fro did fly,
And found no place where safe she shrowd him might.
Faerie Queene.

From the ground she *fearless* doth arise,
And walketh forth without suspect of crime. *Id.*

Against such monsters God maintained his own, by *fearful* execution of extraordinary judgment upon them. *Hooker.*

Is it credible that the acknowledgment of our own unworthiness, our professed *fearfulness* to ask any thing, otherwise than only for his sake to whom God can deny nothing, that this should be noted for a popish errour? *Id.*

Well you may *fear* too far,
——Safer than trust too far:
Let me still take away the arms I *fear*,
Not *fear* still to be harmed. *Shakspeare.*

Antony, stay not by his side:
Thy demon, that's the spirit that keeps thee, is
Noble, courageous, high, unmatchable,
Where Cæsar is not; but near him, thy angel
Becomes a *fear*, as being overpowered. *Id.*

All torment, trouble, wonder, and amazement
nhabits here: some heavenly power guide us
Out of this *fearful* country. *Id.*

He's gentle, and not *fearful*. *Id.*

In such a night
Did Thisbe *fearfully* o'ertrip the dew,
And saw the lion's shadow. *Id.*

There is a cliff, whose high and bending head
Looks *fearfully* on the confined deep. *Id.*

Cowards *fear* to die; but courage stout,
Rather than live in snuff, will be put out.
Raleigh.

Lay down by those pleasures the *fearful* and dangerous thunders and lightnings, the horrible and frequent earthquakes, and then there will be found no comparison. *Id.*

The Irish are more *fearful* to offend the law than the English. *Davies on Ireland.*

Some sitting on the hatches, would seem there,
With hideous gazing, to *fear* away *fear*. *Donne.*

The inhabitants, being *feared* with the Spaniards landing and burning, fled from their dwellings.
Carew.

When a man shall have stedfastly fixed his eyes upon the dread majesty of an ever-present God, and upon the deplorable wretchedness of his own condition, he shall be in a meet capacity to receive the holy *fear*, whereof we treat. Neither indeed is it possible for him to see that all-glorious presence, and not presently thereupon find himself affected with a trembling kind of awfulness: neither can he look upon his own vileness without an humble and bashful dejection of soul: but when he shall see both these at once—how can he choose but be wholly possessed with a devout shivering, and religious astonishment?
Bp. Hall.

Fear doth not more multiply evils, than faith diminisheth them. *Id. Contemplations.*

He gave instances of an invincible courage, and *fearlessness* in danger. *Clarendon.*

The flaming seraph, *fearless*, though alone
Encompassed round with foes, thus answered bold.
Milton.

This is the natural fruit of sin, and the present revenge which it takes upon sinners, besides that *fearful* punishment which shall be inflicted on them in another life. *Tillotson.*

A nation, whose distinguishing character it is to be more *fearless* of death and danger than any other.
Temple.

Fear is an uneasiness of the mind, upon the thought of future evil likely to befal us. *Locke.*

When I view the beauties of thy face,
I *fear* not death, nor dangers, nor disgrace.
Dryden.

I have made my heroine *fearful* of death, which neither Cassandra nor Cleopatra would have been.
Id.

If it was so *fearful* when Christ looked his denier into repentance, what will it be when he shall look him into destruction? *South.*

A third thing that makes a government justly despised, is *fearfulness* of, and mean compliances with, bold popular offenders. *Id.*

See, pious king, with different strife,
Thy struggling Albion's bosom torn:
So much she *fears* for William's life,
That Mary's fate she dare not mourn. *Prior.*

Fear, in general, is that passion of our nature whereby we are excited to provide for our security upon the approach of evil. *Rogers.*

A propensity to hope and joy is real riches; one to *fear* and sorrow, real poverty. *Hume.*

'Tis matter of the greatest astonishment to observe the stupid, yet common boldness of men, who so *fearlessly* expose themselves to this most formidable of perils. *Decay of Piety.*

For fame the wretch beneath the gallows lies,
Disowning every crime for which he dies,
Of life profuse, tenacious of a name,
Fearless of death, and yet afraid of shame.
Soame Jenyns.

So fare we in this prison-house the world;
And 'tis a *fearful* spectacle to see
So many maniacs dancing in their chains.
Cowper.

The pigmy warriors eye with *fearless* glare
The host thick swarming o'er the burdened air;
Thick swarming now, but to their native land
Doomed to return a scanty straggling band.
Beattie.

'And is he gone?'—on sudden solitude
How oft that *fearful* question will intrude?
'Twas but an instant past—and here he stood!
Byron.

FEARNE (Charles), an ingenious lawyer of the last century, was a native of London, and educated at Westminster school. He afterwards became a student of the Inner Temple, and commenced practice as a chamber counsel and conveyancer, in which branches he attained the reputation of great skill and legal learning. He was the author of an Essay on Contingent Remainders and Executory Devises; A Legigraphical Chart of Landed Property: Observations on the Statute of enrollment of Bargains and Sales; and an Essay on Consciousness, or a Series of Evidences of a distinct Mind. He died January 21st, 1794, aged forty-five.

FEAS'IBLE, *adj.* } Fr. *faisable*, of Lat.
FEASIBIL'ITY, *n. s.* } *facio*, to do. Practicable;
FEAS'IBLENESS, *n. s.* } evident; that which may
FEAS'IBLY, *adv.* } be easily done: feasibility is sometimes used for a thing practicable. Bishop Hall writes the other substantive, strictly according to its etymology, 'faisableness.'

Let us enquire into the *faisableness* of this great improvement of our Christian diligence. *Bp. Hall.*

To require tasks not *feasible*, is tyrannical, and doth only pick a quarrel to punish. *Id. Contemplations.*

If a project should be proposed to us very *feasible*, and probable to succeed, in pursuance whereof assuredly we might obtain great profit; methinks, in consistence with ourselves, and conformable to our usual manner of acting, we should be very ready to embrace and execute it. *Barrow.*

We conclude many things impossibilities, which yet are easy *feasibles*. *Glanville's Scepsis.*

Men often swallow falsities for truths, dubiosities for certainties, possibilities for *feasibilities*, and things impossible for possibilities themselves.
Browne's Vulgar Errours.

Things are *feasible* in themselves; else the eternal wisdom of God would never have advised, and much less have commanded them. *South.*

But fair although and *feasible* it seem,
Depend not much upon your golden dream.
Cowper.

FEAST, *n. s.*, *v. n.* & *v. a.* } Sax. fæst; Fr. *fête*,
FEAST'ER, *n. s.* } *feste*; old Fr. *feast*;
FEAST'FUL, *adj.* } Ital. and Port. *festa*;
FEAST'RITE, *n. s.* } Span. *fiesta*; Belg. *feest*; Goth. *fist* (food); Lat. *festum*. A formal or sumptuous entertainment; an anniversary day of rejoicing; delicious food: to feast is to eat sumptuously, or on a joyful occasion: as a verb active, to give a sumptuous entertainment; to delight; pamper: feastful is luxurious; festive; joyous: feastrite, a custom or rite observed at feasts.

On Pharaoh's birthday he made a *feast* unto all his servants. *Genesis* xl. 20.

Who frowns at others' *feasts*, had better bide away.
Sir P. Sidney.

Richard and Northumberland, great friends,
Did *feast* together. *Shakspeare.*

Here's our chief guest. If he had been forgotten,
It had been as a gap in our great *feast*. *Id.*

This day is called the *feast* of Crispian. *Id.*

He was entertained and *feasted* by the king with great shew of favour. *Hayward.*

Those *feasters* could speak of great and many excellencies in manna. *Taylor.*

It is not the quantity of the meat, but the cheerfulness of the guests, which makes the *feast*; it was only at the *feast* of Centaurs, where they ate with one hand, and had drawn swords in the other; where there is no peace, there can be no *feast*. *Clarendon.*

The virgins also shall on *feastful* days
Visit his tomb with flowers, only bewailing
His lot unfortunate in nuptial choice,
From whence captivity and loss of eyes.
Milton.

All these are our's, all nature's excellence,
Whose taste or smell can bless the *feasted* sense.
Dryden.

The lady of the leaf ordained a *feast*,
And made the lady of the flower her guest;
When, lo! a bower ascended on the plain,
With sudden seats ordained, and large for either train.
Id.

Many people would, with reason, prefer the griping of an hungry belly to those dishes which are a *feast* to others. *Locke.*

His hospitable gate,
Unbarred to all, invites a numerous train
Of daily guests; whose board, with plenty crowned,
Revives the *feastrites* old. *Philips.*

The parish finds, indeed; but our church-wardens *Feast* on the silver, and give us the farthings. *Gay.*

The suitor train
Who crowd his palace, and with lawless power
His herds and flocks in *feastful* rites devour.
Pope.

Returning to England in the same vessel with myself, as I have related above, he invited all his old creditors to a *feast*. *Franklin.*

FEAST, or FESTIVAL, is derived by some from feriari, to keep holiday; by others from εστιαω, to feast or entertain; by others, particularly M. Huet, from festinare, which is used by Origen in the same sense, in his Comment on Matthew. Social or civil feasts are also expressed by the words convivium, and compotatio, or concœnatio.

We learn from Herodotus, that the ancients had neither cups nor bowls at their feasts, but they drank out of little horns tipt with silver or gold. The Greeks and Romans kept a domestic for the purpose of reading during their meals and feasts. Sometimes the chief of the family himself performed the office of reader; and history informs us, that the emperor Severus often read while his family ate. The Greeks at feasts proposed moral topics for conversation, of which Plutarch has preserved a collection. Heroes rarely assembled convivially without bringing affairs of consequence into discourse, or deliberating upon those that regarded either present events or future contingencies. The Scythians, while at meat, used to make the strings of their bows resound, lest their warlike virtues might be enfeebled or lost in the season of pleasure. People of rank among the Rhodians, by a fundamental law of the state, were obliged to dine daily with those who had the management of affairs, in order to deliberate with them concerning such things as were necessary or useful for the country; and on this account the principal ministers of the kingdom were obliged to keep open table for all who could be of use to the state. The Persians also generally deliberated on business at table, but never determined, or put their determinations in execution, except in the morning before having eaten. Among the Romans, the place where they supped was generally the vestibule, that a more retired part of the house might not encourage licentiousness and disorder. There were several laws that restricted their meals to these vestibules. When luxury reigned in Rome, they had superb halls for their entertainments. Lucullus had many, each of which bare the name of some deity; and this name was a mark which indicated to the servants the expense of the entertainment. The expense of a supper in Lucullus's hall of Apollo amounted to 50,000 drachmas. Singers, dancers, musicians, stage-players, jesters, and buffoons, were brought into these halls to amuse the guests. Plutarch informs us that Cæsar, after his triumphs, treated the Roman people at 22,000 tables; and by calculation it would seem, that there were at these tables upwards of 200,000 persons. The hall in which Nero feasted, by the circular motion of its walls and ceiling, imitated the revolutions of the heavens, and represented the different seasons of the year, changing at every course, and showering down flowers and perfumes on the guests. The Romans did not, as we do, use but one table at their feasts; they

had generally two; the first was for the services of animal food, which was afterwards removed, and another introduced with fruits; at this last they sung and poured out their libations. The Greeks and eastern nations had the same custom, and even the Jews in their solemn feasts and at sacrifices. The Romans, in the time of Nero, had tables made of citron wood brought from Mauritania; they were varnished with purple and gold, and were raised on feet of carved ivory. It is said that they were more precious than gold. Dion Cassius affirms, that Seneca had 500 of these, which he made use of one after another; and Tertullian tells us that Cicero had but one. The Romans chose the king of the feast by a throw of the dice. At the conclusion of the feast they drank out of a large cup as often as there were letters in the names of their mistresses.

Some very interesting particulars of the preparations for, and materials of, the *Athenian* feasts are collected in a late number of the Quarterly Review. We are principally indebted to it for the following facts and observations:—

The Athenians surpassed our French neighbours, we are told, still more than they do us, in the variety and excellence of their farinaceous compositions. Archestratus, a decisive authority upon these matters, and one of the earliest to be found, made the gods trade with Lesbos for their barley meal: for wheaten *bread*, at least of one kind (the *αρτοι αγοραιοι*,) he allowed, that mere mortals could not go to a better market than the Athenian. Besides the usual divisions of wheaten and barley bread, the Athenians appear to have made use of millet (*μελινη*), of zea, (the triticum spelta of Linnæus, and the far of the Romans), and of a corn called tiphe, in these compositions. The species of grain denominated olyra, with which Homer feeds his heroes' horses, formed, in later ages, a sort of brown bread. Rice (*ορυζα*) and an Ethiopic grain resembling the seed of the plant sesame, whose fruit still furnishes a valuable oil in the east, supplied a species, called Orindes. But the chief attention was confined to the wheaten and the barley bread (*αρτος*, *μαζα*). Into the details of each of these the copious language of the Greeks entered very minutely. The meal of the latter (*αλφιτον*) was accurately distinguished from the meal of the former (*αλευρον*), and the act of kneading them into dough had also their separate terms, (*πεττειν*, *μασσειν*). Meal unboulted bore the name of syncomistos; boulted to an extreme degree, it was termed semidalis: a third name was imparted from the boulting cloth (*κρησειρα*), which, according to Photius, was often made of wool, and bore the same name as the fine net with which the Athenian anchovy was caught. If leaven was used, the bread received the appellation of zymites; if not, that of azymos. The operation of baking, as performed by the oven, the hearth, by live coals without flame, by ashes heaped up round the dough, or by placing the dough on a roaster, introduced a fresh change of names. *Ιπνιτης*, *εσχαριτης*, *απανθρακις*, *εγκρυφιας*, were terms appropriated to these operations. But the favorite mode of baking was that performed by the cribanus, or clibanus, an earthen or iron pot broader below than above. The dough shut up in this vessel, and surrounded with coal, or placed over a fire, was thought to warm more equally; and the bread thereby acquired a more delicious flavor. The bread made of the first corn after the harvest was called thargelus. The homoros was a bread on which goddesses supped; as the hemiartium, or half-circle, appeased the coarser appetite of Hecate. The bread given to children was, according to the scholiast on Aristophanes, called collyra. The poor, who wished to fill the stomach expeditiously, we conclude, bought the bread called panias. The bread made of new spring-wheat, and which in figure resembled the pegs or pins by which harpstrings were tightened, was called collabus. A large bread prepared for the ladies of Delos, when celebrating the feast of Ceres and Proserpine, took the name of Achaïnas: its size gave a name to the festival; and, from an exclamation put into the mouths of those who carried it, it appears to have been of a very greasy composition. The Cyprian bread was chiefly dangerous to hungry horsemen travelling in a hurry; for, having the effect of a magnet, it necessarily impeded expedition. The encryphias, placed in Alexandria in the temple of Chronus for any person to eat that pleased, ranked, as we have seen, among the Athenians, with the bread baked on live coals. The obelias, deriving its name from its price, or the manner in which it was baked, was a bread carried on men's shoulders in sacred processions, and was invented by Bacchus on his military expeditions. From a caution of Pherecrates against its purchase, the god was probably hard put to it for food, when the idea first entered his head. The stætites had a mixture of fat in it: the meconis a strong tincture of a favorite edible among the ancients, the poppy; the encris was composed of farina, oil, and honey; the dipyrus (synonymous with the modern biscuit) of water and farina, boiled in broth, with an addition of pepper, cinnamon, and saffron: cheese, that universal ingredient in Greek cookery—much to the discomfiture of Archestratus—also entered into its composition. But the two favorite breads were the escharites of the Rhodians, and the cribanites. The latter was said to surpass all the rest, as being juicy, agreeable to the stomach, and easy of digestion; but Gourmands must have been inexcusable in not preferring the former: for, surpassing even the *αρτοι αγοραιοι* of the Athenians, it is said to have been so delicious as to cause appetite by eating. A Lydian, a Phœnician, and in latter ages, when the excellencies of the art had been thoroughly discriminated, a Cappadocian baker was recommended. Thearion, one of the profession, could command honorable mention even from such a man as Plato. The pastry-cooks claimed the title of demiurgists, or artists par excellence: the task was generally entrusted to female hands. Guests wiped their hands on pieces of soft bread, called apomygdaliæ: Aristophanes feeds his sausage-seller upon morsels of this kind, and the rogue, in spite of his dramatic pleasantry, deserved no better food. The apomygdaliæ were generally thrown to dogs

The Athenian cook had both a secular and a sacred capacity; and the parish-clerk of England has not more right to mix himself up with the religion of his country, than had this person to take his place among the priesthood of Athens. All the mechanical parts of the sacrificial rites were entrusted to him; and that this was no unimportant function may be evinced from the earnest language in which Olympias writes to her son Alexander, then engaged in his grand Asiatic exterprise, upon the subject of a person of this description whom she had sent to him at his own request. As the epistle possesses a convenient brevity, we insert a version of it, without troubling ourselves much about the difficulties of commentators. 'You will please to accept at my hands of a cook: his name Pelignas. He is well versed in all the modes of sacrifice usual in your own country; he is also acquainted with those practised in the mysteries, and the festivals of Bacchus, and with such as take place before the commencement of the Olympic games. You will, therefore, pay him every attention, and be cautious of any neglect. Let me hear from you at your earliest leisure.' That fit and able persons might never be wanting in this branch of the profession, there appears to have been a particular tribe at Athens, enrolled into a sort of collegiate body, for the sake of preserving the knowledge of their important functions.

The taste for *fish* of every kind, salt, fresh, shelled or otherwise, was, among the Athenians, universal and vehement. Among other salt-fish, in various degrees of favor among the common Athenians, may be mentioned the scombri, which the most correct taste decided, ought to be eaten just three days after putting into brine; the coracini, of which the best came from the Lacus Mæotis, and which then assumed the name of saperdæ; the mugiles supplied from Abdera and Sinope; the enormous tiltus, and that species of fish, of which the larger sort were called platistaci, the middle-sized mylli, and the small agnotidia. Of all salted fish, the cheapest, perhaps, was the omotarichos. In a very amusing fragment of Alexis, where a person, with his table and reckoning stones before him, settles the various prices of fish, the omotarichos is rated at five-eighths of an obol: sea-muscles fetch seven-eighths of the same coin, and the echinus, or sea-porcupine, an entire obol. These fish, potted down, formed the common food of the Greek soldiers and sailors. Epicures pronounced them to be best when boiled in sea-water; and the hotter they were brought to table, the more agreeable they were declared to be.

The ancient dinners were no sinecures, either in a bodily or an intellectual view. To touch a lute, to bear a part in a catch or scolium, to enliven the board, or repay hospitality by a fable or a tale similar to those found in the old Fabliaux, were among the lighter contributions to a Grecian feast; the guests were often called upon for a more important task; and had the convivial discourses of Aristotle, Speusippus, Dion, and others come down to us, we should perhaps have found that the Greeks, like the Romans, brought their common-place books when they distrusted their memories, and mercilessly showered down their contents on the unfortunate auditors.—Another list of fish brings us among the Alphestæ, which were always caught in pairs, one seeming to follow at the tail of the other; the amia, so delicious in itself, that in autumn, if dressed after the setting of the Pleiades, it defied all the arts of bad cookery to spoil it; the scarus, the only fish, according to Seleucus, that never slept at night, the anthias, particularly agreeable in winter, as the chromius was in spring; the ellops, by some writers supposed to be the same as the anthias; the batis (maid or skate) which, in concert with hares, and women whose gait or feet have puzzled translators, formed the great attraction, according to Eupolis, of Callias's table; the gnapheus or fuller;—in the water, which boiled one, says Dorion, I washed out every one of my stains;—the salpa, who never could resist a hook baited with gourds; the sacred fish pompilus, to which so many romantic Greek stories are attached, and which was said to have sprung with Venus from the blood of the sky; and the aphyæ (anchovies), for the dressing of which Archestratus has given a very full receipt. The fish called at Rhodes the fox, and at Syracuse the dog, is opposed by Lynceus to any of the Athenian fish, 'even though surpassing Cecrops himself in reputation.' Archestratus recommends epicures to steal it at the hazard of life, if they cannot purchase it; and all accidents of fate were to be considered as immaterial, according to this great gastrologist, when a man had once eaten of this inestimable dainty. The aper he declares to be too divine for the eyes of any but rich bankers and money-reckoners to look upon; and he recommends travellers to purchase it even at its weight in gold, under pain of incurring the divine displeasure, for it is the 'flower of nectar.' Eels, the only instance perhaps in Athens of modest merit brought from the shade of retirement, supplied an admirable repast for the table, and no small one for the theatre; some of the happiest strokes of the comic poets being derived from its natural habits. It has already appeared incidentally, that the Copaic eel ranked first. The Bœotians, with whom this eel formed a valuable article of trade, crowned the larger sort with a garland like victims, and then offered them to the gods. The eel ranked among fish, according to good eaters, as Helen among women in the opinion of amatory poets; Archestratus sang its praises accordingly: 'I commend,' says he, 'eels of every kind, but happiest among men is he who lives near Messina, for there the best are found.' The Egyptians, the bold Antiphanes tells us, rank the eel in equal honor with the gods; but in fact, it is in much higher estimation than the gods. Offer a few prayers to the heavenly powers, continues the poet, and you gain all your desires; but such is the value set upon eels, that you may pay ten good drachmæ, and hardly get a small one after all! 'He who goes to cater,' says Amphis, 'and buys herbs, when he has the power to buy good fish, is a madman.'

Two other articles connected with Grecian dinners, will, from their intrinsic excellence,

(observes the lively writer we have adverted to,) repay a little attention—*perfumery and flowers*. The room where an entertainment was held was commonly perfumed by burning myrrh and frankincense. The thicker perfumes were called χριματα; the thinner αλειμματα. To indulge in the latter, which was poured over the limbs, was thought to evince a feminine and voluptuous disposition; but the sober and the virtuous, it was allowed, might use the thicker sort without any impeachment of their good qualities. The suppliers of perfumery occupied a considerable place in the list of Greek artisans; those perfumes impregnated with the odor of the violet and the rose were the most popular. The practice of wearing flowers at feasts is referred by Æschylus to a grateful memento of the chains worn by Prometheus, as a punishment for his endeavours to benefit mankind. Sappho ascribes the custom to a religious feeling: 'for flowers,' said she, 'are agreeable to the gods, who turn with aversion from those whose heads are uncrowned with them.'

'To *drink* like a Greek,' has become a proverb. The gods, it was understood, did not sit long at table; but the Greek sat long, and drank deep. 'Long may you live,' was the congratulatory expression used to a person who drank off a large cup without taking breath; and, that there might be no evasion, three public officers, we are assured, were elected in the free town of Athens, whose business it was to attend entertainments, and observe whether every man drank his portion. 'In the pains and headaches arising from the powerful effects of unmixed wine, a compression of the head by the hands was found to convey considerable relief. This gave rise to more permanent ligatures. Ivy, as the most ready at hand, was the first herbaceous plant used for the purpose; the myrtle, the rose, and the laurel soon followed, each having some physical qualities to recommend it, besides its external beauty. By the time of Theophrastus, a much larger assortment had been pressed into the service of the chaplet. The violet, both the black and the white,—the lily, the anemone, the hyacinth,—the helichrysus, deriving its name from the nymph who first gathered it,—the hemerocallis, which dies away at night and revives with the rising sun,—the cosmosandalus, from the wearing of which in their chaplets, Clearchus dates the ruin of the Lacedæmonians,—the lychnis, born of the water in which Venus bathed.'

'During the day,' says Dr. Hill, 'the Athenians either took no food, or only a slight repast in private. At sun-set they sat down to supper; and, considering the business of the day as over, devoted the evening to society and amusement, and often continued to a late hour of the night.'

For the pic-nic parties, where each guest might send his own portion of the feast, or where one might provide, at a fixed price, an entertainment for all the rest, the Athenians appear to have felt a passionate fondness. When Aristotle advocates the propriety of admitting that 'complex entity, the public,' as he calls them, into a share of the government, he more than once draws an argument from the pic-nic suppers, which he asserts were always better than those furnished by a single person. And Theophrastus, his great disciple, was so much persuaded of this truth, that among his legacies may be found one for the support of a pic-nic club.

Before the time of Menander, the law to prevent too large a concourse of people at an entertainment, had limited the number of guests to thirty: there were persons called gynœconomi, whose office it was to number the guests, and to see that this statute was not infringed. It was an ancient practice to give a bill of fare to the master of the feasts, who communicated its contents, at proper intervals, to the guests. The great man, whether host or guest, was generally attended by a flatterer, whose office, from the epithets attached to him by Julius Pollux, (the most amusing of word-collectors), was evidently no easy one—and recreations for the sight and hearing (θεαματα, ακροαματα) made part of the entertainment. The supper-hunters (τρεχεδειπνοι), that class of persons upon whom is laid all the trouble of convivial conversation, and who are expected to perform the double task of never speaking with the mouth full, and yet never losing a mouthful, generally paid their quota in coin of the latter kind. They who were present without contributing towards the entertainment, says archbishop Potter, were termed ασυμβολοι, in which condition (continues the learned, but plain-spoken archæologist) 'were poets and singers, and others who made diversion for the company.'

The common Athenians contented themselves with salt-fish, herbs, pottage, a barley cake not very nicely kneaded: these with a bottle of wine, and figs perhaps for a dessert, formed their usual diet, when a sacrifice, or one of those feasts, which, on various pretences, were wrested from the rich, did not furnish a more substantial banquet.

The following picture of the domestic entertainments of the Romans, which introduces us to their social and convivial hour, contains, in a condensed and accurate shape, nearly all that can be collected upon the subject.

'The tables were originally made of ordinary wood, square, and on four feet; but the form was afterwards changed to circular, or oval, supported on a single carved pedestal, and they were richly inlaid with ivory, gold, or silver, sometimes with the addition of precious stones. Those most valued were made of a kind of wood with which we are at present unacquainted. It appears to have been brought from some part of Barbary, and was called citron-wood: but the timber from the tree of that name is far from beautiful, and certainly was not then so scarce as to command an extraordinary price; yet we are told of a single table, formed of it, having cost a million of sesterces! They were at first used without any covering, and it was not until the reign of the emperors that cloths were introduced: these were of colored woollen, or silk and wool intermixed, and variously ornamented with embroidery; but those most in fashion were striped with gold and purple. A canopy was suspended over the table, to guard it, as it is said, from the dirt of the ceiling. This, however it may have added to the decoration of the

apartments, does not convey a very high idea of their cleanliness; and, in fact, Horace describes the accidental fall of the drapery, at an entertainment, as having enveloped the company in a cloud of dust.' *Sketches of the Domestic Manners, &c., of the Romans*, London, 1824, pp. 164, 165.

'The indulgence of lying down at supper on couches was not extended to young people, of either sex, and, when they were admitted at table, they were seated at the feet of their nearest relation. Each couch could accommodate three or four, but seldom five, persons, who lay in a reclining posture, on the left arm, having the shoulders elevated with cushions, and the limbs extended behind whoever was next; so that, the head of the one was opposite to the breast of the other: and, in serving themselves, they only made use of the right hand.'—p. 166.

'When the form of the table was changed from square to circular, it became customary to place but one large couch around it, in the manner of a crescent. The improvement in the decoration of the table, was followed, as may be supposed, by that of the couch; and from having been formed of the coarsest materials—stuffed with straw, and covered with skins—it became not uncommon to see them plated with silver, and furnished with mattresses of the softest down covered with the richest stuffs. The ancient poets, and even graver writers, are full of descriptions of them, and have long dissertations on their substance and fashion, the choice of the purple, and the perfection of the brocade. The dress worn at table differed from that in use on other occasions, and consisted merely of a loose robe, of a light texture, and generally white. Cicero accuses Valerius, as if it were a crime, of having appeared at an entertainment, dressed in black, although it was on the occasion of a funeral; and compares him to a fury whose presence spread dismay among the assembly. The guests were sometimes supplied with these robes by the master of the house. The sandals were taken off, lest they should soil the costly cushions; and the feet were covered with slippers, or, not unfrequently, left naked. Water was presented to the company to wash the hands, and even the feet before they lay down; and they were then perfumed with essences. It was also customary to sprinkle the apartments with scented waters: but these were, probably, far inferior both in odor and variety, to those of the present day, as the ancients neither possessed so many species of flowers as the moderns, nor were so well acquainted with the art of distilling them; and their chief perfume was always extracted from saffron. Precedence was strictly attended to, and, in families of distinction, there was always a master of the ceremonies who arranged the company; but in those of inferior condition, that duty devolved on the giver of the entertainment. The master of the house occupied the second place on the centre couch, that immediately below him being for his wife, and that above for the most distinguished guest. This was called the consular seat, and we are told, that it was so termed in consequence of being considered the most proper for the chief magistrate, because the space between it and the next couch would admit of his more easily conversing with those who might come to him on the public business. Those next in rank took the upper couch. Guests were allowed to bring their friends, though uninvited, along with them, and they were frequently accompanied by some humble dependents, who, however, do not seem to have been treated with much respect, and were even distinguished by the sneering appellation of 'shadows.' These, with the parasites of the family—also contemptuously nick-named 'flies,' from those insects intruding themselves every where,—and the clients, were placed on the lower couch. The custom of entertaining parasites—men who professedly repaid the hospitality of the host with the grossest adulation—was general, and betrays a want of delicacy and refinement but little in unison with the elevation of sentiments and dignity of manners which we are taught to consider as characteristic of the Romans, as well as a humiliating contrast with the high-minded independence of their ancestors. They were not alone looked upon with the contempt which their servility perhaps merited, but they were often treated with a degree of coarseness that reflected as little credit on the manners, as on the hospitality of their entertainers; and we should find it difficult to determine whether most to despise the meanness of the patron who could impose, or that of the sycophants who would submit to, such a tax upon their reception. The guests being placed, a bill of fare was laid before each, with a cover and goblet.' pp. 167—171.

Feasting was no small enjoyment of the Britons, Germans, Gauls, and all the other Celtic nations; in which they indulged themselves to the utmost, as often as they had opportunity. 'Among these nations (says M. Pelloutier, in his Hist. Celt. l. 2, c. 12, p. 463,) there is no public assembly, either for civil or religious purposes, duly held; no birth-day, marriage, or funeral properly celebrated; no treaty of peace or alliance rightly cemented, without a great feast.' When the Germans, says Tacitus, wanted to reconcile enemies, to make alliances, to name chiefs, or to treat of war and peace, it was during the repast, that they took counsel; a time in which the mind is most open to the impressions of simple truths, or most easily animated to great attempts. These artless people during the conviviality of the feast spoke without disguise. Next day they weighed the counsels of the former evening: they deliberated at a time when they were not disposed to feign, and took their resolution when they were least liable to be deceived. It was by frequent entertainments of this kind that the great men or chieftains gained the affections and rewarded the services of their followers, and those who made the greatest feasts were sure to be most popular, and to have the greatest retinue. These feasts (in which plenty was more regarded than elegance) lasted commonly several days, and the guests seldom retired until they had consumed all the provisions and exhausted all the liquors. Athenæus describes an entertainment that was given by Arcamnes, a very wealthy prince in Gaul, which continued a whole year

without interruption, and at which all the people of Gaul, and even all strangers who passed through that country, were made welcome. At these feasts they sometimes consulted about the most important affairs of state, and formed resolutions relating to peace and war; imagining that men spoke their real sentiments with the greatest freedom, and were apt to form the boldest designs, when their spirits were exhilarated with the pleasures of the table. The conversation at these entertainments, very frequently turned on the great exploits which the guests themselves or their ancestors had performed in war; which sometimes occasioned quarrels and even bloodshed. It was at a feast that the two illustrious British princes, Carbar and Oscar, quarrelled about their own bravery and that of their ancestors, and fell by mutual wounds, (Ossian, vol. ii. p. 8, &c). As to the drink used at those feasts, particularly in Britain, it seems probable, that before the introduction of agriculture into the island, mead, or honey diluted with water, was the only strong liquor known to its inhabitants, as it was to many other ancient nations in the same circumstances. This continued to be a favorite beverage among the ancient Britons and their posterity long after they had become acquainted with other liquors. See MEAD. After the introduction of agriculture, ale or beer became the most general drink of all the British nations who practised that art, as it had long been of all the Celtic people on the continent. See ALE. If the Phœnicians or Greeks imported any wine into Britain, it was only in very small quantities; that liquor being very little known in this island before it was conquered by the Romans. The drinking vessels of the Gauls, Britons, and other Celtic nations were, for the most part, made of the horns of oxen and other animals; but those of the Caledonians consisted of large shells, which are still used by some of their posterity in the Highlands of Scotland. The dishes in which the meat was served up were either of wood or earthenware, or a kind of baskets made of osiers. These last were most used by the Britons, as they very much excelled in the art of making them both for their own use and for exportation. The guests sat in a circle upon the ground, with a little hay, grass, or the skin of some animal under them. A low table or stool was set before each person, with the portion of meat allotted to him upon it. In this distribution, they never neglected to set the largest and best pieces before those who were most distinguished for their rank, their exploits, or their riches. Every guest took the meat set before him in his hands, and, tearing it with his teeth, fed upon it in the best manner he could. If any one found difficulty in separating any part of his meat with his hands and teeth, he made use of a large knife, that lay in a particular place for the benefit of the whole company. Servants, or young boys and girls, the children of the family, stood behind the guests ready to help them to drink or any thing they wanted. As the ancient Britons greatly excelled and very much delighted in music, all their feasts were accompanied with the joys of song, and the music of harps In the words of Ossian (vol. ii. p. 9, &c.) 'whenever the feast of shells is prepared, the songs of bards arise. The voice of sprightly mirth is heard. The trembling harps of joy are strung. They sing the battles of heroes, or the heaving breasts of love.' Some of the poems of that illustrious British bard appear to have been composed in order to be sung by the hundred bards of Fingal, at the feast of Selma. See vol. i. p 87, 209. Many of the songs of the bards, which were sung and played at the feast of the ancient Britons, were of a grave and solemn strain, celebrating the brave actions of the guests, or of the heroes of other times; but these were sometimes intermixed with sprightly and cheerful airs, to which the youth of both sexes danced.

On the subject of Anglo-Saxon feasting, Mr. Turner supplies us with a full quota of information.

'They boiled, baked, and broiled their victuals,' he says. 'We read of their meat dressed in a boiling vessel, of their fish having been broiled, and of an oven heated for baking loaves. The term abacan is also applied to meat. In the rule of St. Benedict, two sanda, or dishes of sodden syflian, or soupe bouillie, are mentioned. Bede mentions a goose that hung on the wall taken down to be boiled. The word seathan, to boil, deserves notice, because the noun seath, from which it is derivable, implies a pit. As we read in the South Sea islands of the natives dressing their victuals in little pits lined with stones, the expression may have been originally derived from a similar practice. A cook appears as an appendix to every monastery, and it was a character important enough to be inserted in the laws. In the cloisters it was a male office; elsewhere it was chiefly assumed by the female sex. In the dialogue already cited, the cook says, 'If you expel me from your society, you would eat your herbs green, and your flesh raw.' He is answered, 'We can ourselves seethe what is to be seethed, and broil what things are to be broiled.' They seem to have attended to cookery not merely as a matter of taste, but of indispensable decorum. It was one of their regulations, that if a person eat any thing half dressed, ignorantly, he should fast three days; if knowingly, four days. Perhaps as the uncivilised Northmen were, in their pagan state, addicted to eat raw flesh, the clergy of the Anglo-Saxons were anxious to keep their improved countrymen from relapsing into such barbarous customs.

'In the drawings which accompany some Anglo-Saxon manuscripts, we have some delineation of their customs at table. In one drawing a party is at table, seated with the females by the side of the men in this order: a man, a lady, a man, a lady, two men, and another lady. The first two are looking towards each other, as if talking together; the three in the middle are engaged with each other, and so are the two last; each have a cup or horn in their hand. The table is oblong, and covered with a table-cloth that hangs low down from the table; a knife, a horn, a bowl, a dish, and some loaves appear. The men are uncovered; the women have their usual head-dress. In another drawing, the table is a sharp oval, also covered with an ample

cloth; upon it, besides a knife and a spoon, there are a bowl, with a fish, some loaves of bread, and two other dishes. Some part of the costume is more like the manners of Homer's heroes than of modern times. At the angles of the tables two attendants are upon their knees, with a dish in one hand, and each holding up a spit with the other, from which the persons feasting are about to cut something. One of these persons, to whom the servants minister with so much respect, is holding a whole fish with one hand, and a knife in the other.

'In the drawing which accompanies Lot feasting the angels, the table is oblong, rounded at the ends, and covered with a cloth. Upon it is a bowl, with an animal's head like a pig's; another bowl is full of some round things like apples. These, with loaves, or cakes of bread, seem to constitute the repast. There are two horns upon the table, and one of the angels has a knife. As no forks appear in any of the plates, and are not mentioned elsewhere, we may presume that our ancestors used their hands instead. There is one drawing of men killing and dressing meat. One man is holding a sheep by his horns, while a lad strikes at its neck with an axe; behind him is a young man severing an animal's head from his body with an axe. Another has put a long stick, with a hook attached to it, into a caldron, as if to pull up meat. The caldron is upon a trivet of four legs as high as the servant's knee, within which the fire is made, and blazing up to the caldron.'

It has been observed by some authors that no nation comes near the English in the magnificence of their public entertainments. Our coronation and instalment feasts, our civic charitable dinners, transcend the belief of foreigners; and yet it may be doubted whether those now given are comparable to the feasts of former ages. William the Conqueror, after he was peaceably settled on the throne of England, sent agents into different countries, to collect the most admired and rare dishes for his table; by which means, says John of Salisbury, this island, which is naturally productive of plenty and variety of provisions, was overflowed with every thing that could inflame a luxurious appetite. The same writer tells us, that he was present at an entertainment which lasted from 3 P. M. to mi lnight; at which delicacies were served up, which had been brought from Constantinople, Babylon, Alexandria, Palestine, Tripoli, Syria, and Phœnicia. These delicacies were doubtless very expensive. Thomas a Becket (says his historian Fitz-Stephen), gave £5, equivalent perhaps to £50 at present, for one dish of eels. The sumptuous entertainments which the kings of England gave to their nobles and prelates, at the festivals of Christmas, Easter, and Whitsuntide, in which they spent a great part of their revenues, contributed very much to diffuse a taste for profuse and expensive banqueting. It was natural for a proud and wealthy baron to imitate in his own castle the entertainments he had seen in the palace of his prince. Many of the clergy too, both secular and regular, being very rich, kept excellent tables. The monks of St. Swithins, at Winchester, made a formal complaint to Henry II. against their abbot, for taking away three of the thirteen dishes they used to have every day at dinner The monks of Canterbury were still more luxurious: for they had at least seventeen dishes every day dressed with spiceries and sauces, besides a dessert. Great men had many kinds of provisions at their tables, not now to be found in Britain. When Henry II. entertained his court, the great officers of his army, and the kings and great men of Ireland, in Dublin, at the Christmas feast of A. D. 1171, the Irish princes and chieftains were quite astonished at the profusion and variety of food which they beheld, and were with difficulty prevailed upon by Henry to eat the flesh of cranes. In the remaining monuments of this period, we meet with the names of several dishes, as dellegrout, maupigyrnun, karumpie, &c., the composition of which is now unknown. The coronation feast of Edward III. cost at that period £2835. 18*s*. 2*d*. At the installation of Ralph abbot of St. Augustine, Canterbury, A. D. 1309, 6000 guests were entertained with a dinner consisting of 3000 dishes, which cost £287. 5*s*. 'It would require a long treatise (says Matthew Paris) to describe the astonishing splendor, magnificence and festivity, with which the nuptials of Richard earl of Cornwall, and Cincia daughter of Riemund earl of Provence, were celebrated at London, A. D. 1243. We are told that above 30,000 dishes were served up at the marriage dinner.' The nuptials of Alexander III. of Scotland, and the princess Margaret of England, were solemnised at York, A. D. 1251, with still greater pomp and profusion. 'If I attempted (says M. Paris) to display all the grandeur of this solemnity,—the numbers of the noble and illustrious guests,—the richness and variety of the dresses,—the sumptuousness of the feasts,—the multitudes of the minstrels, mimics, and others whose business it was to amuse and divert the company, those of my readers who were not present would imagine that I was imposing upon their credulity. The following particular will enable them to form a judgment of the whole. The archbishop of York made the king of England a present of sixty fat oxen, which made only one article of provision for the marriage feast, and were all consumed at that entertainment.' The marriage feast of Henry IV. and his queen Jane of Navarre, consisted of six courses; three of flesh and fowls, and three of fish. All these courses were accompanied and adorned with subtleties, as they were called. These were figures in pastry, of men, women, beasts, birds, &c., placed on the table, to be admired, but not touched. Each figure had a label affixed to it; containing some wise or witty saying, suited to the occasion. The installation feast of George Neville, archbishop of York and chancellor of England, exceeded most others in our history in splendor and expense, and in the number and quality of the guests. The reader may form some idea of this enormous feast from the following list of provisions prepared for it. 'In wheat, quarters, 300; in ale, tuns, 300; in wine, tuns, 100; in ipocrasse, pipes, 1; in oxen, 104; in wild bulls, 6; in swanns, 400; in geese, 2000; in cappons, 1000; in pigs, 2000; in plovers, 400; in quailes, 1200; in fowls called rees,

2400; in peacocks, 104; in mallards and teales, 4000; in cranes, 204; in kids, 204; in chickens, 2000; in pigeons, 2000; in connies, 4000; in bittors, 204; in heronshaws, 400; in pheasants, 200; in partridges, 500; in woodcocks, 400; in curliews, 100; in egritis, 1000; in stags, bucks, and roes, 500 and more; in pastries of venison, cold, 4000; in parted dishes of jellies, 1000; in plain dishes of jellies, 3000; in cold tarts, baked, 4000; in cold custards, baked, 3000; in hot pasties of venison, 1500; in hot custards, 2000; in pikes and breams, 308; in porpoises and seals, 12; spices, sugared delicates, and wafers, plenty.'

One of the most expensive singularities attending the royal feasts in those days consisted in what they called intermeats. These were representations of battles, sieges, &c., introduced between the courses, for the amusement of the guests. The French excelled in exhibitions of this kind. At a dinner given by Charles V. of France to the emperor Charles IV., A D. 1378, the following intermeat was exhibited:—A ship, with masts, sails, and rigging, was seen first: she had for colors the arms of the city of Jerusalem: Godfrey of Bouillon appeared upon deck, accompanied by several knights armed cap-a-pie: the ship advanced into the middle of the hall without the machine which moved it being perceptible. Then the city of Jerusalem appeared, with all its towers lined with Saracens. The ship approached the city; the Christians landed, and began the assault; the besieged made a good defence: several scaling ladders were thrown down; but at length the city was taken. Intermeats, at ordinary banquets, consisted of certain delicate dishes introduced between the courses, and designed rather for gratifying the taste than for satisfying hunger.

We conclude with an account of the coronation feast still given by our kings, and which is the most splendid relic of ancient English entertainments known to modern times.

The great hall of Westminster is considered on this occasion as the hall of his majesty's palace, where he entertains the nobility and the public officers who have attended the coronation ceremony. The table at which their majesties are to dine is covered by the serjeant and gentlemen of the ewry: and the officers of the pantry set kings salt of state and cadinet on the table, with another cadinet for the queen.

Besides the royal table, which is at the upper end of the hall on the raised floor, there are usually tables along each side of the hall. The first on the west side is for the dukes of Normandy and Aquitain, the great officers, the dukes, duchesses, marquisses, and marchionesses; the second of the same side for earls and viscounts, and their ladies; the third for the barons and baronesses. The first table on the east side of the hall is for the archbishops, bishops, barons of the cinque-ports, judges, the king's ancient sergeant, attorney and solicitor general; the second for the serjeants at law, masters in chancery, six clerks, lord mayor, aldermen, and twelve citizens of London; and the third for the kings of arms, heralds, and pursuivants.

When the procession arrives at the hall, the noble and illustrious persons who compose it are conducted by officers of arms to their respective tables, and the king and queen pass up the hall and retire to the court of Wards, leaving the canopies which have been borne over them with the barons of the cinque-ports, who retain them as their fee. The heralds then retire to places appointed for them, and the king's trumpeters and musicians are stationed in a gallery at the lower end of the hall.

Dinner being ready, his majesty—with his crown on his head and his sceptre and orb in his hands, preceded by the lord great chamberlain, and the swords being borne before him—comes out of the court of Wards, and seats himself in his chair of state at the table. Immediately after, the queen, when present, with her crown on her head and the sceptre and ivory rod in her hands,—preceded by her chamberlain and followed by the ladies of the bedchamber,—comes through the court of Wards, and seats herself in her chair of state at the table, on the left hand of the king.

The First Course of hot meat is then served up. The lords the sewers go to the dresser of the kitchen, and the serjeant of the silver scullery calls for a dish of meat, wipes the bottom of the dish, and also the cover, takes assay of it, and covers it; and then it is conveyed to their majesties' table with a flourish of trumpets. This course is attended by,

Three great officers, in their robes of estate and their coronets on their heads, mounted on goodly horses; viz.

Earl Marshal, with his staff. — Lord High Steward, with his white staff. — High Constable, with his staff.

Six Serjeants at Arms, with their maces, &c. &c.

Dinner being placed on the table by the king's and queen's carvers and sewers, with their assistants, the lord great chamberlain and his majesty's cup-bearer and his assistants go to the king's cupboard; and, having washed, the lord great chamberlain—preceded by the usher of the black rod, attended by the cupbearer, and followed by his assistants before mentioned—brings up the great basin and ewer for his majesty to wash: upon which the king rises, and, having delivered the sceptre to the lord of the manor of Worksop, and the orb to one of the bishops, the cupbearer pours out the water upon the king's hands; and the lord of the manor of Heydon in Essex (having accompanied the cupbearer from the cupboard) holds the towel to the king. The like ceremony is used with regard to her majesty's washing; after which the dean of the chapel royal says grace, and their majesties sit down to dinner, as do likewise the peers, peeresses, and others at the tables below.

On the king's right hand stand the noblemen who carry the four swords, holding them naked and erected all dinner-time: nearer the king stand

the lords who hold the orb and sceptre: and on his left hand the lord great chamberlain. On the queen's left hand stand her chamberlain and vice-chamberlain, who bear her sceptre and ivory rod.

The Challenge.—Before the second course is brought in, the king's champion, who holds that office with the manor of Scrivelsby in Lincolnshire, enters the hall completely armed

> in guise
> Of warriors old, with ordered spear and shield,

mounted upon a goodly horse richly caparisoned and attended as follows:—

Two Trumpets, the Champion's arms on their banners.
The Serjeant Trumpeter, with his mace.
Two Serjeants at Arms, with their maces.
The Champion's two Esquires, richly habited,—one on the right hand, with his lance carried upright, the other on the left, with his target, the Champion's arms depicted thereon.
A Herald with a paper in his hand, containing the words of the Challenge.

The Earl Marshal in his robes and coronet, on horseback, with the staff in his hand.	The Champion on horseback, with a gauntlet in his right hand.	The Lord High Constable in his robes and coronet, on horseback, with his staff.

Four pages richly apparelled, attendants on the Champion.

The passage to their majesties' table being cleared by the knight marshal, the herald with a loud voice proclaims the champion's challenge at the lower end of the hall, in the words following:—

If any person, of what degree soever, high or low, shall deny or gainsay our sovereign lord ———, king of Great Britain and Ireland, defender of the faith, &c., son and next heir to our sovereign lord ———, the last king deceased, to be right heir to the imperial crown of this realm of Great Britain, or that he ought not to enjoy the same; here is his champion, who saith that he lieth and is a false traitor, being ready in person to combat with him; and in this quarrel will adventure his life against him, on what day soever he shall be appointed.

The champion then throws down his gauntlet: which, having lain some small time, the herald takes up, and delivers it again to him. They then advance in the same order to the middle of the hall, where the herald makes proclamation as before; and lastly, to the foot of the steps, when the said herald, and those who precede him, going to the top of the steps, proclamation is made a third time; at the end of which the champion casts down his gauntlet, which being taken up, and redelivered to him by the herald, he makes a low obeisance to his majesty, whereupon the king's cupbearer brings to the king a gilt bowl of wine, with a cover; and his majesty drinks to the champion and sends him the bowl by the cupbearer; which the champion (having put on his gauntlet) receives, and, retiring a little, drinks thereof; he then makes his humble reverence to his majesty, and, accompanied as before, departs out of the hall, taking the bowl and cover as his fee.

The Largess. Immediately after this the officers of arms, descending from their gallery, Garter; and the two provincial kings of arms—with their coronets on their heads, followed by the heralds and pursuivants—come to the lower end of the hall, and, making their obeisance to his majesty, proceed to the middle of the hall, where they make a second obeisance, and a third at the foot of the steps; and, having ascended, Garter cries out three times Largess: his majesty's largess is then given, which Garter proclaims aloud in Latin, French, and English, in three different parts of the hall.

The Second Course is now carried up to their majesties' table by the gentlemen pensioners, with the same solemnities as the former; and various feudal services, by which property and manors are held, take place.

Feasts, or Festivals, in a religious sense, are ceremonies of feasting by way of thanksgiving. Such feasts have made part of the religion of almost all nations and sects; witness those of the Greeks, Romans, Hebrews, Christians, and Mahommedans. Among the Greeks the first religious feasts were celebrated in solemn assemblies of the whole nation, on occasion of their games, as the Olympic, the Pythian, the Isthmian, and Nemæan: in process of time they had many others, the principal of which are enumerated in this work, under their respective names. The Romans had also abundance of stated feasts in honor of their deities and heroes; such were the Saturnalia, Cerealia, Lupercalia, Liberalia, Neptunalia, Consualia, Portumnalia, Vulcanalia, Palilia, Divalia, &c. See these articles. They had also feasts instituted occasionally; as Carmentalia, Quirinalia, Terminalia, Floralia, Compitalia, Lemuria, Vernalia, besides other moveable and occasional ones: as to give thanks to the gods for benefits received; to implore their assistance or to appease their wrath, &c., as the Paganalia, Feralia, Bacchanalia, Ambarvalia, Amburbalia, Suovetaurilia, and divers others, particularly denominated Feriæ; as Sementinæ, Latinæ, &c. See these articles. The feasts were divided into days of sacrifice, and days of banqueting and feasting; days of games, and days of rest or feriæ. There being but little history written, or at least published in those days, one end of feasts was to keep up the remembrance of past occurrences.

Feasts, Jewish. The principal feasts of the Jews were the feast of Trumpets, that of the Expiation or Atonement, of Tabernacles, of the Dedication, of the Passover, of Pentecost, and of Purification. See those articles, and our article Jewish Dispensation. The modern Jews have other feasts marked in their kalendar of modern institution.

Feasts in the Church of England. The four feasts of which the English laws take particular notice are, the Annunciation of the blessed Virgin Mary, or Lady-day, the 25th of March; the nativity of St. John the Baptist, held on the 24th of June; the feast of St. Michael the archangel, on the 29th of September; and that of St. Thomas the Apostle, on the 21st of December: on which quarterly days rent on leases is usually paid. 5 & 6 Edw. VI. cap. 3; 3 Jac. I. cap. 1; 12 Car. II. cap. 30. Besides these feasts which are general, and enjoined by the church, there are others local and occasional, enjoined by the magistrate or voluntarily set on foot by the people; such are the days of thanksgiving for victories, delivery from wars, plagues, &c. Such also are the vigils or wakes in commemoration of the dedications of particular churches. See Vigil, &c. The feasts of the church of England are either immoveable or moveable.

1. Feasts, Immoveable, are those constantly celebrated on the same day of the year; the principal of these are Christmas or the Nativity, the Circumcision, Epiphany, Candlemas or the Purification, the Annunciation called also the Incarnation and Conception, All Saints, and All Souls; besides the days of the several apostles, St. Thomas, St. Paul, &c, which in the church of England are feasts, though not feriæ. See these articles.

2. Feasts, Moveable, are those which are not confined to the same day of the year. Of these the principal is Easter, which gives law to all the rest, all of them following and keeping their proper distances from it; such are Palm Sunday, Good Friday, Ash-Wednesday, Sexagesima, Ascension day, Pentecost, and Trinity Sunday. See Easter, Pentecost, Sexagesima, Trinity, &c.

Feasts in the Church of Rome. The prodigious increase of feast days in the Romish church commenced towards the close of the fourth century, and was occasioned by the discovery that was then made of the remains of martyrs and other holy men, for the commemoration of whom they were established. These, instead of being set apart for pious exercises, were but too often abused in indolence and voluptuousness: and this has been defended by the theologians of this church on the ground of becoming all things to all men,' that some may be won. See Dr. Doyle's late Essay on the State of the Irish Catholics. Many of them were instituted on a pagan model.

Feasts, Mahommedan. The Mahommedans, besides their feast or sabbath, which is kept on Friday, have two solemn feasts, the first of which is called the Feast of Victims, and celebrated on the 10th day of the last month of their year; and the second called Bairam. See Bairam.

Feasts of the Dead are solemn religious ceremonies in use among the American Indians. By some nations they are celebrated every eight years; by others, as the Hurons and Iroquois, every ten years.

FEAT, *n. s.* & *adj.*
Feat'ly, *adv.*
Fea'teous, *adj.*
Fea'teously, *adv.*
Fr. *fait*; Norm. Fr. *feat*; Ital. *fatto*; Lat. *factum*, a deed. An act, deed, or exploit: as an adjective, feat means ready; skilful; ingenious: 'fine; neat; brave;' says Minsheu: the adjective is nearly obsolete, and both words have been generally applied with some degree of contempt: feateous, and feateously (both obsolete), have been used as synonymous with feat and featly.

Wherefore her father promised by crye that noble young men should meate at Peverell's place in the Peke, and he that provid hymself yn *feates* of armes should have Mellet his doughter, with the Castel of Whitington.

Leland. Thinges excerpted owt of an old English Boke, &c. vol. i. p. 23.

Pyrocles is his name, renowned far
For his bold *feats*, and hardy confidence;
Full oft approved in many a cruel war.
Faerie Queene.

And with fine fingers cropt full *featously*
The tender stalks on high *Spenser.*

Tarquin's self he met,
And struck him on his knee: in that day's *feats*,
When he might act the woman in the scene,
He proved the' best man i' the' field. *Shakspeare.*

[Posthumus] Lived in court
(Which it is rare to do) most praised, most loved;
A sample to the youngest; to the more mature,
A glass that *feated* them. *Id. Cymbeline.*

Never master had
A page so kind, so duteous, diligent;
So tender over his occasions, true,
So *feat*, so nurse-like. *Id.*

Foot it *featly* here and there,
And sweet sprites and burthen bear.
Id. Tempest.

Look how well my garments sit upon me,
Much *feater* than before. *Id.*

The joints are more supple to all *feats* of activity and motion in youth than afterwards. *Bacon.*

That *feat* man at controversy. *Stillingfleet.*

The moon was up, and shot a gleamy light;
He saw a quire of ladies in a round,
That *featly* footing seemed to skim the ground.
Dryden.

Our soldiers are men of strong heads for action, and perform such *feats* as they are not able to express.
Addison's Spectator.

Down the deep vale, and narrow winding way,
They foot it *featly*, ranged in ringlets gay:
'Tis joy and frolic all, where'er they rove,
And fairy people is the name they love. *Beattie.*

FEATH'ER, *n. s.* & *v. a.*
Feath'erbed,
Feath'erdriver,
Feath'ered, *adj.*
Feath'eredge, *n. s.*
Feath'eredged, *adj.*
Feath'ergrass,
Feath'erless, *adj.*
Feath'erly,
Feath'ery.
Saxon, ꝼeðeꞃ; Goth. *feaden*; Swed. and Teut. *feder*; perhaps from the Goth. *fliader*, plumage. Thompson. The plume of birds; any ornament; and (as birds are distinguished bytheir plumage) kind, or species; as in the expression, 'birds of a feather': to feather is to adorn with feathers or ornaments; to treat as a cock: feathered, clothed, or fitted with a feather, or feathers: featherless is without feathers: featherly, resembling, and feathery, covered with, feathers: the extracts explain the other derivatives, except feathergrass, which is another name for the herb also called shadowgrass, gramen plumotum.

The soote season that bud, and bloom fourth bringes,
With grene hath cladde the hyll, and eke the vale,
The nightingall with *fethers* new she singes;
The turtle to her mate hath told the tale. *Surry.*

I am not of that *feather* to shake off
My friend, when he most needs me. *Shakspeare.*

Look, as I blow this *feather* from my face. *Id. Henry IV.*

I saw young Harry with his beaver on,
His cuisses on his thighs, gallantly armed,
Rise from the ground like *feathered* Mercury. *Id.*

They stuck not to say, that the king cared not to plume his nobility and people, to *feather* himself. *Bacon's Henry VII.*

The husband cock looks out, and straight is sped,
And meets his wife, which brings her *featherbed.* *Donne.*

This so high grown ivy was like that *featherless* bird, which went about to beg plumes of other birds to cover his nakedness. *Howel's Vocal Forest.*

Or whistle from the lodge, or village cock
Count the night watches to his *feathery* dames. *Milton.*

The accretion or pluvious aggelation of hail about the mother and fundamental atoms thereof, seems to be some *featherly* particle of snow, although snow itself be sexangular. *Browne.*

The brave eagle does with sorrow see
The forest wasted, and that lofty tree
Which holds her nest, about to be o'erthrown,
Before the *feathers* of her young are grown;
She will not leave them, nor she cannot stay,
But bears them boldly on her wings away. *Waller.*

So when the new-born phœnix first is seen,
Her *feathered* subjects all adore their queen. *Dryden.*

Dame Partlet was the sovereign of his heart;
Ardent in love, outrageous in his play,
He *feathered* her a hundred times a-day. *Id.*

The cover must be made of *featheredged* boards, in the nature of several doors with hinges fixed thereon. *Mortimer.*

Boards or planks that have one edge thinner than another, are called *featheredge* stuff. *Moxon.*

Vultures, harpies, ravens, cormorants, and among many other *feathered* creatures, several little winged boys perch upon the middle arches. *Addison.*

Darkening the sky, they hover o'er and shroud
The wanton sailors with a *feathered* cloud. *Prior.*

When a man in the dark presses either corner of his eye with his finger, and turns his eye away from his finger, he will see a circle of colors like those in the *feathers* of a peacock's tail. *Newton.*

A *featherdriver* had the residue of his lungs filled with the fine dust or down of feathers. *Derham.*

An eagle had the ill hap to be struck with an arrow, *feathered* from her own wing. *L'Estrange.*

Not the bow they bend, nor boast the skill
To give the *feathered* arrow wings to kill. *Pope.*

Then ships of uncouth form shall stem the tide,
And *feathered* people croud my wealthy side. *Id.*

Among our Scythian ancestors, the number of pens was so infinite, that Herodotus had no other way of expressing it than by saying, that in the regions far to the north, it was hardly possible for a man to travel, the very air was so replete with *feathers.* *Swift.*

Time is the *feathered* thing,
And whilst I praise
The sparklings of thy locks, and call them rays,
Takes wing. *Mayne.*

See then the quiver broken and decayed,
In which are kept our arrows! Rusting there
In wild disorder, and unfit for use,
What wonder, if, discharged into the world,
They shame their shooters with a random flight,
Their points obtuse, and *feathers* drunk with wine!
Well may the church wage unsuccessful war
With such artillery armed. *Cowper.*

While each light moment, as it dances by
With *feathery* foot and pleasure-twinkling eye,
Feeds from its baby-hand, with many a kiss,
The callow nestlings of domestic bliss. *Darwin.*

Free let the *feathery* race indulge the song,
Inhale the liberal beam, and melt in love:
Free let the fleet hind bound her hills along,
And in pure streams the watery nations rove. *Beattie.*

FEATHERS. See ORNITHOLOGY. Feathers make a considerable article of commerce, particularly those of ostriches, herons, swans, peacocks, geese, hens, &c., for plumes, ornaments of the head, filling of beds, writing pens, &c. Geese are plucked sometimes in Great Britain five times in the year, and in cold seasons many of them die by this barbarous custom. See ANAS. The feathers that are brought from Somersetshire are esteemed the best, and those from Ireland the worst. Eider down is imported from Denmark; the ducks that supply it being inhabitants of Hudson's Bay, Greenland, Iceland, and Norway. See DOWN. Our own Western Islands breed numbers of these birds, which turn out a profitable branch of trade to the poor inhabitants. Hudson's Bay also furnishes very fine feathers of the goose kind. The down of the swan is brought from Dantzic, as well as great quantities of the feathers of the cock and hen. The London poulterers deal largely in the feathers of those birds, and of ducks and turkies: those of ducks, being weaker, are inferior to those of the goose; and turkies' feathers are the worst of any. The best method of curing feathers is to lay them in a room, in an exposure to the sun, and when dried to put them in bags, and beat them well with poles. See QUILLS.

FEATLY (Daniel), an English divine, born at Charlton, in Oxfordshire, in 1582. He was educated at Magdalen College, Oxford, and afterwards became fellow of Corpus Christi. He was for some years chaplain to the English embassy in France, and soon after his return became chaplain to archbishop Abbot, who gave him the rectory of Lambeth. Dr. Featly was the last provost of Chelsea College, which station he quitted on his marriage in 1625. He wrote several polemical treatises, particularly against the church of Rome. When the civil wars commenced, he was chosen one of the assembly at Westminster, but his correspondence with archbishop Usher at Oxford being intercepted, he was sent to prison. On the trial of archbishop Laud, Featly appeared as a witness against him. He was the author of Clavis Mystica, a Key opening divers difficult Texts of Scripture, 1636, folio; and among his controversial tracts is one with a title too witty to be forgotten, The Dipper Dipt, or the Anabaptist plunged over Head and Ears and shrunk in the washing, 4to. Upon his liberation he retired to Chelsea College, where he died in 1644.

FEATURE, *n. s.* & *v. a.* } Old Fr. *faic-*
FEATURED, *part. adj.* } *ture* and *facture*; Ital. *fattura*; Lat. *factura*, the making of a

thing. The general cast, or make of the face: any lineament, or single part of the face; make, generally, and of the body in particular: to feature is to resemble, or to pourtray features. Dr. Johnson seems to have read the extract from Shakspeare's Cymbeline, 'featured,' erroneously; but we insert the passage, as he quotes it, being better sense, in our humble judgment, than the more approved reading, 'feated'; and finding the verbal form of the word adopted by other poets.

Though ye be the fairest of God's creatures,
Yet think that death shall spoil your goodly *features*.
Spenser.

Report the *feature* of Octavia, her years.
Shakspeare.

He lived in court most praised, most loved,
A sample to the young'st; to the more mature,
A glass that *featured* them. *Id. Cymberline.*

Though various *features* did the sisters grace,
A sister's likeness was in every face.
Addison's Ov.

No woman can be handsome by the force of *features* alone, any more than she can be witty only by the help of speech. *Hughes.*

We discover in James all the *features* of a great but uncultivated spirit. *Robertson's Hist. of Scotland.*

The great Creator to revere,
Must sure become the creature;
But still the preaching cant forbear,
And ev'n the rigid *feature*. *Burns.*

Pair after pair, and tittering as they pass,
View their fair *features* in the walls of glass;
Leave with impatient step the circling bourn,
And hear behind the closing rocks return.
Darwin.

FEBRIC'ITATE, *v. n.* FEBRIC'ULOSE, *adj.* FEBRIF'IC, FEB'RIFUGE, *n. s.* & *adj.* FEB'RILE, *adj.* Fr. *febricitant (feverish)*, *febrifuge*; Old Fr. *febrifique*; Lat. *febricito*. To be in a fever. Febriculose is, troubled with fever. We copy these words from Dr. Johnson, but find no examples of them Febrific is, tending to produce, febrile, constituting or consequent upon, fever. Febrifuge, a medicine for the cure of fever; and, as an adjective, having the power or tendency to cure that disease.

The spirits, embroiled with the malignity in the blood, and turgid and tumified by the *febrile* fermentation, are by phlebotomy relieved. *Harvey.*

Bitters, like choler, are the best sanguifiers, and also the best *febrifuges*. *Floyer on the Humours.*

Febrifuge draughts had a most surprising good effect. *Arbuthnot.*

The *febrific* humour fell into my legs. *Chesterfield.*

FEBRIS, Lat. Fever, was worshipped as a goddess by the ancient Romans. She had a temple on mount Palatine, and in two other places in Rome. The following inscription to this goddess is still extant: Febri. Divæ. Febri. Sanctæ. Febri. Magnæ. Camilla. amata. pro. filio. male. affecto.

FEBRUA, a feast of atonement held by the ancient Romans for twelve days together in February.

FEBRUA'RY, *n. s.* FEBRUA'TION. Latin, *Februarius*, of Greek, φοιβαω, to purify. The second month of the year. Februation was the keeeping of certain feasts of purification among the ancients.

Fantastic rites and *februations* to chase away mormoes and spectres. *Spenser.*

You have such a *February* face,
So full of frost, of storm, of cloudiness!
Shakspeare.

FEBRUARY, in chronology, was the second month of Numa's year, and under the protection of the god Neptune. It was not in the kalendar of Romulus, being added to the year by Numa. It had its name from Februa, a name of Juno, who presided over the purifications of women; and in this month the Lupercalia were held in honor of Juno, and women were purified by the priests of Pan Lyceus at that festival. See LUPERCALIA. February, in a common year, consists only of twenty-eight days; but every bissextile year it has twenty-nine, by the addition of the intercalary day.

FECAMP, an ancient sea-port of France, in the department of the Lower Seine, and late province of Normandy, containing about 1000 houses, and a ci-devant Benedictine abbey long famed for its riches. The church is one of the largest in France. The chief trade of the inhabitants is in linens, serges, laces, hats, and leather. Many vessels are employed in the herring fishery. Fecamp lies nine miles south-west of Dieppe, and fifteen N. N. E. of Montvilliers.

FE'CES, *n. s.* Fr. *feces;* Lat. *fæces*. Dregs; sediments; subsidence; excrement.

Hence the surface of the ground with mud
And slime besmeared, the *feces* of the flood
Received the rays of heaven; and sucking in
The seeds of heat, new creatures did begin.
Dryden.

The symptoms of such a constitution are a sour smell in their *feces*. *Arbuthnot on Aliments.*

FECES. See FAECES.

FECIALES, or FOECIALES, an order of priests or officers consisting of twenty persons among the ancient Romans, appointed to proclaim war, negociate peace, &c. Festus derives the word from ferio, I strike; as, ferire fœdus signifies, to conclude a treaty; and accordingly, instead of feciales, he would have it written feriales. Others derive it from fœdus, which was anciently written fedus; or from fidus, faith. Others from facio, feci, I make, &c., because they made war and peace. Vossius derives it from fatu, of the verb fari, to speak; in which sense the feciales should be the same with oratores; which sentiment is also confirmed by Varro, who says they were called indifferently feciales and oratores. The feciales were a fort of heralds, who, when the Romans had any dispute with their neighbours, were sent first to demand the thing pretended to be usurped, or require the satisfaction for the injury alleged to be done. If an answer was not returned by them, that was satisfactory to the people and the senate, they were despatched again to declare war, and the like in treating of peace; the feciales being the only persons appointed to negociate between the senate, &c., and the enemy. Plutarch, in the life of Numa, and Halicarnasseus (lib. ii.), observes, that they were first instituted by that prince. The latter adds, that they were chosen out of the best families in Rome; that their office, which was reputed a

ort of sacerdotium, or priesthood, only ended ith their life; that their persons were sacred nd inviolable, as those of other priests; that they ere even charged to see that the republic did ot declare war unjustly; that they were to reeive the remonstrances of nations who comlained of having been any way injured by the omans; that if those complaints were found ist, they were to seize the criminals, and deliver iem up to those they had offended; that they ere invested with the rights and privileges of mbassadors; that they concluded treaties of eace and alliance, and took care to see them xecuted; and, lastly, abolished them, if they ere not equitable. Livy (lib. i. cap. 24) ascribes heir institution to Ancus Martius, A. U. C. 114. arro assures us, that in his time most of these unctions of the feciales were set aside; though lutarch says, that they had still some authority n his time. The feciales were crowned with ervain when they went to declare war. Their eads were covered with veils, over which the rown was placed. In this equipage they proceeded to the frontiers of the new enemy's country, and threw a bloody dart or javelin into the ground within the same. In Livy and other ancient authors we have the formula used in such declarations.

FECKENHAM (John de), the last abbot of Westminster, was born at Feckenham, a village of Worcestershire, about the beginning of the sixteenth century. When the Reformation commenced he opposed it with great zeal, and was sent to the Tower, where he continued till queen Mary's accession, soon after which he was made abbot of Westminster. Queen Elizabeth, whose life he had saved by his remonstrances with Mary, when she designed the death of her sister, would have given him the archbishopric of Canterbury, if he would have conformed to the Reformation, but this he refused; and, while he sat in her first parliament, he protested strongly against the Reformation, which occasioned his being committed to the Tower in 1560. He continued in confinement till 1563, and was then put under the charge of the bishop of Winchester. Two days before the execution of lady Jane Grey, Feckenham held a conference with that unfortunate lady, who remained as much unmoved by his arguments as Cranmer, Ridley, and Latimer, against whom he disputed at Oxford. He died in the castle of Wisbeach in 1585. Feckenham was a learned and a liberal man, and very charitable to the poor. He was the author of several controversial pieces: and is spoken of with great respect by Camden, Fuller, and Burnet.

FE-CHING-SE, a city of China, in the province of Pe-tche-li, near Pekin. It is not extensive, and the houses are low, but the excellent walls and pavilions give it a respectable appearance. In the vicinity there is a fine bridge, built of hewn stone, 216 paces long. At each end is a pavilion, with an inscription in honor of the architect; and at a little distance a temple erected by the late emperor to a tutelary divinity.

FEC'ULENCE, or FEC'ULENCY, *n. s.* FEC'ULENT, *adj.* Fr. *feculence*; Latin, *fæculentia*, *fæcula*, from *fæx fæcis*, dregs. Sediment: lees; quality of abounding with dregs or lees; muddiness.

As much as the reasonable soul doth in dignity of nature, and purity of substance, excel this *feculent* lump of organised clay, our body; as the blissful ravishments of spirit surpass the dull satisfactions of sense,— *Barrow.*

They are to the body as the light of a candle to the gross and *feculent* snuff, which as it is not pent up in it, so neither doth it partake of its impurity. *Glanv. Apology.*

Pour upon it some very strong lee, to facilitate the separation of its *feculencies.* *Boyle.*

Whether the wilding's fibres are contrived
To draw the' earth's purest spirit, and resist
Its *feculence*, which in more porous stocks
Of cyder plants finds passage free. *Philips.*

So joys the soul, when from inglorious aims
And sordid sweets, from *feculence* and froth
Of ties terrestrial set at large, she mounts
To Reason's region. *Young.*

Thither flow,
As to a common and most noisome sewer,
The dregs and *feculence* of every land.
In cities, foul example on most minds
Begets its likeness. *Cowper.*

FECUND' *adj.* FECUNDA'TION, *n. s.* FECUN'DITY. Fr. *fecond*; Lat. *fecundus*. Fruitful; prolific. Fecundation, the act or art of making fruitful. Fecundity, fruitfulness; power of production.

The more sickly the years are, the less *fecund* or fruitful of children also they be. *Graunt.*

She requested these plants as a medicine of *fecundation*, or to make her fruitful. *Browne.*

Some of the ancients mention some seeds that retain their *fecundity* forty years, and I have found that melon-seeds, after thirty years, are best for raising of melons. *Ray.*

I appeal to the animal and vegetable productions of the earth, the vast numbers whereof notoriously testify the extreme luxuriance and *fecundity* of it. *Woodward.*

The least
Of these disseminated orbs, how great!
——— *Fecundity* divine!
Exub'rant Source! perhaps I wrong thee still. *Young.*

It has been supposed that the embryon vegetable after *fecundation*, by its living activity or stimulus exerted on the vessels of the parent plant, may produce the fruit or seed-lobes, as the animal fœtus produces its placenta, and as vegetable buds may be supposed to produce their umbilical vessels or roots down the bark of the tree. *Darwin.*

FED. See FEED.

FEDALA, a sea-port town of Morocco, on the western coast. It is situated on a promontory, which has been mistaken for an island, and surrounded by a fine fertile country. It has an excellent road for ships, so that no place can be more advantageously situated for the corn trade, which it carried on to a great extent till the present emperor prohibited the exportation of corn. Fedala is forty miles S. S. W. of Sallee.

FED'ARY, *n. s.* FED'ERAL, *adj.* FED'ERARY, *n. s.* FED'ERATE, *adj.* FED'ERATIVE. Lat. *fœdus* (cruel), as Ainsworth thinks, because no confederacies were anciently made without blood, i. e. sacrifice. An ally, confederate, or accomplice: this is the sense both of fedary and federary. Federal is relating to

a league or covenant. Federate, leagued; contracted. Federative is, having power to make leagues.

Damn'd paper!
Black as the ink that's on thee, senseless bauble!
Art thou a *fedary* for this act, and lookest
So virgin-like without? *Shakspeare. Cymbeline.*

She's a traitor, and Camillo is
A *federary* with her. *Shakspeare.*

It is a *federal* right betwixt God and us, as eating and drinking, both among Jews and Heathens, was wont to be. *Hammond.*

The Romans compelled them, contrary to all *federal* right and justice, both to part with Sardinia, their lawful territory and also to pay them, for the future a double tribute. *Grew.*

The power to which our constitution has exclusively delegated the *federative* capacity, may find it expedient to make war upon them. *Burke.*

FEE, *n. s.* & *v. a.* } Sax. ꝼeah; Goth. *fe;*
FEEFARM. } Swed. *fæ;* Dan. *fee;* Teut. *fieh;* Su. Goth. *fae;* all perhaps from the Goth. *fa*, to acquire. Property in money, goods, or land; payment to official persons, or to the professors of law or medicine; portion; pittances: to fee is to pay, reward; hence bribe; keep in one's pay: for FEE, see the article.

I here quod he all myne with me about:
Wisedom he ment, not fortunes brotle *fees.*
For nought he counted his that he might leese.
Sir T. More.

In pruning and trimming all manner of trees,
Reserve to each cattle their property *fees. Tusser.*

Though sweet love to conquer, glorious be,
Yet is the pain thereof much greater than the *fee.*
Spenser.

These be the ways by which, without reward,
Livings in courts be gotten, though full hard;
For nothing there is done without a *fee. Hubbert.*

Now like a lawyer, when he land would let,
Or sell *fee*-simples in his master's name.
Id. Tale.

What concern they?
The general cause? or is it a *fee*-gift,
Due to some single breast? *Shakspeare.*

Now that God and friends
Have turned my captive state to liberty,
At our enlargement what are thy due *fees?*
Id. Henry VI.

Here's the lord of the soil come to seize me for a stray, for entering his *fee*-simple without leave. *Id.*

There is not a thane of them but in his house
I have a servant *feed.* *Id. Macbeth.*

John surrendered his kingdoms to the pope, and took them back again, to hold in *feefarm*; which brought him into such hatred, as all his lifetime after he was possessed with fear. *Davies.*

He thought he should be blest
To have his heir of such a suffering spirit;
So wise, so grave, of so perplext a tongue,
And loud withal, that could not wag, nor scarce
Lie still without a *fee.* *Ben Jonson.*

While freezing Matho, that for one leane *fee*
Wont terme auld Terme the Terme of Hilarie,
May now, in sted of those his simple *fees*
Get the *fee*-simple of fayre manneryes.
Bp. Hall. Satires.

Watch the disease in time; for when within
The dropsy rages, and extends the skin,
In vain for hellebore the patient cries,
And *fees* the doctor; but too late is wise.
Dryden.

A wealthy doctor who can help a poor man, and will not without a *fee*, has less sense of humanity than a poor ruffian, who kills a rich man to supply his necessities. *Tatler.*

He does not refuse doing a good office for a man, because he cannot pay the *fee* of it. *Addison.*

No man fees the sun, no man purchases the light, nor errs if he walks by it. *South.*

Praise was originally a pension paid by the world; but the moderns, finding the trouble and charge too great in collecting it, have lately bought out the *fee*-simple; since which time the right of presentation is wholly in ourselves. *Swift.*

When neebors anger at a plea,
An' just as wud as wud can be,
How easy can the barley-bree
Cement the quarrel!
It's aye the cheapest lawyer's *fee,*
To taste the barrel. *Burns.*

If he comes here to take a deposition,
By all means let the gentleman proceed;
You've made the apartment in a fit condition:—
There's pen and ink for you, sir, when you please—
Let every thing be noted with precision,
I would not you for nothing should be *fee'd.*
Byron.

FEE, in law, signifies a complete feudal property. Hence, where the bare life-rent of any feudal subject is meant to be conveyed to A, and the absolute property to B, that meaning is expressed thus, 'to A in life-rent, and to B in fee.' See LAW.

FEE ABSOLUTE, or FEE SIMPLE. A tenant, says Blackstone, in fee simple, or, as he is frequently styled, tenant in fee, is he that hath lands, tenements, or hereditaments, to hold to him and his heirs for ever; generally, absolutely, and simply; without mentioning what heirs, but referring that to his own pleasure, or to the disposition of the law. The true meaning of the word fee (feodum), is the same with that of feud or fief (See FEUDAL SYSTEM), and, in its original sense, it is taken in contradistinction to allodium; which is property in its highest degree; and the owner thereof hath absolutum et directum dominium, and therefore is said to be seised thereof absolutely in dominio suo, in his own demesne. But this allodial property no subject in Britain has; it being a received and now undeniable principle in the law, that all lands are holden mediately or immediately of the king. A subject therefore hath only the usufruct, and not the absolute property of the soil. And hence, in the most solemn acts of law, the strongest and highest estate that any subject can have, is expressed by these words, 'he is seised thereof in his demesne, as of fee.' It is a man's demesne, dominium, or property, since it belongs to him and his heirs for ever: yet this property or demesne, is strictly not absolute or allodial, but qualified or feodal, it is in his demesne, as of fee; that is, it is not purely and simply his own, since it is held of a superior lord, in whom the ultimate property resides. This is the primary sense and acceptation of the word fee. But, as Sir Martin Wright very justly observes, the doctrine, 'that all lands are holden,' having been, for so many ages, a fixed and undeniable axiom, the English lawyers very rarely, of late years especially, use the word fee in this its primary original sense, in contradistinction to allodium or absolute property, with

which they have no concern; but generally use it to express the continuance or quantity of estate. A fee therefore, in general, signifies an estate of inheritance; being the highest and most extensive interest that a man can have in a feud: and when the term is used simply, without any other adjunct, or has the adjunct of simple annexed to it, it is used in contradistinction to a fee-conditional at the common law, or a fee-tail by the statute; importing an absolute inheritance, clear of any condition, limitation, or restrictions to particular heirs, but descendible to the heirs general, whether male or female, lineal or collateral. And in no other sense than this is the king said to be seised in fee, he being the feudatory of no man. Taking therefore fee in this its secondary sense, as a state of inheritance, it is applicable to, and may be had in, any kind of hereditaments either corporeal or incorporeal. But there is this distinction between the two species of hereditaments: that of a corporeal inheritance a man shall be said to be seised in his demesne, as of fee; of an incorporeal one he shall only be said to be seised as of fee, and not in his demesne. For as incorporeal hereditaments are, in their nature, collateral to and issue out of lands and houses, their owner hath no property, dominium, or demesne, in the thing itself, but hath only something derived out of it, resembling the servitudes or services of the civil law. The dominium, or property, is frequently in one man, while the appendage or service is in another. Thus Gaius may be seised as of fee, of a way going over the land of which Titius is seised in his demesne as of fee. The fee simple or inheritance of lands and tenements is generally vested and resides in some person or other; though divers inferior estates may be carved out of it. As if one grants a lease for twenty-one years, or for one or two lives, the fee simple remains vested in him and his heirs; and after the determination of those years or lives, the land reverts to the granter or his heirs, who shall hold it again in fee simple. Yet sometimes the fee may be in abeyance, that is (as the word signifies), in expectation, remembrance, and contemplation in law; there being no person in esse, in whom it can vest and abide, though the law considers it as always potentially existing, and ready to vest whenever a proper owner appears. Thus, in a grant to John for life, and afterwards to the heirs of Richard, the inheritance is plainly neither granted to John nor Richard, nor can it vest in the heirs of Richard, till his death, nam nemo est hæres viventis: it remains therefore in waiting, or abeyance, during the life of Richard. This is likewise the case of a parson of a church, who hath only an estate therein for the term of his life; and the inheritance remains in abeyance. And not only the fee, but the freehold also, may be in abeyance; as, when a parson dies, the freehold of his glebe is in abeyance until a successor be named, and then it vests in the successor. The word heirs is necessary in the grant or donation in order to make a fee of inheritance. See Heir.

Fees, Limited, or such estates of inheritance as are clogged and confined with conditions or qualifications, may be divided into two sorts, viz. 1. Qualified, or base fees; and 2. Fees conditional, or fees tail.

Fees, Qualified, or base fees, are such as have a qualification subjoined, and which must be determined whenever the qualification annexed to it is at an end. As, in the case of a grant to A. and his heirs, tenants in the manor of Dale; in this instance, whenever the heirs of A. cease to be tenants of that manor, the grant is entirely defeated. So when Henry VI. granted to John Talbot, lord of the manor of Kingston Lisle in Berks, that he and his heirs, lords of the said manor, should be peers of the realm, by the title of barons of Lisle; here John Talbot had a base or qualified fee in that dignity; and the instant he or his heirs quitted the seigniory of this manor, the dignity was at an end. This estate is a fee, because it may possibly endure for ever in a man and his heirs; yet as that duration depends upon the concurrence of collateral circumstances, which qualify and debase the purity of the donation, it is therefore a qualified or base fee.

Fees Tail are so called in consequence of the statute de donis, or fees conditional, as they are called in common law. See Tail.

Fees of Lawyers and Physicians. An attorney may bring an action for his fees against the client that retained him in his cause. But by a decision, which was given some years since in the court of king's bench, a physician cannot bring an action against a patient, who is so ungrateful as not to pay him his fees. If a person refuse to pay an officer of court his due fees, the court will grant an attachment against him, to be committed till the fees are paid.

All fees allowed by acts of parliament become established fees; and the several officers entitled to them may maintain action of debt for them. 2 Inst. 210. All such fees as have been allowed by the courts of justice to their officers, as a recompense for their labor and attendance, are established fees: and the parties cannot be deprived of them without an act of parliament. Co. Lit. 368. Where a fee is due by custom, such custom, like all others, must be reasonable; and therefore where a person libelled in the spiritual court for a burying fee due to him for every one who died in the parish, though buried in another; the court held this unreasonable, and a prohibition was granted. Hob. 175. The plaintiff brought an action on the case for fees due to him as usher of the black rod, and obtained a verdict. Stran. 747. Justices in sessions have no authority to fix the bailiff's fees for arrests in civil cases; nor would the court of king's bench allow more than the usual fee of one guinea, though a larger sum had in fact been paid for years under an order of such justices. 3 Term. Rep. K. B. 417.

As to poundage to sheriffs on executions, see stat. 43 Geo. III. c. 46 § 5. Where the sheriff levied, under fi. fa. and received the money, and afterwards the judgment and execution being set aside for irregularity, and the money ordered to be returned, paid it back, with the assent of the plaintiff; it was held that the stat. 43 Geo. III. c. 46 did not take away the sheriff's remedy by action of debt against the plaintiff for his poundage. If an

erroneous writ be delivered to the sheriff, and he execute it, he shall have his fees, though the writ be erroneous. 1 Stalk. 332. It seems to be laid down in the old books as a distinction, that upon an extent of land upon a statute, the sheriff is to have his fees, so much per pound according to the statute immediately; but that upon an elegit he is not to have them till the liberate. Poph. 156. Winch. 51. S. P.

Fees are now recoverable by an action for money had and received, which has been introduced in lieu of an assise. Money given to A. and claimed by B. as perquisites of office, connot be recovered by B. in such action, unless such perquisites be known and accustomed fees, such as the legal officer could have recovered from A. 6 Term. Rep. K. B. 681, 3.

Action on the case lies for an attorney for his fees, against him that retained him in his cause: and attorneys are not to be dismissed by their clients till their fees are paid. 1 Lil. 142. But attorneys are not to demand more than their just fees; nor to be allowed fees to counsel without tickets, or the signature of counsel, &c. Stat. 3 Jac. I c. 7. An attorney may have action of debt for his fees, and also of counsel, and costs of suit: as a counsellor is not bound to give counsel till he has his fee, it is said he can have no action for it: though it has been held otherwise, F. N. B. 121. Brownl. 73. 31 H. VI. c. 9.

Fee Farm is a tenure without homage, fealty, or other service, except that mentioned in the feoffment; which is usually the full rent, or at least a fourth part of it. The nature of this tenure is, that if the rent be behind, and unpaid for two years, then the feoffer and his heirs may have an action for the recovery of the lands.

Fee'ble, *adj.* & *v. a.* / Fee'bleminded, *adj.* / Fee'bleness, *n. s.* / Fee'blesse, / Fee'bly, *adv.* } Fr. *foible;* Ital. *fievole,* from Lat. *flexibilis,* pliant. Weak; infirm; debilitated: as a verb, to render weak; now more commonly used with the prefix *en* (enfeeble): Spenser uses feeblesse, probably after the Old Fr. *febles,* for feebleness; state of weakness, or infirmity.

Whanne thou makist a feest clepe pore men, *feble,* crokid, and blinde: and thou schalt be blessid. *Wiclif. Luk* xiv.

Warn them that are unruly, comfort the *feeble-minded,* support the weak, be patient toward all men. 1 *Thess.*

Thenceforth the waters waxed dull and slow,
And all that drunk thereof did faint and *feeble* grow.
Spenser.

Or as a castle reared high and round,
By subtile engines and malicious slight
Is undermined from the lowest ground,
And her foundation forced and *feebled* quite.
Id. Faerie Queene.

They passing forth kept on her readie way,
With easie steps so soft as foot could stryde,
Both for great *feeblesse,* which did oft assay
Faire Amoret that scarcely she could ryde,
And eke through heavie armes. *Id.*

A better head Rome's glorious body fits,
Than his that shakes for age and *feebleness.*
Shakspeare.

Shall that victorious hand be *feebled* here,
That in your chambers gave you chastisement?
Id. King John.

Feeble minds, when they meet with crosses they looked not for, repent of their good beginnings, and wish any difficulty rather than that they find.
Bp. Hall's Contemplations.

How I have loved, excuse my faltering tongue;
My spirits *feeble,* and my pains are strong. *Dryden.*

Like mine, thy gentle numbers *feebly* creep,
Thy tragic muse gives smiles, thy comick sleep.
Id.

Rhyme is a crutch that helps the weak along,
Supports the *feeble,* but retards the strong.
Smith.

Some in their latter years, through the *feebleness* of their limbs, have been forced to study upon their knees. *South.*

We carry the image of God in us, a rational and immortal soul; and though we be now miserable and *feeble,* yet we aspire after eternal happiness, and finally expect a great exaltation of all our natural powers. *Bentley.*

The hand of God sheltered this *feeble* plant from the storm, and by his care it was reared, and cultivated, and brought to maturity. *Robertson's Sermon.*

Daughter of woe! ere morn, in vain caressed,
Clung the cold babe, upon thy milkless breast,
With *feeble* cries thy last sad aid required,
Stretched its stiff limbs, and on thy lap expired!
Darwin.

Another, hideous sight! unseamed appears,
His gory chest unveils life's panting source;
Though death-struck, still his *feeble* frame he rears;
Staggering, but stemming all, his lord unharmed he bears. *Byron.*

Feed, *v. a., v. n.* & *n. s.* / Feeder, *n. s.* } Sax. pedan, pœdan; Goth. *fodan;* Dan. *fede;* Icl. *fodr.* To supply with nutriment; to nourish; entertain: hence to supply generally; to graze; consume by cattle; fatten: as a neuter verb, to take food; live by eating; to prey; to pasture: as a substantive, feed is used synonymously with food, also for a meal, and a given quantity of food: a feeder is either one who gives food, or one who eats; hence one who excites or encourages: also one who is devoted to the training or feeding of cattle for market or otherwise.

If a man shall cause a field to be eaten, and shall put in his beast, and shall *feed* in another man's field, he shall make restitution. *Exod.* xxii. 5.

Barbarossa learned the strength of the emperor, craftily *feeding* him with the hope of liberty.
Knolles.

To *feed* were best at home;
From thence the sawce to meet is ceremony;
Meeting were bare without it.
Shakspeare. Macbeth.

You cry against the noble senate, who,
Under the gods, keep you in awe, which else
Would *feed* on one another. *Id. Coriolanus.*

When thou do'st hear I am as I have been,
Approach me, and thou shalt be as thou was't
The tutor and the *feeder* of my riots. *Shakspeare.*

But that our feasts
In every mess have folly, and the *feeders*
Jest with it as a custom, I should blush
To see you so attired. *Id.*

Besides his cote, his flocks and bounds of *feed*
Are now on sale. *Id. As You Like It.*

The alteration of scenes, so it be without noise, *feeds* and relieves the eye, before it be full of the same object. *Bacon.*

Galen speaketh of the curing of the scirrhus of the liver by milk of a cow, that *feedeth* upon certain herbs. *Id.*

At his bed's feet *feeden* his stalled teme,
His swine beneath, his pullen ore the beame.
Bp. Hall's Satires.

The beast obeys his keeper, and looks up,
Not to his master's, but his *feeder's* hand.
Denham.

What followers, what retinue canst thou gain?
Or at thy heels the dizzy multitude,
Longer than thou canst *feed* them on thy cost?
Milton.

Plenty hung
Tempting so nigh, to pluck and eat my fill
I spared not: for such pleasure till that hour
At *feed* or fountain never had I found. *Id.*

Upon the roses it would *feed*
Until its lips e'en seemed to bleed:
And then to me 't would boldly trip,
And print those roses on my lip. *Marvell.*

Some birds *feed* upon the berries of this vegetable. *Browne.*

We meet in Aristotle with one kind of thrush, called the missel thrush, or *feeder* upon misselto.
Id. Vulgar Errours.

A fearful deer then looks most about when he comes to the best *feed*, with a shrugging kind of tremour through all her principal parts. *Sidney.*

The brachmans were all of the same race, lived in fields and woods, and *fed* only upon rice, milk, or herbs. *Temple.*

He *feeds* on fruits, which of their own accord,
The willing grounds and laden trees afford.
Dryden.

Her heart and bowels through her back he drew,
And *fed* the hounds that helped him to pursue. *Id.*

But such fine *feeders* are no guests for me;
Riot agrees not with frugality:
Then, that unfashionable man am I,
With me they'd starve for want of ivory. *Id.*

The frost will spoil the grass; for which reason take care to *feed* it close before Winter.
Mortimer's Husbandry.

The breadth of the bottom of the hopper must be half the length of a barleycorn, and near as long as the rollers, that it may not *feed* them too fast. *Id.*

An old worked ox fats as well as a young one, their *feed* is much cheaper, because they eat no oats. *Id.*

God advanced David to the throne that he might *feed* his people, not that he might *feed* himself; that he might do good, not that he might make his family great. *Henry. Psa.* lxxviii. 71.

A constant smoke rises from the warm springs, that *feed* the many baths with which the island is stocked. *Addison.*

How oft from pomp and state did I remove,
To *feed* despair, and cherish hopeless love?
Prior.

Boerhaave *fed* a sparrow with bread four days, in which time it eat more than its own weight.
Arbuthnot on Diet.

All *feed* on one vain patron, and enjoy
The extensive blessing of his luxury. *Pope.*

For on the grassy verdure as he lay,
And breathed the freshness of the early day,
Devouring dogs the helpless infant tore,
Fed on his trembling limbs, and lapped the gore. *Id.*

When I've my master's leave to stand
Cooing upon his friendly hand;
When I can be profusely *fed*
With crumbs of his ambrosial bread.
Cunningham. The Dove. Ode 9.

Though laden, not encumbered with her spoil;
Laborious, yet unconscious of her toil;
When copiously supplied, then most enlarged;
Still to be *fed*, and not to be surcharged. *Cowper.*

Till canker taints the vegetable blood,
Mines round the bark, and *feeds* upon the wood.
Darwin.

FEEJEE, FIDGEE, or Prince William's Islands, are a group of islands on the South Pacific Ocean, the exact number and extent of which are not yet ascertained. They are said to be situated from about 15° 33′ to 19° 15′ of S. lat.; and to about 175° of E. long. The missionary ship Duff counted from fifteen to twenty. They are equally fertile as the generality of the islands in the South Pacific, and produce the same kinds of roots and fruits. Sandal wood is plentiful, and attempts have been made to introduce this valuable tree from hence into Tongataboo, but without success. The inhabitants are a ferocious race, and greatly dreaded by their neighbours; being said to be cannibals in the strictest sense of the word. Englishmen have seen numerous baskets of human flesh, and many bodies of fallen enemies and slaughtered captives devoured. The stature and appearance of the Feejeeans is superior to those of the Friendly Islands, their complexion is darker, and their hair approaches more to a woolly texture. Their arms are neatly fashioned, their canoes of better workmanship, and they are more industrious in their habits also than most of their neighbours. They supply the Friendly Islands with the feathers of a red parroquet, with vessels of earthenware, stone for their hatchets, and all their cutting implements. It is uncertain what kind of government prevails. Some of them have been supposed subject to Tongataboo, but this is very doubtful. These islands were originally discovered by Tasman in the year 1643, who named the more northern Prince William's Island, and Heemskirk's shoals. They were seen by captain Bligh in 1789 and 1792; and in the year 1794 captain Barber anchored, in a merchant-ship, at a bay on the western side of the largest island, where he was attacked by the natives.

FEEL′, *v. n.*, *v. a.* & *n. s.*
FEEL′ER, *n. s.*
FEEL′ING, *part. adj.* & *n. s.*
FEEL′INGLY, *adv.*
FE′LIDEN, *part. adj.*
} Saxon ꝑelan; Belg. *voelen*; Goth. *falwa*. To have perception by the touch; to explore by feeling: hence to have acute mental sensibility; to appear to the touch: as an active verb, to perceive by the touch; to try; sound; perceive mentally; know: as a substantive, the sense of feeling: a feeler is one who feels or perceives; an instrument of feeling conspicuous in insects: feeling means expressive of acute sensibility; felt sensibly: as a substantive the sense of touch, power of acting upon sensibility; sensibility; perception. Wickliffe uses the word feliden for perceived; apprehended.

And thei knewen not this word and it was hid bifore hem that thei *feliden* it not, and thei dredden to axe him of this word. *Wiclif. Luk* ix.

They should seek the Lord, if happily they might *feel* after him, and find him. *Acts.*

He hath writ this to *feel* my affection to your honour. *Shakspeare.*

His overthrow heaped happiness upon him;
For then, and not till then, he *felt* himself,
And found the blessedness of being little.
Id. Henry VIII.

A most poor man made tame to fortune's blows,
Who, by the art of known and *feeling* sorrows,
Am pregnant to good pity. *Shakspeare.*

Write 'till your ink be dry, and with your tears
Moist it again; and frame some *feeling* line,
That may discover such integrity. *Id.*

The apprehension of the good,
Gives but the greater *feeling* to the worse.
Id. Richard II.

This hand, whose touch,
Whose every touch would force the *feeler's* soul
To the oath of loyalty. *Id. Cymbeline.*

Here *feel* we but the penalty of Adam,
The season's difference; as the icy phang,
And churlish chiding of the Winter's wind,
Which when it bites, and blows upon my body,
E'en till I shrink with cold, I smile and say,
This is no flattery: these are counsellors,
That *feelingly* persuade me what I am.
Shakspeare.

The air is so thin, that a bird has therein no *feeling* of his wings, or any resistance of air to mount herself by. *Raleigh.*

He *feelingly* knew, and had trial of the late good, and of the new purchased evil. *Id.*

A king that would not *feel* his crown too heavy for him must wear it every day: but if he think it too light, he knoweth not of what metal it is made.
Bacon.

Great persons had need to borrow other men's opinions to think themselves happy: for if they judge by their own *feeling*, they cannot find it. *Id.*

But why should those be thought to escape, who *feel*
Those rods of scorpions and those whips of steel?
Creech.

Nor did they not perceive the evil plight
In which they were, or the fierce pains not *feel*.
Milton.

Why was the sight
To such a tender ball as the eye confined;
So obvious and so easy to be quenched,
And not, as *feeling*, through all parts diffused,
That she might look at will through every pore?
Id.

Thy wailing words do much my spirits move,
They uttered are in such a *feeling* fashion. *Sidney.*

The princes might judge that he meant himself, who spake so *feelingly*. *Id.*

Blind men say black *feels* rough, and white *feels* smooth. *Dryden.*

The sense of *feeling* can give us a notion of extension, shape, and all other ideas that enter at the eye, except colours. *Addison's Spectator.*

Soon in smart pain he *feels* the dire mistake,
Lashes the wave, and beats the foamy lake. *Gay.*

The difference of these tumours will be distinguished by the *feel*. *Sharp's Surgery.*

Of these tumours one *feels* flaccid and rumpled; the other more even, flatulent and springy. *Sharp.*

Insects clean their eyes with their forelegs as well as antennæ; and, as they are perpetually *feeling* and searching before them with their *feelers* or antennæ, I am apt to think that besides wiping and cleaning the eyes, the uses here named may be admitted.
Derham's Physico-Theology.

The well-sung woes shall sooth my pensive ghost;
He best can paint them who can *feel* them most.
Pope.

Not youthful kings in battle seized alive,
E'er *felt* such grief, such terrour and despair. *Id.*

He would not have talked so *feelingly* of Codrus's bed, if there had been room for a bedfellow in it. *Id.*

I had a *feeling* sense
Of all your royal favours; but this last
Strikes through my heart. *Southerne.*

As we learn what belongs to the body by the evidence of sense, so we learn what belongs to the soul by an inward consciousness, which may be called a sort of internal *feeling*. *Watts.*

He that will not fear, shall *feel* the wrath of heaven.
Young.

What is so hateful to a poor man as the purse-proud arrogance of a rich one? Let fortune shift the scene, and make the poor man rich, he runs at once into the vice that he declaimed against so *feelingly*: these are strange contradictions in the human character.
Cumberland.

FEELING is one of the five external senses, by which we obtain the ideas of solidity, hardness, softness, roughness, heat, cold, wetness, dryness, and other tangible qualities. Although this sense is perhaps the least refined, it is of all others the most sure, as well as the most universal. Man sees and hears with small portions of his body, but he feels with all. The author of nature has bestowed that general sensation wherever there are nerves, and they are every where found where there is life. If it were otherwise, the parts wanting this sense might be destroyed without our knowledge. On this account it seems wisely provided, that this sensation should not require a particular organisation. The structure of the nervous papillæ is not absolutely necessary to it: the lips of a fresh wound, the periosteum, and the tendons, when uncovered, are extremely sensible without them, though they serve to the perfection of feeling, and to diversify sensation. Feeling is, perhaps, the basis of all other sensations. The object of feeling is every body that has consistency or solidity enough to move the surface of our skin. To make feeling perfect, it was necessary that the nerves should form small eminences, because they are more easily moved by the impression of bodies than a uniform surface; and it is owing to this structure that we are enabled to distinguish not only the size and figure of bodies, their hardness and softness, but also their heat and cold. To the blind, feeling is so useful a sensation, that it supplies the office of eyes, and in a great measure indemnifies them for the want of sight. See BLIND.

FEET BEARER, an officer in the courts of the ancient Anglo-Saxon and Welsh kings. He was a young gentleman whose duty it was to sit on the floor, with his back towards the fire, and hold the king's feet in his bosom all the time he sat at table, to keep them warm and comfortable.—*Leges Walliæ*, p. 58.

FEHRABAD, or FAHRABAD, a town in the province of Mazanderan, Persia, situated at the mouth of a river, near the south coast of the Caspian. It carries on some trade in rice, salt, fish, and pottery. Some time ago the population was computed at 16,000 persons, the descendants

principally of Armenians and Georgians. The environs produce sugar, cotton, and silk. It is 126 miles west of Asterabad, and 270 north of Ispahan.

FEIGN, *v. a.* & *v. n.* } Fr. *feindre ;* Old
FEIGN'EDLY, *adv.* } Fr. *feigner ;* Latin,
FEIGN'ER, *n. s.* } *fingo,* to contrive.
FEIGN'ING, } To invent; ima-
FEINT, *part. adj.* & *n. s.* } gine; make a show of; dissemble. As a verb neuter, to relate falsely or fabulously. Feint, as a substantive, is a false appearance; a false assault in fencing.

And thei aspieden and senten aspieris that *feyneden* him just, that thei schulden take him in word and bitaken him to the power of the prince. *Wiclif. Luk* xx.

No such things are done as thou sayest, but thou *feignedst* them out of thine own heart. *Neh.* vi. 8.

Each trembling leaf and whistling wind they hear,
As ghastly bug their hair on end does rear;
Yet both do strive their fearfulness to *feign.*
Faerie Queene.

Both his hands most filthy feculent,
Above the water were on high extent,
And *feigned* to wash themselves incessantly. *Id.*

Therefore the poet
Did *feign* that Orpheus drew trees, stones, and floods;
Since nought so stockish, hard, and full of rage,
But music for the time doth change his nature.
Shakspeare.

Such is found to have been falsely and *feignedly* in some of the heathens. *Bacon.*

May her *feignings*
Not take your word in! *Ben Jonson.*

And these three voices differ; all things done, the doing, and the doer; the thing *feigned,* the *feigning,* and the *feigner;* so the poem, the poesy, and the poet. *Id.*

Such is the greedinesse of men's natures (in these Athenian dayes) of news, that they will rather *feigne* than want it. *T. Ford,* 1647.

No pretences, no privileges, can bear off a sin with God: men think either to patronise or mitigate evils, by their *feigned* reasons. *Bp. Hall's Contemplations.*

Abominable, inutterable, and worse
Than fables yet have *feigned,* or fear conceived,
Gorgons, and hydras, and chimeras dire! *Milton.*

The mind by degrees loses its natural relish of real, solid truth, and is reconciled insensibly to any thing that can be but dressed up into any *feint* appearance of it. *Locke.*

Courtly's letter is but a *feint* to get off. *Spectator.*

But, in the breast encamped, prepares
For well-bred *feints* and future wars. *Prior.*

Me gentle Delia beckons from the plain,
Then hid in shades, eludes her eager swain;
But *feigns* a laugh to see me search around,
And by that laugh the willing fair is found. *Pope.*

But charity not *feigned* intends alone
Another's good—theirs centres in their own.
Cowper.

FELIBIEN (Andrew), born at Chartres in 1619, went secretary under the marquis de Fontenay Mareuil, ambassador to the court of Rome, in 1647. On his return, M. Colbert procured him the places of historiographer to Louis XIV., superintendant of his buildings, and of arts and manufactures in France. He became afterwards deputy comptroller general of the bridges and dykes, and died in 1695. He wrote several pieces relating to the fine arts; the principal of which is his Dialogues on the Lives and Works of the most eminent Painters.

FELICITAS, FELICITY, or happiness, was deified by the ancient Pagans. Lucullus built a temple to her, and she had another erected by Lepidus. The Greeks worshipped her under the name of Macaria. This deity is often represented upon medals, and generally with a cornucopia in one hand and a caduceus in the other. The inscriptions are, Felicitas Temporum, Felicitas Augusti, Felicitas Publica, &c.

FELIC'ITATE, *v. a., part.* } Fr. *feliciter,*
FELICITA'TION, *n. s.* [& *adj.* } Lat. *felicitatum;*
FELIC'ITOUS, *adj.* } *felicito,* to make
FELIC'ITOUSLY, *adv.* } happy: as an
FELIC'ITY, *n. s.* } adjective, felicitate signifies made happy. Felicitation is, congratulation. Felicity, happiness; prosperity; bliss. Felicitous and felicitously follow this sense.

Set fortunes servauntes by them and ye wull,
That one is free, that other euer thrall,
That one content, that other neuer full,
That one in suretye, that other like to fall.
Who lyst to aduise them bothe, perceyue he shall,
As great difference between them as we see,
Betwixt wretchednes and *felicite.* *Sir T. More.*

The joyous day, dear Lord, with joy begin,
And grant that we, for whom thou didest die,
Being with thy dear blood clean washed from sin,
May live for ever in *felicity.* *Spenser's Sonnets.*

That I profess
Myself an enemy to all other joys;
Which the most precious square of sense possesses,
And find I am alone *felicitate.*
In your dear highness' love. *Shakspeare. Lear.*

Felicity, pure and unalloyed *felicity,* is not a plant of earthly growth; her gardens are the skies. *Burton.*

Others in virtue placed *felicity;*
But virtue joined with riches and long life,
In corporal pleasure he, and careless ease.
Milton.

All pious dispositions are fountains of pleasant streams, which by their confluence do make up a full sea of *felicity.* *Barrow.*

They might proceed unto forms of speeches, *felicitating* the good, or depreciating the evil to follow. *Browne.*

Some of the fathers went so far, as to esteem the love of music a sign of predestination; as a thing divine, and reserved for the *felicities* of heaven itself. *Sir W. Temple.*

How great, how glorious a *felicity,* how adequate to the desires of a reasonable nature, is revealed to our hopes in the gospel. *Rogers.*

The *felicities* of our wonderful reign may be complete. *Atterbury.*

What a glorious entertainment and pleasure would fill and *felicitate* his spirit, if he could grasp all in a single survey. *Watts.*

Other ambition than of crowns in air,
And superluminary *felicities,*
Thy bosom warm. *Young.*

Pound St. Paul's church into atoms, and consider any single atom; it is, to be sure, good for nothing: but put all these atoms together, and you have St. Paul's church. So it is with human *felicity,* which is made up of many ingredients, each of which may be shown to be very insignificant. *Johnson.*

FELICUDI, one of the Lipari Islands, the ancient Phænicusa. It consists chiefly of a vol-

canic rock, but has some good corn land, and produces oil, wine, and fruit. Population 650. Long. 14° 21′ E., lat. 38° 34′ N.

FE'LINE, *n. s.* Lat. *felinus*. Like a cat; pertaining to a cat.

Even as in the beaver; from which he differs principally in his teeth, which are canine, and in his tail, which is *feline*, or a long taper. *Grew.*

FELIPE (St.), or St. Philip de Xativa, a town of Spain, in the province of Valencia, situated on the declivity of a mountain. It has an old castle built on a rock, containing several Roman and Moorish remains. The Roman name of this place was Setabis, changed by the Moors to Xativa. In 1706 it was taken by assault and burned; king Philip, on ordering it to be rebuilt, gave it the name of San Felipe. The adjacent country is productive in rice. Twenty-nine miles S.S.W. of Valencia. Population 10,000.

FELIPE, SAN, a city of Venezuela, South America, was, a century ago, only a village, known by the name of Cocorota. A great number, however, of Canarians, and natives of the neighbouring districts, attracted by the fertility of its soil, having settled there, the company of Guipuzcoa, some time before its dissolution, established stores for the purpose of trading with the interior. From that time this place gained a new aspect; handsome houses, and streets regularly built, took the place of huts huddled together without order. It stands in lat. 10° 15′ N., fifty leagues west of Caraccas, fifteen north-west of Valencia, and seven north-west of Nirgua. The neighbouring district is watered by the rivers Yarani and Aroa, and by numerous rivulets. Copper mines exist also there. The city is regularly built; the streets are in a line and broad; and the parish church is handsome and well maintained. The inhabitants, who amount to nearly 7000, are reputed laborious and industrious. They have only priests, and no monks or miraculous images among them. The atmosphere is hot and moist, and the town consequently not very healthy.

FELIS, Lat. felis, the cat, in zoology, a genus of quadrupeds, belonging to the order of feræ. The characters, according to Gmelin and Kerr, are these: six cutting teeth, all equal: grinders three: the tongue beset with rough papillæ, which point backwards: the feet are provided with sharp hooked claws, which are lodged in a sheath, and may be extended or drawn in at pleasure: the head is mostly round, and the visage short. All the animals of this genus, though ferocious, are temperate; very agile in climbing trees; alight on their feet, when falling from a height; and seize their prey by surprise. The females bring a considerable number at a birth, and have all eight paps. This genus comprehends twenty-eight species. Mr. Pennant has arranged it in two subdivisions, viz. 1. those having long tails and plain ears; and, 2. those with short tails and ears pencilled at the tips. The latter comprehends nine different species of lynxes, and the former nineteen species, consisting of the lions, tygers, panthers, leopards, cats, and all the rest of the genus. This arrangement is adopted by Kerr.

F. capensis, the Cape tiger, is the nsussi of Labat, who was the first that noticed this species, which he describes as of the size of a dog, with a coat as much striped and varied as that of a tiger. Its appearance bespeaks cruelty, and its eyes fierceness; but it is cowardly, and gets its prey only by cunning and insidious arts. It is found in all parts of Africa, from Congo to the Cape of Good Hope. When Dr. Forster touched the second time at the Cape of Good Hope, in 1775, an animal of this species was offered him to purchase; but he refused to buy it because it had a broken leg. It was very gentle and tame. It was brought in a basket to his apartment, where he kept it above twenty-four hours, which gave him the opportunity of describing it more accurately than had hitherto been done, and of observing its manners and economy. These he found to be perfectly analogous to those of our domestic cats. It ate fresh raw meat, and, after it had been several times fed by our author, followed him like a tame favorite cat. It liked to be stroked and caressed; it purred and rubbed its head and back against the person's clothes who fed it. It had been taken when quite young in the woods, and was not above eight or nine months old; but had already very nearly, if not quite, attained its full growth. The doctor was told that the tiger-cats live in mountainous and woody tracts; and that in their wild state they are very great destroyers of hares, rabbits, jerboas, young antelopes, lambkins, and of all the feathered tribe.

F. catus, the common cat. Of this species there are many varieties. Mr. Kerr describes nine.

F. catus Angorensis, the Angora cat, with hair of a silvery whiteness and silky texture, and very long, especially about the neck, where it forms a fine ruff. It is a large variety; found about Angora, the same country which produces the fine-haired goat. It degenerates after the first generation in our climate. A variety of this kind, with pendant ears, is found in China, of which the Chinese are very fond, ornamenting their necks with silver collars.

F. catus domesticus, the domestic, or tame cat, is of a smaller size, and has the hair shorter and thicker than the wild cats. Although when young they are playful and gay, they possess a perverse disposition, which increases as they grow up, and which education teaches them to conceal, but never to subdue. Constantly bent upon theft and rapine, though in a domestic state, they are full of cunning and dissimulation; they conceal all their designs, and seize every opportunity of stealing. They love ease, and search for the softest and warmest places to repose in. The cat is extremely amorous; and the female is more ardent than the male. The female goes with young fifty-five or fifty-eight days, and generally produces from three to six kittens at a litter, which are blind for nine days. She takes care to conceal them, and, when she is apprehensive of a discovery, she takes them up in her mouth one by one, and hides them in holes or inaccessible places. When she has nursed a few weeks, she brings them mice, small birds, &c., to teach them to eat flesh. The cat is inca-

pable of restraint, and consequently of being educated to any extent. However, we are told that the Greeks in the island of Cyprus trained this animal to catch and devour serpents, with which that island was greatly infested. He has no delicacy of scent, like the dog; he hunts only by the eye: neither does he properly pursue, but rather lies in wait, and attacks animals by surprise; and, after he has caught them, sports with and torments them a long time. The eye of the cat differs greatly from that of most other animals: the pupil being capable of a great degree of contraction and dilatation. It is narrow and contracted like a line during the day, round and wide in the dark. It is from this conformation of the eye that the cat sees best in the night, which gives him a great advantage in discovering and seizing his prey. Cats have a natural antipathy to cold and wetness. They likewise hate bad smells; but they are fond of certain aromatics, and particularly of catmint, and valerian. Cats take about eighteen months before they come to full growth; but they are capable of propagation in twelve months, and retain this faculty all their life, which generally extends to nine or ten years. They eat slowly, and are peculiarly fond of fish. They drink frequently; their sleep is light. They walk softly, and without making any noise. As their hair is always dry, it easily gives out an electrical fire, which becomes visible when rubbed in the dark. Their eyes likewise sparkle in the dark like diamonds. The cat, when pleased, purrs, and moves its tail: when angry, it spits, hisses, and strikes with its foot. It washes its face with its fore paws before rain, and stretches itself, &c., at the approach of a storm. These peculiarities are probably owing to its abounding with the electric fluid. It always lights on its feet, and is proverbially tenacious of life. Our ancestors seem to have had a high sense of the utility of this animal. Hoel Dda, or Howel the Good, among his laws relating to the prices, &c., of animals, includes that of the cat; and describes the qualities it ought to have. The price of a kitten before it could see was to be a penny; till it caught a mouse, two-pence; when it commenced mouser, four-pence. It was required besides, that it should be perfect in its senses of hearing and seeing, be a good mouser, have the claws whole, and be a good nurse; but if it failed in any of these qualities, the seller was to forfeit to the buyer the third part of its value. If any one stole or killed the cat that guarded the prince's granary, he was to forfeit a milch ewe, its fleece, and lamb; or as much wheat as, when poured on the cat suspended by its tail, the head touching the floor, would form a heap high enough to cover the tip of the former.—*Leges Wallicæ*, p. 247, 248.

F. catus ferus, the wild cat, is three or four times as large as the house cat; the head larger, and the face flatter. The teeth and claws are tremendous: its muscles very strong, as being formed for rapine: the tail is long and very thick, marked with alternate bars of black or brown, and white, the end always black; the hips and hind part of the lower joints of the leg are black; the fur is very soft and fine. The general color is a yellowish-white, or yellowish-brown and whitish, mixed with deep gray or blackish stripes. These colors though they appear at first sight confusedly blended together, yet on a close inspection are found to be disposed like the streaks on the skin of the tiger, pointing from the back downwards, rising from a black list that runs from the head along the middle of the back to the tail, while those on the sides are perpendicular or spiral. This animal, with us, may be called the British tiger. It is the fiercest and most destructive beast we have; making dreadful havoc among our poultry, lambs, and kids. It inhabits the most mountainous and woody parts of these islands, living mostly in trees, and feeding only by night. They are taken either in traps or by shooting: in the latter case, it is very dangerous only to wound them, for they will attack the person who injured them; and have strength enough to be no despicable enemy. Wild cats were formerly reckoned among the beasts of chase, as appears by the charter of Richard II. to the abbot of Peterborough, giving him leave to hunt the hare, fox, and wild cat. The fur was used for the lining of robes; but it was esteemed not of the most luxurious kind; for it was ordained, 'that no abbess or nun should use more costly apparel than such as is made of lambs' or cats' skins.' This animal is now become very scarce in Britain; one was killed some years ago in Cumberland, and another in Warwickshire. They are more frequently found in the North of Scotland, and are still common in the Hebrides. This species is the stock or origin of the domestic cat in all its varieties.—It inhabits the woods of most parts of Europe, but is not found in the vast woods of Russia or Siberia. It dwells with the common lynx in all the wooded parts of the mountains of Caucasus and their neighbourhood; and is most destructive to lambs, kids, fawns, and all sorts of feathered game.

F. concolor, the puma, the couguar of Buffon, has a very small head, ears a little pointed, and eyes large. According to some zoologists, the back, neck, rump, and sides, are of a pale brownish red, mixed with dusky hairs; the breast, belly, and inside of the legs, cinereous: but Gmelin and Kerr say, 'the fur is of a uniform lively red color, tinged with black, having no spots.' The tail is dusky and ferruginous, the tip black; and the teeth are of a vast size. It is as big as a large wolf, being long bodied, and high on its legs; the length from nose to tail five feet three inches; that of the tail two feet eight. This animal inhabits the continent of America, from Canada to Brasil: in South America it is called Puma, and by Europeans is mistaken for the lion. It is the scourge of the colonies of the hotter parts of America, being fierce and ravenous in the highest degree. It swims over the broad rivers; attacks the cattle in the very enclosures; and, when pressed with hunger, spares not even mankind. In North America their fury seems to be subdued by the rigor of the climate; and the smallest cur, in company with its master, makes them seek for security, by running up trees. When they lie in wait for the moose, or other deer, they lie

close on the branch of some tree till the animal passes beneath, when they drop down upon and soon destroy them. They also make wolves their prey. In the Museum of the Royal Society there is the skin of one which was killed just as it had pulled down a wolf. When it has satisfied itself with eating, it carefully conceals the rest of the carcase, covering it with leaves; if any other touches the relics, it never comes near them again. It sometimes purrs like a cat, and at other times makes a great howling. The fur is soft, and of some value among the Indians, who cover themselves with it during winter; and who also eat the flesh, which is said to be good and as white as veal.

F. jubata, the hunting leopard, or Guepard of Buffon, is of the size of a large greyhound, of a long make, with a narrow chest and long legs. The color of the body is a light tawny-brown, marked with numbers of small round black spots; the neck is shaggy, having a mane four or five inches long; the hair on the belly is of the same length, and the tail is longer than the body. It inhabits India; where it is tamed, and trained for the chase of antelopes. For this purpose it is carried in a small kind of waggon, chained and hoodwinked, till it approaches the herd; when first unchained, it does not immediately make its attempt, but winds along the ground, stopping and concealing itself till it gets a proper advantage, and then darts on the animals with surprising swiftness. It overtakes them by the rapidity of its bounds, but if it does not succeed in its first efforts, consisting of five or six amazing leaps, it misses its prey: losing its breath, and finding itself unequal in speed, it stands still, gives up the point for that time, and returns to its master. This species is called in India, Chittah. It is used for the taking of jackals, as well as other animals.

F. leo, the lion. The largest lions are from eight to nine feet in length, and from four to six feet high; those of a smaller size are generally about five feet and a half long, and about three and a half high. The head is very thick, and the face is beset on all sides with long bushy yellowish hair; this shaggy hair extends from the top of the head to below the shoulders; the belly and breast are likewise covered with long hair. The rest of the body is covered with very short hair, excepting a bush at the point of the tail. The ears are roundish, and almost entirely concealed under the hair of his front. The tail is long and very strong; the legs are thick and fleshy; and the feet are short: the claws are about an inch and a quarter long, of a whitish color, very crooked, and can be extended or retracted into the membranous sheath at pleasure: their points are seldom blunted, as they are never extended but when he seizes his prey. The female, or lioness, has no mane about her head or shoulders; in her we see distinctly the whole face, head, ears, neck, shoulders, breast, &c.; all these parts being in some measure concealed under the long hair of the male, give a female a very different appearance; besides, she is considerably less than the male. The hair of both male and female is of a yellowish color, and whitish on the sides and belly. Naturalists are not agreed as to the ordinary period of life in this animal which is variously stated. Buffon concludes that it ought to be about twenty-five years, or seven times the space of three or four years, as it has been asserted of the lion that he acquires maturity in three or four years after his birth. It is, however, ascertained, that in some instances, the lion lives much beyond that time. The great lion called Pompey, which died in the Tower, is recorded to have lived in captivity above seventy years; and one brought from the river Gambia died there a few years since at the age of sixty-three. In warm countries, quadrupeds in general are larger and stronger than in the cold or temperate climates. They are likewise more fierce and hardy; all their natural qualities seem to correspond with the ardor of the climate. The lions nourished under the scorching sun of Africa or the Indies, are the most strong, fierce, and terrible. Those of mount Atlas, whose top is sometimes covered with snow, are neither so strong nor so ferocious as those of Biledulgerid or Zaara, whose plains are covered with burning sand. It is in these hot and barren deserts, that the lion is the dread of travellers, and the scourge of the neighbouring provinces. But the species is not very numerous, and they even appear to diminish daily. The Romans brought many more lions out of Libya for their public shows in one year, than are now to be found in the whole country. In short, in those countries which lions chiefly inhabit, their numbers were infinitely greater in former times than they are at present. It is scarcely to be conceived how, otherwise, the Romans were able to procure the prodigious number of these animals, which, from time to time, they exhibited in their public shows. Pliny has supplied us with details on this subject, which almost surpass belief. 'Quintus Scævola,' he says, 'was the first who exhibited many of them at once, in the circus, during the time he was ædile. Sylla, in his prætorship, had 100 lions, all males, to fight at the same time.—Pompey afterwards 600 (of which 350 were males), and Cæsar 400.' Seneca, it is true, informs us, that those of Sylla had been sent to him by Bocchus, king of Mauritania; but, at this day, the princes of that country consider one or two of these animals as a grand present. The same abundance continued, during some time, under the emperors; but, in the second age, it appears to have begun to diminish, since Eutropius then considered the appearance of 100 lions, in the triumph of Marcus Aurelius, as an exhibition of great magnificence. The lions in Persia and the Indies are also said to be less numerous than formerly. As this formidable and courageous animal makes a prey of most other animals, and is himself a prey to none, this diminution in the number of the species can be owing to nothing but an increase in the number of mankind; for the strength of this king of beasts is not a match for the dexterity and address of a negro or Hottentot, who will often dare to attack him face to face, and with very slight weapons. The ingenuity of mankind augments with their number; that of other animals continues always the same. This

superiority in the numbers and industry of mankind, at the same time that it has broken the vigor of the lion, seems likewise to have enervated his courage. In the vast deserts of Zaara; in those which separate the negroes and Moors, between Senegal and the boundaries of Mauritania; in those uninhabited regions above the country of the Hottentots; and, in general, in all the meridional parts of Africa and Asia, where mankind have disdained to dwell, lions are still as numerous and as ferocious as ever. Accustomed to measure their strength by that of in all other animals which they encounter the habit of conquering renders them haughty and intrepid. Having never experienced the strength of man, or the power of his arms, instead of discovering any signs of fear, they disdain and set him at defiance. Wounds irritate, but do not terrify them: they are not even disconcerted at the sight of numbers. A single lion of the desert has been known to attack a whole caravan; and if, after a violent and obstinate engagement, he finds himself weakened, he retreats fighting, always keeping his face to the enemy. On the other hand, the lions which live near the villages or huts of the Indians or Africans, being acquainted with man and the force of his arms, are so dastardly as to fly and leave their prey at the sight of women or children. A lion taken young, and brought up among domestic animals, will easily be accustomed to his master or keeper, and refrain from injuring them. When led into captivity, he will discover symptoms of uneasiness, without anger or peevishness; on the contrary, his natural temper softens, he obeys his master, caresses the hand that gives him food, and sometimes gives life to such animals as are thrown to him alive for prey; by this act of generosity he seems to consider himself as for ever bound to protect them: he lives peaceably with them; allows them a part, and sometimes the whole, of his food; and will rather submit to the pangs of hunger, than destroy the fruit of his beneficence. Ælian, quoting Eudemus, speaks of the affection entertained by a lion for a dog. He informs us, that a lion, a dog, and a bear, lived together in the most intimate friendship. The attachment between the two first was most tender. The dog, in one of his frolics, having by accident bitten the bear, the natural ferocity of that animal returned, and he tore the offender to pieces, but the irritated lion revenged the death of his companion, by immediately destroying the bear. But as his passions are impetuous and vehement, it is not to be expected, that the impressions of education will at all times be sufficient to balance them; for this reason it is dangerous to let him suffer hunger long, or to vex him by ill-timed teazings; bad treatment not only irritates him, but he remembers it long, and meditates revenge. Labat informs us of a gentleman, who kept a lion in his chamber, and employed a servant to attend it, and who as usual mixed his caresses with blows. One morning the gentleman was awakened by an unusual noise in his room, and drawing his curtains aside, he perceived the lion growling over the body of the unhappy man, whom it had just killed, and had separated his head from his body. The terror and consternation of the gentleman may be easily conceived; he flew out of the room, obtained assistance, and secured the animal. For his ordinary subsistence, the lion requires about fifteen pounds of raw flesh each day.

The body of the lion appears to be the best model of strength joined with agility. The force of his muscles is expressed by his prodigious leaps and bounds, often twenty feet at once; by the brisk motion of his tail, a single sweep of which is sufficient to throw a man to the ground; by the ease with which he moves the skin of his face, and particularly of his forehead; and by the faculty of erecting and agitating the hair of his mane when irritated. Lions are very ardent in their amours; when the female is in season, she is often followed by eight or ten males, who roar incessantly, and enter into furious engagements, till one of them completely overcomes the rest, takes peaceable possession of the female, and carries her off to some secret recess. The length of time the lioness goes with young is variously stated by different writers; Ælian says two months, Philostratus six; among the moderns the period of gestation is said to be five months; but it has been clearly ascertained by La Cepéde, that the lioness goes with young 108 days, or rather more than three months and a half. A lion and lioness of about the same age having arrived from Northern Africa, at the menagerie of Paris, they were permitted to couple, which they did, five times in the same day. The first time the lioness was with young, she miscarried at the end of about two months, bringing forth two fetuses. The second time she produced, at the end of about 108 days, three young ones. One of these, about five hours after it came into the world, had the following measurements:—

Eighteen inches and a half from the fore part of the forehead to the origin of the tail; four inches and a quarter from the muzzle to the occiput; three inches and a quarter from one ear to the other; four inches and three quarters from the elbow to the end of the toes of the fore feet; three inches and three quarters from the knee to the heel; three inches and a half from the heel to the extremity of the toes of the hind feet; six inches and a quarter from the origin of the tail to its extremity.

These little animals were, at first, entirely destitute of hair; and we are informed that the long hair or mane on the neck and round the face of one of the males, which survived the rest, did not begin to appear till he had attained the age of nearly three years and a half; and that, from that time, this has been continually increasing in quantity. He had no tuft at the end of his tail till about the same period. The hair of all the young animals of this litter was at first woolly, and not of the same color as that of their parents, but a mixed gray and red, marked by a great number of narrow brown stripes. These were very distinct at the middle of the back, and towards the origin of the tail; and they were disposed transversely on each side of a longitudinal stripe, of the same color, that extended from the back of the head to the end of

the tail. When the mother was again with young, the three animals of the former litter became very mischievous. One of these, when about three months old, was driven, against his inclination, into the garden of the museum, when he made a spring at the keeper, Felix Cassel, and seized his arm with so much violence as to tear the sleeve of his coat. We are not able any further to describe the development of character in the above-mentioned three animals, since two of them have fallen victims to the first effects of dentition, an operation very dangerous to most animals that are produced in captivity. The lion that bit the keeper was one of those that died.

All the passions of the lion, the soft passion of love not excepted, are excessive; the love of offspring is extreme: the lioness is naturally weaker, less bold, and more gentle than the lion; but she becomes perfectly ferocious and terrible when she has young. She then regards no danger; she attacks indifferently men and animals, kills them and carries them to her young ones, whom she thus early instructs to suck their blood and tear their flesh. She generally brings forth in the most secret and inaccessible places; and, when afraid of a discovery, she endeavours to conceal the traces of her feet, by returning frequently on her steps, or rather by effacing them with her tail; and, when the danger is great, she carries off her young, and conceals them elsewhere. But, when an actual attempt is made to deprive her of her young, she becomes perfectly furious, and defends them till she be torn in pieces. The lion seldom goes abroad in the day; but sallies forth in the evening and night in quest of prey. He is afraid of fire, and seldom or never approaches the artificial fires made by the shepherds for the protection of their flocks; he does not trace animals by the scent, but is obliged to trust to his eye. Many historians have even represented him as incapable of finding out his prey; alleging that he is obliged to the jackal, an animal of exquisite scent, to provide for him, and that this animal either accompanies or goes before him for this purpose. The jackal, perhaps, sometimes follows the lion, but it is to pick up what he leaves behind, not to provide for him. The lion, when hungry, will attack any animal that presents itself; but he is so formidable, that all endeavour to avoid his rencounter; this circumstance often obliges him to conceal himself, and lie in wait till some animal chances to pass. He lies squat on his belly in a thicket; from which he springs with such force and velocity, that he mostly seizes them at the first bound. He endures hunger longer than thirst; he seldom passes water without drinking, which he does by lapping like a dog. In burning deserts, where rivers and fountains are denied, they live in a perpetual fever, a sort of madness fatal to every animal they meet with. 'The roaring of the lion,' says Dr. Sparrman, 'consists in a hoarse inarticulate sound, which at the same time seems to have hollowness in it, something like that proceeding from a speaking trumpet. The sound is between that of a German *u* and an *o*, being drawn to a great length, and appearing as if it came from out of the earth; at the same time, after listening with the greatest attention, I could not exactly hear from what quarter it came. The sound of the lion's voice does not bear the least resemblance to thunder, as M. de Buffon, tom ix. p. 22, from the voyage of Bouillage le Gouz, affirms it does. In fact, it appeared to me to be neither peculiarly piercing nor tremendous; yet, from its slow prolonged note, joined with nocturnal darkness, and the terrible idea one is apt to form to one's self of this animal, it made me shudder, even in such places as I had an opportunity of hearing it in with more satisfaction, and without having the least occasion for fear.' But when he is irritated his cry is shorter, repeated more suddenly, and is still more terrible than the roaring; he beats his sides with his tail, stamps with his feet, erects and agitates the hair of his head and mane, moves the skin of his face, shows his angry teeth, and lolls out his tongue. The gait of the lion is stately, grave, and slow, though always in an oblique direction. His movements are not equal or measured, but consist of leaps and bounds; which prevent him from stopping suddenly, and make him often over-leap his mark. When he leaps upon his prey, he makes a bound of twelve or fifteen feet, falls above it, seizes it with his fore feet, tears the flesh with his claws, and then devours it with his teeth. If he chances to miss his leap, he will not follow his prey any farther; but, as if he were ashamed, turning round towards the place where he lay in ambush, slowly, and step by step, as it were, measures the exact length between the two points, in order to find how much too short of, or beyond, the mark, he had taken his leap. One would suppose that the roaring of the lion would prove serviceable to the other animals, by warning them to betake themselves to flight; but as, when he roars, he puts his mouth to the ground, so that the sound is diffused equally all over the place, without its being possible to hear from what quarter it comes, the animals are intimidated to such a degree, as to fly about backwards and forwards in the dark to every side; in consequence of which, they often run on to the very spot from whence the sound proceeds, and which they meant most to avoid. Dr. Sparrman, in his account of the lion, detracts considerably from the character of courage and generosity generally ascribed to that animal; and relates several anecdotes in proof of his opinion. 'A yeoman,' says Dr. Sparrman, 'a man of veracity, related to me an adventure he had in these words: 'one day walking over his lands with his loaded gun, he unexpectedly met with a lion. Being an excellent shot, he thought himself pretty certain, in the position he was in, of killing it; he therefore fired his piece. Unfortunately he did not recollect that the charge had been in it for some time, and consequently was damp, so that his piece hung fire, and the ball, falling short, entered the ground close to the lion. In consequence of this he was seized with a panic, and took directly to his feet; but being soon out of breath, and closely pursued by the lion, he jumped upon a little heap of stones, and there made a stand, presenting the butt-end of his gun to his adver-

sary, fully resolved to defend his life as well as he could to the utmost. My friend did not take upon him to determine whether this position and manner of his intimidated the lion or not; it had, however, such an effect upon the creature, that it likewise made a stand, and, what was still more singular, laid itself down at the distance of a few paces from the heap of stones, seemingly quite unconcerned. The sportsman in the mean while did not dare to stir a step from the spot; besides, in his flight, he had the misfortune to lose his powder-horn. At length, after waiting a good half hour, the lion rose up, and at first went very slowly, and step by step, as if he had a mind to steal off, but as soon as it got to a greater distance it began to bound away at a great rate.'

'An elderly Hottentot,' says the same writer, 'in the service of a Christian, near the upper part of Sunday River, on the Cambdebo side, perceived a lion following him at a great distance for two hours together. Thence he naturally concluded, that the lion only waited for the approach of darkness in order to make him his prey, and in the mean time could not expect any other than to serve for this fierce animal's supper, inasmuch as he had no other weapon of defence than a stick, and knew that he could not get home before it was dark. But as he was well acquainted with the nature of the lion, and the manner of its seizing upon its prey, and at the same time had leisure between whiles to ruminate on the ways and means in which it was most likely that his existence would be put an end to, he at length hit upon a method of saving his life. For this purpose, instead of making the best of his way home, he looked out for a kilpkrans (so they generally call a rocky place, level and plain at the top, and having a perpendicular precipice on one side of it), and sitting down on the edge of one of these precipices, he found, to his great joy, that the lion likewise made a halt, and kept the same distance as before. As soon as it grew dark, the Hottentot, sliding a little forwards, let himself down below the upper edge of the precipice upon some projecting part or cleft of the rock, where he could just keep himself from falling. But, in order to cheat the lion still more, he set his hat and cloak on the stick, making with it, at the same time, a gentle motion, just over his head, and a little way from the edge of the mountain. This crafty expedient had the desired success. He did not stay long in this situation before the lion came creeping softly towards him like a cat, and, mistaking the skin cloak for the Hottentot himself, took his leap with such exactness and precision, as to fall headlong down the precipice directly close to the snare which had been set up for him.'

The strength of the lion is very great. We are informed by Dr. Sparrman, that 'this animal was once seen at the Cape to take a heifer in his mouth, and though the legs of the latter dragged on the ground, yet seemed to carry her off with the same ease as a cat does a rat. It likewise leaped over a broad dike with her without the least difficulty. A buffalo perhaps would be too cumbersome for this beast of prey, notwithstanding his strength, to seize and carry off with him in this manner. Two yeomen, upon whose veracity I can place some confidence, gave me the following account. Being a hunting near Boshies-man River with several Hottentots, they perceived a lion dragging a buffalo from the plain to a neighbouring woody hill. They, however, soon forced it to quit its prey, in order to make a prize of it themselves; and found that this wild beast had had the sagacity to take out the buffalo's large and unwieldly entrails, to be able the easier to make off with the fleshy and more eatable part of the carcase. The lion's strength, however, is said not to be sufficient alone to get the better of so large and strong an animal as the buffalo; but, to make it his prey, this fierce creature is obliged to have recourse both to agility and stratagem; insomuch that, stealing on the buffalo, it fastens with both its paws upon the nostrils and mouth of the beast, and keeps squeezing them close together, till at length the creature is strangled, wearied out, and dies. Buffaloes which had escaped from the clutches of lions, bore the marks of the claws of these animals about their mouths and noses. The lion itself, however, risked its life in such attempts, especially if any other buffalo were at hand to rescue that which was attacked. A traveller once had an opportunity of seeing a female buffalo with her calf, defended by a river at her back, keep for a long time at bay five lions, which had partly surrounded her, but did not dare to attack her. I have been informed, from very good authority, that on a plain to the east of Kromme River, a lion had been gored and trampled to death by a herd of cattle, having, urged probably by hunger, ventured to attack them in broad day light.' This the reader will, perhaps, not so much wonder at, when he is informed, that in the day time, and upon an open plain, twelve or sixteen dogs will easily get the better of a large lion. Some other important particulars, such as the hunting, &c., of the lion, together with some account of the late combats of the lions and bull dogs, we shall give under the English name of this animal. See LION.

F. leopardus, the leopard, differs from the panther and the ounce, in the beauty of his color, which is a lively yellow, with smaller spots than those of the two latter, and disposed in groups. He is larger than the ounce, and less than the panther, being about four feet long, and the tail from two to two feet and a half. He inhabits Senegal and Guinea, and, when beasts of chase fail, descends from the internal parts of Africa among the numerous herds that cover the rich meadows of the lower Guinea. It tears its prey to pieces with both claws and teeth; but is always thin, though perpetually devouring. The panther is its enemy, and destroys numbers of them. The negresses make collars of their teeth, and attribute to them certain virtues. The negroes take these animals in pit-falls, covered at the top with slight hurdles, on which is placed some flesh as a bait. They make a banquet of their flesh, which is said to be as white as veal, and very well tasted. Leopards' skins are often brought to Europe, and

reckoned very valuable. In Asia these animals are found on the mountains of Caucasus, from Persia to India; and also in China, where they are called Poupi. By the Bukharian traders, who often bring their skins to Russia, they are styled Bars. The leopard inhabits also Arabia, where it is called Nemr. Mr. Forskal says, that in that country, as well as in Egypt, it will do no harm to man unless provoked; but will enter houses by night and destroy the cats.

F. lynx Canadensis, the Canadian lynx, has pale yellow eyes, and erect ears tufted with long black hair. The body is covered with soft and long fur, cinereous tinged with tawny, or gray mixed with white, and marked with black or dusky spots more or less visible in different subjects, dependent on the age or season in which the animal is killed; the legs are strong and thick; the claws large. It is about three times the size of a cat; though only about a foot high, and the tail is four inches long, tipt with black. This species inhabits the vast forest of North America. It is called in Canada le chat cervier, or le lóup cervier, on account of its being so destructive to deer: which it drops on from the trees, like the puma, and, fixing on the jugular vein, never quits its hold till the exhausted animal falls through loss of blood. The English call it a wild cat. It is very destructive to the young pigs, poultry, and all kinds of game. The skins are in high esteem for the softness and warmness of the fur; and great numbers are annually imported into Europe.

F. caracal, the siyah-ghush, or Persian lynx, has a lengthened face and small head; very long slender ears, terminated with a long tuft of black hairs; eyes small: the upper part of the body is of a very pale reddish brown; and the belly and breast are whitish: the limbs are strong and pretty long; and the tail is about half the length of the body. These animals inhabit Arabia, Persia, India, and Barbary; where they are often brought up tame, and used in the chase of smaller quadrupeds, and the larger sort of birds, such as cranes, pelicans, peacocks, &c., which they surprise with great address. When they seize their prey, they hold it fast with their mouth, and lie for a time motionless on it. They are fierce when provoked; Dr. Charleton says, he saw one fall on a hound, which it killed and tore to pieces in a moment, notwithstanding the dog defended itself to the utmost.—The Arabian writers call it anak el ard; and say, that it hunts like the panther, jumps up at cranes as they fly, and covers its steps when hunting.

F. lynx chaus, the Caspian lynx, has a round head, a little more oblong than that of the common cat; shining restless eyes, with a most brilliant golden pupil; ears erect, oval, and lined with white hairs; their outside reddish, their summits tufted with black. The hairs are coarser than those of the cat or common lynx, but less so than those of the wolf. They are shortest on the head, but on the top of the back above two inches long. The color of the head and body is a yellowish-brown; the breast and belly of a bright brown, nearly orange. The tail reaches only to the flexure of the leg; is thick and cylindric; of the same color with the back, tipped with black, and thrice obscurely annulated with black near the end. In general appearance it has the form of the domestic cat. Its length is two feet and a half from the nose to the base of the tail: its tail little more than eleven inches: its height before is nineteen inches; behind twenty. It is sometimes found larger, there being instances of its reaching the length of three feet from the nose to the tail. This animal inhabits the reeds and woods in the marshy parts that border on the western sides of the Caspian Sea, particularly about the castle of Kislar on the river Terek, and in the Persian provinces of Ghisan and Masenderan, and frequent about the mouth of the Kur, the ancient Cyrus.—In manners, voice, and food, it agrees with the wild cat. It conceals itself in the day, and wanders over the flooded tracts in search of prey; feeding on rats, mice, and birds, but seldom climbing trees. It is excessively fierce, and never frequents the haunts of mankind. It is so impatient of captivity, that one which was taken in a trap, and had a leg broken, refused for many days the food placed by it; but in its fury devoured the fractured limb, with pieces of the stake it was fastened to, and broke all its teeth in the phrensy of its rage.

F. lynx vulgaris, the common lynx, is about two feet and a half long and fifteen inches high. He has a great resemblance to the common cat; but his ears are longer and tufted, and his tail is much shorter: his head and body are of a grayish color tinged with red; his hair is streaked with yellow, white, and black colors. The lynx inhabits the vast forests of the north of Europe, Asia, America, and Japan. His eyes are brilliant, his aspect is soft, and his air is gay and sprightly. Like the cat, he covers his urine with earth; he howls something like the wolf, and is heard at a considerable distance; he does not run like the dog or wolf, but walks and leaps like a cat; he pursues his prey even to the tops of trees; neither wild cats nor squirrels can escape him; he lies in wait for stags, goats, hares, weasels, birds, &c., and darts suddenly upon them; he seizes them by the throat and sucks their blood; then opens the head and eats the brain; after this, he frequently leaves them and goes in search of fresh prey. The color of his skin changes according to the season or the climate; the winter furs are more beautiful than those of summer. These furs are valuable for their softness and warmth: numbers are annually imported from North America, and the north of Europe and Asia; the farther north and east they are taken, the whiter they are, and the more distinct the spots. Of these the most elegant kind is called irbys, whose skin sells on the spot for £1. sterling. The ancients, particularly Pliny, (viii. 8.) celebrated the great quickness of the lynx's sight; and feigned that its urine was converted into a precious stone.

F. onca, the American tiger, the jaguar of Buffon, is of a bright tawny color; the top of the back marked with long stripes of black; the sides with rows of eyes like annular spots, open in the middle, which is of the ground color of the hair: the thighs and legs are marked with full spots of black, the breast and belly whitish: the tail

is half the length of the body. This species, which grows to the size of a wolf, and even larger, inhabits the hottest parts of South America, from the isthmus of Darien to Buenos Ayres. It is fierce, and destructive to man and beast. Like the tiger, it plunges its head into the body of its prey, and sucks out the blood before it devours it. It makes a great noise in the night, like the howling of a hungry dog; and is very cowardly. It is easily put to flight, either by the shepherds' dogs, or by a lighted torch, being very fearful of fire. It lies in ambush near the sides of rivers.

F. pardalis, the Mexican panther, or ocelot of Buffon, has its head, back, upper part of the rump, and tail, of a bright tawny; a black stripe extending along the top of the back, from head to tail; and, from the nostrils to the corners of the eyes, there also runs a stripe of black: the sides are whitish, marked lengthways with long stripes of black, hollow and tawny in the middle, in which are sprinkled some small black spots; the legs are whitish, varied with small black spots; and the tail is also varied with small spots near its base, and larger near the end, which is black. It is above four times the size of a large cat, and strongly made. It inhabits Mexico, California, the neighbourhood of Carthagena, and Brasil. It lives in the mountains; and is very voracious, but fearful of mankind; preying on young calves, and different sorts of game. It lurks amidst the leaves of trees; and sometimes will extend itself along the boughs as if dead, till the monkeys, tempted by their natural curiosity, approaching to examine it, become its prey.

F. pardus, the panther, is about the size of a large dog, and has a great resemblance to a domestic cat. The tongue is rough, and remarkably red; the teeth are strong and sharp; the skin is exceedingly beautiful, being of a yellow or bright tawny color, variegated with roundish black spots, and the hair is short. Each spot is composed of four or five small spots, with a single spot in the centre. He has a cruel and ferocious aspect; his motions are brisk and lively; his cry resembles the growl of an enraged dog, but is more strong and rough. The panther inhabits Africa, from Barbary to the remotest parts of Guinea. This species is next in size to the tiger; next to it in cruelty, and its general enmity to the animal creation: it is to Africa what the former is to Asia, with this alleviation, that it prefers the flesh of brutes to that of mankind; but, when pressed with hunger, attacks every living creature without distinction. Its manner of taking its prey is the same with that of the tiger, always by surprise, either lurking in thickets or creeping on its belly till it comes within reach; it will also climb up trees in pursuit of monkeys and smaller animals, so that none are secure from its attacks. He is not so perfectly ungovernable as the tiger: but, notwithstanding all attempts to render him obedient and tractable, he may rather be said to be subdued than tamed; for he never entirely loses his natural ferocity. Accordingly, when kept with a view to the hunting of bucks, goats, or other animals, great care is necessary in training him, and still greater in conducting him. When leading out to the field, they put him in a cage and carry him on a cart. When the game is sprung, they open the door of the cage; he instantly springs towards the animal, often seizes him in a few bounds, throws him to the ground, and strangles him. But if he happens to miss his aim, he becomes mad with rage, and sometimes falls upon his master, who, to prevent such accidents, generally carries along with him pieces of flesh, or perhaps a lamb or a kid, which he throws to him in order to appease his fury. The ancients were well acquainted with these animals. Scaurus exhibited at one time 150 panthers; Pompey the Great 410; Augustus, 420. Probably they thinned the coasts of Mauritania of these animals, but they still swarm in the southern parts of Guinea. Oppian describes two species of panthers, a large and a small one; the first of which has a shorter tail than the smaller, and may possibly be this kind. An animal of this species is found in Bukharia, called there Babr; it is seven feet long, very destructive to horses, and even camels; the skin is fine, and valued in Russia at £1 sterling. In China there is a most remarkable kind, called there louchu, whose skins sell at £6 sterling a-piece. These skins equal those of the old continent in beauty and size. Though Buffon denies the panther to be an inhabitant of America, yet Pennant is of opinion that the same, or a variety at least, inhabits that country.

F. serval, the serval, has the upper part of the body of a dusky color, interspersed with round black spots; the belly and the orbits of the eyes are white. This animal, which is very fierce and untameable, inhabits the woods in the mountainous parts of India and Thibet; where it lives in trees and breeds in them. It scarcely ever descends on the ground; but leaps with great agility from tree to tree. It is called by the natives of Malabar the maraputé, by the Portuguese the serval.

F. tigrina, the margay of Buffon, is about the size of a common cat. The upper part of the head, the neck, back, sides, shoulders, and thighs, are of a bright tawny color; the face is striped downwards with black: the shoulders and body are marked with stripes and oblong large black spots: the legs with small spots: the thighs are whitish spotted with black: the tail is very long, marked with black, tawny and gray. It inhabits South America, where it lives on the feathered game and on poultry. It is untameable. It makes a noise like the common cat, lives much in trees; it is very active and goes by bounds or leaps. It brings forth in all seasons of the year, in hollow trees, and has two at a time.

F. tigris, the tiger, according to some authors is larger, and according to others somewhat less, than the lion. M. de la Landemagon assures us, that he has seen a tiger in the East Indies fifteen feet long, including undoubtedly the length of the tail, which, supposing it to be four feet, makes the body of the tiger about eleven feet in length. The skeleton preserved in the ci-devant royal cabinet at Paris, indicates that the animal was about seven feet long from the point of the muzzle to the origin of the tail;

but then it must be considered, that he was caught young, and lived all his days in confinement. The head of the tiger is large and roundish; and the ears are short, and at a great distance from each other. The form of the body has a great resemblance to that of the panther. The skin is of a darkish yellow color striped with long black streaks; the hair is short, excepting on the sides of the head, where it is about four inches long. The point of the tail is black, and the rest of it is interspersed with black rings. His legs and claws resemble those of the lion, only the legs are much shorter in proportion to the size of the animal. The tiger is more ferocious and savage than the lion. Although gorged with carnage, his thirst for blood is not appeased; he seizes and tears in pieces a new prey with equal fury and rapacity, the very moment after devouring a former one; he lays waste the country he inhabits; he neither dreads the aspect nor the weapons of men; slaughters whole troops of domestic animals; and attacks young elephants, rhinoceroses, &c., and sometimes even braves the lion himself. The tiger seems to have no other instinct, but a constant thirst after blood, a blind fury which knows no bounds or distinction, and which often stimulates him to devour his own young, and to tear the mother in pieces for endeavouring to defend them. He lies in wait on the banks of rivers, &c., where the heat of the climate obliges other animals to repair for drink. Here he seizes his prey, or rather multiplies his massacres; for he no sooner kills one animal, than he flies with equal fury upon the next, plunges his head into their bodies and drinks their blood. However, when he kills a large animal, as a horse or buffalo, he sometimes does not tear out the entrails on the spot, but, to prevent any interruption, drags off the whole carcase to the wood, with incredible swiftness. This is a sufficient specimen of the strength of this rapacious animal. Neither indulgence nor restraint can tame the tiger. He is equally irritated with good as with bad treatment: he tears the hand which nourishes him with equal fury as that which administers blows: he roars and is enraged at the sight of every living creature. There is a sort of cruelty in his devastations, unknown to the lion; as well as a cowardliness in his sudden retreat on any disappointment. 'I was informed,' says Pennant, 'by very good authority, that, in the beginning of this century, some gentlemen and ladies, being on a party of pleasure, under a shade of trees, on the bank of a river in Bengal, observed a tiger preparing for its fatal spring; one of the ladies, with amazing presence of mind, laid hold of an umbrella, and furled it full in the animal's face, which instantly retired, and gave the company an opportunity of removing from so terrible a neighbour. Another party had not the same good fortune: a tiger darted among them while they were at dinner, seized on one gentlemen, carried him off, and he never was more heard of.' There is in some parts of India a popular notion, that the rhinoceros and the tiger are in friendship, because they are often found near each other. But Mr. Pennant says, the fact is, that the rhinoceros, like the hog, loves to wallow in the mire; and, on that account, frequents the banks of rivers; the tiger, to quench his raging thirst, is met with in places contiguous to them. Pliny has been often censured by the moderns, for calling the tiger animal tremendæ velocitatis; they allow it great agility in its bounds, but deny its swiftness in pursuit. Two travellers of authority, however, both eye-witnesses, confirm what Pliny says: the one indeed only mentions in general its vast fleetness: the other saw a trial between one and a swift horse, whose rider escaped merely by getting amidst a circle of armed men. The chase of this animal was a favorite diversion with the great Cam-hi, the Chinese monarch, in whose company Mr. Bell, and father Gerbillon, saw these proofs of the tiger's speed. The tiger, according to Mr. Pennant, is peculiar to Asia; and is found as far north as China and Chinese Tartary, and about lake Aral and the Altaic mountains. It inhabits Mount Ararat and Hyrcania, famous of old for wild beasts; but the greatest numbers, the largest, and the most cruel, are met with in India and its islands. In Sumatra the natives are so infatuated that they seldom kill them, having a notion that they are animated by the souls of their ancestors. The tiger has always been more rare than the lion; though the female brings forth an equal number of young, viz. four or five at a litter. The female is furious at all times; but, when her young are attempted to be taken from her, her rage is redoubled: she braves every danger: she pursues the ravishers, who are obliged, when hard pressed, to drop one of the young in order to retard her motion; she stops, takes it up, and carries it into some secret part of the forest; but she instantly returns and pursues the hunters into their villages or boats. The tiger moves the skin of his face, grinds his teeth, and roars, like the lion; but the sound of his voice is different.

F. uncia, the ounce, is less than the panther; the tail is longer; the hair is likewise longer, and of a whitish-gray color, marked with irregular black spots. The ounce is easily tamed; and is employed in hunting in several parts of Asia, where dogs are very scarce. He has not the delicate scent of a dog; does not trace other animals by the smell; neither can he run them down in a fair chase; but lies in wait for their approach, and then darts upon them unawares. He leaps so nimbly, that he easily clears a ditch or a wall several feet high; he often climbs trees, waits till some animal passes, and instantly leaps upon them. This method of catching their prey, is practised by the panther and leopard, as well as by the ounce. The ounce inhabits Barbary, Persia, Hyrcania, and China; from which last place the skins are brought into Russia, and sold for 20*s.* a-piece. It is an animal of a more gentle and mild nature than most of the preceding. It is like the F. leopardus, used for the chace of antelopes, and even hares; but, instead of being conveyed in a waggon, is carried on the crupper on horseback. It is under as much command as a setting-dog; returns at the least call, and jumps up behind its master. This animal is supposed to be the *παρδαλις ολιγοτερα*,

or less panther of Oppian, and the panthera of Pliny.

FELL, *adj.* } Sax. ꝑelle; Old Fr. Teut. and Belg *fel*. Cruel; barbarous; savage; atrocious.
FELLNESS, *n. s.* }
FELLY, *adj.* }

Soone meete they both; both *fell* and furious,
That daunted with their forces hideous
Their steeds doe stagger, and amazed stand.
Spenser's Faerie Queene.

When his brother saw the red blood trail
Adown so fast, and all his armour steep,
For very *fellness* loud he 'gan to weep. *Id.*

Fair ye be sure, but cruel and unkind;
As is a tyger, that with greediness
Hunts after blood, when he by chance doth find
A feeble beast doth *felly* him oppress. *Spenser.*

So *fellest* foes,
Whose passions and whose plots have broke their sleep,
To take the one the other, by some chance,
Some trick not worth an egg, shall grow dear friends.
Shakspeare.

It seemed fury, discord, madness *fell*,
Flew from his lap when he unfolds the same.
Fairfax.

I know thee, love! wild as the raging main,
More *fell* than tygers on the Lybian plain. *Pope.*

Scorning all the taming arts of man,
The keen hyena, *fellest* of the *fell*. *Thomson.*

T' indulge *fell* Rapine's desolating lust,
To drench the balmy lawn in streaming gore,
To spurn the hero's cold and silent dust—
Are these thy joys? Nor throbs thy heart for more?
Beattie.

FELL, *n. s.* } Sax. ꝑele; Teut. *fell*; Belg. *vel*, of Goth. *vela*, to cover; or, as some writers think, from Lat *pellis*; Gr. φελλος. The skin; the hide of a beast: a fellmonger is one that dresses or prepares hides.
FELLMONGER, }

Wipe thine eye;
The goujers shall devour them, flesh and *fell*,
Ere they shall make us weep. *Shakspeare.*

The time has been my senses would have cooled
To hear a night-shriek; and my *fell* of hair
Would at a dismal treatise rouse and stir. *Id.*

FELL, *v. a.* } Sax. ꝑyllan; Teut. *fellen*; Goth. *fella*. To knock down; bring to the ground; down, or along, added seem redundant.
FELLER, *n. s.* }

Since thou art laid down, no *feller* is come up against us. *Isa.* xiv. 8.

Whom so dismayd when that his foe beheld,
He cast to suffer him no more respire,
But gan his sturdy sterne about to weld,
And him so strongly stroke, that to the ground him *feld*
Spenser's Faerie Queene.

Then would he seem a farmer that would sell
Bargains of woods, which he did lately *fell*. *Hubberd.*

Villain, stand, or I'll *fell* thee down. *Shakspeare.*

Up and down he traverses his ground;
Now wards a *felling* blow, now strikes again,
Dan.

Taking the small end of his musket in his hand, he struck him on the head with the stock, and *felled* him.
Raleigh.

Whereas great Arthur lies in ruder oke;
That never felt none but the *feller's* stroke.
Bp. Hall's Satires.

On their whole host I flew
Unarmed, and with a trivial weapon *felled*
Their choicest youth: they only lived who fled.
Milton.

Proud Arcite and fierce Palamon,
In mortal battle, doubling blow on blow;
Like lightning flamed their falchions to and fro,
And shot a dreadful gleam; so strong they struck,
There seemed less force required to *fell* an oak.
Dryden.

I *felled along* a man of bearded face,
His limbs all covered with a shining case. *Id.*

The poplars are *felled*, farewell to the shade,
And the whispering sound of the cool colonnade.
The winds play no longer and sing in the leaves,
Nor Ouse in his bosom their image receives. *Cowper.*

FELL. See FALL.

FELL (Dr. John), a learned English divine, born at Longworth in Berkshire, in 1625, and educated at Christ Church, Oxford, of which his father was dean. In 1648 he was ejected by the parliamentary visitors, being then in orders; and from that time to the Restoration, lived at Oxford a retired and studious life. He was installed canon of Christ Church, in July 1660; and dean in 1661; in which places he did great services to the college, and reformed several abuses. He was consecrated bishop of Oxford in 1675; and had leave to hold his deanery in commendam, that he might continue his services to the college and university. He published several works, and died in 1686.

FELL (John), an English dissenting minister, and controversial writer, born at Cockermouth in Cumberland in 1732. He was bred a taylor, and followed this occupation for some time in London, but soon after, he was enabled by a friend to pursue his studies at an academy, after which he became pastor of a congregation at Beccles, near Yarmouth, whence he removed to Thaxted in Essex, where he also kept a boarding school. After several years residence at Thaxted, he accepted an invitation to be resident tutor in the dissenting academy at Homerton. But he had not been long there, before a misunderstanding took place between him and the managers of that institution, which ended in his dismissal. Some respectable friends then subscribed a yearly stipend of £100, for which he was to deliver a course of lectures on the evidences of Christianity. Four of these were preached by him in 1797, but he died on the 6th of September in that year. The late Dr. H. Hunter completed and published the lectures. Mr. Fell was a man of considerable erudition; he was the author of an answer to Mr. Farmer's Essay on the Demoniacs, and also to that on the Idolatry of Greece and Rome by the same gentleman: this last, which was published in 1785, is an acute and learned treatise. Besides these, he wrote an Essay on the Love of One's Country; Genuine Protestantism; A letter to Mr. Burke on the Penal Laws; An Essay towards an English Grammar, &c.

FELLER (Francis Xavier), known for some time as Flexier de Reval, a name which he assumed on the suppression of the society of Jesuits, to which he belonged; was a native of Brussels, born in 1735, and enjoyed a reputation for learning. But his principal work, an Historical Dictionary, printed at Liege in eight octavo volumes, has been attacked on the score of piracy by the proprietors of the Nouveau Dictionnaire Historique. His other writings are:

A Reply to Buffon's Epochs of Nature; Remarks on the Newtonian Philosophy; a Geographical Dictionary; and a literary and historical journal entitled Clef des Cabinets, published at Luxemburgh from 1774 to 1794. He died at Ratisbon in 1802.

FELLER (Joachim), a German poet, was a native of Zwickhau, and born in 1638: he was chosen professor of poetry at Leipsic in 1661. At an early age he wrote a poem on the passions. His principal compositions, which he wrote in Latin, are Flores Philosophici; Notæ in Lotichicii eclogam, &c.; Cygni quasimodo geniti sanctæ virorum celebrium Cygneæ (Zwickhau) veterum; and some annotations on the works of Horace. In 1676 he became librarian to the university of Leipsic. Having contracted a habit of walking in his sleep, he fell at length from a window during one of his fits of somnambulism, and died in 1691, from the effects of the fall.

FELLER (Joachim Frederick), son of the above, was born in 1673 at Leipsic, where he graduated in philosophy. The duke of Weimar appointed him his secretary in 1706, a situation he filled during twenty years; travelling a considerable part of the time, under his patron's auspices. He published Monumenta varia inedita, in twelve 4to numbers, printed in 1714 at Jena; a Genealogy of the House of Brunswick Lunenburgh, 8vo.; Otium Hanoverianum; and Miscellanea Leibnitiana; and died in 1726.

FELLIF'LUOUS, *adj.* Lat. *fel* and *fluo*. Flowing with gall.

FE'LLOE, *n. s.* Dan. and Teut. *felge*. The circumference of a wheel; the outward part. It is often written fally or felly.

Axle-trees, naves, *felloes*, and spokes, were all molten. *Kings.*

Out, out, thou strumpet Fortune! all you gods,
In general synod, take away her power;
Break all the spokes and *fellies* from her wheel,
And bowl the round nave down the hill of heaven.
Shakspeare.

FELLOW, *n. s.* & *v. a.*
FELLOW-CITIZEN, *n. s.*
FELLOW-COMMONER,
FELLOW-COUNSELLOR,
FELLOW-CREATURE,
FELLOW-FEELING,
FELLOW-HEIR,
FELLOW-HELPER,
FELLOW-LABORER,
FELLOW-LIKE, *adj.*
FELLOWLY,
FELLOW-MAIDEN, *n. s.*
FELLOW-MEMBER,
FELLOW-MINISTER,
FELLOW-PEER,
FELLOW-PRISONER,
FELLOW-SCHOLAR,
FELLOW-SERVANT,
FELLOWSHIP,
FELLOW-SOLDIER,
FELLOW-STUDENT,
FELLOW-SUBJECT,
FELLOW-SUFFERER,
FELLOW-TRAVELLER,
FELLOW-WORKER,
FELLOW-WRITER.

Sax. ꝑelaꝩ; Goth. *felag*, a companion; community; Swed. *fælage*; Scot. *fallow*, 'quasi, to follow', Minsheu, from Sax. ꝑe, faith, and laȝ, bound.—Junius. A companion; associate; equal; one of a literary community, or privileged fraternity of scholars; one of the same kind; one of a pair: a familiar compellation, and appellation, sometimes expressing mere familiarity, at other times contempt, pity, and even abhorrence: to fellow is to suit, or pair with: fellowship is companionship; consent; association; the privileged state of a fellow at college; a rule of arithmetic; a disposedness to good living or jollity, having 'good' generally prefixed. The compounds explain themselves.

What if ony of the branchis ben broken whanne thou were a wielde olyue tree art graffid among hem, art maad *felowe* of the roote and of the fatnesse of the olyue tree? *Wiclif. Romaynes* xi.

Now, therefore, ye are no more strangers and foreigners, but *fellow-citizens*, with the saints. *Ephes.* xi. 19.

The Gentiles should be *fellow-heirs*. *Id.* iii. 6.

Epaphroditus, my brother and companion in labour, and *fellow-soldier*. *Phil.* ii. 25.

Those only are my *fellow-workers* to the kingdom of God. *Col.* iv. 11.

There salute thee Epaphras, my *fellow-prisoner* in Christ, &c. *Philem.* 23.

We ought to receive such, that we might be *fellow-helpers* to the truth. 3 *John*, 8.

In youth I had twelve *fellows* like unto myself, but not one of them came to a good end. *Ascham.*

One seed for another to make an exchange,
With *fellowly* neighbourhood seemeth not strange.
Tusser.

Those laws do bind men absolutely, even as they are men, although they have never any settled *fellowship*, never any solemn agreement among themselves. *Hooker.*

Most of the other Christian princes were drawn into the *fellowship* of that war. *Knolles.*

To be your *fellow*,
You may deny me: but I'll be your servant,
Whether you will or no. *Shakspeare. Tempest.*

I have great comfort from this *fellow*: methinks he hath no drowning mark about him; his complexion is perfect gallows. *Id.*

Imagination,
With what's unreal, thou co-active art,
And *fellowest* nothing. *Shakspeare.*

This is Othello's ancient, as I take it.
—The same indeed; a very valiant *fellow*. *Id.*

Cassio hath here been set on in the dark
By Roderigo, and *fellows* that are 'scaped. *Id.*

To quench mine honour; they add shame to make me
Wait else at door; a *fellow-counsellor*
Among boys, grooms, and lackeys.
Id. Henry VIII.

She, questionless, with her sweet harmony,
Is with her *fellow-maidens* now within.
Id. Pericles.

You shall not need, my *fellow-peer* of Tyre,
Further to question of your king's departure,
His sealed commission's left with me. *Id.*

My *fellow-ministers*
Are alike invulnerable. *Id. Tempest.*

You ——— ———
Have sworn for three years' time to live with me
My *fellow-scholar*. *Id. Love's Labour Lost.*

We would not die in that man's company,
That fears his *fellowship* to die with us.
Shakspeare.

Come, *fellow-soldier*, make thou proclamation. *Id.*

I pr'y thee, do not mock me, *fellow-student*.
Id. Hamlet.

An officer was in danger to have lost his place, but his wife made his peace; whereupon a pleasant *fellow* said, that he had been crushed, but that he saved himself upon his horns. *Bacon.*

There should be a mission of three of the *fellows* or brethren of Solomon's house, to give us knowledge of the affairs and state of those countries to which they were designed. *Id.*

In a great town friends are scattered, so that there is not that *fellowship* which is in less neighbourhoods. *Id. Essays.*

Chieftain of the rest
I chose him here: the earth shall him allow;
His *fellows* late, shall be his subjects now.
Fairfax.

All which good parts he graceth with a good *fellow-like*, kind, and respectful carriage. *Carew.*

Eighty pounds per annum for a *fellow-commoner* [at Cambridge] was looked on as a sufficient maintenance. *Prideaux.*

Homer in his Odyssey, speaking of Ulysses, and Elpenor his *fellow-traveller*, &c. *Sir T. Herbert.*

Whence are our depopulations and inclosures, but for that men cannot abide either *fellows* or neighbours? *Bp. Hall's Contemplations.*

He had by his excessive *good fellowship*, which was grateful to all the company, made himself popular with all the officers of the army. *Clarendon.*

Nearer acquainted, now I feel by proof
That *fellowship* in pain divides not smart,
Nor lightens aught each man's peculiar load.
Paradise Regained.

Let partial spirits still aloud complain,
Think themselves injured that they cannot reign,
And own no liberty, but where they may
Without controul upon their *fellows* prey. *Waller.*

Those great *fellows* scornfully receiving them, as foolish birds fallen into their net, it pleased the eternal Justice to make them suffer death by their hands. *Sidney.*

So you are to be hereafter *fellows*, and no longer servants, *Id.*

Have we not plighted each our holy oath,
That one should be the common good of both;
One soul should both inspire, and neither prove
His *fellow's* hindrance in pursuit of love? *Dryden.*

As next of kin, Achilles' arms I claim;
This *fellow* would ingraft a foreign name
Upon our stock. *Id.*

My *fellow-labourers* have commissioned me to perform in their behalf this office of dedication. *Id. Juvenal, Dedication.*

O love! thou sternly dost thy power maintain,
And will not bear a rival in thy reign;
Tyrants and thou all *fellowship* disdain. *Dryden.*

How happy was it for those poor creatures, that your grace was made their *fellow-sufferer*? And how glorious for you, that you chose to want rather than not relieve? *Id.*

The *fellow* had taken more fish than he could spend while they were sweet. *L'Estrange.*

A shepherd had one favourite dog: he fed him with his own hands, and took more care of him than of his *fellows*. *Id.*

It is a high degree of inhumanity not to have a *fellow-feeling* of the misfortune of my brother. *Id.*

He cannot appropriate, he cannot inclose, without the consent of all his *fellow-commoners*, all mankind. *Locke.*

God having designed man for a sociable creature, made him with an inclination, and under the necessity to have *fellowship* with those of his own kind. *Id.*

We have one peculiar elegance in our language above all others, which is conspicuous in the term '*fellow*.' This word, added to any of our adjectives, extremely varies, or quite alters the sense of that with which it is joined. Thus, though 'a modest man' is the most unfortunate of all men, yet a modest *fellow* is as superlatively happy. A 'modest *fellow*' is a ready creature, who, with great humility, and as great forwardness, visits his patrons at all hours, and meets them in all places, and has so moderate an opinion of himself, that he makes his court at large. *Tatler.*

Since they cannot raise themselves to the reputation of their *fellow-writers*, they must sink it to their own pitch, if they would keep themselves upon a level with them. *Addison.*

When virtue is lodged in a body, that seems to have been prepared for the reception of vice; the soul and the body do not seem to be *fellows*. *Id. Spectator.*

We in some measure share the necessities of the poor at the same time that we relieve them, and make ourselves not only their patrons but *fellow-sufferers*. *Id.*

Their fathers and yours were *fellow-servants* to the same heavenly master while they lived; nor is that relation dissolved by their death, but ought still to operate among their surviving children. *Atterbury.*

Even your milkwoman and your nurserymaid have a *fellow-feeling*. *Arbuthnot.*

You'll find, if once the monarch acts the monk,
Or, cobler-like, the parson will be drunk,
Worth makes the man, and want of it the *fellow*;
The rest is all but leather and prunella. *Pope.*

The bleeding condition of their *fellow-subjects* was a feather in the balance with their private ends. *Swift.*

If you have no *fellow-student* at hand, tell it over with your acquaintance. *Watts's Logick.*

We signify our being united to each other as *fellow-members*. *Whole Duty of Man.*

Self-knowledge, moreover, implies a due attention to the several relations in which we stand to our *fellow-creatures*; and the obligations that result from thence. *Mason.*

When blockheads rattle the dice-box, when *fellows* of vulgar and base minds sit up whole nights contemplating the turn of a card, their stupid occupation is in character. *Cumberland.*

A young *fellow* who seems to have no will of his own, and does every thing that is asked of him, is called a very good-natured, but at the same time is thought a very silly, young *fellow*. *Chesterfield.*

Their poet, a sad trimmer, but no less
In company a very pleasant *fellow*,
Had been the favourite of full many a mess
Of men, and made them speeches when half mellow.
Byron.

FELO-DE-SE. See SUICIDE.

FEL'ON, *n. s.* & *adj.* FELO'NIOUS, *adj.* FELO'NIOUSLY, *adv.* FELON'OUS, *adj.* FELON'Y, *n. s.* FELO-DE-SE, *n. s.* Sax. *fel*; Goth. and Swed. *fel*, a fault; Fr. *felon*; Low. Lat. *felo*; Minsheu says, from *fell*, crime, and *one*. One who has committed a serious crime; a capital offender; a whitlow: as an adjective, fierce; cruel; inhuman; wicked; which is also the meaning of felonious and the obsolete felonous: felony is legally defined in our article.

Ah me! what thing on earth, that all things breeds,
Might be the cause of so impatient plight!
What fury, or what fiend with *felon* deeds,
Hath stirred up so mischievous despight! *Spenser.*

I am like for desperate dole to die,
Through *felonous* force of mine enemy. *Id.*

I apprehend thee for a *felon* here.
Shakspeare.

I will make it *felony* to drink small beer.
Id. Henry VI.

This man conceived the duke's death; but what was the motive of that *felonious* conception is in the clouds. *Wotton.*

O thievish night!
Why should'st thou, but for some *felonious* end,

In thy dark lanthorn thus close up the stars
That nature hung in heaven, and filled the lamps
With everlasting oil, to give due light
To the misled and lonely traveller? *Milton.*

The wily fox,
Chased even amid' the folds; and made to bleed,
Like *felons*, where they did the murderous deed.
Dryden.

In thy *felonious* heart though venom lies,
It does but touch thy Irish pen, and dies. *Id.*

The malign paronychia is that which is commonly called a *felon*. *Wiseman's Surgery.*

Then with deep-opening mouth,
That makes the welkin tremble, he proclaims
The' audacious *felon*. *Somervile.*

Then bids prepare the' hospitable treat,
Vain shews of love to veil his *felon* hate
Pope.

But, though the *felon* on his back could dare
The dreadful leap, more rational, his steed
Declined the death, and wheeling swiftly round,
Or e'er his hoof had pressed the crumbling verge,
Baffled his rider, saved against his will. *Cowper.*

Next view in state, proud prancing on his roan,
The golden-crested haughty Marmion,
Now forging scrolls, now foremost in the fight,
Not quite a *felon*, yet but half a knight,
The gibbet or the field prepared to grace,
A mighty mixture of the great and base. *Byron.*

FELONY, says Blackstone, in the general acceptation of the law, comprises every species of crime which occasions, at common law, the forfeiture of lands or goods. This most frequently happens in those crimes for which a capital punishment either is or was to be inflicted: for those felonies that are called clergyable, or to which the benefit of clergy extends, were anciently punished with death in all lay, or unlearned, offenders; though now, by the statute law, that punishment is for the first offence universally remitted. Treason itself, says Sir Edward Coke, was anciently comprised under the name of felony: and, in confirmation of this, we may observe that the statute of treasons, 25 Ed. III. c. 2, speaking of some dubious crimes, directs a reference to parliament: that it may be there adjudged 'whether they be treason or other felony.' All treasons, therefore, strictly speaking, are felonies; though all felonies are not treason. And all offences now capital are in some degree or other felony: but this is likewise the case with some other offences which are not punished with death; as suicide, where the party is already dead; homicide by chance-medley, or in self-defence; and petit larceny, or pilfering; all of which are, strictly speaking, felonies, as they subject the committers of them to forfeitures. So that, upon the whole, the only adequate definition of felony seems to be, an offence which occasions a total forfeiture of lands or goods, or both, at the common law; and to which capital or other punishment may be superadded, according to the degree of guilt. To explain this farther: The word felony, or felonia, is of undoubted feodal original, being frequently to be met with in the books of feuds, &c.; but the derivation of it has much puzzled the juridical lexicographers, Pratæus, Calvinus, and the rest: some deriving it from the Greek φηλος, an impostor or deceiver; others from the Latin fallo, fefelli, to countenance which they would have it called felonia. Sir Edward Coke has given us a still stranger etymology; that it is crimen animo felleo perpetratum, 'with a bitter or gallish inclination.' But all of them agree in the description, that it is such a crime as works a forfeiture of all the offender's lands or goods. And this gives a great probability to Sir Henry Spelman's Teutonic or German derivation of it: in which language indeed, as the word is clearly of feodal original, we ought rather to look for its signification, than among the Greeks and Romans. Fe-lon then, according to him, is derived from two northern words; fee, which signifies the fief, feud, or beneficiary estate; and lon, which signifies price or value. Felony is therefore the same as pretium feudi, the consideration for which a man gives up his fief; as we say in common speech, such an act is as much as your life, or estate, is worth. In this sense it will clearly signify the feodal forfeiture, or act by which an estate is forfeited, or escheats, to the lord.

To confirm this, we may observe, that it is in this sense, of forfeiture to the lord, that the feodal writers constantly use it. For all those acts, whether of a criminal nature or not, which at this day are generally forfeitures of copy-hold estates, are styled felonia in the feodal law: 'scilicet, per quas feudum amittitur.' As 'si domino deservire noluerit; si per annum et diem cessaverit in petenda investitura: si dominum ejuravit, i. e. negavit se à domino feudum habere; si à domino in jus eum vocante, ter citatus non comparuerit;' all these, with many others, are still causes of forfeiture in our copy-hold estates, and were denominated felonies by the feodal constitutions. So likewise injuries of a more substantial or criminal nature were denominated felonies, that is forfeitures: as assaulting or beating the lord; vitiating his wife or daughter; 'si dominium cucurbitaverit, i. e. cum uxore ejus concubuerit:' all these are esteemed felonies, and the latter is expressly so denominated, si fecerit feloniam, dominium forte cucurbitando. And as these contempts, or smaller offences, were felonies, or acts of forfeiture, of course greater crimes, as murder and robbery, fell under the same denomination. On the other hand, the lord might be guilty of felony, or forfeit his seignory to the vassal, by the same act as the vassal would have forfeited his feud to the lord. 'Si dominus commisit felonian, per quam vasallus amitteret feudum si eam commiserit in dominum, feudi proprietatem etiam dominus perdere debet. One instance given of this sort of felony in the lord is beating the servant of his vassal, so as that he loses his services, which seems merely in the nature of a civil injury, so far as it respects the vassal. And all these felonies were to be determined, 'per juramentum sive judicium parium suorum,' in the lord's court; as with us forfeitures of copy-hold lands are presentable by the homage in the court-baron. Felony, and the act of forfeiture to the lord, being thus synonymous terms in the feodal law, we may easily trace the reason why, upon the introduction of that law into England, those crimes which induced such forfeiture or escheat of lands (and, by a small deflexion from the original

sense, such as induced the forfeiture of goods also) were denominated felonies. Thus it was that suicide, robbery, and rape, were felonies; that is, the consequence of such crimes was forfeiture; till by long use we began to signify, by the term felony, the actual crime committed, and not the penal consequence. And upon this system only can we account for the cause why treason, in ancient times, was held to be a species of felony; because it induced a forfeiture. Hence it follows, that capital punishment does by no means enter into the true idea and definition of felony. Felony may be without inflicting capital punishment, as in the cases instanced of self-murder, excusable homicide, and petit larceny: as in case of heresy by the common law, which, though capital, never worked any forfeiture of lands or goods, an inseparable incident to felony. And of the same nature was the punishment of standing mute, without pleading to an indictment; which at the common law was capital, but without any forfeiture, therefore such standing mute was no felony. In short the true criterion of felony is forfeiture; for, as Sir Edward Coke justly observes, in all felonies which are punishable with death, the offender loses all his lands in fee simple, and also his goods and chattels; in such as are not punishable, his goods and chattels only. The idea of felony is indeed so generally connected with that of capital punishment, that we find it hard to separate them; and to this usage the interpretations of the law now conform. And therefore, if a statute make any new offence felony, the law implies that it shall be punished with death, viz. by hanging as well as with forfeiture: unless the offender prays for benefit of clergy; which all felons are entitled once to have, unless the same is expressly taken away by statute. If a statute make the doing of an act felonious, and a subsequent act make it penal only, the latter is considered as a virtual repeal of the former.

Felonies are several, and cannot be joint; so that the pardon of one felon cannot discharge another; though the felony of one man may be dependent upon that of another. Henry I. was the first who ordered felons to be hanged, about the year 1108. The judgment against a man for felony has been the same since the reign of that king, i. e. that he be hanged by the neck till dead; which is entered suspendatur per collum, &c., 4 Inst. 124. As well as loss of life, felony is punished with forfeiture of lands not entailed, goods and chattels. Heretofore felony worked corruption of blood; unless a statute making an offence felony ordained it otherwise, as many statutes did; and at last, by stat. 54 Geo. III. c. 145, no corruption of blood takes place for any felony (not treason) except murder or petty treason.

The punishment of a person for felony, by our ancient books, is 1. To lose his life: 2. To lose his blood, as to his ancestry, and so as to have neither heir nor posterity; 3. To lose his goods; 4. To lose his lands, and the king shall have annum diem et vastum, to the intent that his wife and children be cast out of the house, his house pulled down, and all that he had for his comfort or delight destroyed. 4 Rep 124. By stat. 53 Geo. III., c. 162, any court may pass on persons convicted of felony with benefit of clergy (or of grand or petit larceny) sentence of imprisonment to hard labor, either singly and alone, or in addition to any other sentence. A former provision, as to passing this sentence on felons, by 52 Geo. III. c. 44, is repealed by this act. 53 Geo. III.

Private persons may arrest felons by their own authority, or by warrant from a justice of peace; and every private person is bound to assist an officer to take felons, &c. But no one ought to be arrested upon suspicion of felony, except there be probabilis causa showed for the ground of the suspicion. If a felony is not done by a man, but some person else, if another hath probable cause to suspect he is the felon, and accordingly doth arrest him, this is lawful and may be justified. But, to make good such justification, there must be in fact a felony committed by some person, without which there can be no ground of suspicion. 2 Hale's Hist. P. C. 78.

A private man arresting one for felony, cannot justify breaking doors, to take the party suspected; but he doth it at his peril, viz. if in truth he be a felon it is justifiable; but if innocent, then it is not. To prevent a murder, or manslaughter, private persons may break doors open. 2 Hale 82. Officers may break open a house to take a felon, or any person justly suspected of felony; and if an officer hath a warrant to take a felon, who is killed in resisting, it is not felony in the officer; but if the officer is killed it is otherwise.

Watchmen and beadles have authority at common law to arrest and detain in prison for examination by a magistrate, persons walking in the streets at night, whom there is reasonable ground to suspect of felony, although there is no proof of a felony having been committed. 3 W. P. Taunton, 14. Persons indicted of felony, &c., where there are strong presumptions and circumstances of guilt, are not replevisable; but for larceny, &c., when persons are committed who are of good reputation, they may be bailed. 2 Hawk. P. C. The former part of the position must be, with an exception to the power of the court of king's bench.

If one be committed to prison for one felony, the justices of gaol delivery may try him for another felony, for which he was not committed, by virtue of their commission, 1 Lil. 602. In the highest crime, and in the lowest species of felony, viz. in petit larceny, and in all the misdemeanors, standing mute hath always been an equivalent to conviction. But upon appeals or indictments for other felonies, or petit treason, the prisoner was not by the ancient law looked upon as convicted, so as to receive judgment for the felony, but should, for his obstinacy, have received a terrible sentence of penance, or peine forte et dure. See MUTE, STANDING.

Where a married woman commits felony, in company with her husband, it shall be presumed to be done by his command, and she shall be excused. 3 Inst. 310. Where one steals another's goods, and a third person feloniously

takes them from him, he is a felon as to both the others. There is also a pretence of title to things unlawfully taken, which maybe only a trick to color felony: the ordinary discovery of a felonious intent is, if the party doth it secretly, or being charged with the goods denies it. If a person to whom goods are delivered, on a pretended buying them, runs away with them, it is felony: and a guest stealing plate set before him at an inn, &c. is felony; also persons who have the charge of things, as a servant of a chamber, &c., may be guilty of felony: and the least removing of a thing in attempts of felony, is felony, though it be not carried off. 3 Inst. 308. Raym. 275.

But base kinds of goods, such as dogs, &c., being stolen, cannot constitute a felony: nor feræ naturæ, as deer, hares, &c., except they be made tame, when it will be felony to steal them. If any turkeys, geese, poultry, fish in a trunk, &c., are taken away, it is felony. 3 Inst. 309, 310. Stealing of tame peacocks is felony; so of herons and young hawks in their nests; it is otherwise of pheasants, partridges, conies, &c., although they be so kept that they cannot escape; if they be not reclaimed and known. The owner of goods stolen prosecuting the felon to conviction, cannot recover the value of them in trover from the person who purchased them in market overt, and sold them again before conviction, notwithstanding the owner gave him notice of the robbery, while they were in his possession; but he has a right to restitution of the goods in specie. 2 Term Rep. K. B. 750.

Under the term felony, in commissions, &c., are included petit treason, murder, homicide, burning of houses, burglary, robbery, rape, &c., chance-medley, se defendendo, and petit larceny. All felonies punishable according to the course of the common law, are either by the common law or by statute. Piracy, robbery, and murder on the sea, are punishable by the civil statute law. 1 Inst. 391.

Felony, by the common law, is against the life of a man; as murder, manslaughter, felo de se, se defendendo, &c. Against a man's goods, such as larceny and robbery: against his habitation, as burglary, arson or house-burning: and against public justice, as breach of prison. 3 Inst. 31. It is not easy to recapitulate the vast variety of offences which are made felony, by the almost innumerable statutes which have been from time to time made on this subject: which we are happy to believe is, at the period we are writing, undergoing important revision in the highest quarter. But we copy from Sir T. E. Tomlyn's Law Dictionary the following general account of felonies, by statute; within clergy, and without.

Felonies Within Clergy. *Armour*, the king's, embezzling.—*Assaults*, with intent to spoil persons' dress; or with intent tc rob.—*Bail*, personating: before commissioners.—*Bank paper*, forging or preparing.—*Bigamy*.—*Bills of Exchange*, foreign, forging.—*Bleaching grounds*, robbing.—*Bridges*, destroying, several specified in different statutes.—*Burning* ricks of corn, hay, &c.—*Cattle*, sheep, &c. killing in the night maliciously, or slaughtering horses without notice.—*Child-stealing*.—*Cloth*, stealing from tenters, third offence.—*Collieries*, destroying engines to drain.—*Commons*, destroying enclosures of.—*Copper*, removing from a house to steal it, assisting therein, or buying it when stolen.—*Corn*, destroying granaries; second offence.—*Customs*, harbouring smugglers, and assisting to run goods.—*Deer stealing*.—*Dikes*, cutting in marsh land.—*Fishing* in enclosed pond, &c., with intent to steal; or buying stolen fish.—*Foreign State*, going out of the realm to serve without taking the oath of allegiance.—*Forests*, destroying enclosures in; third offence.—*Forgery* of bank bills, foreign bills, customs' debentures, stamps for marking plate, &c.—*Frame-work-knitting machines*, destroying.—*Gaoler*, forcing a prisoner to become an approver (impeacher).—*Hawk*, stealing.—*Hunting*, in the night or in disguise.—*Jewels* and *plate* stolen, receiving of.—*Iron bars* fixed to buildings, stealing.—*King* or his council, conspiring to destroy.—*Laborers*; confederacy of masons against the statute of laborers.—*Lead*; entering black-lead mines with intent to steal; stealing lead affixed to buildings; or buying or receiving it when stolen.—*Locks*, floodgates, sluices or banks, destroying.—*Maiming* another.—*Marriage*, clandestine, solemnising.—*Miscarriage*, attempting to procure though the woman be not quick with child.—*Money*; exporting silver, importing false money, blanching copper, putting off counterfeit money, or counterfeiting copper money, or tokens issued by the bank.—*Mutiny* and desertion in seamen or soldiers.—*Oysters* and their brood, taking from beds.—*Palaces* of the king, entering with intent to steal.—*Pewter*, stolen, buying or receiving.—*Plague*, persons infected with, going out of doors.—*Polygamy*, or bigamy.—*Post-office*, frauds in, as to postage of letters.—*Privily stealing* from the person.—*Process*, opposing execution of, in pretended privileged places.—*Public works*, injuring or damaging.—*Records*, withdrawing or secreting.—*Rescuing prisoners* for treason or felony; or offenders against statutes concerning spirituous liquors; or offenders condemned to hard labor; or bodies of murderers.—*Robbery*, of furniture from lodgings; assaulting with intent to rob.—*Rogues*, incorrigible, escaping from the house of correction or offending a second time.—*Servants* taking their master's goods at his death; assaulting master woolcomber or weaver; embezzling goods to the value of 40*s*.—*Sheep*, exporting alive; second offence.—*Ships*, destroying; forcibly preventing the lading, sailing, &c., of ships by seamen, keelmen, and others. *Smugglers*, assisting, &c.,—*Stamp duties*, frauds respecting.—*Stolen goods*, buyers or receivers of, or person taking reward to discover.—*Stores*, government, embezzling.—*Trees*, shrubs, &c., destroying in nurseries or gardens to the value of 5*s*.—*Turnpikes*, gates, toll-houses, &c., destroying.—*Warrens*, entering in the night and killing conies.—*Watermen*, carrying too many passengers, if any drowned.—*Woods* setting fire to.

Felonies Without Clergy. *Abortion*, procuring.—*Accessaries*, in certain cases.—*Aliens* returning from transportation.—*Arson*.—*Bail*, personating.—*Bank of England*, clerks embezzling notes; altering dividend warrant, &c.; paper-

makers unauthorised using moulds for notes (See post, *Forgery*).—*Banks*, of the sea, destroying.—*Bankrupt*, not surrendering; concealing his estate, &c.—*Bastard*, murdering, &c.—*Black act*, offenders under.—*Bridges*, wilfully damaging those of London, Westminster, and Fulham.—*Burglary*.—*Burning houses*, or barns with corn.—*Cattle*, stealing or maiming.—*Challenging jurors*, above twenty, in felonies ousted of clergy.—*Cloth*, stealing from the tenters.—*Coal mines*, setting fire to.—*Coining*.—*Cottons*, selling, with forged stamps.—*Customs*; smugglers shooting at or wounding officers of the navy or custom-house; harbouring transported offenders; not surrendering on proclamation.—*Cutting*, maliciously.—*Deeds*, enrolled, acknowledging in the name of another robbing.—*Fences of commons*, destroying.—*Fish ponds*, *Fens*, destroying works for draining of.—*Fines*, acknowledging in another's name.—*Forgeries* of deeds, transfers of stock, stamps, bills, notes, wills, registers, &c. &c.—*Highway robbery*.—*Hops*, cutting the binds.—*Horse stealing*.—*Judgments*, acknowledging in another's name.—*Letters*, threatening, sending; or rescuing offenders so doing.—*Linen*, stealing from bleaching grounds; or cutting or destroying.—*Mail*, robbing, or stealing letters from post- office.—*Maiming*; maliciously lying in wait for that purpose.—*Malicious injuries*, viz. shooting at, stabbing, &c., giving medicine to procure miscarriages: setting fire to houses, out-houses, &c.—*Marshes*; setting fire to engines for draining.—*Mariners* wandering without testimonials, and see stat. 39 Eliz. c. 17, sec. 4 (post, *Seaman*).—*Marriage*, forcible.—*Mines*, damaging.—*Miscarriage*, procuring, when the woman is quick with child.—*Money*, uttering false money; third offence.—*Murder*.—*Mute*, standing on trial for treason or felony.—*Northern borders*, thieves and spoilers in Cumberland, Northumberland, Westmoreland, and Durham.—*Outlawry*, for felonies without clergy.—*Perjury*, convicts for escaping, breaking prison, or returning from transportation.—*Personating* bail, seamen, pensioners, nominees of annuities, &c.—*Piracy*; under which is included, sailors hindering the captain of a ship from fighting, by forcible restraint.—*Poisoning* of malice prepensed, and administering with intent to murder, &c.—*Popish recusants*, priests and jesuits in certain cases.—*Post-office*; robbing mail, secreting letters, &c.—*Prisoners* forswearing themselves under insolvent acts, refusing to deliver up, or concealing their effects; escaping from confinement to hard labor; second offence.—*Privy Counsellors*, attempting to kill.—*Quarantine*, neglecting the regulations for performing.—*Rape*.—*Rescuing convicts* from transportation, or murderers.—*Rebels* returning from transportation, their aiders and correspondents.—*Recognizance* or *recovery*, acknowledging in another's name.—*Riots*, and destroying buildings. *Robbery*, of churches, on the highway, in booths in fairs, dwelling-houses, shops, ware-houses, coach-houses, or stables: on board vessels; in wharfs; in lodgings, if above 12*d*. value; stealing exchequer orders, bank notes, navy bills, promissory notes, &c.—*Sea*; treasons, robberies, murders, &c. upon.—*Seamen*, personating to receive their pay.—*Ships* of war, and others, wilfully destroying.—*Shooting at* another.—*Silk*; destroying any silk or velvet in the loom, or the tools for manufacturing thereof.—*Smuggling*, and assembling armed for that purpose.—*Sodomy*.—*Soldiers*; deserting, wandering without testimonials, personating them.—*Stabbing* maliciously.—*South Sea Company*; servants embezzling their effects.—*Stamps*, counterfeiting.—*Stolen goods*, helping to a reward in certain cases.—*Stores*, government; embezzling, or burning, or destroying, in dock yards.—*Transportation*, returning from, or being at large in the kingdom after sentence.—*Turnpikes*, gates, weighing engines, locks, sluices, &c., destroying.—*Wool*; destroying woolien goods, racks, or tools, or forcibly entering a house for that purpose.—*Women*, stealing, and marrying.—*Wreck* of ships, causing by stealing pumps, &c., stealing shipwrecked goods, or killing shipwrecked persons.

FELOOPS, a people of Western Africa, inhabiting the south side of the Gambia. Their country is extensive, and abounds with rice and bees' wax, with which, as well as with goats and poultry, they supply the European traders. They also make their honey into an intoxicating liquor, similar to mead. They are described as wild and unsociable, and have a language of their own. Their trade is generally conducted by a Mandingo factor, who speaks a little English.

FELSPAR, in mineralogy, Germ. feldspath. Of this mineral there are five sub-species, viz. adularia, common felspar, continuous felspar, Labradore felspar, and compact felspar.

1. Adularia, or moonstone of Kirwan. Color greenish-white; and when thin, pale flesh-red by transmitted light. Massive and crystallised. Primitive form an oblique four-sided prism, with two broad and two narrow lateral planes; the lateral edges are 120° and 60°. Lustre splendent, intermediate between vitreous and pearly. Cleavage threefold. Fracture imperfect conchoidal. Semitransparent. Refracts double; softer than quartz, and easily frangible. Specific gravity 2·5. It melts before the blow-pipe, without flux, into a white transparent glass. Its constituents are sixty-four silica, twenty alumine, two lime, and fourteen potash. It occurs in drusy cavities, in granite and gneiss, in the island of Arran, in Norway, Switzerland, France, and Germany. The finest crystals are found in the mountain of Stella, a part of St. Gothard. Rolled pieces, exhibiting a most beautiful pearly light, are collected in the island of Ceylon. Moonstone adularia is found in Greenland; and all the varieties in the United States. Under the name of moonstone it is worked by lapidaries.

2. F. vulgare, common felspar, spath. fusible of Desmaretz, spath. etinulant. spathum pyromachum.—Its color is most commonly flesh-red, sometimes bluish-gray, oftener yellowish-white, or milk white, or brownish yellow, rarely blue, or olive green; and lately, in one instance, black. Amorphous and interspersed, sometimes crystallised in rhomboids, or six or eight sided prisms; seldom right angled, very seldom in pellucid needles, tables, or polygons. Its lustre

when broke across, 0; in other directions, 2·3·1. Its transparency, 2·1. Its fracture discovers a straight foliated texture. The lamellæ polished, and shining often on four sides, cross fracture uneven. Its fragments rhomboidal, or tending to that form. It generally presents granular distinct concretions, either large or small. Its hardness, from nine to ten. Its specific gravity, from 2,437 to 2,600; the greenish seem to extend to 2,70. The yellow felspar of Port François, in North America, is so brittle as not to bear the slightest friction; when heated it becomes red. When heated, the crystallised frequently decrepitate: a quadrangular prism of crystallised felspar of Baveno, of a reddish-white color, and whose specific gravity was 2,437, melted at 130°, into a gray semi-transparent porous glass, and at 154° into a compact semi-transparent glass. Another from Silesia, which was not crystallised, and whose specific gravity was 2,554, and of a gray yellowish white color, melted at 119°, into a gray, smooth, almost compact, semi-transparent glass; and, being mixed with an equal weight of Carrara marble, it melted at 105°, into a white opaque, almost compact mass of a silky lustre. The green becomes pale reddish when heated. Alkalies flux this stone with great difficulty; microcosmic salt, and particularly borax, is more effectual.

According to Gerhard, the purest felspar found in granites contains 0·46 silex, 0·30 argill, and 0·06 calx. Here 0·18 parts are missing, a loss too great to be imputed to the escape of air and water. Vauquelin analysed the green Liberian felspar, and found it to consist of

Silex . . .	62·83
Alumine . .	17·02
Lime . .	3·
Oxide of iron .	1·
Potassa . .	13·
	96·85

Magnesia was indicated in felspar by Mr. Bergman, and though not found by many of the subsequent analysts, Monnet found it jointly with silex, argill, and calx, in the felspar he examined; and Chaptal observed it to exist in greater plenty in the red than in white felspar.

Scopoli, in felspar of Baveno, found 0·63 silex, 0·17 argill, 0·06 magnesia, 0·02 calx, and 0·07 of iron, loss 0·05. With respect to iron, it is highly improbable that this felspar, which is of the purest kind, should contain any. That which appeared may most probably be ascribed to the Prussian alkali he employed in the analysis.

From these different analyses it appears that any compound of silex and argill, in which silex predominates, and to which a sufficient, but smaller proportion of calx and magnesia, or of calx, magnesia, and barytes, is added to render the whole fusible in a heat not exceeding 140°, may form a felspar, and will undoubtedly be so called, if at the same time it presents a foliated texture; but iron appears to be a foreign ingredient.

3. Continuous felspar. Its color is reddish-gray, or flesh-colored; or pale reddish-yellow, or olive-green. It occurs in mass, and generally contains common crystallised felspar dispersed through it in various proportions. It is sometimes dull, but generally possesses a feeble glimmering lustre; it is translucent on the edges; its fracture is fine splintery, passing into uneven earthy; its fragments are indeterminately angular; its hardness is fully equal to that of common felspar, and it is less brittle. It frequently consists of granular concretions, easily separable. A specimen of this sort, melted at 150° 5, into a porous porcelain mass, glazed on the surface. It differs from the amorphous stones of the first family in this, that the last has a foliated texture, and more lustre, and the fragments tend more to the rhomboidal shape; and also in fusibility.

4. Labradore felspar. Its color is of a light or dark gray, or bluish, or blackish gray; but, in certain positions and spots, reflecting blue, purple, red, green, &c. It chiefly occurs in blunted fragments. Its lustre 2·3. Its transparency 1·2·3. Its fracture straight foliated. Its fragments 2. Rhomboidal, with four polished faces, or tending to that shape. Sometimes without distinct concretions; sometimes with large or coarse grained, rarely with thick lamellar. Its hardness 10. Its specific gravity from 2·67 to 2·6925. At 130°, a specimen of the bluish gray, whose transparency was barely 1, and its specific gravity 2·672, was barely glazed on the outside; and at 155° the white part separated itself from the brown, and was melted. The brown was also imperfectly melted into an opaque porous brown porcelain.

5. Compact felspar. Colors, white, gray, green and red. Massive, disseminated, and crystallised in rectangular four-sided prisms. Lustre glistening, or glimmering. Fracture splintery and even. Translucent only on the edges. Easily frangible. Specific gravity 2·69. It melts with difficulty into a whitish enamel. Its constituents are, 51 silica, 30·5 alumina, 11·25 lime, 1·75 iron, 4 soda, 1·26 water.—Klapr. It occurs in mountain masses, beds, and veins: in the Pentland hills, at Sala, Dannemora, and Hallefors in Sweden; in the Saxon Erze-gebirge, and the Hartz. The blue compact variety was discovered by Widenmann, at Krieglach, in Stiria, forming a granitic mass with white quartz and silvery mica: the green varieties occur in green porphyry and greenstone.

FELT, *n. s.* & *v. a.* } Sax. pelt; Ital. *feltro;*
FELT'RE, *v. a.* } Dan. and Swed. *filt;* Belg. *vilt.* Woollen stuff or cloth made without weaving; the basis of hats: to felt or feltre, is to unite without weaving; to clot together.

> It were a delicate stratagem to shoe
> A troop of horse with *felt.*
> *Shakspeare. King Lear.*
>
> His *feltered* locks, that on his bosom fell,
> On rugged mountains briers and thorns resemble.
> *Fairfax.*
>
> The same wool one man *felts* into a hat, another weaves it into cloth, another into kersey. *Hale.*
>
> To know whether sheep are sound or not, see that the *felt* be loose. *Mortimer's Husbandry.*

FELTHAM (Owen), an English author descended of a respectable Suffolk family, was born about the middle of the seventeenth century. He resided many years in the family of the earl of Thomond, during which he published his only known work, which is of great merit, entitled Resolves, Divine, Political, and Moral. It went through twelve editions before the year 1709; and a thirteenth has lately appeared under the superintendence of Mr. Cumming of the Board of Control. The author died about 1678.

FELTING, in the mechanical arts, is the process by which hair, wool, or silk is worked into a compact texture, without spinning or weaving; chiefly employed in the manufacture of hats. See HAT MAKING.

FELTRE, or FELTRI, the antient Feltria, a town and bishop's see of the Austro-Venetian territory, in the delegation of Beluno. It has a population of 5200, and stands in a mountainous district, at the conflux of two small rivers, not far from the Piave. It is well built, having a handsome square, a cathedral, and a provincial academy; it is likewise a place of some strength. In 1809 Buonaparte conferred the title of duke of Feltre on general Clarke, his minister of war. It is fifty-three miles north-west of Verona, and eighty-three north of Padua.

FELU'CCA, *n. s.* Fr. *felouque*; Arab. *felkon*. A small open boat with six oars.

I took a *felucca* at Naples to carry me to Rome. *Addison.*

FELUDJE, FELUGIA, or Anbar, a small modern town of Asiatic Turkey, situated on the east bank of the river Euphrates, north of Hallah. In the neighbourhood dates, grapes, grain, and cotton, are produced. Here Soliman the Great, pacha of Bagdad, erected a palace; and the place was anciently of great celebrity; it was taken by the Romans under the emperor Julian, who reduced it to ashes.

FE'MALE, *n. s.* & *adj.* Fr. *femme*, *femelle*; Lat. *femella*, à *fætu* (Ainsworth). 'A she'; one of the sex that produces young; a woman: female and feminine, mean of or pertaining to the female sex; soft; tender; delicate: female-rhymes, are double rhymes; see below: feminality and feminity, female nature; the quality or behavior of women.

FEMALE-RHYMES,
FE'MINALITY,
FEM'ININE, *n. s.* & *adj.*
FEM'INITY.

God created man in his own image; male and *female* created he them. *Gen.* i. 27.

If he offer it of the herd, whether it be male or *female*, he shall offer it without blemish. *Levit.*

Hether great Venus brought this infant fayre,
The yonger daughter of Chrysogoner,
And unto Psyche, with great trust and care,
Committed her, yfostered to bee,
And trained up in true *femenitee*.
Spenser's Faerie Queene.

Men, more divine,
Indued with intellectual sense and soul,
Are masters to their *females*, and their lords.
Shakspeare.

Ninias was no man of war at all, but altogether *feminine*, and subjected to ease and delicacy.
Raleigh's History.

Thus we chastise the god of wine
With water that is *feminine*,
Until the cooler nymph abate
His wrath, and so concorporate. *Cleaveland.*

Female of sex it seems. *Milton.*

Swarming next appeared
The *female* bee, that feeds her husband drone. *Id.*

Other suns, perhaps,
With their attendant moons thou wilt descry,
Communicating male and *female* light;
Which two great sexes animate the world. *Id.*

He scrupled not to eat
Against his better knowledge, not deceived,
But fondly overcome with *female* charm. *Id.*

O! why did God create at last
This novelty on earth, this fair defect
Of nature? And not fill the world at once
With men, as angels, without *feminine*. *Id.*

If in the minority of natural vigour the parts of *feminality* take place, upon the increase or growth thereof the masculine appears. *Browne.*

The *female rhymes* are in use with the Italian in every line, with the Spaniard promiscuously, and with the French alternately, as appears from the Alarique, the Pucelle, or any of their later poems.
Dryden's Preface to Ann. Mirab.

If by a *female* hand he had foreseen
He was to die, his wish had rather been
The lance and double ax of the fair warrior queen.
Dryden.

So should young sympathy in *female* form,
Climb the tall rock, spectatress of the storm;
Life's sinking wrecks with secret sighs deplore,
And bleed for others' woes, herself on shore.
Darwin.

My heart is *feminine*, nor can forget—
To all, except one image, madly blind;
So shakes the needle, and so stands the pole,
As vibrates my fond heart to my fixed soul.
Byron.

Of higher birth he seemed, and better days,
No mark of vulgar toil that hand betrays,
So *femininely* white it might bespeak
Another sex, when matched with that smooth cheek.
But for his garb, and something in his gaze,
More wild and high than woman's eye betrays.
Id.

FEMERN, an island of Denmark, in the Baltic, opposite to the coast of Holstein; its circuit is about thirty miles; its population 7600. Part of it is under tillage, the rest affords good pasturage. Fishing is one of the chief means of subsistence here; but the women are employed in the knitting of stockings.

FEMININE, in grammar, one of the genders of nouns. See GENDER. The feminine gender in Latin, is formed of the masculine, by altering its termination; particularly changing *us* and *er* into *a* or *ra*. Thus, of the masculine bonus equus, a good horse, is formed the feminine bona equa, a good mare; but this rule is far from being universal, most adjectives of the third declension having the terminations of both genders alike, and some those of all the three the same. In French, the feminine gender is generally expressed, not by a different termination, but by a different article: thus, le is joined to a male, and la to a female. In English, the difference of sex is generally expressed by different words; as boy and girl, brother and sister, boar and

sow, &c. though sometimes the feminine is formed by varying the termination of the male into ess; as in abbot, abbess, &c.

FEM'ORAL, *adj.* Lat. *femoralis*. Belonging to the thigh.

The largest crooked needle should be used in taking up the *femoral* arteries in amputation. *Sharp.*

FEMORIS os, the thigh bone, a long cylindrical bone, situated between the pelvis and tibia. Its upper extremity affords three considerable processes; the head, the trochanter major, and trochanter minor. The head, which forms about two-thirds of a sphere, is turned inwards, and is received into the acetabulum of the os innominatum. It is covered by a cartilage, which is thickest in the middle, but which is wanting in its lower internal part, where its place is supplied by a round spongy fossa, to which the strong ligament, usually called the round ligament, is attached. This is about an inch in length, flattish, and of a triangular shape, having its narrow extremity attached to the fossa, while the broader end is fixed obliquely to the rough surface near the inner and anterior edge of the acetabulum of the os innominatum. The head of the os femoris is supported obliquely, with respect to the rest of the bone, by a smaller part, called the cervix, which, in the generality of subjects, is about an inch in length. The lower extremity of the os femoris is larger than the upper one, and flattened, so as to form two surfaces, of which the anterior one is broad and convex, and the posterior narrower and slightly concave. This end of the bone terminates in two large protuberances, called condyles, which are united before so as to form a pulley, but are separated behind by a considerable cavity, in which the crural vessels and nerves are secured from the compression to which they would otherwise be exposed in the action of bending the leg.

FEN, *n. s.* / FEN'BERRY, / FEN'BORN, *adj.* / FEN'NY, *adj.* / FEN'SUCKED. } Saxon, fenn; Goth. and Welsh, *fen*; Teut. *fenn*; Belgic, *veen*; Fr. *fange*; Italian, *fango*. A marsh; bog; low, flat ground. Fenberry is a kind of blackberry; fenny, belonging to, or inhabiting fens. Fenn-sucked, 'drawn out of the fens.'

I go alone,
Like to a lonely dragon, that his *fen*
Makes feared and talked of more than seen.
Shakspeare.

Fillet of a *fenny* snake,
In the cauldron boil and bake. *Id.*

Infect her beauty,
You *fensucked* fogs, drawn by the powerful sun.
Id. King Lear.

Mexico is a city that stands in the midst of a great marsh or *fen*. *Abbot's Description of the World.*

The *fen-born* serpent. *Milton.*

Driving in of piles is used for stone or brick houses, and that only where the ground proves *fenny* or moorish. *Moxon.*

He to Portina's watery marshes went;
A long canal the muddy *fen* divides,
And with a clear unsullied current glides.
Addison.

The surface is of black *fen* earth. *Woodward.*

The hungry crocodile, and hissing snake,
Lurk in the troubled stream and *fenny* brake.
Prior.

Mountains, and *fens*, and rivers, set bounds to despotic power, and amidst these is the natural seat of freedom and independence.
Robertson's History of Scotland.

The star of Autumn rays his misty hair;
Fierce from his *fens* the giant Ague springs.
Darwin.

Ten thousand forms by pining fancy viewed
Dissolve.—Above the sparkling flood
When Phœbus rears his awful brow,
From lengthening lawn and valley low
The troops of *fen-born* mists retire. *Beattie.*

FEN. See DRAINING. Fens are either made up of a congeries of bogs, or consist of a multitude of pools or lakes, with dry spots of land intermixed like so many little islands. The fens in Lincolnshire and elsewhere in England, bring many advantages to the inhabitants. Fowls and fish are very plentiful in them. The pikes and eels are large and easily caught, but they are usually coarse. Ducks, mallards, and teals, are in such plenty as is scarcely to be conceived. They are taken by decoys in prodigious flocks; but improvements in drainage are annually banishing these ancient distinctions of the fen districts. The people have another very great advantage from these birds, in their feathers and quills.

Oats grow very well in many of the fen countries, and in good seasons bring great advantage to the owners. There is also another vegetable of great profit to them, i. e. the brassica napus; the seed of which they call cole seed; and make an oil from it of great use in trade.

In Cambridgeshire the fen lands occupy perhaps a third of the whole surface of the county: the soil here is rich, black, and deep. In the neighbourhood of Wisbeach it consists of a mixture of sand and clay, or silt, and the uplands of chalk, gravel, loam, and clay. Agues were once very common here; but are much diminished of late years.

The former state of the fen lands, and their degradation to their present state, are given at length in the Agricultural Report, chiefly from an able pamphlet by lord Hardwicke, a great proprietor here. It was the opinion of Atkins, a commissioner of sewers in the reign of James I. 1604, that these fens, a space of upwards of 280,000 acres, were once 'of the nature of landmeadows, fruitful, healthy, and very gainful to the inhabitants, and yielded much relief to the highland counties in time of great droughts.' Sir W. Dugdale, who was born 1605, and died 1686, was of the same opinion, adding as a proof, 'that great numbers of timber trees (oaks, firs, &c.) formerly grew there, as is plain from many being found in digging canals and drains, some of them severed from their roots, the roots standing as they grew, in firm earth, below the moor.' In 1635 the workmen, on deepening the channel of Wisbeach river, at eight feet below the then bottom, discovered a second bottom, which was stony, with seven boats lying in it, covered with silt. And at Whittlesea, on digging through the moor at eight feet deep, a perfect soil was found with swards of grass lying on it, as they were at first mown. Henry of Hunting-

don, who lived in the reign of Stephen, 1135, described this fenny country 'as pleasant and agreeable to the eye; watered by many rivers which run through it, diversified by many large and small lakes, and adorned by many woods and islands.' And William of Malmsbury, who lived in the first year of Henry II. 1154, has painted the state of the land round Thorney in the most glowing colors: he says, 'it is a very paradise, in pleasure and delight it resembles heaven itself; the very marshes abounding in trees, whose length without knots do emulate the stars.' 'The plain there is as level as the sea, which, with the flourishing of the grass, allureth the eye; in some parts there are apple-trees, in others vines.' It appears then, on the authority of the authors quoted, that the fens were formerly wood and pasture. The engineers were of opinion that the country in question formerly meadow and wood, now fen, became so from partial embankments preventing the waters from the uplands going to the sea by their natural outfalls; want of proper and sufficient drains to convey these waters into the Ouse; neglect of such drains as were made for that purpose; and that these evils increased from the not embanking the river Ouse, and the erection of sluices across it preventing the flux and reflux of the sea; the not widening and deepening, where wanted, the river Ouse; and from not removing the gravels, weeds, &c., which have from time to time accumulated in it.

The first attempt at draining any part of the fens appears to have been made in the time of Edward I. (1272, &c.); many others with various success followed. The famous John of Gaunt, or Ghent, who died in 1393, and Margaret, countess of Richmond, were amongst the draining adventurers; but Gough, in his addition to Camden, says 'the reign of Elizabeth may be properly fixed on as the period when the level began to become immediately a public case. Many plans were proposed and abandoned between that time and 1634, when king Charles I. granted a charter of incorporation to Francis, earl of Bedford, and thirteen gentlemen adventurers with him, who jointly undertook to drain the level on a condition that they should have granted to them, as a recompense, 95,000 acres (about one-third of the level). In 1649 this charter was confirmed to William, earl of Bedford, and his associates, by the convention parliament; and in 1653, the level being declared completely drained, the 95,000 acres were conveyed to the adventurers, who had expended £400,000, which is almost £4 4s. per acre on the 95,000 acres, and about £1 8s. on the whole breadth, if the whole level contain 285,000 acres, and it is generally supposed to contain 300,000 acres. In 1664 the corporation called Conservators of the great level of the fens was established. This body was empowered to levy taxes on the 95,000 acres, to defray whatever expenses might arise in their preservation; but only 83,000 acres were vested in the corporation, in trust for the earl of Bedford and his associates; the remaining 12,000 were allotted, 10,000 to the king, and 2000 to the earl of Portland. At first the levy was an equal acre tax, but upon its being deemed unjust, a gradual one was adopted, which is now acted upon. In the year 1697 the Bedford level was divided into three districts, north, middle, and south; having one surveyor for each of the former, and two for the latter. In 1753 the north level was separated by act of parliament from the rest. In addition to the public acts obtained for draining the fens, several private ones have been granted, for draining separate districts with their limits, notwithstanding which, and the vast sums expended, much remains to be done; a great part of the fens is now (1806) in danger of inundation; this calamity has visited them many times, producing effects distressing and extensive beyond conception, indeed many hundred acres of valuable land now drowned, the misfortune aggravated by the proprietors being obliged to continue to pay a heavy tax, notwithstanding the loss of their land.

The interior drainage is performed in most places by windmills, which are very uncertain in their effects. Steam has been tried, and there can be no doubt would be incomparably preferable, as working in all weathers.

Embanking may be considered a necessary accompaniment of draining on the fen-lands. The fens are divided into three large levels, and each of these are subdivided into numerous districts by banks; but as these banks are made of fen-moor, and other light materials, whenever the rivers are swelled with waters or any one district is deluged, either by rain, a breach of banks, or any other cause, the waters speedily pass through these bright, moory, porous banks, and drown all the circumjacent districts. The fens have sometimes sustained £20,000 or £30,000 damage by a breach of banks; but these accidents seldom happen in the same district twice in twenty years; the water, however, soaks through all fen banks every year in every district; and when the water-mills have lifted the waters up out of the fens into the rivers in a windy day, a great part of the water soaks back through the porous banks in the night upon the same land again. This water that soaks through the bank, drowns the wheat in the winter, washes the manure into the dykes, destroys the best natural and artificial grasses, and prevents the fens from being sown till too late in the season. This stagnant water, lying on the surface, causes also fen agues, &c.; thus the waters that have soaked through the porous fen banks have done the fertile fens more real injury than all the other floods that have ever come upon them. The remedy for the soaking through of the water is obviously that of forming a puddle wall in the middle, which appears to have been first thought of among the fen bank-makers by Smith of Chatteris, a professed embanker. See our article EMBANKMENTS. With respect to embanking from the sea, Vancouver is of opinion that the ground ought to be covered by nature with samphire or other plants, or with grass, before an attempt is made to embank it: there is particular danger in being too grasping. 'If the sea has not raised the salt marsh to its fruitful level, all expectation of benefit is vain, the soil being immature, and not ripened for enclosure; and if again

with a view of grasping a great extent of salt marsh, the banks or sea wall be pushed farther outwards than where there is a firm and secure foundation for it to stand upon, the bank will blow up, and in both cases great losses and disappointments will ensue.'

Paring and burning land is every where approved of, and considered the sine qua non of the fen districts, in breaking up turf. Without it corn crops are destroyed by the grub and wire-worm. Colonel Adeane, of Barbraham, has 300 acres of meadows, which have been irrigated from the time of queen Elizabeth. 'Pallavicino, who was collector of Peter's pence in England, at the death of queen Mary, having £30,000 or £40,000 in his hands, had the art to turn Protestant on the accession of queen Elizabeth, and appropriated the money to his own use; he bought with it an estate at Barbraham and other lands near Bournbridge; and procuring a grant from the crown, of the river which passes through them, was enabled legally to build a sluice across it, and throw as much of the water as was necessary into a new canal of irrigation, which he dug to receive it in the method so well known, and commonly practised in Italy long before that period. The canals and the sluices are all well designed, and are the work of a man evidently well acquainted with the practice; but, in taking the waters from them for spreading it by small channels over the meadows, there does not seem to be the least intelligence or knowledge of the husbandry of watering. No other art is exerted but that merely of opening in the bank of the river small cuts for letting the water flow on to the meadows always laterally, and never longitudinally, so necessary in works of this kind. The water then finds its own distribution, and so irregularly, that many parts receive too much, and others none at all. From the traces left of small channels in different parts of the meadows, it would appear that the ancient distribution formed under Pallavicino is lost, and that we see nothing at present but the miserable patch-work of workmen ignorant of the business. Irrigation has not spread from this example, but might be extensively practised on the banks of all the rivers.

FENCE, *n. s.*, *v. a.* & *v. n.*, FENCE'LESS, *adj.*, FENCE'FUL, FEN'CER, *n. s.*, FENC'IBLE, *adj.*, FENC'ING, *n. s.*, FENC'ING-MASTER, FENC'ING-SCHOOL. Latin, *fendo*, to drive away. Guard; defence; security; enclosure; the art or skill of defending one's self. To fence is to enclose or guard: as a neuter verb, to practise the art of fencing; to guard against: fenceful, affording protection: fenceless, exposed; without defence: fencer and fencing-masters, are professors of the art of fencing: fencible, capable of defence: fencing, the art of using weapons for defence and occasional assault: fencing-school, a place where the use of such weapons is taught.

Thou hast clothed me with skin and flesh, and hast *fenced* me with bones and sinews. *Job* x. 11.

He went about to make a bridge to a strong city, which was *fenced* about with walls. 2 *Mac.* xii. 13.

If a throstle sing, he falls strait a capering:
He will *fence* with his own shadow. *Shakspeare.*

I'll prove it on his body, if he dare,
Despite his nice *fence* and his active practice. *Id.*

The' inhabitants each pasture and each plain
Destroyed have, each field to waste is laid;
In *fenced* towers bestowed is their grain,
Before thou cam'st this kingdom to invade.
Fairfax.

Calmness is great advantage; he that lets
Another chafe, may warm him at his fire,
Mark all his wand'rings, and enjoy his frets;
As cunning *fencers* suffer heat to tire. *Herbert.*

A nimble *fencer* will put in a thrust so quick, that the foil will be in your bosom when you thought it a yard off. *Digby.*

So much of adders' wisdom I have learnt,
To *fence* my ear against thy sorceries. *Milton.*

Are not the *fences* of discipline cast down? Is there any conscience made of violating laws? *Barrow.*

A beauteous heifer in the wood is bred;
The stooping warriors aiming head to head,
Engage their clashing horns; with dreadful sound
The forest rattles, and the rocks rebound;
They *fence* and push, and, pushing, loudly roar,
Their dewlaps and their sides are bath'd in gore.
Dryden.

Shall I mention make
Of the vast mound that binds the Lucrine lake?
Or the disdainful sea, that, shut from thence,
Roars round the structure, and invades the *fence.*
Id.

With love to friend, the impatient lover went,
Fenc'd with the thorns, and trod the deep descent.
Id.

There's no *fence* against inundations, earthquakes, or hurricanes. *L'Estrange.*

A man that cannot *fence* will keep out of bullies and gamesters' company. *Locke.*

The only *fence* against the world is a thorough knowledge of it; into which a young gentleman should be entered by degrees, as he can bear it; and the earlier the better, so he can be in safe and skilful hands to guide him. *Id.*

If a man be to prepare his son for duels, I had rather mine should be a good wrestler than an ordinary fencer, which is the most a gentleman can attain to, unless he will be constantly in the *fencingschool*, and every day exercising. *Id.*

Each motion of the heart rises to fury,
And love in their weak bosoms is a rage
As terrible as hate, and as destructive:
So the wind roars o'er the wide *fenceless* ocean,
And heaves the billows of the boiling deep,
Alike from North, from South.
Rowe's Jane Shore

Let us bear this awful corpse to Cæsar,
And lay it in his sight, that it may stand
A *fence* betwixt us and the victor's wrath.
Addison.

While a man is learning to *fence*, he practises both on friend and foe; but when he is a master in the art he never exerts it but on what he thinks the right side. *Id. Spectator.*

See that the churchyard be *fenced* in with a decent rail or other inclosure. *Ayliffe's Parergon.*

Minerva
Taught artists first the carving tool to wield,
Chariots with brass to arm, and form the *fenceful* shield. *Congreve.*

These, being polemical arts, could no more be learned alone than *fencing* or cudgelplaying.
Arbuthnot and Pope.

Employ their wiles and unavailing care,
To pass the *fences* and surprise the fair. *Pope.*

That proved not *fence* enough to the reputation of their oppressors. *Decay of Piety.*

I wat she was a sheep o' sense,
An' could behave herself wi' mense:
I'll say't she never brak a *fence*,
Through thievish greed.
Burns.

We give some Latin, and a smatch of Greek;
Teach him to *fence* and figure twice a week;
And having done, we think, the best we can,
Praise his proficiency, and dub him man.
Cowper.

Thither he hied, enamour'd of the scene.
For rocks on rocks piled, as by magic spell,
Here scorch'd with lightning, there with ivy green,
Fenc'd from the north and east this savage dell.
Beattie.

Then for accomplishments of chivalry,
In case our lord the king should go to war again,
He learn'd the arts of riding, *fencing*, gunnery,
And how to scale a fortress—or a nunnery.
Byron.

FENCE, in gardening and husbandry, wall, ditch, bank, or other enclosure, made round gardens, fields, woods, &c. In hot climates, where they have no occasion for walls to ripen their fruit, their gardens lie open, where they can have a water fence, and prospects; or else they are bounded with groves, which are much more pleasing to the sight than dead walls; but, in cold countries, we are obliged to have walls to shelter and ripen our fruit, although they take away much from the pleasant prospect of the garden. Brick walls are accounted the best and warmest for fruit; and these being built pannel-wise, with pillars at equal distances, save a great deal of expense, as they can be built thinner than if they were made plain without the pannels; and besides, these pannels make the walls look the handsomer. Stone walls, however, on account of their durability, are to be preferred to brick, especially those of square hewn stones. Those that are made of rough stones, though they are very dry and warm, yet, by their unevenness, are inconvenient to nail up trees to, unless pieces of timber be laid in them here and there for that purpose. But, in large gardens, it is better to have the prospect open to the pleasure garden; which should be surrounded with a fosse, that from the garden the adjacent country may be viewed. Where the fosses are made round a garden which is situated in a park, they are extremely proper; because hereby the prospect of the park will be obtained in the garden, which renders those gardens much more agreeable than those that are confined. In making these fosses there have been many inventions: but, Miller, in his Gardener's Dictionary, reckons none preferable to those which have an upright wall next the garden, which (where the soil will admit of a deep trench) should be five or six feet high; and, from the foot of this wall, the ground on the outside should rise with a gradual easy slope, to the distance of eighteen or twenty feet; and, where it can be allowed, if it slopes much farther it will be easier, and less perceptible as a ditch, to the eye, when viewed at a distance; but if the ground is naturally wet, so as not to admit a deep fosse, then, in order to make a fence against cattle, if the wall be four feet high, and slight posts of three feet high are placed just behind the wall, with a small chain carried on from post to post, no cattle or deer will ever attempt to jump against it; therefore it will be a secure fence against them; and if these are painted green they will not be discerned at a distance, and at the same time the chain will secure persons walking in the garden from falling over. In places where there are no good prospects to be obtained from a garden, it is common to make the enclosure of park-pailing; which, if well performed, will last many years, and has a much better appearance than a wall: and this pale may be hid from the sight within, by plantations of shrubs and evergreens; or there may be a quick hedge planted within the pale, which may be trained up, so as to be an excellent fence by the time the pales begin to decay. Fences round parks are generally of paling; which if well made of winter fallen oak, will last many years. But a principal thing to be observed is, not to make them too heavy, else their own weight will make them decay; therefore the pales should be cleft thin; and the rails should be cut triangular, to prevent the wet lodging upon them; and the posts should be good, and not placed too far asunder. One of these pales will thus last upwards of forty years. The common way of making these fences is, to have every other pale nine or ten inches above the intermediate ones; so that the fence may be six feet and a half high, which is enough for fallow deer; but, where there are red deer, the fence should be one foot higher, otherwise they will leap over. Some enclose their parks with brick walls; and, in countries where stone is cheap, the walls are built with this material; some with, and others without, mortar. A kitchen garden if rightly contrived, will contain walling enough to afford a supply of such fruits as require the assistance of walls, for any family: and being situated on one side, and quite out of sight of the house, may be surrounded with walls which will screen the kitchen garden from the sight of persons in the pleasure garden; and, being locked up, the fruit will be much better preserved than it can be in the public garden. Too great a quantity of walling is often the occasion that so many ill-managed trees are to be seen in large gardens. The height of garden walls should be twelve feet, which is a moderate proportion; and, if the soil be good, it may in time be well furnished with bearing wood in every part, especially that part planted with pears, notwithstanding the branches being trained horizontally from the bottom of the walls. See HORTICULTURE.

Dr. Anderson, in his Essays on Agriculture, &c., observes, that, 'The fences that are most universally employed, are either stone dikes or hedges. Dikes, if well built, as effectually preserve a field from the intrusion of domestic animals, as any other kind of fence whatever; but they afford little warmth or shelter to the fields: whereas hedges, if good, answer both these purposes equally well. But the most material distinction between dikes and hedges is, that dikes are in the highest degree of perfection as soon as

they are reared, and from that moment begin to tend towards decay; so that the person who builds this kind of fence immediately receives the full benefit thereof: whereas hedges, being at first weak and tender, stand in need of attention and care, and do not become a fence for several years after they are planted; and, as they continue to increase in strength, and gradually acquire a higher and higher degree of perfection, it is long before they begin to fall towards decay; so that they are, in general, infinitely more durable than dikes, although they are longer in becoming of use to the person who plants them. Which of these two kinds of fences may, upon the whole, be most eligible, must, in general, be determined by the circumstances and views of the possessor of the ground to be enclosed. If he is a tenant who has a short lease, without a prospect of getting it renewed; or, if he has immediate occasion for a complete fence; it will be, in general, most prudent in him to make choice of dikes, if the materials for rearing these are at hand; but, if there is any probability that his posterity may reap any advantage from these enclosures, it will be almost always more for his advantage to make choice of hedges. A dike built of freestone and lime will be almost as durable as a hedge; although, in general, it will neither be so cheap nor agreeable. But dry stone dikes, unless built of the finest quarried stone, are of such a perishable nature, as to be hardly ever worth the expense of rearing; and never, excepting where the field that you would wish to enclose has plenty of stones upon its surface, which you are under a necessity of carrying away before the field can be improved. In this situation a man may, in some measure, be excused, if he should be tempted to put them into dikes; because the carriage of these stones may be said to cost him nothing: and he may, perhaps, be at some loss how to dispose of them in any other manner. But, in all other circumstances, it is very bad economy to rear fences of this kind, as feal (sod) dikes can always be built at one fourth of the expense that these would cost, and will answer all purposes equally well, and, if carefully built, will be kept in repair for any number of years at as small an expense as they could be. The want of durability generally complained of in these dikes is owing to their bad construction. The greatest part of them are made of a considerable thickness, with a ditch on each side; the heart of the dike being made up with the earth that is taken from these ditches; and only a thin wall, on each side, is built of solid feal from top to bottom; the consequence of which is, that as the loose earth that is thrown into the middle of the dike subsides much more than the seal on each side, the top of the dike sinks down; and, of course, the two side walls are pressed too much upon the inside, so as to bilge (or swell) out about the middle, and quickly crumble down to dust. To avoid this inconvenience, I have always chosen to build my dikes of this sort thinner than usual: they being only three feet and a half thick at the bottom; one foot, or a very little more, at top; and five feet high: taking care to have them built in such a manner, as that every sod (or feal), from top to bottom binds the joinings of the others below it, with as much accuracy as the bricks in a well built wall. The uppermost course of feal is cut a little longer than those that are immediately below it, and placed with the grassy side uppermost, so as to project a little on each side; which not only helps to throw the water a little off the dike, but also to prevent sheep or cattle from attempting to jump over it so readily as they otherwise might do. At the foot of the dike, on each side, is dug a small ditch, about one foot and a half or two feet deep; leaving a ledget of a few inches broad on each side, that the dike may not be undermined by the crumbling down of the loose earth into the ditch. These ditches not only help to give the dike an additional height, and keep its foundation dry; but are also of use to prevent cattle from coming close to it and rubbing upon it, or tearing it down with their horns, which they are very apt to do if this precaution be omitted. The earth that is taken out of the ditches may be thrown outwards, into the place that was occupied by the feal that has been taken to build the dike; and, if the field is in grass, a few seeds may be sowed upon it, and it will soon be covered as well as the rest of the field. By having the joints bound in every direction, the fabric is rendered much firmer than it could be by any irregular manner of working, while it is at the same time more easily reared. If the ground is soft, and the feal rise well, I get a fence of this kind done for one halfpenny per yard; but, if it is not good to work, a little more must be allowed. As to the time that a fence of this kind may stand without needing any repair, the oldest has now stood ten years, and seems to be nearly as firm as when first built. I have seen some walls of poor cottages which have been built somewhat after this manner, that have been good after standing forty or fifty years: but their durability depends greatly upon the nature of the feal of which they are formed. The best is that which is taken from poor ground of a spongy quality, which is generally covered with a strong sward of coarse benty grass. And, in situations where this can be had, I would recommend this as the cheapest and best temporary fence that could be reared. The greatest inconvenience that attends this species of fence is, the danger it runs of being torn down by the horns, or wasted away by the rubbing of cattle upon it; which they will sometimes do notwithstanding the ditches. This may be effectually prevented by planting a row of sweet briar (or eglantine) plants between the first and second course of feal when the dike is built, which will not fail to grow with luxuriance, and in a short time defend the dike from every attack of this kind. But if sheep are to be kept in the enclosures, this plant ought not, on any account, to be employed; for, as that animal naturally flies to the fences for shelter in stormy weather, the prickles of the straggling branches of the briar will catch hold of the wool, and tear it off in great quantities, to the great detriment of the flock and loss of the proprietor. In these cases, if the possessor of the ground is not afraid of the bad consequences that may be dreaded from the spreading of whins (furze), it would be much better to scatter a few of the seeds of this

plant along the ledget at the foot of the dike, which would quickly become a preservative for it, and be otherwise of use as a green food for his sheep during the winter season. But, before he ventures to sow this plant, let him remember, that where it is once established it will hardly fail to spread through the adjoining fields, and can hardly be ever afterwards thoroughly rooted out. I have often imagined, that this kind of fence might be greatly improved both in beauty and strength, by planting a row of ivy plants beneath the first course of feal in building the dike; which would, in a short time, climb up the sides of the dike and cover the whole with a close and beautiful net-work of woody fibres, covered with leaves of the most beautiful verdure; which would tend to preserve the dike from being eaten away by frost, and other vicissitudes of weather. And when it is arrived at the top, it would there send out a number of strong woody branches, forming a sort of hedge, that would afford some shelter to the fields, and break the force of the wind considerably. I have seen a garden wall that had been built of stone and clay, ornamented and strengthened in this way. I have had the experience of ivy growing well upon a dry stone dike; and have likewise seen it growing up the walls, and covering whole cottages built of feal; which have by this means been preserved entire, long after the walls that had been naked have fallen to decay. But, not having had plants of this kind at hand, I have not had an opportunity of trying it in the manner proposed; although, I think, there is the greatest reason to hope for success. Whins have been often employed as a fence when sowed upon the top of a bank. They are attended with the convenience of coming very quickly to perfection, and of growing upon a soil on which few other plants could be made to thrive: but, in the way that they are commonly employed, they are neither a strong nor a lasting fence. See HEDGE. The fences hitherto mentioned are only intended to preserve fields from the intrusion of cattle; but, on some occasions, it is necessary to have a fence that would even resist the efforts of men to break through it: as around bleaching fields, orchards, &c. the want of which often subjects the proprietor of such fields to very disagreeable accidents. To effectuate this, it is necessary to begin by trenching up or ploughing a large belt all around the field you mean to enclose, of forty or fifty feet or more in breadth, if you find it convenient; the outer edge of which should be enclosed by a good dike, or a ditch and hedge. This belt should be kept in culture one year, and well manured, if your situation will admit of it; and laid up before winter in such a manner that no water may be allowed to lodge upon it; and planted in winter all over with plants of eglantine so thick as not to be above two feet from one another; and between these put a good number of young birch plants not above two years old, interspersed with hazels, oak, ash, rawn (wild service), and other trees that will thrive upon your soil: together with thorns, hollies, brambles, and wood-bine (honey suckle); and having then fenced it from cattle, and kept down the weeds that may rise upon its surface by the hoe, as long as you can conveniently get access into it, leave it afterwards to nature. If this is done, and your soil be not extremely bad, the belt in a very few years will be entirely filled with a close bush of trees, so intermixed with the bending branches of the eglantine, and bound together by the trailing shoots of the bramble and wood-bine, that no animal above the size of a cat could penetrate; especially when it is of such a depth as I have recommended.—But as all kinds of trees and shrubs, if planted very close upon one another, become naked at the root when they arrive at any considerable size, care should be taken to prevent it from ever coming to that state, by cutting it down whenever it becomes in danger of being open at the root. And as it would be improper ever to leave the field entirely defenceless, it is a great advantage to have the belt as broad as it conveniently may be, so that the one-half of it may be a sufficient fence; by which means, we shall have it in our power to cut down the inside and the outside of the best alternately, so as still to keep the thicket young, and never to want at any time a sufficient fence; and the brush wood that this afforded at each cutting would, in almost every situation, yield such a revenue as would do much more than indemnify the proprietor for the rent of the ground that was occupied by this fence. And, if the field was in such a situation as required shelter, some trees might be allowed to grow to their full size about the middle without any inconvenience, if the belt were of a sufficient breadth.'

'There is one other species of fencing (continues Dr. Anderson), as useful as any of those already mentioned, which is in general much less understood, and more difficult to execute properly, viz. the method of securing the banks of rivers from being washed away by the violence of the stream, and of preventing the damages that may otherwise be occasioned by the swelling of the waters. It frequently happens that, when a river runs in a bed of rich vegetable mould, the least accident that may chance to divert the stream towards any particular part of the bank, causes it to sweep away large tracts of fine ground, to the very great detriment of the proprietor, as well as the public; as this fine mould is usually carried to the sea, and the place that the water leaves, to occupy the new bed that it thus forms for itself, is generally of a much worse quality, consisting chiefly of stones, sand, and gravel. In some cases, where the whole force of the current is quite close to the bank, and the materials necessary for fencing it are not to be found, it may perhaps be impossible or very difficult totally to prevent this evil; but for the most part it admits of a cure that can be obtained at a pretty moderate expense. These ravages are always greatest where the bank rises perpendicularly to a pretty considerable height above the ordinary surface of the water, and never at those places where the banks shelve down gradually towards the water's edge; for when the river is swelled to a great height by rains, and runs with a force and rapidity greater than usual, it strikes violently against these perpendicular banks that directly oppose its course, which, being composed of earth quite bare and uncovered, are easily soft-

ened by the water, and quickly washed away; so that the upper part of the bank, being thus undermined, falls by its own weight into the river, and is carried off in prodigious quantities: whereas at those parts of the bank that shelve gradually downwards to the water's edge, when the river rises to any considerable height, it gently glides along its surface; which, being defended by the matted roots of the grass with which it is covered, scarcely sustains any damage at all; and is nearly the same after the water has retired within its banks as before the inundation. These facts, which no one who has bestowed the least attention to this subject can fail to have observed, clearly point out, that the first and most necessary step towards a cure, is to level down the edge of the bank that is next to the water, so as to make it slope gradually down towards the river. If the bank is very high, and you have no other particular use for the earth that must be taken from it, the easiest method of disposing of it, will be to throw it into the river; but, in whatever manner you may dispose of the earth, the slope of the bank must be continued until the inner edge of it is as low as the surface of the water at the driest time of the year, and be made to ascend gradually upwards from the water with an easy slope, till it comes to the level of the ground, or at least rises to such a height as the water never exceeds. This operation ought to be performed as early in summer as possible, and should be either immediately covered with turf, pared from the surface of some field that has a very strong sward upon it, taking care to lay these in such a manner as to be in as little danger as possible of being washed away by any accidental flood that might happen before they had grown together; or, if turf of this kind cannot be easily had, it should be sowed very thick with the seeds of some small matt-rooted grass (such as the poa repens, or creeping meadow grass), 'that should be kept in readiness for this purpose. If the stream has not been extremely rapid at the foot of the bank, some of the earth that was thrown into the water will be allowed to subside to the bottom, and will there form a bank of loose soft earth, which will be of great use afterwards in preventing the face of the bank under water from being washed away; but, in order to secure this bulwark effectually for the future, the surface of this soft earth ought to be instantly stuck full of the roots of bog reeds, flags, water spider-wort, rushes, and other matt-rooted aquatic plants; which, if allowed to remain till they have once struck root, will afterwards form a barrier that nothing will ever be able to destroy. But if the stream be too rapid to admit of this, and the bank of soft earth is much deeper than the surface of the water, it will be of use to fill up the breast of the bank with loose stones carelessly thrown in, till they rise near the surface of the water; which would most effectually secure it against any future encroachments, if the bank is sloped away above. If stones cannot be easily got for this purpose, the only resource is to dig the bank so low, that, at the undermost edge, it may be always below the surface of the water; and to carry it out in this way for a considerable distance, and thus stick the whole surface that is below the water full of matt-rooted aquatic plants; which will in a great measure, if not entirely, defend it from any future encroachments. This bank ought to continue to shelve downwards even where it is below water, and those aquatics that will grow in the greatest depth of water should be planted on the innermost brink, and the others behind them. The water spiderwort will grow in four feet deep of water, and the roots of the common yellow-flowered water iris form such a strong and compact covering upon the surface of the soil on which it grows, as would defend it from being affected by the water almost as well as a rock. It is likewise an advantage attending this plant, that it grows upon a firm bottom, and chiefly delights in running water. If the stratum of soft earth is not so deep as to reach to the surface of the water, and lies upon a stratum of rock or hard gravel, there will be no occasion for throwing in stones of any kind. But, as it is difficult to unite the vegetable mould to any of these strata, there will always be some danger of its separating from these in violent inundations; and, if the water once get an entry, it will not fail to grow larger and larger by every future inundation. To prevent this inconvenience, it will be necessary, after you have sloped the earth away till you reach the gravel or rock, to cover the place where the edge of the earth joins the inferior stratum with a good many small stones, if they can be found; sowing between them the seeds of any kind of plants that you think are most likely to thrive, which have strong matted roots with as small and flexible tops as possible. From the impossibility of ever making earth adhere firmly to stone of any kind, it must always be an improper practice to face the banks of rivers to a certain height with stones which is coped at top with earth.'

Mr. Arthur Young, in his Annals of Agriculture, vol. XIII. has supplied us with the following method of fencing, from the pen of W. Erskine, Esq. 'The importance of good fences is universally acknowledged by every lover of husbandry, although there are various opinions about the kinds of them, every one being naturally prejudiced in favor of those he has been most accustomed to see, or by the opinion of others whose judgment he relies on. An intelligent correspondent, in the second volume of the Bath Papers on Agriculture, is so warm an advocate for quickset hedges, as to make him totally condemn the dead walls which are to be seen on the road between Bath and Cirencester, and in many other parts of England. I hope he will not take it amiss, if I cannot absolutely assent to his assertion, 'that quickset hedges are more useful and profitable.' That they are more ornamental cannot be denied, and they are generally allowed to afford more shelter; but the length of time, the constant attention, and continual expense of defending them until they bear even a resemblance of a fence, induces many people, in those places where the materials are easily procured, to prefer the dry stone walls; for though the first cost is considerable, yet as the farmer reaps the immediate benefit of the fence (which is undoubtedly the most secure one), they are thought on the whole to be the least expensive;

besides, the cattle in exposed situations, and especially in these northern parts, are so impatient of confinement at the commencement of the long, cold, wet nights, that no hedges I have ever yet seen in any part of this island are sufficient to keep them in. These inconveniences probably suggested to the late Sir George Suttie (eminent in East Lothian for his love of, and skill in, agriculture), an idea of a fence, that at once joined the warmth and ornament of the hedge with the almost perpetual fence of the wall. If I mistake not, you have, in some of your useful works, recommended hedges to be planted against the common dry stone walls: Sir George Suttie rather improved on this thought; he planted his hedges after the common method here, in the face of the ditch; but instead of putting a paling, or post and rail on the top of the bank, he placed a wall of two feet and a half high. His local situation induced him to build with lime, and, in places where that commodity is tolerably reasonable, it is the best method, as the satisfaction it affords by requiring no repairs, and the duration more than repays the expense; but, where the price of lime is high, they may be built without any cement, and answer the purpose very well, if the work is properly executed.' Mr. Erskine, after informing Mr. Young that 'he has now experienced the benefit of these fences for some years,' and that he 'can with great confidence recommend them as superior to all others,' concludes with the following account of the method of erecting them: 'When a new fence is proposed to be made, the surface of the ground of the breadth of the ditch, and likewise for two feet more, should be pared off, to prevent, as much as possible, the weeds and grass from hurting the growth of the young thorns. The ditch should be five feet broad, two feet and a half deep, and one foot broad at the bottom; leave one foot for an edging or scarcement, then dig the earth one spit of a spade for about one foot, and put about three inches of good earth below the thorn, which should be laid nearly horizontal, but the point rather inclining upwards, in order to let the rain drip to the roots; then add a foot of good earth above it; leave three or four inches of a scarcement before another thorn is planted: it must not be directly over the lower one, but about nine inches or a foot to one side of it; then throw a foot of good earth on the thorn, and trample it well down, and level the top of the bank for about three feet and a half for the base of the wall to rest on. The base of the wall should be about nine or ten inches (but not exceed one foot from the thorn). The wall to be about two feet thick at the bottom, and one foot at the top; the cope to be a single stone laid flat, then covered with two sods of turf; the grass of the undermost to be next the wall, and the other sod must have the grass side uppermost; the sods should be of some thickness to retain moisture, so that they may adhere together, and not be easily displaced by the wind; the height of the wall to be two feet and a half, exclusive of the sods, which together should be from four to six inches, by which means the wall would be nearly three feet altogether.' See HEDGES and PALING.

'Next to implements and machinery, and suitable buildings,' says an able writer on this subject in the supplement to the Encyclopædia Britannica, 'fences are in most situations indispensable to the profitable management of arable land. They are not only necessary to protect the crops from the live stock of the farm, but often contribute, in no small degree by the shelter they afford, to augment and improve the produce itself. On all arable farms, on which cattle and sheep are pastured, the ease, security, and comfort, which good fences give, both to the owner and the animals themselves, are too evident to require particular notice. And as there are few tracts so rich as to admit of crops being carried off the land for a succession of years, without the intervention of green crops consumed where they grow, fences, of some description or other, can very rarely be dispensed with, even in the most fertile and highly improved districts.' But 'there is no branch of husbandry so generally mismanaged as this. No district, of any considerable extent, perhaps, can be named, in which one does not see the greater part of what are called fences, not only comparatively useless, but wasteful to the possessor of the lands which they occupy, and injurious both to himself and his neighbours, by the weeds which they shelter. This is particularly the case with thorn hedges, which are too often planted in soils where they can never, by any management, be expected to become a sufficient fence; and which, even when planted on suitable soils, are in many cases so much neglected when young, as ever afterwards to be a nuisance, instead of an ornamental, permanent, and impenetrable barrier, as, with proper training, they might have formed in a few years.'

By way of general hints, he adds, 'the exposure of the land should be considered, in order that the fences may give the shelter that is most required:—the form of the field should be such as to render it most accessible from the farm buildings, and that it may be cultivated at the least expense, the lands or ridges not being too short, nor running out into angles at the points where the fence takes a different direction:—and the soil of the enclosure should be as nearly alike throughout as possible, that the whole field may be always under the same kind of crop. It must, in general, be a matter of consequence to have water in every enclosure; but this is too obvious to escape attention.'

'The most common fences, of a permanent character, are stone walls and whitethorn hedges. Stone walls have the recommendation of being an immediate fence; but the disadvantage of going gradually to decay, and of requiring to be entirely rebuilt, in some cases every twenty years, unless they are constructed with lime mortar, which is in many districts much too expensive to be employed in erecting common fences. Whitethorn hedges, on the contrary, though they require several years to become a fence of themselves, may be preserved at very little expense afterwards in full vigor for several generations. It is scarcely necessary to add, that upon wet soils, where hedges are employed as fences, it is of importance that the ditches be drawn in such a direction as to serve the purposes of drains, and also that

they may receive the water from the covered drains that may be required in the fields contiguous. According as the line of the fence is more or less convenient in this respect, the expense of draining may be considerably diminished or increased.'

'The expense of enclosing, and, of course, the direction and construction of the fences,' concludes this writer, 'ought to be undertaken in almost every case by the proprietor, not merely for the sake of relieving the tenant from a burden which may be incompatible with his circumstances and professional duties, but also from a principle of economy on the part of the landlord. Whatever may be the tenant's knowledge and capital, it is not to be expected that his views should extend much beyond his own accommodation during his temporary occupation; whereas the permanent interest of the landlord requires, not so much a minute attention to economy in the first instance, as that the amelioration shall be as complete and as durable as possible. The tenant's outlay on fences must inevitably be returned by a diminution of the yearly rent, and probably with a large profit for the first advance of the money; while, at the same time, that money may be expended in an improvement which is neither so complete nor so lasting as it might have been rendered, had it been done at the expense, and under the direction of the proprietor. But another error of the same kind is probably still more common, and by far more pernicious to landholders. The fences are to be kept in repair by the tenant; which, in so far as regards stone walls, is a stipulation no way objectionable. But it often happens that a landlord, even though he runs a hedge-fence at his own expense, leaves it to be trained up by the tenant without his interference; and the consequence is, that, in perhaps nine cases out of ten, it never becomes a sufficient fence at all; that the original cost is lost for ever; and that the land which it occupies is not only unproductive, but actually a nuisance. Besides, it is evidently improper to require of a tenant to rear up a good fence, commonly by a greater outlay than was required for forming it, when the half of his lease perhaps must elapse before he can derive much benefit from it. This mistake on the part of proprietors is probably the principal cause of the badness of hedge-fences; for if they are neglected when the plants are young, if cattle are allowed to make gaps, water permitted to stagnate in the ditch, or weeds to grow unmolested on the face of the bank, no labor or attention afterwards will ever make an equal and strong fence. As it is well known how difficult, or rather impossible, it is to enforce this care by any compulsory covenants, the best plan for both parties is that which is adopted in some districts, where hedges are reared at the mutual expense of landlord and tenant, the thorns, while they require it, being protected by rails, or otherwise, so as to give the tenant all the advantages of a complete fence in the mean time. In this case he cannot justly complain that he pays a share of the expense, and this payment furnishes the strongest motive for preserving the young thorns from damage, and for training them with such care, as to become a complete fence in the shortest possible period.'

Rammed earth, or en pise walls, are very common in France, both as fences and walls for buildings. They have been described at great length in the communications to the Board of Agriculture, and in other works, and tried in various parts of this country with tolerable success, though they are by no means suited either to our moist climate or degree of civilisation. In constructing them the earth is previously pounded, in order to crumble any stones therein; clay is added thereto in a small quantity, about one-eighth part. It is all beaten and mixed up together by repeated blows with a mallet about ten inches broad, and ten or fifteen inches long, and two inches thick. The earth being thus prepared, and slightly wetted, the foundation of the wall is dug; this is laid with stone, and when it is about one foot high above the surface of the ground, planks are arranged on each side, and the space between filled with the earth intended for the wall. It is strongly beaten; and this method is continued successively, till the wall is completed.

FENCING.

Fencing, in military exercises, is the art, or science, of making a proper use of the sword, either for attacking an enemy or defending one's self. On this elegant and manly exercise Sir John Sinclair observes, 'There is no exercise, with a view to health, better entitled to the attention of those who are placed among the higher orders of society, than that of fencing. The positions of the body, in fencing, have for object, erectness, firmness, and balance; and, in practising that art, the chest, neck, and shoulders, are placed in positions the most beneficial to health. The various motions of the arms and limbs, whilst the body maintains its erect position, enable the muscles in general to acquire vigorous strength, and in young people the bones of the chest and thorax necessarily become more enlarged, by means of which a consumptive tendency may be often prevented. It has been remarked, also, that those who practise the art are remarkable for long life and the good health they enjoy. These considerations, combined with the graceful movements which it establishes, and the elegant means of self-defence which it furnishes, certainly render the art an object of considerable importance.'

'Fencing,' says Locke on Education, 'is so necessary a qualification in the breeding of a gentleman, and has so many advantages in regard to health and personal appearance, that

every gentleman of respectability ought to have so striking a mark of distinction.'

But fencing is not the exercise of a few days, or even months; the practice of two or three years is requisite to enable a person to become a skilful fencer. In France, where the best fencers in Europe are found, a very indifferent opinion is entertained of any one if he cannot boast of at least four years regular practice in the fencing schools.

This art is, however, too much dependent on personal instruction and practice to demand any lengthened treatise in a work like the present. We shall, therefore, only attempt to give a succinct account of the first lessons, the thrusts, parades, &c., following Monsieur Danet's well-known arrangement.

It will be necessary, first, to observe that the sword is divided into two parts: the strong part, or *fort*, as it is usually termed, reaching from the hilt to the middle of the blade, and the weak part, or *foible* from the middle to the point.

Thrusts are made either *inside*, or *outside*, *over*, or *under* the arm, and ought to be parried with the *fort* of the blade. Supposing the sword held flat before you, the *inside* is that edge which is nearest the left side, the *outside* that nearest the right; a thrust put above the sword is *over* the arm, one put in beneath it *under* the arm.

The GUARD.—The only regular guard in fencing, is assumed after the following manner. Hold the sword with the thumb flat upon the handle, at about the distance of an inch from the guard, pressing the hilt principally with the little and ring fingers; incline the edge of the blade a little inwards, the hilt being at the height of the right breast, and the point a little higher. The body is to be turned, so as to present the profile of it, the heel of the right foot in a line with the ancle of the left, at the distance of at least twice the length of the foot, and at right angles with each other. The right arm must be a little bent, the elbow inclining inwards; the left arm raised to the height of the head, and forming an easy semi-circle, the fingers a little bent, and the index just touching the thumb.

The THRUSTS.—In fencing there are nine different positions of the arm and wrist in thrusting, which are thus distinguished. 1. Prime of the modern nomenclature, commonly called high carte, inside the arm; 2. Ancient prime; 3. High tierce or modern seconde; 4. Old seconde, a mere low tierce; 5. Low carte of the moderns, the common carte of the ancient school; 6. Quinte, the same in both modern and ancient style; 7. Carte, over arm; 8. Carte, cut outside; and 9. Flanconnade.

It is necessary to observe that all thrusts and parades are included in but three positions of the wrist, viz. *supination*, the palm of the hand being turned upwards; *pronation* when reversed or turned downwards; and the *mean position* the medium between these two, the thumb being above the fingers as they are bent.

1. *Prime* or *high carte*, *inside the arm*.—This thrust is the prime of the moderns, not only because it is the highest elevation of the wrist, but because it is also the easiest, most used, and most simple thrust in fencing. It is given inside the arm, the wrist in supination raised about three inches above the crown of the head during the movement of the right foot. The instructions for performing this thrust, as given in Rolando's modern art of fencing, are the following:—Carry the right foot forward to its greatest point of extension, which is generally about four times its length; and in the very time of this action, when you ought to direct your point, adjust your thrust without vacillation towards your adversary's right breast; but, as soon as the point of your sword reaches within three or four inches of his body, form the opposition of your wrist, the nails uppermost, your chest a little inclined forward, the head turned a little outside, the left haunch steadied, the shoulders well turned out, the right knee outwards, and bent perpendicularly with the instep; the left heel on the same line with the right heel, the leg well bent, and the foot firm upon the ground. The right hand, in directing the thrust, must always set out first, and the other parts of the body should follow rapidly. The thrust being made, get up quick on guard, joining your adversaries blade without forcing, and holding your point still opposite to his breast. In every thrust all these evolutions are to be executed with the same precision. This thrust is parried either by *high carte*, *prime seconde*, or *octave*. See plate I. FENCING, fig. 1.

2. *Ancient prime*.—This was the first thrust of the ancient school, and was so named as being the natural attempt made by any one, who had never learned to fence, to thrust with a sword. it is executed by raising the wrist in pronation about three inches above the crown of the head; and, in plunging the point at the adversary, the body is inclined somewhat more forward than in *high carte*: the remainder is executed in the same manner as described in the account of that thrust. In order to obtain an opening for this thrust, which is generally put in after the prime parade, it is sometimes necessary to step out of the line, to the right, as you make your thrust. This is parried by *prime*, *half circle*, and *octave*.

3. *High tierce*, or the *seconde* of the moderns.—In making the thrust of high tierce the wrist should be in pronation at about the height of the crown of the head; the sight may be directed under the arm, the body should be a little more inclined forward than in high carte, and the thrust should be given between the arm-pit and the right breast: the rest as in *high carte*. This thrust is parried by tierce, carte over arm, and pointe volante. Although this thrust is given in the same situation as the old prime, it differs from it not only in the height of the wrist, but in the more marked opposition of the fort of the blade. See plate I. fig. 2.

4. *Seconde* of the ancients, or *low tierce* of the moderns, is thus performed: lower the point of your sword under your adversary's guard, and thrust under his arm; the wrist in pronation raised as high as the eyes, directing the point under his arm-pit, and inclining the body and head farther forward than in the preceding; covering, particularly the head, as much with the wrist as by the fort of the blade. This thrust is parried by the *half-circle*, *prime*, *seconde*, *octave*, and *quinte*.

5. *Low carte*, of the modern system, or *common carte inside the arm*, of the ancients, is thus executed. Being on guard, in carte, direct the point of your sword along, and underneath your opponent's wrist; and, when about four inches from his body, raise your wrist in supination as high as the mouth, and throw the point into the pit of his stomach without extending your body so much as in the preceding thrust. This thrust is parried by *low carte*, the *octave*, *half-circle*, *prime*, and *seconde*. *Rolando's Modern Art of Fencing*, p. 28.

6. *Quinte*, both ancient and modern, was the fifth thrust, whence it derives its name. It is thus given: the wrist, being in the mean position, should be held as high as the chin, the fort of your blade opposed to the foible of your adversary's, and supporting thus your opposition pass as it were by stealth your point under his wrist, and thrust at his abdomen, still in the attitude of carte with the flat of the blade uppermost. This thrust is parried by *quinte*, *seconde*, *octave*, and the *half circle*.

7. *Carte over arm*, or modern *prime over arm*, is a carte thrust, passed over the arm along your opponent's blade, with the wrist in supination three inches above the head; the right arm should be entirely extended, and the other parts of the body placed as directed in *high carte*. This thrust is best parried by *pointe volante*; it may also be parried by *tierce*, and the *cart cover arm* parade.

8. *Carte cut outside the arm*, is thus executed: when on guard in tierce over your opponent's arm, lower by stealth your point by means of a half circle outside the arm; adjust your point under his arm-pit, the flat of the blade uppermost, supporting the sword precisely under his elbow; the wrist will then be in the mean position with the same position as in *low carte*. This thrust is to be parried by the *half circle*, *seconde*, *quinte*, or *octave*. See FENCING, plate II. fig. 1.

9. *Flanconnade*, so called, because mostly touching only the flank, is thus performed: being engaged in carte, lower the point below your opponent's wrist, take the foible of his blade without quitting it, and plunge your point into his flank under his elbow outside the arm; the wrist raised and supported in the mean position as high as the mouth; oppose suddenly the left wrist close to the elbow, the hand open, and stoop at the same time to avoid being touched by seconde. This is parried by *seconde and low carte*. See plate II. fig. 2.

We shall now endeavour to give a short description of the different simple parades. A *parade*, or parry, is formed by giving a dry beat on your opponent's sword, to avoid being touched by his point. A dry parade, is the action of striking his blade with a firm vivid motion, so as to turn it aside without following it. There were formerly only six parades taught; there are now fifteen in use.

The first is that of *high carte*, or *modern prime*, which is thus executed: supposing you are on guard, and your opponent thrusts high carte, then turn your right side so as to oppose as narrow a front as possible, and parry with a dry beat from the inside fort of your blade against his foible, lowering yours about six inches inside the arm, the wrist in the mean position at the breast height, and return *high carte*.

2. *Ancient prime parade*.—If when on guard your opponent thrusts ancient prime, parry with the fort outside of your sword, the wrist in pronation being as high as the forehead and opposed inside the arm; then extend your arm, and throwing your point below his stomach return *ancient prime*.

3. *High tierce*, or *modern seconde*, *parade*.—If when on guard your opponent thrusts high tierce, parry with a dry beat, fort against foible, outward from within; wrist nearly in pronation at the height of the flank, the arm extended in order better to be able to return with *high tierce*.

4. *Ancient seconde parade*.—If when on guard your opponent thrusts ancient seconde, parry with the inner fort of the blade turned out; the wrist in pronation breast high, the arm extended to return *ancient seconde*.

5. *Low carte parade*.—If from the guard your opponent thrust low carte, parry with a dry beat from the fort inside of your blade; the wrist in the mean position at the height of the abdomen, the point a little more elevated, and return *low carte*.

6. *Quinte parade*.—When from his guard your opponent makes the thrust of quinte, parry with the fort edge of your blade against his foible; lowering your wrist to the mean position, perpendicular with your knee, and the edge of your sword to the height of the thigh, somewhat inclined inwards, return *low carte*.

7. *Carte over arm parade*.—Upon your opponent's thrusting from his guard carte over arm, parry with your arm bent, with the fort outside of your blade against his foible, the wrist being in the mean position at the height of the chest, in the same situation as in carte outside the arm, and return with *carte over arm*.

8. *Low tierce parade* is adapted in the same manner either to a tierce or carte over arm thrust, and is thus executed:—Upon your antagonist attempting either of these, parry with the inner fort edge upon his foible by a dry beat, lowering and bending your elbow a little; the wrist in pronation at the height of the haunch, the point elevated, and return *seconde*.

9. *The octave parade*, so called as having been formerly the eighth and last of the parades, is thus performed:—Upon your antagonist's thrusting carte cut outside the arm, parry with the fort outside edge of your blade against his foible, the wrist in the mean position at the height of the breast; the arm bent outwards, the point low; and then return *carte over arm*.

10. *Half circle parade* upon low carte.—When from his guard your opponent thrusts low carte, parry with a dry beat from the inner fort edge of your blade against the foible of his, forming a half circle outside the arm; stretch out your arm, the wrist in supination the height of your mouth, and return carte.

11. *Flanconnade parade*.—If from the carte engagement your opponent thrust the flanconnade, turn your wrist suddenly in pronation at the height of the haunch, forming an angle from it

to the point of the sword, the arm bent at the same time that he endeavours to assure himself of your blade, from the foible to the fort, and return *seconde*

When this parry is used in the attack it is in the following manner:—If your opponent from the guard in carte thrust flanconnade, parry carte; without quitting his blade, lower your point a little, and pass it immediately under his wrist; thus binding his blade, and returning his sword to nearly the position in which it before was. This is however a dangerous parade to use in an attack, as a quick fencer would often, by disengaging carte over arm with the strong part of his sword against the foible of yours, thrust you at the same time you were thrusting at him.

12. *Pointe volante parade* is the twelfth and last of the simple parades, and is so named from the swiftness with which the point of the sword is thrown over the shoulder When your antagonist thrusts carte over arm, parry rapidly by bending your elbow, and throwing the point of your sword over your shoulder without displacing your wrist from the situation in which it was in the guard in carte; the outside edge of your sword thus gliding from one end to the other of your antagonist's will throw it sufficiently aside to enable you to return to your guard.

We have now enumerated the twelve simple parades commonly in use: there are now three others, of the circular kind, remaining to be noticed, the first of which is,

The counter carte parade, the chief of the circular parades, as it envelopes almost every thrust in fencing, either inside, outside, over or under the arm. It is in fact describing a small circle round your adversary's blade to throw it aside when you join it.

The counter of tierce is neither so easy nor so certain a parade as the last, and ought only to be used when out of measure.

The circle parade is performed by wheeling your sword closely and rapidly round from right to left so as to throw off your adversary's point from the centre of attack. This is the most difficult to perform of all the parades now in use, and is eminently useful as it embraces all the thrusts that can be aimed at you in retreating. Indeed, if it could be continued as long as it might be necessary to join an adversary's blade, who possesses both vivacity and address, it would be general against every attempt; but, as the arm and wrist after the fourth or fifth round become considerably deranged, a quick fencer, in order to follow you, will describe a smaller circle and easily come within its central point. To effect this parade with certainty, extend your arm, the wrist in supination being as high as the mouth, the point of the foil very low, and by the motion of the wrist alone describe from right to left, in an oblique manner, the figure of a cone in as small a compass as possible. See plate II. fig. 3.

Having now enumerated the principal thrusts and parades, we shall give some account of the common artifices in fencing, and a definition of some of the common terms.

The appeal.—Marking an appeal is an endeavour to throw your adversary off his guard by inducing him to make some thrust for which being prepared you may return to advantage. This artifice consists in a lively close stroke from the fort to the foible of his blade to throw it aside, and by giving a stamp with the right foot induce him to parry at a thrust you never intended to give, or to thrust you at a time when you expect and are prepared for it. The greatest attention should however be paid, lest your adversary, anticipating your intention, throw in his thrust at the very time you are executing your appeal, and thus seizing the time touch you before you are prepared.

Beating.—To beat the foil is to strike the foible of your adversary's blade with the fort edge of yours, as often with a view to turn his point aside as to open his guard so as to be enabled to touch him. See BEAT, in fencing, in the body of the work.

Binding.—To bind and cross an adversary's sword is to join it by sliding and forcing strongly upon it with your edge from the fort to the foible under his wrist, to drive it away, as it were, so that you may be sure to touch if not disarm him. For this reason it is a method of disarming the most advantageous, as, if well executed, it becomes, if not absolutely certain, yet very useful, as being attended with no comparative danger.

Coup de fouet, or lashing, is the act of giving a firm dry beat or jerk upon your opponent's blade, when he holds it flat and stiffly before him, in order to cause him to let it fall.

To disengage is to carry or pass the point of your sword from one side to the other over your antagonist's, by joining it without forcing.

Glizade is the act of sliding your blade upon the foible of his: the body must be well effaced and firm upon the left haunch; the sword directly before you; and when you close slide upon your adversary's blade by the fort of your own.

Volting.—To volte is to turn your back almost entirely upon your adversary, by a half wheel to the left to about the distance of the guard, throwing back your point at the same time to his body. The volte is only useful when you are engaged with one, who, without any knowledge of fencing, rushes upon you with a curved arm, not suspecting the danger; or who, being acquainted with the danger, cautiously uses this method of fighting, with the view either of surprising or disconcerting you.

'It is not a little surprising,' says Mr. Forsyth in the treatise we have already quoted, 'that such dangerous manœuvres have been invented and adopted, so diametrically opposed to the true principles of fencing, which only require firmness of the body and legs, a requisite that can never be supplied in the action of volting, which too evidently and too frequently exposes us to be hit, before we can completely command this hazardous and uncertain evolution, and which, should we fail in our design, leaves us without a resource with a stroug quick fencer, who will seldom fail to take advantage of the disorder into which these dangerous experiments are sure to involve us.' For SPADROON EXERCISE, and SWORD EXERCISE, see those articles.

FEND, *v. a.* & *v. n.* } Latin *fendo*. See
FEND'ER, *n. s.* } FENCE. To keep off;
FEND'ER-BOLT. } shut out; to dispute; shift off (a charge): the sea phrase is exemplified by Dr. Rees: the household fender is a well known protection of the floor from coals falling out of the fire, says Dr. Johnson: we should add from the scene around us, and of children from falling into it.

Spread with straw the bedding of thy fold,
With fern beneath to *fend* the bitter cold.
Dryden.

The dexterous management of terms, and being able to *fend* and prove with them, passes for a great part of learning: but it is learning distinct from knowledge. *Locke.*

Fend, in the sea language, imports the same as defend. Hence the phrase *fending* the boat, &c.; that is, saving it from being dashed against the rocks, shore, or ship's side. Hence also *fenders*, any pieces of old cable-ropes, or billets of wood, &c., hung over the ship's side, to *fend* or keep other ships from rubbing against her; or to prevent her from striking or rubbing against a wharf or quay. *Dr. A. Rees.*

Fend, or *fender-bolts*, made with long and thick heads, struck into the outermost bends or wales of a ship, to save her sides from bruises and hurts. *Id.*

FENELON (Francis de Salignac de la Motte), was of an ancient and illustrious family, and born at the castle of Fenelon in Perigord, in 1651. In 1689 he was appointed tutor to the dukes of Burgundy and Anjou; and in 1695 was consecrated archbishop of Cambray. But a publication of his, entitled An Explication of the Maxims of the Saints concerning the Interior Life, in which he seemed to favor the extravagant notions of Madam Guyon, and the principles of Quietism, compelled him to quit the court; to which he never returned. A controversy was for some time carried on between him and M. Bossuet, bishop of Meaux; which terminated in an appeal to the pope, who condemned the archbishop's book, March 12th, 1699, and our prelate had what was wittily called the coquetry of humility to read his own condemnation from his own pulpit. Some allege that there was more of court policy than religious zeal in this affair; be this as it may, the archbishop submitted patiently, and, retiring to his diocese, performed the duties of his station, and led a most exemplary life. The work that gained him the greatest reputation, and which will render his memory immortal, is his Telemachus; the style of which is natural, the fictions well contrived, the moral sublime, and the political maxims excellent. Louis XIV. is said never to have approved of the appointment of Fenelon to the preceptorship of the princes, and to have regarded Telemachus as a satire upon his own government. He stopped therefore the printing of the work, and the archbishop could never recover his favor, notwithstanding his writings against the Jesuits, and munificent distribution of corn in a season of scarcity to the army. Fenelon is also said to have given unpardonable offence by his honest advice to Louis not to marry madame Maintenon. In person, manners, and general character Fenelon is universally represented as having been one of the most engaging of men; uniting, with a noble politeness, a natural and flowing elocution, and the power of making himself understood upon all subjects. No man inspired stronger attachments; and such was the respect borne to his character, that the duke of Marlborough, and the other generals of the allies, expressly excepted the archiepiscopal lands of Cambray from pillage when in possession of that part of Flanders. His principal works not already mentioned, are—Dialogues of the Dead, 2 vols. 12mo.; Dialogues on Eloquence, 12mo.; Philosophical Letters, a Demonstration of the Existence of a God, 12mo.; Letters on different Religious and Metaphysical Subjects, 12mo.; Spiritual Works, 4 vols. 12mo.; Sermons, and controversial pieces. Fenelon died from a fall received in the overturning of his carriage in 1715; a collection of all his religious works was afterwards printed at Rotterdam, under the care of the marquis Fenelon his grandnephew, when ambassador to the states general.

FENERATION, *n. s.* Lat. *fœneratio*. Usury; the gain of interest; the practice of increasing money by lending.

The hare figured not only pusillanimity and timidity from its temper, but *feneration* and usury from its fecundity and superfetation. *Browne.*

FENESTRA, in anatomy, a name given to two small holes in the cavity of the tympanum, which are distinguished from each other by the epithets rotunda and ovalis.

FENESTRELLE, a fortress of France, in Piedmont, on the Clusone, near the borders of Dauphiny, consisting of three distinct erections, built on eminences, and communicating with each other by covered ways cut in the rock. In the valley below lies the village of Fenestrelles, with 860 inhabitants. Seven miles S. S. E. of Susa, and twenty N. N. W. of Pignerol.

FE'NNEL, *n. s.* Lat. *fœniculum*. A plant of strong scent.

A sav'ry odour blown, more pleased my sense
Than smell of sweetest *fennel*, or the teats
Of ewe, or goat, dropping with milk at even.
Milton.

FENNEL, in botany. See ANETHUM.

FENNEL FLOWER. See NIGELLA.

FENNEL FLOWER or CRETE. See GARIDELLA.

FENNEL, GIANT. See FERULA.

FENNEL, HOG'S. See PEUCEDANUM.

FENNEL, SCORCHING. See THAPSIA.

FENTON (Elijah), descended from an ancient family, was born at Shelton near Newcastle. He was the youngest of twelve children, and was intended for the ministry; but embracing political principles contrary to the measures of government, while at Cambridge, he declined entering into holy orders. He was secretary to the earl of Orrery; but seems to have spent most of his time among his friends and relations. His elder brother had an estate of £1000 a year. When his engagement with lord Orrery ceased, he obtained, through the recommendation of Pope, a situation with Mr. secretary Craggs, who, aware of the deficiences of his own education, wished to have a man of taste and learning for a companion. He next undertook, for Pope, the translation of the first, fourth, nineteenth, and twentieth books of the Odyssey, for which he re-

ceived the sum of £300. His tragedy of Mariamne rendered him more known; it was performed in 1723, with very great applause, and produced him £1000. 'An instructive comparison,' says Dr. Johnson, 'between the patronage of the public, and that of a king or minister.' He died in 1730 of indulgence and want of exercise. His pupil, lord Orrery, says of him, Poor Fenton died of a great chair and two bottles of port a day. He adds, he was one of the worthiest and modestest men that ever belonged to the court of Apollo. Pope wrote upon him the following beautiful but not very veracious epitaph:—

'This modest stone, which few vain marbles can,
May truly say, here lies an honest man;
A poet blessed beyond the poet's fate,
Whom heaven kept sacred from the proud and great;
Foe to loud praise, and friend to learned ease,
Content with science in the vale of peace.
Calmly he looked on either life, and here
Saw nothing to regret, or there to fear;
From nature's temperate feast rose satisfied,
Thanked heaven that he had lived, and that he died.'

FENTON (Sir Geoffry), privy counsellor and secretary in Ireland, during the reigns of queen Elizabeth and king James I., is well known for his translation of Guicciardin's History of the Wars of Italy, dedicated to queen Elizabeth in 1579. He died at Dublin in 1608, after having married his daughter to Mr. Boyle, afterward earl of Cork.

FE'NUGREEK, *n. s.* Lat. *fænum Græcum.* A plant.

FEOD, *n. s.* / FE'ODAL, *adj.* / FEODAL'ITY, *n. s.* / FE'ODARY, / FEODA'TORY, *adj.* } Fr. *fief*, of Old Latin *feodum*. Fee; tenure; possession held under a superior: the adjective feodal is strictly Gothic, signifying possessed by fee: a feodary, is one who holds under a feudal lord or superior: feodality, 'the possession of divers feoffs.'—*Cotgrave.*

Any beneficiary or *feudatory* king. *Bacon.*
The *feodal* discipline extended itself every where. *Burke.*
The leaders teach the people to respect all *feodality.* *Id.*

FEOD, or FEUD, is defined to be a right which a vassal hath in lands or some immoveable thing of his lord's, to use the same, and take the profits thereof, hereditarily, rendering unto the lord such feodal duties and services as belong to military tenure, &c., and the property of the soil always remaining to the lord. Pontoppiddan says, that odh in the northern languages is the same with proprietas, and all with totum in the Latin. Hence, odhall signifies right: and hence we may conjecture, that the udal right in Finland is derived. By transposing these two syllables, we form the word allodh; whence we have the etymology of the allodium or absolute property claimed by the holders of fiefs or feuds; and by combining odh, signifying property, with the word fee, signifying a conditional stipend or reward, we have the word feodh, signifying a property given by way of stipend or reward upon a certain condition. See FEUDAL SYSTEM.

FEODAL SYSTEM. See FEUDAL SYSTEM.

FE'OFF, *v. a.* & *n. s.* / FEOFFEE', *n. s.* / FEOFF'ER, / FEOFF'MENT. } Old Fr. *feoffee*; Low Lat. *feoffare*. To put in feodal possession; a fief: a feoffee, is one put in possession: feoffer, one who gives possession: and feoffment, the act or form of giving it.

The late earl of Desmond, before his breaking forth into rebellion, conveyed secretly all his lands to *feoffees* in trust, in hope to have cut off her majesty from the escheat of his lands. *Spenser.*

Any gift or grant of any honours, castles, lands, or other immoveable things, to another in fee simple, that is, to him and his heirs for ever, by the delivery of seisin of the thing given: when it is in writing, it is called a deed of *feoffment*; and in every *feoffment* the giver is called the *feoffer*, *feoffator*, and he that receiveth by virtue thereof the *feoffee*, *feoffatus*. The proper difference between a *feoffer* and a donor is, that the *feoffer* gives in fee-simple, the donor in fee-tail. *Cowell.*

FEOFFMENT, in law, from feoffare, to give one a feud, is still directed and governed by the feodal rules: insomuch that the principal rule relating to the extent and the effect of the feodal grant, tenor est qui legem dat feudo, is the maxim of the law with relation to feoffments, modus legem dat donationi. And therefore, as in pure feodal donations, the lord, from whom the feud moved, must expressly limit and declare the continuance or quantity of estate which he meant to confer, ne quis plus donasse præsumatur, quam in donatione expresserit: so, if one grants by feoffment lands or tenements to another, and limits or expresses no estate, the grantee (due ceremonies of law being performed) hath barely an estate for life. For, as the personal abilities of the feoffee were originally presumed to be the immediate or principal inducements to the feoffment, the feoffee's estate ought to be confined to his person and subsist only for his life; unless the feoffer, by express provision in the creation and constitution of the estate, has given it a longer continuance. These express provisions are indeed generally made; for this was for ages the only conveyance whereby an estate was created in fee simple, by giving the land to the feoffee, to hold to him and his heirs for ever; though it serves equally well to convey any other estate of freehold. But by the mere words of the deed the feoffment is by no means perfected: a very material ceremony remains to be performed, called livery of seizing; without which the feoffee has but a mere estate at will. See SEISIN.

FER DE FOURCHETTE, in heraldry, a cross having at each end a forked iron, like that formerly used by soldiers to rest their muskets on. It differs from the cross fourche, the ends of which turned forked: whereas this has that sort of fork fixed upon the square end. See HERALDRY.

FER DE MOULIN, MILRIND, or INKE DE MOULIN, in heraldry, is a bearing supposed to represent the iron-ink, or ink of a mill, which sustains the moving wheel.

FERABAD, or FERABAT, a town of Persia, in the province of Mezanderan, twelve miles from the Caspian Sea, seated among the moun-

tains which bound its south coast. The environs produce sugar, cotton, and silk. Shah Abbas often spent the winter in it. It lies 122 miles west of Asterabad; 140 north-east of Gilan, and 270 north of Ispahan.

FERABAT, a town of Persia, one mile and a half from Ispahan, extending nearly three miles along the banks of Zenderoad. It was built by Shah Abbas, who brought Armenians to it, from Ferabad, after they had revolted from the Turks.

FERÆ, in zoology, an order of the class mammalia; thus characterised: foreteeth conic, usually six in each jaw; tusks longer than the other teeth; grinders with conic projections; feet with subulate claws; food carcases, and other animals attacked while alive.

FE'RAL, *adj.* Lat. *feralis*. Funereal; deadly.

By the wan moon how oft the bird of night
Lengthens her *feral* note. *Headley.*

FERALIA, in antiquity, a festival observed among the Romans on the 21st of February, or, according to Ovid, on the 17th of February, in honor of the manes of their deceased friends and relations. Varro derives the word from inferi, the shades, or from fero, to carry; on account of a repast carried to the sepulchres of such. Festus derives it from ferio, on account of the victims sacrificed. Vossius observes, that the Romans called death fera, cruel, and that the word feralia might arise thence. Macrobius refers the origin of the ceremony to Numa Pompilius. Ovid, in his Fasti, goes back as far as Æneas for its institution. He adds, that on the same day a sacrifice was performed to Muta, the goddess of dumbness; and that the persons who officiated were an old woman attended with a number of young girls. During the continuance of this festival, which lasted eleven days, presents were made at the graves of the deceased, marriages were forbidden, and the temples of the gods shut up. While the ceremonies continued, they imagined that the ghosts suffered no punishments in hell, but that their tormentors allowed them to wander round their tombs, and feast upon the meats which their surviving friends had prepared for them. For a more particular account of the offerings, sacrifices, and feasts for the dead, see INFERIÆ and SILICERNIUM. Sometimes at the feralia public feasts were given to people at the tombs of the rich and great, by their heirs or particular friends.

FERBER (John James), a Swedish mineralogist and physician, born at Carlscrona in 1743. He was brought up under his father, also a physician, and early became distinguished as a natural philosopher. He set out in 1765, on a mineralogical tour to inspect the mines of Germany, France, Holland, England and Italy; and on his return accepted an invitation to become professor of natural history at Mittau. He removed to St. Petersburgh in 1783, as professor of Natural Science in that capital, whence he removed in 1786 into the service of Prussia. He died in 1790 at Berne in Switzerland. His works are—Letters from Italy, respecting the most remarkable Natural Productions in that Country, 1773, 8vo.; Collections towards a History of the Mines of Bohemia, Berlin, 1774, 8vo.; A Description of the Quicksilver Mines at Idria, Berlin, 1774, 8vo.; An Account of Mines in the Cantons of Deux Ponts, the Palatinate, and Nassau, Berlin, 1776, 8vo.; An Attempt towards an Oryctography of Derbyshire, Mittau, 1776, &c., &c.; all of which are written in the German language.

FERDINAND V. king of Spain, who married Isabella of Castile, whereby that kingdom was united to the Spanish crown. This illustrious pair laid the foundation of the glory and power of Spain. The conquest of Granada, and the discovery of America by Christopher Columbus, make his reign a celebrated era in history. He died in 1516, aged sixty-three. See SPAIN.

FERE, *n. s.* Sax. ꝑeꝛa. A mate or companion. Also written pheer; and applied to both sexes.

Clarissa to a lovely *fere*
Was linked, and by him had many pledges dear.
Spenser.

This king unto him took a *pheere*,
Who died and left a female heir. *Shakspeare.*

FERENTINUM, in ancient geography, a town of the Hernici in Latium, which the Romans, after subduing that nation, allowed to be governed by its own laws: now called Ferentino.

FERETRUM, among the Romans, the bier used in carrying out the bodies of the dead, which duty was performed by the nearest male relations of the deceased: thus, sons carried out their parents, brothers their sisters, &c.

FERG, or FERGUE, Francis Paul, an eminent landscape painter, born in 1689, at Vienna, where he learned the first principles of his art. He practised under Hans Graf, Orient, and Thiele. He first went into Saxony, and painted for the duke of Brunswick, and for the gallery of Salzdahl. From Germany he came to London, where he was involved in difficulties. His necessities compelled him to diminish the prices of his paintings, in order to procure immediate support; and by a series of misfortunes he was always overwhelmed with debt. He died suddenly in the street one night in 1738, at the door of his lodgings. He had formed a style of his own from various Flemish painters, though resembling Poelemburgh most in the enamelled softness and mellowness of his coloring; but his figures are greatly superior; every part of them is sufficiently finished, every action expressive. He painted small landscapes, fairs, and rural meetings; his horses and cattle are not inferior to Wouvermans; and his buildings and distances seem to owe their respective softness to the intervening air not to the pencil. The greatest part of his works are in London and Germany; and they now bear a high price.

FERGANA, or FERGANAH, a mountainous province of Samarcand, abounding in mines of gold, silver, copper, iron, and coals.

FERGUSON (James), an eminent experimental philosopher and mechanic, born in 1710, at Keith, a village in the shire of Banff in Scotland. At the earliest age his extraordinary genius began to exert itself. He first learned to read, by overhearing his father, who was in low circumstances, teach his elder brother: and his taste for mechanics was first shown by his making a wooden clock after having once only been shown the inside of one. As soon as his age

would permit, he went to farming service; and, whilst in this humble situation, he began the study of astronomy, by laying down from his own observations only, a celestial globe. His master, observing these marks of his ingenuity, procured him the countenance and assistance of his superiors; and, by their help, he was sent to Edinburgh. Here he began to take portraits; an employment by which he supported himself and family for several years, both in Scotland and England, whilst he was pursuing more serious studies. In London he first published some curious astronomical tables and calculations; and afterwards gave public lectures in experimental philosophy, which he repeated (by subscription) in most of the principal towns in England, with the highest marks of general approbation. He was elected F. R. S. without paying for admission; and had a pension of £50 a year given him, unsolicited, by the late king, who had attended his lectures, and frequently sent for him. His death took place in 1776, and he left behind him nearly £6000. His principal works are Astronomical Tables and Precepts, 8vo.; Astronomy Explained; Introduction to Astronomy; Tables and Tracts; Lectures in Mechanics, Hydrostatics, Pneumatics, and Optics; Select Mechanical Exercises; The Art of Drawing in Perspective; An Introduction to Electricity; and several papers in the Philosophical Transactions.

FERGUSSON (Adams), a celebrated writer on history and moral science, was born in 1724, at Logierait, in Scotland, of which parish his father was minister. Educated at Perth and St. Andrews, he removed to Edinburgh, after graduating M.A. to study for the ministry. He served in the first instance as chaplain in the forty-second regiment of foot, but on the peace of Aix-la-Chapelle returned to Edinburgh, where, in 1759, he was made professor of natural philosophy, which chair he afterwards resigned for that of moral philosophy. His Essay on Civil Society appeared in 1767, and was very favorably received. He shortly after received the degree of LL.D., and accompanied the earl of Chesterfield on his travels. In 1776 he replied to Dr. Price on Civil Liberty, and was rewarded by the appointment of secretary to the mission sent to America in 1778, to effect a reconciliation between the two countries. On his return he resumed the duties of his professorship, and composed his History of the Roman Republic, which was published in 1783, in three volumes, 4to. In 1793 he published his lectures as a Treatise on Moral and Political Science, two volumes, 4to. He subsequently went abroad, and returning, settled at St. Andrews, where he died, February 16th, 1816.

FERGUSSON (Robert), an eminent Scottish poet, born in Edinburgh, in 1750. Though early laboring under the disadvantages of a delicate constitution, which often interrupted his studies and attendance, yet he excelled most of his companions at the high school of Edinburgh. After four years spent at this seminary, he studied two years at the grammar-school of Dundee; after which, having obtained a bursary in the college of St. Andrews, he entered as a student there in his thirteenth year, and soon became distinguished as a youth of very superior genius. During his residence at St. Andrew's, he first gave specimens of his poetical talents. He had been originally intended for the church, but upon the expiration of his bursary, after residing four years at St. Andrew's, he abandoned the study of divinity. After residing six months with his maternal uncle, Mr. John Forbes, he was dismissed from the house, and composed his poems on the Decay of Friendship, and Against Repining at Fortune. Not long after this he obtained employment, first in the commissary's, and afterwards in the sheriff clerk's office, in which last he remained to the end of his short career. Meantime he continued to indulge his poetical vein, and before he was twenty years of age had published many of his pieces in Ruddiman's Weekly Magazine, a periodical work then universally read. Those most admired were written in the Scottish dialect, upon humorous and often temporary subjects. As he subscribed all his poems with his name, from their first appearance in the Weekly Magazine, his company soon came to be generally courted, and in the circles of gaiety and dissipation his conversation never failed to please. But while he received these slight marks of general admiration, he had not the good fortune to fall in with any one who was equally qualified by station, inclination, and influence, to patronise his merits, and ameliorate his circumstances. Among his numerous acquaintance there was, however, one gentleman, who having contracted a sincere friendship for Fergusson previous to his departure for the East Indies, remitted a draught for £100, accompanied with a cordial invitation to come over to India and make his fortune. But the kind invitation arrived too late: poor Fergusson having previously breathed his last. Among the numerous acquaintance, whom his fame as a poet and man of humor had attracted around him, there were some persons, unfortunately, by no means celebrated for their regularity of life, and against the temptations to dissipation, held out to him by such companions, his easy temper proved a weak defence. At last the debility of his frame produced a total derangement of mind; and, his mother's circumstances not admitting of a proper attendance being paid to him in her own house, he was removed to the public asylum, where he died, October 16th, 1774. He was interred in the Canongate church-yard, where Burns erected a monument to him, with the following epitaph and inscription:—

No sculptured marble here, nor pompous lay!
No storied urn, nor animated bust!
This simple stone directs pale Scotia's way,
To pour her sorrows o'er her poet's dust.

By special grant of the Managers
To ROBERT BURNS, who erected this stone,
This burial place is ever to remain sacred
to the memory of
ROBERT FERGUSSON.

FERIÆ, in Roman antiquity, holidays, or days upon which they abstained from work. Proclamation was generally made by the herald,

by command of the rex sacrorum, or flamines, that all should abstain from business; and whoever transgressed the order was severely fined. The feriæ were of two kinds, public and private.

Feriæ Privatæ, the private feriæ, were holidays observed by particular persons or families on account of birth-days, funerals, &c. These belonged to, and were one division of, the dies festi.

Feriæ Publicæ, the public feriæ, were of four kinds, viz. feriæ conceptivæ, moveable feasts, the days for the celebration of which were fixed by the magistrates or priests; of this sort were the feriæ, Latinæ, paganalia, &c., which happened every year, but the days for keeping them were left to the discretion of the magistrates or priests. Of these the feriæ Latinæ were feasts at which a white bull was sacrificed, and the Latin and Roman towns provided each a set quantity of meat, wine, and fruits; and, during the celebration, the Romans and Latins swore eternal friendship to each other, taking home a piece of the victim to every town. The festival was instituted by Tarquinius II., when he overcame the Tuscans and made a league with the Latins, proposing to build a common temple to Jupiter Latialis, at which both nations might meet and offer sacrifices for their common safety. At first the solemnity lasted but one day, but it was at different times extended to ten. It was held on the Alban Mount, and celebrated with chariot races at the capitol, where the victor was treated with a large draught of wormwood. Feriæ imperativæ were fixed and instituted by the mere command of consuls, prætors, or dictators, upon the gaining of some victory or other fortunate event. Feriæ nundinales were regular market days, one of which fell every ninth day. The country people, after working eight days successively, came to town the ninth to sell their commodities, and to inform themselves of what related to religion and government. Feriæ stativæ were kept as public feasts by the whole city upon certain immoveable days appointed in their calendar; such were the compitalia, carmentalia, lupercalia, &c.

Feriæ, in the Romish breviary, is applied to the days of the week; thus Monday is the feria secunda, Tuesday the feria tertia. The occasion of this was, that the first Christians used to keep the Easter week holy, calling Sunday prima feria, &c., whence the term feria was given to the days of every week. They have also extraordinary feriæ, viz. the last three days of passion week, the two following Easter day, and the second feriæ of rogation.

FE'RIAL, *adj.* } Lat. *ferialis*. Respect-
Feria'tion, *n. s.* } ing the ordinary days of the week; sometimes respecting holidays: feriation is the act of keeping holiday.

As though there were any *feriation* in nature, this season is commonly termed the physician's vacation. *Browne.*

Concerning the *ferial* character. The ecclesiastical year of old began at Easter, the first week whereof was all holiday, the days being distinguished by prima, secunda, tertia, &c., added unto *feria*. *Gregory.*

In the statute 27 Hen. VI. c. 5. *ferial* days are taken for working days; all the days of the week except Sunday. *Tomlins.*

FERIANA, the ancient city of Thala, in Africa, taken and destroyed by Metellus in the war with Jugurtha. It was visited by Mr. Bruce in his late travels through Africa, who expected to have found many magnificent ruins in the place, but was disappointed. The only remarkable objects he met with were the baths, which are excessively warm: these are without the town, and flow from a mountain named El Tarmid. Notwithstanding the excessive heat of its water the fountain is not destitute of fish: they are of the shape of a gudgeon, above four inches long; and he supposed that there might have been about five or six dozen of them in the pool. On trying the water with a thermometer, he found the heat so great that he was surprised the fish were not boiled in it.

FE'RINE, *adj.* } Lat. *ferinus*. Wild;
Feri'neness, *n. s.* } savage: the substantives
Fe'rity. } mean barbarity; cruelty.

The only difficulty is touching those *ferine*, noxious, and untameable beasts; as lions, tygers, wolves, bears. *Hale.*

A *ferine* and necessitous kind of life, a conversation with those that were fallen into a barbarous habit of life, would assimilate the next generation to barbarism and *ferineness*. *Id.*

He reduced him from the most abject and stupid *ferity* to his senses, and to sober reason.
Woodward's Natural History.

FERMANAGH, a county in the province of Ulster, Ireland, is bounded on the west by Leitrim, on the north by Tyrone and Donegal, on the east by Tyrone and Monaghan, and on the south by Cavan and Leitrim. It abounds in hills, many of them of great height, and boggy; but these high grounds afford good coarse pasture for young cattle. Agriculture is not here in a flourishing condition; and the fact is said to be well authenticated that, so late as the year 1808, it was the practice in some places to plough by the tail! The farms in the northern part are of a large size, and tolerably productive. Oats are the most common grain, and next to these barley. In some quarters, when calculating a profitable crop, they estimate four stone of barley, and six of oats, to a gallon of whisky. Potatoes are common.

In 1809 about 5000 Irish acres were supposed to be sown with flax. The grazing tenures are from 100 to 300 acres. Mr. Wakefield says, that 'Enniskillen market is attended weekly by about thirty or forty farmers from the vicinity, whose circumstances enable them to eat meat daily, and to drink port wine'! This is the principal or rather the only town of note in the county. See Enniskillen.

A considerable part of the county is occupied with dairies. There is also a small breed of cows here similar to those of Down: but no flocks of sheep. The linen manufacture and the rearing of black cattle are the great sources of wealth here. The linen produced is what is called seven-eighths. Illegal distillation is carried on to a considerable extent. There are mills for grinding oats, but none for grinding wheat.

This county also contains rich iron ore and coal. On lord Enniskillen's estate, west of

Lough Erne, there are quarries of marble. It is brown and white, beautifuliy veined, and of a fine grain.

The laborer is generally paid in money. In 1811 the prices of labor, provisions, &c., were: for a man, the year round, 1*s.* and a woman 6*d.* per day; a carpenter, per day, 3*s.* 6*d.* and if constantly employed, 2*s.* 6*d.*; a mason, per day, 2*s.* 6*d.*; a thrasher, per day, 1*s.* 1*d.*, or, by piece-work, from 6*d.* to 8*d.* per barrel of oats, 8*d.* to 10*d.* per ditto of barley, and 1*s.* 1*d.* to 1*s.* 8*d.* per ditto of wheat; a car and horse, per day, 2*s.* 2*d.*; a saddle-horse per ditto 5*s.* 5*d.*; a plough per ditto 11*s.* 4½*d.*, and, for ploughing and sowing an acre, from 26*s.* to 36*s.*; a blacksmith, per stone of work, 1*s.* 6*d.*, or per day 2*s.* 6*d.*; turf, per kish, 2*s.*; sea coal, per barrel, 4*s.* to 5*s.*; culm, per ditto, 3*s.*; lime, per ditto, 1*s.* 8*d.* to 2*s.*; a car, mounted, £4 10*s.*; potatoes, per stone, 2*d.* to 4*d.*; salt butter, per cwt. £4 13*s.* 4*d.*; fresh ditto, per lb. 1*s.*; hay, per ton, £3 to £4; whisky, per gallon, 7*s.* 9*d.* to 10*s*; strong ale, per quart, 4*d.*; porter, per gallon, 1*s.* 3*d.*; beef, per lb., 6*d.*; mutton 7*d.*; pork 3*d.*; lambs, per score, £18 to £22; eggs, per score, 6*d.*; cheese, per lb., 1*s.* 6*d.*; bacon, per ditto, 6*d.*; shoeing a horse, 4*s.*; shoes, per pair, 11*s.* 4½*d.*; salt, per stone, 1*s.* 5*d.*; undressed flax, per cwt. £4 10*s.* to £5; wool, per stone, 22*s.* to 20*s.*; fowls, per couple, 1*s.* to 1*s.* 6*d.*; wheat, per barrel, £2 3*s.*; barley, ditto, 19*s.*; oats, ditto, 13*s.* 6*d.*; quartern loaf of wheaten bread, 1*s.*; flower, firsts, per cwt., £1 9*s.*; seconds, ditto, £1 8*s.*; thirds, ditto, £1 4*s.*; oatmeal, per cwt. 16*s.*; labor in harvest of hay and corn, per day, 2*s.* to 3*s.*; mowing grass, per acre, 5*s.*; rabbits, per couple, 1*s.* 8*d.*; milk, per quart, 2*d.*; corn acre of oats (tithe free to the tenant), per acre, £6 to £8; ditto, meadows (according to weight of grass, ditto), £6 to £9; ditto potatoe land, ditto, £6 16*s.* 6*d.* to £8 8*s.*; ditto, flax, per rood (tithe free), ditto £2 5*s.*, to £2 10*s.* The wood of this county is an important product. Ash-trees are common, running along the edgerows; they are, however, of modern introduction. At Lough Erne, the yew grows to a large size: beech, grows in this county to a good height and bulk: here are also oaks, firs, sallows, and hazels.

Mr. Wakefield reckons the average rental of this county at £1 5*s.* per green acre. At Florence-court, land lets at £1 10*s.* per acre: near Enniskillen, at £8 8*s.* per corn acre. In general the leases run for three lives, or thirty-one years: of late the period adopted is twenty-one years and one life. There are here a few estates whose rental is from £1500 to £2000; but by far the greatest number of the estates are large, and there is no intermediate step between the proprietors and the leaseholders. Lord Enniskillen has an estate of £13,000 per annum. The marquis of Ely, lord Belmour, and Sir James Caldwell, have property of from £6000 to £7000 per annum each. There is also a large church property here, belonging to the see of Clogher.

The most remarkable geographical feature of this county is Lough Erne; consisting of two lakes, the upper being nine miles long, and from one and a half to five wide, and the lower one about ten miles in length, and from two to eight in breadth. They are connected by a broad winding channel of about six miles The entire site occupied by Lough Erne is supposed to be eighty-five square miles. The scenery around is remarkably striking. On its bosom are between 300 and 400 islands, some of them large, fertile, well-wooded, and inhabited; and the whole of them disposed in a very picturesque manner. The Erne runs into it at the north-west end by a current of about seven miles, and at length precipitates itself over a grand cataract into the sea at Ballyshannon. The falls of Belleek are esteemed very beautiful, and deserving of the traveller's attention. Lough Erne contains almost every kind of fresh water fish. The salmon grow very rapidly: some young ones have been found to increase at the rate of a pound a week. Near Enniskillen large quantities of eels are caught. At Belleek is an eel weir, which lets at £120 per annum, and three others in the vicinity, which let at £100 each. On the east of Lough Erne, Fermanagh has five baronies, and on the west three. It sends three members to parliament, two of these being from the county, and one from the burgh of Enniskillen. The county freeholders amount to 5000.

Of the eighteen parishes of the county, fifteen are in the diocese of Clogher, and the other three in that of Kilmore. The Catholics are in the proportion of three to one. Dr. Beaufort supposes that Fermanagh contains 719 square miles, or 455,298 acres English measure, the length being forty-three miles, and the breadth thirty-three. Of these, Lough Erne occupies 76,311. Mr. Wakefield makes the superficial contents 694 English square miles. Excluding Lough Erne, there are about thirty-one English acres to a house, or five acres and one-sixth to each individual.

FERMAT (Peter), a French mathematician, was born at Toulouse in 1590. He was bred to the law, and became counsellor to the parliament of Toulouse, where he died in 1664. His mathematical works were printed in 2 vols., folio, 1679, under the title of Opera Varia Mathematica. He was the intimate acquaintance of Descartes, Torricelli, Pascal, Huygens, &c. His son, Samuel Fermat, was the author of several works.

FER'MENT, *v. a.*, *v. n.* & *n. s.*
FERMENT'ABLE, *adj.*
FERMENT'AL,
FERMENTA'TION, *n. s.*
FERMENT'ATIVE, *adj.*
} Fr. *fermenter*; Lat. *fermento*. To rarify; change chemically,

by internal commotion. See the more scientific explanation of this word in our article: fermentable, is capable of fermentative: fermental, having the power to cause it: fermentative, actually causing fermentation.

Cucumbers, being waterish, fill the veins with crude and windy serosities, that contain little salt or spirit, and debilitate the vital acidity and *fermental* faculty of the stomach. ***Browne.***

The juice of grapes, after *fermentation*, will yield a spiritus ardens. ***Boyle.***

As these politicians of both sides have already worked the nation into a most unnatural *ferment*, I shall be so far from endeavouring to raise it to a greater height, that, on the contrary, it shall be the

chief tendency of my papers to inspire my countrymen with a mutual good-will and benevolence.
Spectator.

A man, by tumbling his thoughts, and forming them into expressions, gives them a new kind of *fermentation*; which works them into a finer body, and makes them much clearer than they were before.
Collier on Friendship.

Subdue and cool the *ferment* of desire. *Rogers.*

The dewlapt bull now chafes along the plain,
While burning love *ferments* in every vein;
His well-armed front against his rival aims,
And by the dint of war his mistress claims. *Gay.*

The semen puts females into a fever upon impregnation; and all animal humours which poison, are putrefying *ferments*. *Floyer.*

Digestion is a *fermentation* begun, because there are all the requisites of such a *fermentation*; heat, air, and motion: but it is not a complete *fermentation*, because that requires a greater time than the continuance of the aliment in the stomach: vegetable putrefaction resembles very much animal digestion.
Arbuthnot on Aliments.

Aromatical spirits destroy by their *fermentative* heat. *Arbuthnot.*

The sap, in fluent dance,
And lively *fermentation*, mounting, spreads
All this innumerous coloured scene of things.
Thomson.

Secrets are so seldom kept, that it may be with some reason doubted, whether the quality of retention be so generally bestowed, and whether a secret has not some subtile volatility by which it escapes, imperceptibly, at the smallest vent, or some power of *fermentation*, by which it expands itself, so as to burst the heart that will not give it way. *Johnson.*

The same yields a stercoraceous heap,
Impregnated with quick *fermenting* salts,
And potent to resist the freezing blast. *Cowper.*

It is remarkable, that all the diseases from drinking spirituous or *fermented* liquors are liable to become hereditary, even to the third generation, gradually increasing, if the cause be continued, till the family becomes extinct. *Darwin.*

Thus heat evolved from some *fermenting* mass
Expands the kindling atoms into gas;
Which sink ere long in cold concentric rings,
Condensed, on Gravity's descending wings. *Id.*

FERMENTATION. The phenomena and products attendant on this process are of considerable importance. Its general application to the manufacture of malt liquors, will be found under ALE and BEER brewing.

The term fermentation is employed to signify the spontaneous changes which certain vegetable solutions undergo, placed under certain circumstances, and which terminate either in the production of an intoxicating liquor, or of vinegar; the former termination constituting vinous, and the latter the acetous fermentation.

The principal substance concerned in vinous fermentation is sugar; and no vegetable juice can be made to undergo the process, which does not contain it in a very sensible quantity. In the production of beer, the sugar is derived from the malt; in that of wine, from the juice of the grape.

When sugar is dissolved in four times its weight of water, and mixed with yeast, it speedily ferments, and yields peculiar products. It has been employed, therefore, by chemists as a less complicated means of ascertaining the phenomena of fermentation, than grain which is usually employed. Thenard mixed sixty parts of yeast with 300 of sugar, and fermented them at a temperature of 59°. In four or five days, he informs us, that all the saccharine matter had disappeared. The quantity of carbonic acid evolved amounted, by weight, to 94·6 parts. It was perfectly pure, being completely absorbed by water. The fermented liquid, being distilled yielded 171·5 parts of alcohol, of the specific gravity ·822. When the residue of the distillation was evaporated, twelve parts of a nauseous acid substance were obtained; and forty parts of the yeast still remained; but, upon examination, it had lost the whole of its azote. This experiment gives us the following quantities:—

Substances fermented.

Sugar . .	300
Yeast . .	60
	360

Products of fermentation.

Alcohol of ·822 . .	171·5
Carbonic acid . .	94·6
Nauseous residue . .	12.0
Residual yeast . .	40·0
	318·1
Loss . . .	41·9

The loss here amounts to about a ninth part of the whole, and must either be ascribed to waste, or to the formation of water. The first is the more probable supposition. From this experiment we learn that 100 parts of sugar, supposing the yeast not to furnish any thing, would yield,

Alcohol . .	57·16
Carbonic acid .	31·53
Nauseous residue .	4·00
	92·69
Loss . .	7·31

Here the produce of alcohol is greater than that obtained from wort of barley; but the produce of carbonic acid is somewat less. The well known experiment of Lavoisier corresponds pretty well with the result obtained by Thenard. 100 pounds of sugar and ten pounds of yeast yielded,

Alcohol . .	57·70
Carbonic acid .	35·34
Residue . .	6·59
	99·63

These experiments are sufficient to show us, that by far the greatest part of the produce is obtained from the sugar; and the yeast acts chiefly by inducing the decomposition of that substance.

Messrs. Vauquelin and Fourcroy, after a series of very minute experiments, came to the following conclusions relative to the fermentation of grain:—

Two pounds of ground germinated barley, placed with six pounds of water heated to 131° Fahr. in a matrass furnished with a crooked tube, fermented in four hours in a heat of 72°. The fermentation continued thirty-six hours. The

gas disengaged and collected was partly formed of carbonic acid, and partly of hydrogen gas. Six days afterwards this barley was distilled, from which a product was obtained equal at least to one-third of the water employed. This produce, heavier than water, was acid and empyreumatic. This acidity demonstrates the conversion of alcohol into acetous acid. The liquor, which was saccharine at the period of distillation, was no longer so at the end of the process.

The same ground and germinated barley, but deprived of its bran by bolting, was treated in the same manner as in the first experiment; it fermented with similar appearances, and yielded an equal part of carbonic acid gas and hydrogen gas. Thus the bran was not the source of the latter gas, as at first supposed.

Brewers' mash, exposed in the same apparatus to the same temperature of 72°, fermented more quickly with a more rapid effervescence, and its gas was merely carbonic acid, without hydrogen gas. Thus the latter depends upon the farina mixed with flower.

The farina of germinated barley, with water, exposed in the matrass to the temperature of 59°, did not ferment until the end of five hours; and its gas was condensed by potash. Upon raising the temperature to 22°, there came off a mixture of gas not soluble and inflammable, the proportion of which was soon equal to that of the carbonic acid. Thus it is necessary that there should be a heat of upwards of 68° before there can be any liberation of hydrogen gas in the farina of barley which is fermenting.

Six pounds of ground barley, not germinated, treated at three several times with twelve pounds of warm alcohol, furnished one ounce two drachms of pure sugar; while six pounds of germinated barley, treated in the same manner, yielded four ounces and two drachms, or about five per cent.; which is four times what the barley contained previous to germination. Thus germination forms sugar, as we have announced.

They put twenty-four pounds of farina of barley, not germinated, into a tub with seven times its weight of hot water at 158°, and four pounds of mild beer yeast. Fermentation immediately commenced with great violence, and continued seven days. The liquor submitted to distillation, with the husks, yielded nine litres of a weak and empyreumatic liquid, which, being passed again through the still, furnished sixteen decilitres of an alcohol at 16°, which amounts to nine decilitres at 40°. These nine decilitres, weighing twenty-three ounces, and twenty-four pounds of barley not germinated, containing only five ounces of sugar, it follows, that four times more alcohol was formed than there was sugar in this farina. Lavoisier, however, asserts that 100 pounds of sugar furnish only fifty-eight pounds of alcohol.

Twenty-four pounds of germinated and ground barley, made to ferment under the same circumstances as barley not germinated, presented the same phenomena, and only varied in their products. There were two litres 0·3 of alcohol at 40°, which makes five pounds of alcohol for a quintal of barley, or three times more alcohol than there was sugar; and this answers to the produce of barley not germinated.

'It must be concluded from these results,' observe these ingenious chemists, 'that it is some other substance than sugar which is converted into alcohol, although sugar is indispensable to its production and to the establishment of fermentation.

'Two pounds of farina of bolted wheat, mixed with six pounds of water at 140° Fahr., remained six hours without motion. The next day, after having remarked the swelling of the mass, they placed the matrass upon a sand-bath a little heated, and added water to favor the disengagement of the gas. We obtained hydrogen gas twice larger in volume than carbonic acid. The vessel, having been taken off the sand-bath, the temperature having decreased to 57°, the fermentation all at once stopped. The liquid, when submitted to distillation, did not yield alcohol but an acid liquor.'

The farina of wheat, therefore, does not form alcohol by fermentation: yeast is indispensable for this fermentation, although it does not enter into the composition of alcohol; by accelerating the alcoholic fermentation, it opposes the formation of vinegar. When, on the contrary, the fermentation is very slow, the alcohol becomes acetous in proportion as it is formed; perhaps even then sugar and the other fermenting substances pass into the acid state with alcoholizing.

Air is not absorbed in the vinous fermentation although its oxygen is in the acetous. When wine is manufactured in close vessels it is stronger, if the process is slower, because a portion of the alcohol escapes from the vats: and this is now understood in our malt distilleries. That alcohol is held in solution in the carbonic acid which is generated; and thus, it appears, to intoxicate more rapidly, as is well known in the wines of Champagne. Under pressure, this compound is united to the fluid; and, being disengaged, produces the well-known effervescence. The practice of fermentation is partly regulated by this consideration. The violent stage of that process in wine-making is allowed to take place in an open vat; the next is partially checked by an occasional bung, and, in the last of all, the vessel is completely closed. In strong still wines the whole process may be conducted in open vessels; but, in light and brisk ones, it is absolutely necessary that the last part should take place in closed ones. Champagne wines are managed so as to ferment even in their bottles.

The volume of the fermenting fluid has a considerable effect on the process; a few days are sufficient to complete it when the quantity is large. When small, it is difficult to establish, and tedious in the progress, and the results are also different: wines of different qualities being thus produced from the very same materials. It is the same in the ultimate fermentation or ripening of wines. Champagne would be destroyed in a large cask; porter, an extreme case, is ripened in enormous masses, as are many of the stronger wines. Bulk is peculiarly required for the strong and sweet wines; Champagne may be made in a gallon measure.

The first appearance is the production of air-bubbles, terminating at length in a general ebullition. The liquor then becomes turbid, a variety of solid matters are disengaged, some

falling to the bottom, and others rising to the top of the fluid. The yeast before mentioned is thus separated among other matters, while the bulk of the fluid is materially increased. It is in this stage that we have the power of regulating the extent of the fermentation, by separating the floating leaven, or allowing it to return into the liquor. Hence, the process of fermentation in a full cask, ejecting that substance by the bung-hole.

The disengaged gas is carbonic acid chiefly; but holding some alcohol in solution. It appears, by analysis, that this is the produce of part of the carbon of the sugar and of its oxygen; and this is the great change which leads to the production of the alcohol. But it also contains some obscure vegetable matter in suspension; because, if passed through water, it not only converts it into vinegar, but deposits that mucilage, which, in vinegar, is called the mother. It is possible, however, that this may itself be a new compound: and it is one which, in certain cases, contains azote.

All those juices of fruits which undergo the vinous fermentation, either with or without the addition of sugar, contain an acid. Vegetable acids are obtained chiefly from fruits. The apple, for instance, contains malic acid; the lemon, citric acid; the grape, tartaric and malic acids. The marquis de Bouillon has ascertained that must will not ferment if all the tartar which it contains be separated from it; but it ferments perfectly well on restoring that salt. The same chemist ascertained that the strength of wine is considerably increased by adding tartar and sugar to the must. We may conclude from these facts that the presence of a vegetable acid is of importance in these spontaneous fermentations. It deserves attention, that Bouillon obtained more tartar from verjuice than from wine; and he observed, that the more the proportion of sugar in grapes increased, the more that of tartar diminished.

It seems more than probable, from the experiments of Bouillon and Chaptal, that the tartaric acid is partly decomposed during the fermentation, and that a portion of malic acid is formed. The process, therefore, is more complicated than was suspected by Lavoisier. It is obviously analogous to combustion, as is evident from the evolution of caloric and the formation of carbonic acid, which is a product of combustion. Proust has ascertained that, during the fermentation, not only carbonic acid, but azotic gas also, is disengaged. This is a demonstration, that all the constituents of must are concerned; for sugar does not contain that principle. Thenard could detect no azote in the carbonic acid from wort.

We have already seen that a vinous fermentation, to be perfect, requires very exact proportions of mucilage and saccharine matter, so as to have the one just sufficient to destroy or attenuate the other; in which case the result will be, if the operation has been properly conducted, a mixture of alcohol and water, differently flavored, according to the materials from which it is produced, as grapes, pears, apples, or malt and hops; but such accuracy in the proportions cannot be expected, either from nature working at large, and varying in every climate, soil, and situation, or from our most ingeniously conducted experiments.

A perfect fermentation, therefore, has been considered an object almost impossible to be obtained; and all we wish to show is, that the errors of the mixture may be corrected, and the whole process improved, by good management.

The common practice, until a few years back, has been to ferment in open vessels; and though it was a circumstance well known among chemists, that a certain portion of spirit and flavor escaped in the form of vapor during the process, yet no one had an idea that the condensatory system could be applied, as it appeared impossible to effect the fermentation in air-tight vessels, being unable to surmount the great difficulty which existed of keeping down and managing that enormous bulk of non-condensable gases, which are emitted during the decomposition of the saccharine matter, and which acquire greater expansive force by the gradual increase of heat.

The idea, however, occurred to Madame Gervais, that distillation might be carried on during the fermenting process. Having come to this conclusion, she proceeded to construct an apparatus that would operate in such manner as to return into the vessel the spirit and the flavor that was evolved from the fermenting gyle, and let out the non-condensable gases, which might, by the increasing heat, acquire too great an expansive force, and burst the working-tun. A short description of this apparatus will be a fresh proof that the greatest advantages are often derived from the most simple means.

It consists of a vessel resembling the head of the ancient still, and constructed of such form as to be capable of being placed securely on the back, or vat, in which the process of fermentation is to be carried on; the back or vat must be closed air-tight, with a hole in the top, communicating with that part of the apparatus called the cone, or condenser This cone is surrounded by a cylinder or reservoir, which is to be filled with cold water, so that the alcoholic vapor, or steam, evolved during the process, may be condensed as it comes in contact with the cold interior surface of the cone; and, being thereby converted into a liquid, trickles down the inside of the condenser, and through a long pipe is returned into the fermenting liquor.

By the application of this apparatus, a considerable portion of alcohol, which has been hitherto suffered to escape in the form of vapor, along with the non-condensable gases, is condensed and returned into the liquor; and the non-condensable gases are carried off by a pipe, which, proceeding from the interior lower part of the cone, and running up the inside of the cylinder in the cold water, passes out through the side, and the end is immersed some depth below the surface of water contained in a separate vessel, permitting the gases to escape, but still under a certain degree of pressure, the object of which is to confine the alcoholic steam and gas within the cone, and allow them a sufficient time to cool and condense.

To obtain a good fermentation, as complete a decomposition of the must or wort, and as perfect a recomposition of alcohol as possible, are the great objects to be obtained. To acquire the former, three requisites are necessary—fluidity, heat, and motion; the latter—density, coolness, and tranquillity.

Let us examine each of these separately; first, of fluidity.

The specific gravity of the liquid most eligible to produce a good fermentation, is between 1·020 and 1·140, or eighteen, and 132 pounds by Dicas's improved saccharometer, made by Joseph Long. Below eighteen pounds of real extract per barrel, the liquid is too thin to produce a proper fermentation, and above 132 pounds it is too thick; but, supposing the specific gravity of the must or wort to be correct, it may be carried beyond a proper dilatation by too much heat, or congealed to too great a consistency by excessive cold; consequently either a thunder-storm or hard frost will derange the operation, and are equally injurious to fermentation. Any method, therefore, that will ensure an even temperature must be of great importance; and such a method is obtained by applying the apparatus already described, since, by preventing the access of atmospheric air, the sudden changes of the external temperature can have no effect upon the fermenting gyle; and if it has been commenced at a proper heat (which is between sixty-five and eighty), will proceed through its different stages, as well during the hottest days of summer, as in the selected months of autumn and spring.

With respect to motion, we are indebted to M. Gay Lussac, as we have already stated, for a beautiful and important experiment, proving that must, possessed of all the requisites to produce a good fermentation, will not begin to ferment unless excited by a foreign agent. He placed the must in a close vessel, from which the atmospheric air had been exhausted, where it remained several days without giving any signs of fermentation, from which he concluded some power was wanting to break the union of its constituent principles; he therefore introduced a small quantity of oxygen, which immediately caused the must to ferment, evidently proving the necessity of a small portion of atmospheric air (which contains oxygen), to allow the fermentation to commence. But it at the same time proves, that, after performing that office, this great enemy to all fermented liquors may be dispensed with, without impeding the process; as the small quantity of oxygen, introduced by M. Gay Lussac, was soon absorbed by the carbon to form carbonic acid gas, and he found no occasion for any further supply.

This discovery is of the greatest importance, since it enables us, without the least detriment or inconvenience to the process, to exclude the oxygen of atmospheric air, which, by constantly supplying the gyle with the principle that causes and promotes acidity, casts on it from the first that roughness and disagreeable flavor which spoil most of our common beverages.

Here again the new apparatus proves of great benefit, for, as soon as carbonic acid gas is evolved from the fermenting gyle, the atmospheric air, being lighter, is driven out from the upper part of the working tun; and, as no air is permitted to enter afterwards, all the subsequent carbonic acid gas emitted, diminishes the quantity of oxygen contained in the gyle, by the oxygen uniting with the carbon as fast as it disunites from the saccharine matter during its decomposition, and thereby secures a soundness and peculiar mildness, not to be procured by any other mode.

The necessary conditions for a complete decomposition of the saccharine matter having been stated, it remains to notice those required for a good production of alcohol.

The first already mentioned is a certain density, in order to allow the several principles which are disunited to recombine. It is doubtful whether such a combination will in any case take place, until the temperature of the gyle, having attained its greatest heat, is afterwards cooled a few degrees; a fact confirming which is, that a portion of the liquid taken out when at its greatest heat, and tried by distillation, produced little or no spirit; but such refrigeration must not be effected too suddenly, as it might coagulate the yet undecomposed mucilage, and check its further action on the remaining saccharine matter; and by arresting that natural operation which ought to be pursued a longer or shorter period, according to the specific gravity of the fermentable matter, might produce that result termed 'ropiness,' by holding in solution the coagulated mucilage.

Here again the apparatus will be found of great service, for, by frequently renewing the cold water in its reservoir, the internal temperature will gradually diminish by the heat of the gyle coming in contact with the cold interior of the cone: but, in order to effect this, the tranquillity above mentioned is necessary, since the continual motion is caused by the oxygen soliciting new combinations with the carbon, and thereby constantly giving rise to a fresh supply of heat.

Besides the advantages already mentioned, which are common to all fermented liquors, there are others peculiar to each, that require to be explained.

The apparatus being applied to ferment the must of grapes, has been found to procure an increase of quantity, amounting in some instances to ten or twelve per cent., and which necessarily varies according to situation, season, or former management; but in no instance has it been found less than from five to six per cent.

When applied to the fermentation of beer, this saving has constantly been between four and a half and five per cent., a quantity certainly inferior to that obtained from wine, but which will not appear unimportant when it is considered that this saving is a spirit congenial to the nature of the beer, and an essential oil necessary to its preservation; in addition to the peculiar mildness and superior flavor.

Mr. Henry found, by a series of very interesting experiments, that malt infusion might be made to enter into complete fermentation by impregnating it with carbonic acid, prepared

from chalk and sulphuric acid, and the liquor thus fermented gave a yeast which made perfect bread, gave alcohol by distillation, and vinegar by further keeping. The wort itself undoubtedly contained all the ingredients of yeast, since this substance was produced during the fermentation; but the experiment is decisive to prove that no addition of azotic extract is required to begin fermentation in materials naturally fermentable, though, when once begun, the yeast, as fast as it was produced, must have assisted in the fermentation then going on. The evidence for the necessity of an acid to begin fermentation is, therefore, more decisive, but it is still doubtful whether any particular one is required, or whether there are not several which will answer the purpose. In Mr. Henry's experiments the acid employed was the carbonic, and, from the arrangement of the apparatus, probably a small portion of sulphuric was also carried in along with it. But in grape juice there is no proof of the existence of carbonic acid ready formed, though the tartaric, malic, and other vegetable acids contain within themselves the ingredients of carbonic acid, and are chiefly and ultimately resolvable into this acid. Yeast will even induce fermentation after it is pressed and dried into solid cakes (a practice not uncommon, as it will keep for a great length of time in this form), but after this operation it can hardly contain any carbonic acid ready formed, though with abundant tendency to reproduce it by the first mutual action of its constituent parts.

The attenuation of liquors, or the diminution of their specific gravity by fermentation, is very striking. This is shown by the hydrometer, which swims much deeper in fermented liquor, than in the same materials before fermentation. Much of this attenuation is, doubtless, owing to the destruction of the sugar, (which, dissolved in water, adds to its density), and to the consequent production of alcohol, which, on the contrary, by mixture with water, diminishes the density of the compound. The extract, or mucilage, also appears to be in some degree destroyed by fermentation, for the gelatinous consistence of thick liquors is much lessened by this process: the destruction of this principle, however, is by no means so complete as of the sugar, many of the full-bodied ales, for example, retaining much of their original clamminess and gelatinous density even after having undergone a very perfect fermentation.

The acetous fermentation must now be noticed. When any of the vinous liquors are exposed to the free access of atmospheric air, at a temperature of 80° or 85°, they undergo a second fermentation, terminating in the production of a sour liquid called vinegar. During this process, a portion of the oxygen of the air is converted into carbonic acid; hence, unlike vinous fermentation, the contact of the atmosphere is necessary, and the most obvious phenomenon is the removal of carbon from the beer or wine; the vinegar of this country is usually obtained from malt liquor, while wine is employed as its source in those countries where the grape is abundantly cultivated.

Not only do vinous liquors suffer this change, but every substance susceptible of the vinous can likewise pass into the acetous fermentation; hence, sugar dissolved in water, sweet vegetable juices, or infusions of grains that have been malted, can be converted into vinegar. Fecula, even without the previous process of malting, is equally susceptible of it; for, in the process of starch-making, a quantity of vinegar is formed, not merely from the small portion of saccharine matter in the grain, but likewise, as Vauquelin, in his Analysis of the Sour Liquors of the Starch-Makers, has remarked, from the fecula itself. Even substances which are not at all susceptible of the vinous fermentation, it appears to be established, may suffer the acetous. This is indeed contrary to an opinion formerly maintained, which regarded the acetous merely as a continuance of the vinous fermentation, and as necessarily preceded by it. But it often happens where the former cannot be traced, and where there is no reason to suppose that it ever did exist, as in vegetable juices or infusions containing much mucilaginous with scarcely any saccharine matter, which soon become sour; and the sourness which even pure mucilage, or a solution of gum in water suffers, is probably owing chiefly to the production of acetous acid.

Nor is pure alcohol, in any state of dilution with water, capable of undergoing the acetous fermentation: there must always be present other vegetable principles, as sugar, mucilage, or farinaceous matter. Even a certain proportion of these is requisite. Hence strong wines do not become so readily sour as weak or sweet wines; for the same reason, wine that has been clarified is less liable to ferment; and strong wines can be made to pass into the acteous fermentation more easily, by adding to them sugar or mucilage; and, when these highly spirituous wines are thus made to ferment, they furnish a much stronger vinegar than those which are weak. Even the vegetable acids appear to contribute to it, and, in the conversion of sweet vegetable juices or of wine into vinegar, there is reason to believe that the malic and tartaric acids they contain are partly changed and pass into the acetic acid.

The addition of some substances which act as ferments, appears also to be requisite. It is true that wine and other fermented liquors will of themselves become sour in a certain time; but this is probably from their containing a portion of matter analogous to ferment, and which excites the change. In preparing vinegar, it is known that a certain quantity of such matter must be added, either a portion of the substance which has been deposited from a liquor that has previously passed into vinegar, or a quantity of yeast; and there is every reason to believe, that it is vegetable gluten which is the essential principal of these ferments. Fourcroy and Vauquelin accordingly found, that, when sugar was added to water which had stood over the gluten of wheat, it quickly formed vinegar; and Berthollet obtained the same result from a mixture of gluten and starch. This principle, Vauquelin remarks, contributes to the formation of vinegar in the liquor formed in the manufacture of starch; and the matter which is contained in

common vinegar from malted grain, and which renders it so liable to putrefaction, is, according to the chemist, vegetable gluten.

The admission of atmospheric air is essential to the acetous fermentation. Hence, wines that are well bottled may be kept for a long time uninjured, and the more free the exposure to the air is, the sooner they become sour. The oxygen of the air is at the same time always absorbed. According to Saussure, this oxygen is not absorbed so as to enter into the composition of the acid, but is expended entirely in abstracting carbon, and of course forming carbonic acid. In keeping wine in contact with oxygen gas for a year in receivers closed with mercury, he found it converted into vinegar; but the diminution of the volume of the gas never exceeded, but was always inferior to the volume of the wine; and hence, acording to the view he gives of the experiment, the oxygen had combined with carbon so as to form carbonic acid, which had been absorbed by the liquor. And accordingly he found, that when he made the experiment with wine previously impregnated with carbonic acid gas, this wine, under the same circumstances, was equally converted into vinegar, but without the volume of the elastic fluid above it being changed; the oxygen consumed being replaced by an equal volume of carbonic acid gas.

A certain degree of temperature is requisite to the acetous fermentation. It takes place slowly, even below 60°; but it proceeds with more rapidity between 60° and 80°; and in forming vinegar artificially, the temperature is kept high. If it fall below 50° it is nearly checked; and hence wines can be longer preserved by being kept below this temperature.

The phenomena which occur in the acetous fermentation are somewhat analogous to those in the vinous. When it is proceeding rapidly, there is an intestine motion, not accompanied, however, with such a disengagement of elastic fluid as in the vinous fermentation; the liquor is turbid; its temperature rises; and its smell becomes perceptibly acetous. These appearances at length subside, and the liquor gradually becomes clean, having deposited a kind of glutinous sediment somewhat similar to yeast.

The theory of the acetous fermentation is not yet completely elucidated. Since the strength of the acid which is formed from it is proportioned to the quantity of alcohol, or of matter of a composition analogous to alcohol, and in general capable of passing into it: and, since this alcohol disappears during the fermentation; Lavoisier supposed that the theory of the process might be inferred from the changes which this principle can be supposed to suffer: and, as he found that during the change oxygen is absorbed, while scarcely any sensible quantity of carbonic acid is extracted, he concluded, that the acetous fermentation consists in the oxygenizement of the alcohol. If the experiments of Saussure be admitted as correct, in proving that as much carbonic acid is formed as corresponds with the quantity of oxygen consumed, this acid being retained by the liquor, the theory of Lavoisier would require to be so far modified as to ascribe the change of alcohol into vinegar rather to the abstraction of carbon than the fixation of oxygen; leaving of course, however, a larger proportion of the latter principle in the composition of the acetic acid.

This simple view cannot however be received as altogether just, since alcohol alone cannot undergo this change, nor can it by oxygenizement be converted into acetic acid; and since the presence of mucilage, saccharine matter, or other principles, is always necessary to the acetous fermentation, the operation of which is not explained in conformity to his theory: neither does it explain the action of the ferment which appears to be nearly equally indispensable. It will afterwards appear, that nitrogen probably enters into the composition of acetic acid; and the operation of the ferment may be partly that of affording this element.

Vinegar, the product of the acetous fermentation, is prepared in different countries from different materials. Where the grape is cultivated, it is obtained from weak or spoiled wine. This is kept in a proper temperature with the access of the air, and the fermentation is excited by the addition of a quantity of the sediment of vinegar, of wine already sour, or of the lees of such wine. The product is stronger in proportion to the previous strength of the wine. In this country it is prepared either from unrefined sugars, or from the wort obtained by infusion from malted grain; the fermentation being excited by yeast, and being carried on in a warm apartment. This vinegar is in general inferior in strength and purity to that from wine, and is more liable to become mouldy or suffer the putrefactive fermentation. This appears to be owing chiefly to the presence of glutinous matter; and hence the rationale of the method which Scheele pointed out as the best for preserving vinegar, that of heating it, and bringing it even to boil for a few minutes, the glutinous matter being separated by a kind of coagulation.

Panary fermentation has already been noticed under the article BREAD, and little more than the theory remains to be examined. Although the fermentation of dough has been termed panary, there is little doubt but it is merely a modification of the acetous. The subjects of both species of fermentation are certainly different, in regard to consistency; but it is probable, that the modification alluded to is the consequence of this difference: for the fermentable matter, from want of room for action, does not arrive at the same point of chemical change which it would do in a more diluted state. We shall not attempt to theorize on the changes which take place during the panary fermentation, further than to suppose that the flour, yeast, and water, give out their elementary components for the formation of saccharine matter, starch, carbonic acid, and acetic acid; and that, during the incipient generation of the latter, the process is stopped by the action of artificial heat.

The fermentation that produces putrefaction is the last stage of this process The most remarkable changes produced upon a body by putrefaction are upon its color, smell, and taste. Flesh beginning to putrefy, is well known to exhale very soon after a penetrating fetid smell, its color becomes pale, then inclining to blue

and afterwards livid and black, and its taste nauseous. Transparent liquor, as urine and broth, during putrefaction, becomes also turbid; as the putrefaction advances the smell becomes more and more fetid, and it also acquires great pungency, which is caused by a large quantity of volatile alkali, disengaged from those substances that are completely putrefied. Solid bodies, whilst they are putrefying, swell, become soft, lose the cohesion of their parts, and are lastly reduced to a very disagreeable putrid pulpy mass: the fluids become turbid, and the effluvia are loathsome and sickening, and after a time a putrid gas is disengaged in a slow but sensible effervescence. A foul and brown serum then passes out from the pulpy mass, and about this time the effluvium is very sensibly ammoniacal, which is indicated by its effects on the eyes and throat, and by forming a white vapor with muriatic acid gas. For some time a large part of the putrid substance is evaporated, and carried off in the putrid gas and dispersed in the atmosphere, after which the extreme fetor subsides; and finally the process of putrefaction ceases, and leaves a kind of fat fetid earthy matter. All the gases certainly known to be produced by putrefaction, are carbonic acid, carburetted hydrogen, sulphuretted and phosphuretted hydrogen, and ammonia; but either these, or some of these, must be considerably changed by the solution of the animal matter; or some compound, not yet examined, must be produced in that state of putrefaction, when the gas evolved occasions such dreadful effects upon those that have the misfortune to fall in the way of it, even when diluted considerably with common air. This is said to be the case when the abdomen of a large animal is first burst, the gas from which causes instant fainting, and sometimes death; and even when death does not ensue, it leaves excessive debility and other alarming symptoms for a considerable time. The most deleterious gas that is known is, perhaps, carburetted hydrogen, but the effects of this, as obtained by chemical means, are far short of those above-mentioned, when equally diluted. The generation of ammonia has been satisfactorily accounted for, since the discovery of the constituent parts of the volatile alkali, by the new combination formed between the azote of the animal matter, and the hydrogen, of which latter there are many sources, and particularly that of the decomposition of water. As ammonia is always produced during putrefaction, it seems rational to suppose, that one important purpose of the moisture necessary to the process, is to afford, by its decomposition, the hydrogen of the volatile alkali. The nitrous acid is also an undoubted product of putrefaction; but farther experiments and facts are necessary for explaining the reason why in some cases the azote tends to unite with oxygen to form this acid, and in others with hydrogen to form ammonia.

Every kind of vegetable matter is liable to this species of decomposition: there is none but what ultimately decays, though some resist it, or preserve their composition much longer than others. Those suffer it most quickly which are soluble in water; and any vegetable principle dissolved in this fluid passes very speedily into it: the surface of the liquor appears covered with a mould: various elastic fluids are disengaged, and at length it is entirely decomposed. Those which are not perfectly soluble, if merely kept humid, present nearly the same results. Oils and resins, which refuse to unite with water or imbibe it, resist any change of this kind for a long period, and can indeed scarcely be said to be subject to it.

The same circumstances favor this species of spontaneous decomposition which favor the others, particularly humidity, and a moderate heat. Any species of vegetable matter, kept perfectly dry, is long in exhibiting any sign of alteration or decay. A certain temperature, which must be less, however, than what will dissipate the humidity, hastens the decomposition, by favoring the approximation and consequent exertion of the affinities of the constituent elements. And the presence of the air often promotes it; at the same time, however, modifying the results.

The gases which are disengaged during this decomposition are of course combinations of the principles of the vegetable substance. According to Saussure junior, they are compounds of hydrogen with carbon, forming inflammable gases and carbonic acid. The former appear principally when the action of the atmosphere is excluded by the substance being immersed under water: the latter is produced when the air is admitted; and its production depends in a great measure on the action of the oxygen of the atmosphere. A portion of water appears also to be formed by the union of part of the oxygen and hydrogen of the vegetable matter.

The principal difference between this species of decomposition and the putrefaction of animal matter is, that there is no evolution of ammonia, or of those fetid combinations which characterise the latter. This is owing to the absence of nitrogen, which is essential to the formation of these. And, accordingly, those varieties of vegetable matter which contain this element, present, in their ultimate decomposition, results extremely similar to those of animal substances: such is particularly the case with all those which contain gluten, and with gluten itself in its pure form.

The residual matter of vegetable substances, after this species of decomposition, frequently contains a large proportion of carbon, especially when formed from those principles in which this element is abundant, as from the ligneous matter; and this may remain long unaltered, the other principles which could re-act upon it having been abstracted in the progress of the decomposition. A residuum of this kind forms that black soft matter which has been named vegetable mould, and which constitutes so important a part of the soil.

When this is obtained free from the undecomposed vegetable matter, more or less mixed with it, it appears from the researches of Saussure, who has particularly examined it, to be nearly uniform in its composition and properties. Subjected to distillation, it gave carburetted hydrogen and carbonic acid gases; water, hold-

ng in solution acetate and sometimes carbonate f ammonia, and a small quantity of empyreumatic oil, leaving charcoal, with various saline nd earthy ingredients. From these products it ollows, that the mould contained less oxygen, nore carbon, and more nitrogen than the vegeable matter from which it had been formed; hough part of this nitrogen must probably have een derived from the animal matter unavoidbly mixed with it.

The acids do not exert any very striking ction on this mould; they dissolve its earthy nd metallic ingredients. The fixed alkalies dissolve it almost entirely, and evolve ammonia luring the solution. Alcohol merely takes up a ittle resinous extractive matter. Water likewise dissolves a small quantity of extract.

Saussure has remarked, as has been above stated, that vegetable mould, though the result of the putrefactive process, is not itself susceptible of putrefaction, but even rather retards it; hence it remains unaltered, evidently from the cause already assigned, that no other principles are present in sufficient proportion to act on the carbon accumulated in it. This, however, is to be understood of it, only when the air is excluded; for, when exposed to the atmosphere, it suffers a gradual change, until it is entirely decomposed. The oxygen of the air becomes combined with its carbon, forming carbonic acid, as Saussure found by enclosing it over quicksilver, in atmospheric air or oxygen gas. While this proceeds, the abstraction of carbon appears to allow part of the oxygen and hydrogen of the mould, to combine and form water; for it loses more of its weight than can be accounted for, merely from the quantity of carbon abstracted. These changes continue to proceed in a certain relation to each other, and terminate at length in the entire decomposition, leaving the earthy and metallic substances originally contained in the vegetable matters. We perceive from this view, how necessary the frequent turning up of the soil is to enable the vegetable mould to form a proper manure, by decomposing, and affording carbonic acid to the growing plant.

FERN, *n. s.* } Sax, peapn. A plant de-
FEAR'NY, *adj.* } scribed in the extracts.

The leaves are formed of a number of small pinnules, dentated on the edges, and set close one by another on slender ribs. On the back of these pinnules are produced the seeds, small and extremely numerous. The country people esteem it as a sovereign remedy decocted for the rickets in children. *Hill.*

The herd sufficed, did late repair
To *ferny* heaths, and to their forest-lair. *Dryden.*

There are great varieties of *fern* in different parts of the world; but they are seldom cultivated in gardens *Miller.*

Hence dusky iron sleeps in dark abodes,
And *ferny* foliage nestles in the nodes. *Darwin.*

FERN, in botany, filix. See FILICES. Fern is very common in dry and barren places. It is one of the worst weeds for land, and very hard to destroy where it has a deep soil to root in. In some grounds the roots are found to the depth of eight feet. One of the most effectual ways to destroy it is often mowing the grass; and, if the field is ploughed up, plentiful dunging is good. However, fern, cut while the sap is in it, and left to rot upon the ground, is a very good manure. In some places of the north the inhabitants mow it green, burn it, and make the ashes up into balls with water: which, when dried in the sun, they use to wash linen with, and find to be nearly as good as soap for that purpose.

FERN, FEMALE. See PTERIS.

FERN, FLOWERING. See OSMUNDA.

FERN, MALE. See POLYPODIUM.

FERN, MULE'S. See HEMIONITIS.

FERN, SWEET. See SCANDIX.

FERNANDEZ, or JUAN FERNANDEZ, an island in the South Pacific Ocean, about 100 miles from the coast of Chili, formerly a place of resort for the buccaneers, who were led to resort hither from the multitude of goats which it nourished. To deprive their enemies of this advantage, the Spaniards transported hither a considerable number of dogs, which, increasing greatly, almost extirpated the goats. There are instances of two men living at different times alone on this island for many years; the one a Musquito Indian: the other Alexander Selkirk, a Scotchman, who was, after five years, taken on board an English Ship, which touched here in about 1710, and brought him back to Europe. From the history of this recluse Daniel de Foe is said to have written his Adventures of Robinson Crusoe. See DE FOE. This island was a propitious retreat to commodore Anson's squadron in 1741, after having been buffeted with tempests, and debilitated by an inveterate scurvy. They continued here three months; during which time the dying crews, who on their arrival could scarcely with one united effort heave the anchor, were restored to perfect health. Captain Carteret, also, in the Swallow, in 1767, having met with many difficulties and impediments in his passage into the South Sea, attempted to make this island in order to recruit the health of his men; but he found it fortified by the Spaniards. They in fact had settled an establishment at the port called Juan Fernandez, on the south-west coast, since June 1750. But M. de Bougainville that same year is said to have touched here for refreshments, although, in the narrative of the voyage, the fact is cautiously suppressed. The island is not quite fifteen miles long, and six broad; its only safe harbour is on the north side. It is said to have plenty of excellent water, and to abound with a great variety of excellent vegetables, and valuable wood: among which are the sandal, the yellow wood, and a species of palm. Vast shoals of fish of various kinds frequent the coast, particularly cod of a prodigious size. There are but few birds here. The president of Chili usually appoints the governor of this island, who is one of the commanders upon the Araucanian frontier. Besides the port of Juan Fernandez, there is another, lying towards the south, called the English harbour, from the circumstance of lord Anson's squadron having anchored there; but it is insecure, and too much exposed. Long. 78° 30′ W., lat. 33° 40′ S.

FERNE (Sir John), a celebrated antiquary, was born in Lincolnshire, and educated at Oxford, whence he removed to the inner temple, and in the beginning of the reign of James I. was knighted and made keeper of the king's signet for the north. He died about 1610: having published The Blazon of Gentry, 4to., 1586.

FERNE (Henry), a bishop, the son of the preceding, was born at York in 1602, and became first a commoner of St. Mary-hall Oxford, and afterwards fellow of Trinity College Cambridge. He enjoyed the livings of Masham in Yorkshire, and Medborn in Leicestershire; and, being made archdeacon of Leicester, took, in 1642, his doctor's degree. The same year he published a piece in defence of the king, whose personal favor he obtained, and who, after the Reformation, made him master of Trinity College, dean of Ely, and bishop of Chester. He died in 1661. His works are—1. The Case of Conscience touching Rebellion; 2. Episcopacy and Presbytery considered; 3. Sermons and Tracts.

FERNEL, or FERNELIUS (John), physician to Henry II. of France, was born in Picardy, about the end of the fifteenth century. Being sent to Paris, to study rhetoric and philosophy, he applied himself in a most intense manner. He read Cicero, Plato, and Aristotle; and, by imitating the style of the ancients, made the lectures he afterwards read on philosophical subjects as eloquent as those of the other masters were barbarous. He also applied himself earnestly to the mathematics; but this continual study occasioned a long fit of sickness, which obliged him to leave Paris. On his recovery he returned and studied physic, and at the same time taught philosophy in the college of St. Barbara. In the course of these studies he invented several mathematical instruments; and soon after began reading lectures upon Hippocrates and Galen, which gained him great reputation. He now composed his treatise on Physiology, and another De Venæ Sectione, upon both of which he read lectures for several years. While thus employed he was sent for to court to see a lady whose recovery was despaired of. He, however, accomplished the cure; and on this occasion Henry II., then dauphin, offered him the place of first physician to him; but Fernel, preferring his studies, declined the employment. When Henry came to the throne he renewed his offers, which Fernel was at last prevailed on to accept. He died in 1558, leaving behind him many other works, as De Abditis Rerum Causis, seven books of Pathology, a book on Remedies, &c., which have been repeatedly printed, with his life prefixed, written by William Plantius, his disciple.

FERNESS, a cape and bay on the west coast of Eday, one of the Orkney islands. Long. 2° 43′ W., lat 59° 2′ N.

FERNEY, a small town of France, on the frontier of Switzerland, five miles N.N.W. of Geneva. It is chiefly remarkable as the favorite residence of Voltaire. In the reigns of Louis XIII. and XIV. the inhabitants, who were Protestants, were obliged to emigrate. In 1762 Voltaire purchased the adjacent lands, and invited a number of workmen and artists, particularly watchmakers, to settle here; he even erected a church for their use: but in 1786, eight years after his death, the number of inhabitants did not exceed 600. The chateau of this superficial philosopher is preserved, and shown to strangers.

FERNS, a small town, or rather village, of Ireland, in the county of Wexford, which, united with Leighlin, was once a bishop's see. In the year 1166 the king of Leinster burnt this town, but afterwards founded an abbey in it, now in ruins, as also a castle to which he retired. This occasioned the calling in of the Norman chiefs, and, eventually, the conquest of Ireland. Ferns is fifteen miles north of Wexford.

FERO'CIOUS, *adj.* } Fr. *feroce*; Lat. *ferox*.
FERO'CIOUSLY, *adv.* } Savage; fierce; ravenous.
FEROC'ITY, *n. s.* }

The hare, that becometh a prey unto men, unto beasts and fowls of the air, is fruitful even unto superfetation; but the lion and *ferocious* animal hath young ones but seldom, and but one at a time.
Browne's Vulgar Errours.

Untaught, uncultivated, as they were
Inhospitable, full of *ferocity*. *Philip's Briton.*

An uncommon *ferocity* in my countenance, with the remarkable flatness of my nose, and extent of my mouth, have procured me the name of lion.
Addison's Guardian.

Smedley rose in majesty of mud;
Shaking the horrors of his ample brows,
And each *ferocious* feature grim with ooze.
Pope.

It is to the merciful maxims of Christianity, much more than to any other cause, that we must ascribe the little *ferocity* and bloodshed which accompany our modern victories. *Robertson's Sermon.*

And now to see them thus divided, stand
In fixed *ferocity*, when joyous tears
And sweet sensations should have welcomed, both
Show what the passions are in their full growth.
Byron.

The FEROE, FERRÆ, or FAROE Islands, are a cluster of islands in the Northern Ocean, amounting to twenty-two in number, and lying between 61° 15′ N. lat., and 62° 25′. Their name is conjectured to have been derived either from fær, a sheep, and æ, an island, from the number of these animals found on them by the first settlers, and which were introduced by the Norwegian pirates, who first discovered the islands and made them their rendezvous; or from fier, feathers, the feathers of sea-birds forming a staple article of their riches; or finally, from fiær, far distant, as relative to their position with respect to Norway. The seventeen of them which are inhabited, may be thus described:—

1. *Fuglæ*, Bird Island, north-eastern, is eight miles in circuit, has some spots of ground producing corn, and two villages. 2. *Swinæ*, Hog Island, larger than Fuglœ, is composed of two hills, and nearly divided by a great bay on the east, and another on the west; one village. 3. *Viderœ*, three leagues long and one broad; on the east side is a cavern penetrating quite through the island, 300 feet long, and by which a boat may pass as under the arch of a bridge; two villages. 4. *Bordœ* is four leagues long and three broad, is intersected by two inlets dividing

into four peninsulas; it has a good winter port med Klaksund, on the north-west, and seven llages. 5. *Kunæ*, eight miles long, and two oad, is one steep conical hill; three villages. *Kelsæ*, nine miles long, and one broad; four llages. *Osterø*, twenty miles long, and ten oad, has the highest hills among the group, is dented by five sounds, and has the good winter arbour of Kongshaven on the south-west; it has vo small fresh-water lakes and many basaltic olumns. It contains seven churches, and twenty illages or farms. Two singular rocking stones re seen in the sea near the island. Their length s twenty-four feet, and breadth eighteen, even hen the sea is perfectly calm, they have a sen- ible vibratory motion, and in storms move ackwards and forwards several inches with a reaking noise: this effect is probably produced y their remaining suspended on the summits of ther rocks after the clay on which they formerly ested had been washed away. 8. *Stromæ*, the argest of the islands, is twenty-seven miles ong, and seven broad. It has one town and wenty villages and farms. The former, named Thorshavn, is the only one on the islands, and is on the south-east side of the island. It is the seat of government and the centre of trade. It consists of 100 wooden houses, with the same number of families, of whom one half are fish- ermen, servants, or paupers. There is a Latin school, and a wooden church, covered with slate. The defences are a small fort, and garrison of thirty-six men. At Kirkeboe, a village on the south end of the island, is the only stone church; and here was the ancient seat of the popish bishops. Westmanhamen, on the west side of the island, is the best harbour of the group. 9. *Nolsæ*, Needle Island, has its name from a perforated hill resembling the eye of a needle. It is five miles and a half long, and one mile broad, and contains copper ore, mixed with gold; one village. 10, 11. *Hestæ*, and *Kolter*, are little islands with a single farm each. 12. *Vaagæ*, has two lakes of fresh-water, one of which is three miles long, and half a mile broad; they abound in large trout; three villages. 13. *Mygenæs*, the western island, is small and of difficult access, so that it is only visited twice a year by the clergyman; one village. West of this island is a great rock of basaltic columns, the only resort amongst the islands of the Soland goose. It pastures sheep and oxen, whose flesh is the most esteemed of the islands. 14. *Sandæ* is thirteen miles long, and one mile and a half broad; it has three lakes, and five villages. It is one of the most fertile, producing excellent potatoes. 15. *Skuæ*, a small island, is celebrated in the annals of the islands for containing the tomb of their hero Sigismund Bristesen. 16. The *Great Dimon* is almost entirely inacces- sible; and its inhabitants, of one family, having no place to haul up a boat, have no communica- tion with the other islands, unless when the people of the latter visit them; and the clergy- man who visits the island only every summer, is obliged to be hoisted up by a rope. This island, as well as its neighbour the Little Dimon, is the grand resort of sea-fowls. 17. *Sudero*, the southernmost of the group, is seventeen miles long, and five miles broad; has six churches, and ten villages. It has many spaces, covered with basaltic columns. This island has two good winter harbours. The *Monk* is a great lump of rock south of Sudero, surrounded by sunken rocks among which the currents are strong and dangerous.

These islands are all vast mountains of rock, generally rising in conical or angular summits of 1000 to 2000 feet elevation, and the coasts pre- senting perpendicular rocky cliffs of 200 to 300 feet height. The grand formation is trap, with feltspar, glimmer, and grains of zeolite; the only volcanic appearances are in basaltic columns, which cover considerable spaces. Many confused heaps of loose stones, and vast masses of rock, scattered on the sides of the hills, seem to denote some great convulsion, by which also it would appear that many of the islands have been torn to pieces. The shores offer numerous deep caverns, the resort of seals. The moun- tains are only separated by very narrow glens, through which run rivulets and brooks, many of which form cascades, and are useful in turning corn mills. There are also some fresh-water lakes, in which are trout and eels; and some warm springs.

The quantity of arable land is very small, the soil over the bed of rock being in general not more than a foot or two deep. Barley and rye are the only cultivated grains; and turnips, carrots, and potatoes the only vegetables. The turnips are a yellow sort, but small and hard; and the potatoes diminutive and watery. Such, however, is the industry of the people in some places, that soil is often seen laid on the flat sur- faces of large stones, in which potatoes of a good quality are produced. The islands have no trees, though from the veins of soil they possess, and from the trunks of juniper trees found in the soil, it would appear that they were not formerly without wood. Copper ore has been found, with particles of gold, but too poor to pay the expense of working. The climate, though very foggy, is not unhealthy. The summers are generally wet; the winters stormy but not cold, the lakes or brooks seldom freezing to any thick- ness, but snow falls in vast quantity. The aurora borealis is common in winter, and is even seen sometimes in August. The shores are tre- mendously beaten by the Atlantic waves, and the currents rush through the sounds and straits with great violence, forming whirlpools almost equal to those of the Maelstrom, on the coast of Norway. The islands are deeply indented by inlets forming eight good harbours in winter, and they have besides many roads named summer harbours.

The wild animals are only rats and mice; the domestic ones horned cattle, sheep, horses, and a few hogs, dogs, and cats. The amphibious animals are the walrus, and several species of the seal. Among the aquatic birds are many kinds of ducks, particularly the eider, the auk, the puffin, penguin, diver, fulmer, sheer-water, gannet, gulls, petrel, &c. The only land birds of any consideration are the quail and wild pigeon. Domestic fowls are common, but there are no turkeys.

The population in 1782 was 4409 souls: in 1812, 5209. Their principal pursuits are cutting turf for fuel, agriculture, rearing cattle and sheep, manufacturing the wool of the latter into coarse cloths or knit jackets and stockings, to dye which they make use of lichens, with which the islands abound. The cattle are small; and, no pains being taken to select the best for breeding, few are to be met with that are well shaped. They yield but a small quantity of milk, but it is sweet and rich. The sheep vary a little in appearance and in the quality of their wool, which is torn from them when the fleece begins to loosen; but frequently that event is not waited for, and the skin of the animals is cruelly lacerated. The horses are small, and in general not well shaped. The best are to be seen in the island of Suderoe. They are very seldom used, except for carrying home fuel from the mosses; there being no roads and no wheel carriages. The inhabitants are also employed in catching sea birds both for their flesh and feathers, the former forming a good portion of their food, fresh or dried; and in hunting the seal for its skin and oil. The fishery, which was formerly considerable, is now reduced to barely sufficient for the consumption of the inhabitants, the fish having forsaken these coasts; the principal kinds are hollibut, cod, haddock, and sey (gadus virens.) Shoals of small whales, of 100 to 1000, arrive periodically, and a great number are killed for their oil as well as for food. Seals were formerly taken in great numbers in the caverns but they are not so numerous now.

Many of the inhabitants speak English, a considerable intercourse having been kept up between these islands and Scotland during both the American and French wars. Some differences having taken place in the year 1809 between some British merchants and the Icelanders, an order in council was issued, commanding British subjects to consider the Icelanders, Faroese, and the people of the Danish settlements in Greenland, as stranger friends, and permitting a trade between these places and the ports of London, Leith, and Liverpool, on certain conditions. The money and the value of all the goods of which Feroe and Iceland had been robbed by some privateers were also restored. In 1811, the maritime war interrupting the supplies of the Faroese, a small but adequate export from Britain was permitted. Many romantic scenes are presented in the formation and appearance of these islands; and there is scarcely a promontory or detached rock that does not present something combining singularity with magnificence. Of these, the rock called the Witch's Finger and the little island called Tindholm, the one on the east and the other on the west side of Vaagoe, are perhaps the most remarkable. The former is detached from the adjoining precipice almost to the bottom. From some points of view it has the appearance of a grand square tower, surmounted by a lofty spire; and, when the light falls in a particular direction, the resemblances of a door and windows are quite distinct at a distance of five miles. When viewed in that position in which it appears detached from the rock, it is not unlike a huge finger pointing upwards. Landt states the height of this peak to be 1200 feet, and we believe that this does not much exceed the truth. The elevation of Tindholm is probably about 500 feet, and its singular appearance is much more striking. On one side, though very steep, it is covered with verdure almost to the summit, which consists of a number of long and slender peaks, ranged along the ridge, which terminates on the opposite side a perpendicular face of rock. In crossing the island of Vaagoe towards this rock, its summit is seen in a form bearing a close similitude to the towers and pinnacles of Westminster Abbey. In some places there are ranges of columnar rocks; but, in general, they are not in such situations as to render them of much importance in the scenery. The promontory of Niepen, in Stromoe, presents a beautiful range of columns. There are some in Osteroe which are lofty, but, from their situation, not very striking. Several very curious columnar rocks are to be seen in Suderoe and Mygenæs. The highest mountain is the Skellingfell, or Skielinge Field, which rises very abruptly, terminating in a small platform. It exceeds 3000 feet in height; but it has not yet been very accurately measured. The frequency of fog, which often suddenly envelopes the adventurous traveller, even in fine weather, renders the ascent of the Feroe mountains a very hazardous undertaking. The height of Slatturtind, in Osteroe, is 2825 feet; and there are several mountains in the same island, which appear equally high. There is nothing in Feroe which can be called a valley. Of the few lakes, the largest is in the island of Vaagoe, being about three miles long, and one in breadth. Beyond the upper end of the lakes there is generally a small extent of flat ground. Barley is the principal article imported from Denmark: pease, rye, meal, and oats being less commonly used. In the year 1812, 5650 barrels of grain and meal were imported. It appears that a single mercantile house in Copenhagen has of late years had a monopoly of the supply of these islands.

The bird-catchers here are very adventurous. Sir G. Mackenzie supplies the following account of their modes of procedure:—'The fowlers are provided with long poles, to the ends of which are fastened small poke nets. They display great dexterity in casting this instrument over the birds, which invariably make towards the water when they are disturbed. It is this anxiety of the birds to seek the element in which their security is to be found, which gives certainty to the exertions of the fowler. The birds push their heads through the meshes of the net, which, being dexterously inverted, keeps them suspended by the neck. When a fowling expedition is undertaken, two men fasten themselves to a rope, so that there may be eight or ten fathoms of it between them. One assists the other to ascend the rock by means of a pole, at the end of which is a hook, which is fastened to the band of the climber's breeches, or to a rope tied round his waist, and thus he is pushed up: but the most common method is for the climber to seat himself on a board fastened to the end of the pole. They often ascend frightful

cliffs without any assistance. When the first has got to a place where he has some footing, he helps the other up by means of the rope to which they are both fastened. When they have gained the elevation where the birds are pretty numerous, they assist each other from cliff to cliff. It sometimes happens that one of them falls and pulls the other after him, when both are precipitated into the sea, or dashed to pieces on the projecting rocks. When the rocks are so high and smooth as to render it impossible for the fowlers to ascend, they are let down by means of a strong rope from above. To prevent the rope being cut, a piece of wood is placed at the verge of the precipice. By means of a small line, the fowler makes signals to those above, and they let him down or pull him up accordingly. When he reaches a shelf of the rock where the birds have their nests, he unties himself, and proceeds to take them. Sometimes he places himself on a projecting rock, and, using his net with great adroitness, he catches the birds as they fly past him; and this they call beining. This mode of catching birds is even practised while the fowlers are suspended. When a projection of the rock is between the fowler and the place where the birds are, he swings himself from the rock so far that he turns round the projection. In this, great address and courage are requisite, as well as in swinging under a projection into a cavern. When he cannot, with the help of his pole, swing far enough, he lets down a line to people stationed in a boat below, who swing him, by means of it, as far as is necessary to enable him to gain a safe place to stand upon. Besides being exposed to the risk of the rope breaking, the fowler is frequently in danger of being crushed by pieces of the rock falling down upon him.—Such are the hazardous means to which these poor people resort for procuring food.'

The houses in Thorshavn are crowded together without any regularity. The roofs are covered first with birch bark, brought from Norway, over which turf is laid. The green color of the tops of the houses, assimilating with that of the soil around the town, renders the place almost invisible from the sea. The house of the commandant is the best furnished, but that of the land-foged (who is here high sheriff as well as treasurer) is the most spacious. Though the exterior of the buildings does not promise much, yet the rooms are generally neat and clean. The prison is a wretched stone building, in which those convicted of crimes, such as sheep-stealing, are confined for several years. They are brought out occasionally, however, to work when any thing particular is required to be done. At the mouth of the harbour are the remains of a small but strong fort, the guns of which were destroyed by the British in the year 1808.

The hospitality of the Faroese is remarkable, and in their polite and respectful deportment, and strict honesty, they are no where exceeded.

To religious duties they pay the most regular attention. Almost every village has a church. On the Sunday evenings, and on holydays, the people give themselves up to merriment. In fine weather, groups of them are seen in the fields, formed into circles, moving round in slow cadence (which they call dancing) to a song in which sometimes fifteen or twenty voices join.

The religious establishment of the whole of these islands is under the superintendence of a provost. There are seven parishes, and thirty-nine places of worship, so that the duty of the clergy is exceedingly laborious. The stipends are inconsiderable, and are chiefly paid in kind. To the glebes a permanent stock of sheep, and sometimes a few cows, are attached. Glebes are also provided for the widows of the clergy.

Barley bread with milk or fat generally constitute the breakfast of the common people. In the autumn, when the lambs are slaughtered for drying, the blood is boiled with the milk. Dinner consists of fish and water gruel, improved by being boiled with bones or fat. Soup is sometimes made with fresh or dried meat, and turnip leaves. Dried lamb is eaten raw with tallow, and dried whale flesh is esteemed a delicacy. On holydays a large pot is placed on the fire, and a quantity of sea-birds boiled for supper. The quantity of fat which these people devour, and the state in which the rest of their animal food is taken into the stomach, might be deemed unwholesome; yet diseases are not frequent, and the appearance of the inhabitants every where is robust and healthy. Elephantiasis was formerly a prevalent disorder, and an hospital was established near Thorshavn for the reception of lepers. The remedies used by the natives are simple, and, as might be expected, harmless and ineffectual, such as soaking the parts affected in water, into which a piece of old gold or silver coin, or some ornament, is put, and decoctions of various plants applied externally. The only surgical operation performed is the extirpation of the uvula, when, from relaxation, it lengthens and obstructs the passage to the stomach and lungs. There is a surgeon established at Thorshavn, with a salary from the Danish government.

The male dress consists entirely of woollen stuffs, manufactured in the country. Their jackets, which are worn in their ordinary occupations, are knitted, and ornamented with figures in colored worsted. In full dress, they wear a long frock of a dark brown or black color, and breeches of the same. Their shoes are made of sheep-skin, slightly tanned with the root of tormentilla They are formed by cutting a piece of a skin proper length and breadth, and puckering, very neatly, the parts for the toes and heel: the fastening is a white woollen thong, knitted for the purpose, and tied round the legs. The dress cap is formed like a bishop's mitre; on ordinary occasions they wear woollen caps, and sometimes caps of skin, with the hairy part outermost. The men never cut their hair; and to appearance seldom comb or wash it. The women wear their hair combed backwards from the forehead, and have white linen caps with a broad stiff border of coarse lace, rising perpendicularly. The cap is fastened by a colored silk or cotton kerchief tied under the chin, with a piece of riband floating behind. The rest of the dress much resembles that of the peasantry of Scotland, the materials being coarser. They wear aprons, and

cotton kerchiefs over the shoulders and bosom; and the more gaudy the colors, the more superb is a dress esteemed. The language is a dialect of the Scandinavian.

The revenue collected out of the produce of the islands is: for every sheep of the permanent or estimated stock of each farm, a lamb's skin; and for every sixty sheep killed, 36lbs. of tallow, and thirty skins. The proportion of wool paid as tax, is sold at a fixed price to the people of Thorshavn. It amounted formerly to between 3000 and 4000 rix dollars. The civil establishment is under the direction of a military officer, commanding thirty men, who maintain the form of mounting guard, and keeping a look out. Under the commandant are, the landfoged or treasurer, and the sysselmen, or governors of districts.

FERONIA, the goddess of woods and orchards, so named from the town where were a wood and temple consecrated to her. Strabo relates, that those who sacrificed to this goddess walked barefoot upon burning coals, without being hurt. She was the guardian deity of freed men, who received their cap of liberty in her temple.

FERRACINO (Bart.), an Italian engineer, of considerable repute in the seventeenth century, was born at Bassano, and originally a sawyer. He first invented a saw to be worked by wind, and then constructed various clocks and hydraulic engines, which have been much admired. One of the latter, made for the procurator Belegno, was famous in Italy within these few years: it was framed on the principle of the screw of Archimedes, and raised water to the height of thirty-five feet. He also built the bridge over the Brenta, at his native town. He died in 1750.

FERRAH, a large walled town of Afghaunistaun, situated in a fertile valley: it gives its name to a considerable river, falling into the lake of Zarra, the Ariapaulus of the ancients, and is supposed to be the Parrah, mentioned in ancient geography as the capital of the Parthian province of Anabon. It stands in long. 61° 40′ E., and lat. 33° 7′ N.

FERRAR, (Robert), an English prelate and martyr of the sixteenth century, was born at Halifax, Yorkshire, and studied both at Oxford and Cambridge. He became a canon regular of the order of St. Augustine, and was chosen prior of the monastery of St. Oswald, which dignity he surrendered on the dissolution of 1540, receiving a pension of £100 per annum. Embracing the principles of the reformation, he became chaplain to archbishop Cranmer, and, after his example, took a wife. By Edward VI. he was made bishop of St. David's; but in consequence of issuing out his commission to his chancellor to visit his chapter, and inspect into some dilapidations in an exploded form, his enemies found occasion to accuse him of a præmunire, and so great were the expenses of the prosecution, that he became unable to pay his first fruits and tenths, and was imprisoned for them as a debtor to the crown. On the accession of queen Mary he was brought, in company with Hooper, Bradford, and others, before Gardiner, bishop of Winchester, who after treating him with great indignity delivered him up for trial to his successor, Morgan, by whom he was declared guilty of heresy, and being turned over to the secular arm was burnt at Caermarthen, on the 30th of March, 1555. This prelate appears to have been of a headstrong and imprudent disposition, but was treated with remarkable and personal ill will by both Protestants and Papists.

FERRARA, or the Ferrarese, a duchy and province of Italy, in the ecclesiastical states, bounded on the north by the Po, and on the east by the Adriatic. The part formerly belonging to this province, beyond the Po, was in 1815 united to Lombardy. It is now properly a legation of the papal states, and is supposed to contain about 171,000 inhabitants. It is well watered by branches of the Po, which often overflow it: but is indifferently cultivated, though fit for corn, pulse, and hemp, which it produces, as well as some silk and wine. This duchy was formerly possessed by the house of Este; but pope Clement VIII. took possession of it in 1598, after the death of Alphonso II., duke of Ferrara, as a fief of the church. In October, 1796, the inhabitants of this province, uniting with those of Bologna, Modena, and Reggio, erected the ci-devant Cispadane republic. In October, 1797, they joined the other Italian states in forming the Cisalpine republic, of which this duchy constituted a department, entitled the Lower Po, and was then found to contain 154,000 citizens, who elected twelve deputies to the councils. But in July, 1799, the whole province was reduced, and the democratic government overthrown by the Austrians, who were again obliged to surrender to the French in May, 1800. They occupied it until 1814.

Ferrara, an ancient and large city of Italy, capital of the above duchy. It is seated in an agreeable and fertile plain, watered by the river Po on one side, and on the other encompassed by a strong wall and deep broad ditches. It has a citadel, erected by pope Clement VIII. In the middle of the city is a magnificent castle, surrounded with water, formerly the palace of the dukes, and now of the papal legate. It contains some fine paintings. The duke's garden and park are called the Belvidere. The theatre here is one of the best in Italy. Here are also a good drawing academy, and a valuable collection of minerals and antiquities. Manuscripts of Ariosto, Tasso, and Guarini are shown; also the houses which they respectively occupied. The hospital of St. Ann was the prison of Tasso. The two Strozzi, the poets, and Bentivoglio, the historian, as well as Savonarola, the Dominican, were natives of Ferrara.

Ferrara had formerly a considerable trade; but it was greatly reduced by the exactions of the popes. The ancient university, founded in 1391, by pope Boniface IX., had dwindled into a wretched college of the Jesuits before the revolution. In 1735 it was advanced to an archbishopric by pope Clement XII. The country around is so marshy, that a heavy shower of rain renders the roads almost impassable. It has an ancient cathedral and about 100 churches, and contained 30,000 inhabitants in 1797, including

600 Jews, who carry on silk manufactures, &c. In the 11th of June, 1796, the French, under Buonaparte, arrived in this city, and began to establish the late democratic constitution. On the 19th February, 1797, it was formally ceded to the Cispadane republic by the pope. In July, 1799, it surrendered after a long siege, to the Austrians, under general Klenau. Murat's army was defeated here in the beginning of April, 1815, by an Austrian force under general Mohr and Count Neipperg. It is sixty-seven miles north of Bologna, and forty south-east of Mantua. Population, 24,000.

FERRARI (Octavian), an Italian philosophical writer, was born at Milan, in 1518. He became professor of ethics and politics at his native place, but removed afterwards to Padua, where he explained the principles of Aristotle four years, and then returned to Milan. He died in 1586. His works are, 1. De Sermonibus exotericis. 2. De Disciplinæ, Encyclica: seu Clavis Philosophiæ Peripateticæ Aristotelicæ. 3. De Origine Romanorum. 4. A Translation of Atheæus into Latin.

FERRARI (Francis Bernardin), of the same family with the foregoing, was born at Milan in 1577, and laid the foundation of the Ambrosian library. He died in 1669. His works are, 1. De Antiquo Ecclesiasticarum Epistolarum genere. 2. De Ritu Sacrarum Ecclesiæ Catholicæ concionum. 3. De veterum acclamationibus et plausu.

FERRARI (Octavio), another professor of the same family, was born in 1607, and educated at the Ambrosian College, where he presided in the chair of rhetoric. He afterwards removed to Padua, and greatly benefited that university by his labors and fame. He died in 1682. His principal work is entitled Origines Linguæ Italicæ, folio; besides which he wrote several dissertations on subjects of antiquity.

FERRARI (John Baptist), was a Jesuit of Sienna, who published a Syriac Dictionary in 1622, 4to. He wrote also De Malorum Aureorum Cultura, 1646; and De Florum Cultura, 1633. He died in 1655.

FERRARI (Gaudenzio), a painter born at Valdugia, in 1484, was employed by Raffaelle in the Vatican, and thereby acquired a beautiful style of design and coloring. He died in 1550. Another painter of this name, John Andrew Ferrari, of Genoa, excelled in landscapes as well as historical subjects. He died in 1669.

FERRARI (Lewis), a mathematician, was born at Bologna, about 1520. He studied under Cardan, and discovered the method of resolving biquadratic equations. He was professor of mathematics at Bologna, where he died in 1565.

FERRARIA, in botany, a genus of the triandria order, and gynandria class of plants: natural order sixth ensatæ. Spathæ two-leaved: CAL. none; petals six, wavingly curled; stigmata cucullated: CAP. trilocular, inferior. There are four species, natives of the Cape of Good Hope, Mexico, and Australasia. There is a great singularity in the root of one of these species; it vegetates only every other year, and sometimes every third year; in the intermediate time it remains inactive, though quite sound.

FERRARS (George), a lawyer, poet, and historian, descended from an ancient family in Hertfordshire, and born about A. D. 1510, near St. Alban's. He was educated at Oxford, and thence removed to Lincoln's Inn, where he was soon called to the bar. Cromwell, earl of Essex, introduced him to king Henry VIII. who employed him, and in 1535 gave him a grant of the manor of Flamstead, in his native county. He was, however, for some years afterwards in embarrassed circumstances: and being, in 1542, in attendance on his duty as a member of the house of commons, he was taken in execution by a sheriff's officer and committed to the compter. The house, having heard of his confinement, despatched their serjeant to require his release. This was refused, and an affray took place between the clerks of the compter and that officer, who had his mace broken. On his returning, and making a report to the house of what had happened, the members in a body repaired to the bar of the house of lords to complain of the breach of privilege; when the latter judged the contempt to be very great, and referred the punishment of the offenders to the discretion of the lower house. The members now resolved that the serjeant should repair once more to the sheriffs of London (who in the late affray had supported the clerks of the compter), and demand their prisoner without writ or warrant, his mace being a sufficient badge of his authority: when the city magistrates delivered up the insolvent senator to the officers of the house. But this tardy obedience did not exempt the parties from punishment, for the sheriffs and the plaintiff, at whose suit Ferrars was arrested, were committed to the tower, and the clerks to Newgate; and an act of parliament was passed discharging Ferrars from liability for the debt. This extraordinary transaction, it is said, obtained the entire approbation of the king, and became the basis of that rule of parliament which exempts members to this day from arrest. In the reign of Edward VI. Mr. Ferrars attended lord Somerset as a commissioner of the army, in his expedition to Scotland in 1548. He died in 1579, at Flamstead. He wrote, 1. A Translation of Magna Charta, and several early statutes. 2. History of the Reign of Queen Mary, published in Grafton's Chronicle, 1569, folio. 3. Six Tragedies, or dramatic Poems, published in the Mirror for Magistrates, in 1559, 1587, and 1610.

FERRARS (Henry), a Warwickshire gentleman, of a good family, eminent for his genealogical and heraldic researches. Mr. Wood says, that out of the collections of this gentleman Sir William Dugdale laid part of the foundation of his celebrated Antiquities of Warwickshire. Camden also mentions his assistance in relation to Coventry. Some poems of his were published in the reign of queen Elizabeth; and he died in 1633.

FERREARAT. See FERIARA.

FE'RREOUS, *adj.* } Lat. *ferreus.* Irony;
FERRU'GINOUS. } of iron.

In the body of the glass there is no *ferreous* or magnetical nature. *Browne's Vulgar Errours.*

They are cold, hot, purgative, diuretick, *ferruginous*, saline, petrifying, and bituminous. *Ray.*

On long exposure to air, the granites or porphories of this country exhibit a *ferruginous* crust; the iron being calcined by the air first becomes visible, and is then washed away from the external surface, which becomes white or gray, and thus in time seems to decompose. *Darwin.*

FERRERAS (Don John de), a learned Spanish ecclesiastic, a native of Labaneza, was born in 1652. After studying at Salamanca he obtained the cure of St. James of Talavera, whence he removed to Madrid, and became a member of the academy. He assisted in the compilation of the great Spanish Dictionary, and was the author of various works in philosophy, theology, and history, the most considerable of which is a general History of Spain, in ten volumes, 4to.

FER'RET, *n. s.* & *v. a.* } Fr. *furet*, Teut.
FER'RETER, *n. s.* } *fret*; Welsh, *fured*; Port. *frao*; Dutch, *ferret*; Lat. *viverra*, i. e. a creature that lives or sees under the earth. A species of mustela used in the destruction of rats, hunting of rabbits, &c. See MUSTELA: hence to ferret is to hunt out of concealment, or lurking places.

Cicero
Looks with such *ferret* and such fiery eyes
As we have seen him.
Shakspeare. Julius Cæsar.

With what an eager earnestness she looked, having threatening not only in her *ferret* eyes, but while she spoke, her nose seemed to threaten her chin.
Sidney.

The archbishops had *ferretted* him out of all his holes. *Heylin.*

Coneys are taken either by *ferrets* or purse-nets.
Mortimer.

FERRETTO, in glass-making, a substance which serves to color glass. It is made by a simple calcination of copper, but serves for several colors. There are two ways of making it: the first is this:—Take thin plates of copper and lay them on a layer of powdered brimstone, in the bottom of a crucible; over these lay more brimstone, and over that another layer of the plates, and so on, alternately, till the pot is full. Cover the pot, lute it well, place it in a wind-furnace, and make a strong fire about it for two hours. When it is taken out and cooled, the copper will be found so calcined that it may be crumbled to pieces between the fingers like a friable earth. It will be of a reddish, and, in some parts, of a blackish color. This must be powdered and sifted fine for use. Another way of making ferretto is as follows: make several stratifications of plates of copper and white vitriol, alternately, in a crucible, which place on the floor of the glass furnace, near the eye, and let it stand there three days; then take it out, and make a new stratification with more fresh vitriol: calcine again as before. Repeat this operation six times, and a most valuable ferretto will be obtained.

FERRI (Ciro), a painter, born at Rome in 1634, was bred under Pietro da Cortona; and the works of the scholar are often mistaken for those of the master. The grand duke of Tuscany nominated him chief of the Florentine school. He died in 1689.

FERRIAR (John), a respectable modern physician and polite writer, was born at Chester, in 1764. He graduated at Edinburgh, after which he settled in practice at Manchester, and became senior physician to the infirmary and the lunatic asylum. He contributed largely to the formation of the literary and scientific institutions of that place; and supplied many papers in their Transactions. He died in 1815. Dr. Ferriar was the author of, 1. Medical Histories, 3 vols. 8vo. 2. Illustrations of Sterne, in which the plagiarisms of that writer were detected, 8vo. 3. Bibliomania, an Epistle, 8vo. 4. An Essay towards a Theory of Apparitions, 8vo. 5. On the medical Properties of the Digitalis Purpurea, 8vo.

FERRIER (Arnold de), an eminent French lawyer, born at Toulouse in 1506. He was admitted L.L.D. at Padua: was a professor in the university of Toulouse, and a counsellor in the parliament of that city. He went afterwards ambassador to Venice, where he continued several years. He wrote several works, and assisted F. Paul in his history of the council of Trent. After long entertaining sentiments in favor of the Protestant religion, he at last openly renounced popery in his seventy-sixth year, and died three years afterwards.

FERRINGTOSH, Gael. i. e. the Thane's lands, a barony of Scotland, in Ross-shire, whose ancient owner having greatly assisted to quash a rebellion which threatened the north of Scotland upon the revolution in 1688, and having, in consequence of his patriotic exertions, incurred great damage by the depredations of the opposite faction upon his property, he received, by way of compensation, an exemption from all duties upon spirits distilled from grain, the growth of his lands in this district. The family continuing steadfast in their adherence to government this singular privilege of exemption from excise was continued to them till 1784, when it was taken away by act of parliament, and a suitable compensation authorised to be made. This, upon being submitted to a jury before the court of exchequer, November 29th, 1785, was fixed at £21,580.

FERRO, FER, or HIERO, the smallest and most westerly of the Canary islands. It contains about seven square leagues, and a population of 5000. The chief exertions of the inhabitants are turned towards the rearing of cattle. Fogs are very common over this island, whence it has received in the neighbourhood the name of the Black Canary. It presents on all sides to the sea a face of bold and craggy rock. In the interior the appearance of the country improves; and a great part of the island is tolerably fruitful. Good wine and brandy are exported to Teneriffe. Bees thrive exceedingly on account of the multitude of aromatic flowers, and the honey is excellent. The island abounds also in figs, and the quantity is sometimes so great, that to prevent their being lost, it is necessary to convert them into brandy. The woods have deer, red-legged partridges, bustards, and pheasants. A great disadvantage is the want of water, of which Ferro is said to contain not more than three fountains. Hence the cattle are said sometimes to quench their thirst with sea water. Ferro.

eing once supposed to be the most westerly oint of the old world, was originally employed y all geographers as their first meridian, and the ongitude reckoned from it. El Golfo, or the ulf, on the east side, is the principal village. ong. 17° 46′ W., lat. 27° 45′ N.

FERROL, an important sea-port of Spain, on he north coast of Galicia, having one of the best arbours of Europe; being ten miles deep, and rom a quarter to half a mile broad, with depth or the largest ships to Ferrol, five miles from he entrance, and for frigates two miles further. Both shores are lofty and lined with forts, and he haven, or arsenal, which is formed by piers, ay be closed with a boom. The strength of hese works will account for the retreat of Sir ames Pulteney, who landed with a very effiient force in the vicinity, in the end of August 799, but judged it necessary to re-embark.

The bays of Ares and Betanzos are separated rom Ferrol harbour by a peninsula: the islands f Marola and Miranda are in the entrance. These bays are open to the north-west, and conequently dangerous.

The basin in which the ships are laid up is of great extent, and solid workmanship; each vesel has its own store-house, where the boatswains', carpenters', and gunners' stores, are distinctly marked. The marine barracks are a vast and beautiful building, affording accommodation for 6000 men. The establishments are all naval; there is an academy for the Guardas Marinas: a mathematical school for marine artillerists; a nautical, and even a pilot school. The town has 10,000 inhabitants, but little more trade than what the presence of the fleet produces, foreign merchandise not being allowed to enter it: and the manufactures are confined to sail-cloths, ropes, hardware, and leather. The climate is moist. The town is of very recent erection, having been but a village until 1752, when Ensennada, minister of Ferdinand VI., apprised of the advantages of its situation, determined to establish dock-yards, arsenals, and manufactories here. It is twenty-one miles north-east of Corunna, and thirty-six north-west of Lugo. Long. 8° 11′ 29″ W., lat. 43° 29′ 30″ N.

FERROL, CAPE, a cape on the north-west coast of Newfoundland. Long. 57° 11′ W., lat. 51° 4′ N.

FERROPRUSSIC, or FERROCYANIC, ACID. Into a solution of prussiate of potash pour hydrosulphuret of barytes, as long as any precipitate will fall. Filter the whole, and wash the precipitate with cold water; dry it, and, having dissolved 100 parts in cold water, add gently concentrated sulphuric acid thirty parts; shake them well together, and set the mixture aside to settle. The supernatant liquid is ferroprussic acid, first discovered by Mr. Porrett. It has a pale lemon-yellow color, but no smell. Heat and light decompose it. Hydrocyanic acid is then formed, and white ferroprussiate of iron, which soon becomes blue. Its affinity for the bases enables it to displace acetic acid, without heat, from the acetates, and to form ferroprussiates.

Mr. Porrett considers this acid 'as a compound of

4 atoms carbon	=	30·00
1 atom azote	=	17·50
1 atom iron	=	17·50
1 atom hydrogen	=	1·25
		66·25′

This sum represents the weight of its prime equivalent. Ferroprussiate of potash, and of barytes, will each therefore, according to him, consist of an an atom of acid + an atom of base + two atoms of water.

It has been supposed that Mr. Porrett's new acid is nothing but a hydrocyanate or prussiate of iron, which, from the mutability of its constituents, is easily decomposed by heat and light; and that the only permanent compound which that acid forms is in triple salts. This is the old opinion, and also the present opinion of several eminent chemists. These compounds we shall call ferroprussiates. M. Vauquelin and M. Thenard style them ferruginous prussiates.

Ferroprussiate of potash is made by heating pearl-ash with the hoofs and horns of animals in a heated iron vessel. This salt is now manufactured in several parts of Great Britain; and therefore the experimental chemist need not incur the trouble and nuisance of its preparation. An extemporaneous ferroprussiate of potash may however be made by acting on Prussian blue with pure carbonate of potash, prepared from the ignited bicarbonate or bitartrate. Of the purified Prussian blue, add successive portions to the alkaline solution, as long as its color is destroyed. Filter the liquid, saturate the slight alkaline excess with acetic acid, concentrate by evaporation, and allow it slowly to cool. Quadrangular bevelled crystals of the ferroprussiate of potash will form. This salt is transparent, and of a beautiful lemon or topaz-yellow. Its specific gravity is 1·830. It has a saline, cooling, but not unpleasant taste. In large crystals it possesses a certain kind of toughness, and, in thin scales, of elasticity. The inclination of the bevelled side to the plane of the crystal is about 135°. It loses about thirteen per cent. of water when moderately heated; and then appears of a white color, as happens to the green copperas; but it does not melt like this salt. Water at 60° dissolves nearly one-third of its weight of the crystals; and, at the boiling point, almost its own weight. It is not soluble in alcohol; and is not altered by exposure to the air. Exposed in a retort to a strong red heat, it yields prussic acid, ammonia, carbonic acid, and a coaly residue consisting of charcoal, metallic iron, and potash. When dilute sulphuric or muriatic acid is boiled on it, prussic acid is evolved, and a very abundant white precipitate of protoprussiate of iron and potash falls, which afterwards, treated with liquid chlorine, yields a Prussian blue, equivalent to fully one-third of the salt employed. Neither sulphuretted hydrogen, the hydrosulphurets, nor infusion of galls, produce any change on this salt. Red oxide of mercury acts powerfully on its solution at a moderate heat. Prussiate of mercury is formed, which remains in solution; while peroxide of iron and metallic mercury precipitate. This salt is said

by Mr. Porrett to be composed of the following constituents.

Potash . . .	40·34
Ferrochyazic acid .	44·53
Water . . .	15·13
	100·00

Ferroprussiate of soda may be prepared from Prussian blue and pure soda, by a similar process to that prescribed for the preceding salt. It crystallises in four-sided prisms, terminated by dihedral summits. They are yellow, transparent, have a bitter taste, and effloresce, losing in a warm atmosphere thirty-seven and a half per cent. At 55° they are soluble in four parts and a half of water, and in a much less quantity of boiling water. As the solution cools crystals separate. Their specific gravity is 1·458. They are said to be soluble in alcohol.

Ferroprussiate of lime may be easily formed from Prussian blue and lime water. Its solution yields crystalline grains by evaporation.

Ferroprussiate of barytes may be formed in the same way as the preceding species. Its crystals are rhomboidal prisms, of a yellow color, and soluble in 2000 parts of cold water and 100 of boiling water. By Mr. Porrett's second account of this salt it is composed of

Acid	41 5
Barytes	47·5
Water	11·0
	100·0

In the Annals of Philosophy for October, 1819, Mr. Porrett gives as its true proportions,

1 atom ferrochyazic acid	66·25	35·66
1 atom barytes . .	97·	52·22
2 atoms water . .	22·5	12·12
	185·75	100·00

But professor Berzelius represents it as a compound of,

Potassium . . .	37·11
Iron	12·85
Water . . .	12·82
Cyanogen . . .	37·22
	100·00

Ferroprussiate of strontian and *magnesia* have also been made.

Ferroprussiate of iron.—With the protoxide of iron and this acid we have a white powder, which, on exposure to air, becomes blue, passing into *deutoferroprussiate of iron*, or Prussian blue. We have already described the method of making the ferroprussiate of potash, which is the first step in the manufacture of this beautiful pigment. This is usually made by mixing together one part of the ferroprussiate of potash, one part of copperas, and four parts more of alum, each previously dissolved in water. Prussian blue, consisting of the deutoferroprussiate of iron, mixed with more or less alumina, precipitates. It is afterwards dried on chalk stones, in a stove.

Pure Prussian blue is a mass of an extremely deep blue color, insipid, inodorous, and considerably denser than water. Neither water nor alcohol has any action on it. Boiling solutions of potash, soda, lime, barytes, and strontites, decompose it; forming on one hand soluble ferroprussiates with these bases, and on the other a residue of brown deutoxide of iron, and a yellowish-brown sub-ferroprussiate of iron. Aqueous chlorine changes the blue to a green in a few minutes, if the blue be recently precipitated. Aqueous sulphuretted hydrogen reduces the blue ferroprussiate to the white protoferroprussiate.

Its igneous decomposition in a retort has lately been executed by M. Vauquelin with minute attention. He regards it as a hydrocyanate or mere prussiate of iron; but the changes he describes are very complex, nor do they invalidate Mr. Porrett's opinion, that it is a combination of red oxide of iron, with a ferruretted acid. The general results of M. Vauquelin's analysis were hydrocyanic acid, hydrocyanate of ammonia, an oil soluble in potash, crystalline needles, which contained no hydrocyanic acid, but were merely carbonate of ammonia; and, finally, a ferreous residue slightly attracted by the magnet, and containing a little undecomposed Prussian blue.

Proust, in the Annales de Chimie, vol. LX., states, that 100 parts of Prussian blue, without alum, yield 0·55 of red oxide of iron by combustion; and, by nitric acid, 0·54. 100 of prussiate of potash and iron, he further says, afford, after digestion with sulphuric or nitric acid, thirty-five parts of Prussian blue.

FERRY is also used for a liberty by prescription, or by the king's grant, to have a boat for passage, on a frith or river, for carrying passengers, horses, &c., over it, for a reasonable toll.

FER'RULE, *n. s.* Lat. *ferrum*, iron; but this word, the Fr. *verole*, and Teut. *vere*, are traced by Mr. Thomson to the barb. Lat. *virola*, and Gr. *γυροω*, to bend. An iron ring put round any thing to keep it from cracking.

The fingers ends are strengthened with nails, as we fortify the ends of our staves or forks with iron hoops or *ferrules*. *Ray.*

FER'RY, *v. a.*, *v. n.* & *n. s.*
FER'RY-BOAT, *n. s.*
FER'RY-MAN,
FER'RIAGE, *n. s.*
} Saxon, ꝼaꞃan (to go), ꝼeꞃ; Goth. *far*; Teut. *ferg*; Bel. *vear*; Swed. *farga*. Skinner traces all these words to the Lat. *veho*: Dr. Johnson suggests *ferri*, to be carried, as their more probable origin; Minsheu refers at once to the Greek *φερω*, to bear. To carry or be carried over water in a boat. Ferry and ferry-boats are names for the vessel of carriage, and the former is a name often given to the accustomed place of passage. A ferryman is he who manages or conducts one over a ferry. Ferriage, the fare or price paid for his services.

A *ferryboat* to carry over the king's household.
2 *Sam.* xix. 18.

Cymocles heard and saw,
He loudly called to such as were aboard

The little bark unto the shore to draw,
And him to *ferry* over that deep ford.
Facrie Queene.

By this time was the worthy Guyon brought
Unto the other side of that wide strand,
Where she was rowing, and for passage sought:
Him needed not long call, she soon to hand
Her *ferry* brought. *Id.*

Bring them with imagined speed
Unto the Traject, to the common *ferry*
Which trades to Venice. *Shakspeare.*

I past, methought, the melancholy flood,
With that grim *ferryman* which poets write of,
Unto the kingdom of perpetual night. *Id.*

But never since dareth the *Ferryman*
Once entertaine the ghost of Gullian.
Bp. Hall's Satires.

Thence hurried back to fire,
They *ferry* over this Lethæan sound
Both to and fro, their sorrow to augment. *Milton.*

The common *ferryman* of Egypt, that wafted over the dead bodies from Memphis, was made by the Greeks the *ferryman* of hell, and solemn stories raised after him. *Browne.*

The grisly *ferryman* of hell denied
Æneas entrance, 'till he knew his guide.
Roscommon.

I went down to the river Brent in the ordinary *ferry*. *Addison.*

We have no slaves at home—Then why abroad?
And they themselves, once *ferried* o'er the wave
That parts us, are emancipate and loosed. *Cowper.*

Ferte Gaucher, La, a small town of France, in Champagne, which was the scene of a severe action, on the 26th of March 1814, between the French and allies. Population 1950 Fourteen miles south of Chateau-Thierry.

Ferte Imbault, La, a small town of France, in the department of the Loir and Cher, on the Seudre, with 1600 inhabitants. Twenty-eight miles E. S. E. of Blois.

Ferte, Langeron, La, a town of France, in the department of the Nievre. Population 1200. Fifteen miles north of Nevers.

Ferte Louptiere, La, a town of France, in the department of the Yonne. Population 1160. Fifteen miles north-west of Auxerre.

Ferte Maces, La, a town of Normandy. Population 3400. Twenty-three miles west of Alençon.

Ferte Milon, La, a town of France, in the department of the Aisne, on the Ourcq. Racine, the celebrated French tragedian, was born here, in 1639. Population 2100. It is sixty miles north-east of Paris.

Ferte, St. Auben, La, or Lovendhal, a small town of the interior of France, on the Cousson, containing 1600 inhabitants. Eleven miles south of Orleans.

Ferte Sur Aube, La, a town of France, in the department of the Upper Marne, on the Aube. Population 1100. This was the scene of an action between the French and allies on the 27th and 28th of February 1814. Fifteen miles west of Chaumont en Bassigne.

Ferte Sous Jouarre, a neat town of France, in the department of the Seine and Marne, at the conflux of the Marne and the Morin. Population 3700. Ten miles east of Meaux. There are various other small towns of France of this name.

FER'TILE, *adj.* FER'TILENESS, *n. s.* FERTIL'ITATE, *v. a.* FERTIL'ITY, *n. s.* FER'TILIZE, *v. a.* FER'TILELY, *adv.* Fr. and Ital. *fertile*, Span. and Port. *fertil*; Lat. *fertilis*, from *fero*, *fers*, to bear. Productive; fruitful; abundant; taking *of* before that which is produced. Fertilitate is an obsolete synonyme of fertilise, which signifies to make fruitful or productive. Fertileness and fertility are the state of being fruitful or productive; fecundity; plenteousness.

I had hope of France,
As firmly as I hope for *fertile* England.
Shakspeare.

I will go root away
The noisome weeds, that without profit suck
The soil's *fertility* from wholesome flowers.
Id. Rich. II.

Paradise itself exceeded in beauty and *fertility*, and these places had but a resemblance thereof.
Raleigh's History.

A cock will in one day *fertilitate* the whole racemation or cluster of eggs not excluded in many weeks after. *Browne.*

I have had a large, a fair, and a pleasant field, so *fertile*, that it has given me two harvests in a summer. *Dryden.*

The quickness of the imagination is seen in the invention, the *fertility* in the fancy, and the accuracy in the expression. *Id.*

I ask whether in the uncultivated waste of America, a thousand acres yield as many conveniences of life as ten acres of equally *fertile* land do in Devonshire.
Locke.

The earth is *fertile of* all kind of grain. *Camden.*

This happy country is extremely *fertile*, as *of* those above, so likewise *of* its productions under ground.
Woodward.

Rain-water carries along with it a sort of terrestrial matter that *fertilizes* the land, as being proper for the formation of vegetables. *Id.*

To inundations Egypt, through which the Nile flows, and the Indies owe their extraordinary *fertility*, and those mighty crops they produce after these waters are withdrawn. *Id.*

View the wide earth adorned with hills and woods,
Rich in her herds, and *fertile* by her floods.
Blackmore.

Sneer. In short, that even the finest passages you steal are of no service to you; for the poverty of your own prevents their assimilating; so that they lie on the surface like lumps of marl on a barren moor, encumbering what it is not in their power to *fertilize!*
Sheridan.

Add to this, that on the coasts of Africa, where frost is unknown, the *fertility* of the soil is almost beyond our conceptions of it. *Darwin.*

FER'VENCY, *n. s.* FER'VENT, *adj.* FER'VENTLY, *adv.* FER'VID, *adj.* FERVID'ITY, *n. s.* FER'VIDNESS, FER'VOR. Fr. *fervent*; Ital. and Port. *fervente*; Lat *fervens*, *ferveo*; à Gr. θερω, to make hot. Heat: most commonly applied in our language metaphorically, to heat or ardor of mind; warmth of devotion; zeal: fervidity, fervidness, and fervor, are synonymes of fervency.

Not slough in bisinesse, *feruent* in spyryt, seruonge to the lord. *Wiclif. Romaynes* xii.

And not by his coming only, but by the consolation wherewith he was comforted in you, when he told us your earnest desire, your mourning, your *fervent* mind toward me; so that I rejoiced the more.
1 *Cor.* vii. 7.

Epaphras saluteth you, laboring *fervently* for you in prayers. *Col* iv. 12.

—— The day of God, wherein the heavens being on fire shall be dissolved, and the elements shall melt with *fervent* heat. 2 *Peter* iii. 12.

The fountains
Bubbling wave did ever freshly wade
Ne ever would through *fervent* Summer fade.
Spenser.

Yon sleeping sparkes awake,
Which troubled once into huge flames will grow;
Ne ever will their *fervent* fury slake,
Till living moisture into smoke do flow,
And wasted life doe lye in ashes low.
Spenser's Faerie Queene.

They all that charge did *fervently* apply;
With greedy malice and importune toil. *Id.*

They that are more *fervent* to dispute, be not always the most able to determine. *Hooker.*

We have on all sides lost most of our first *fervency* towards God. *Id. Dedication.*

Odious it must needs have been to abolish that which all had held for the space of many ages, without reason so great as might in the eyes of impartial men appear sufficient to clear them from all blame of rash proceedings, if in *fervour* of zeal they had removed such things. *Hooker.*

Haply despair hath seized her;
Or, winged with *fervour* of her love, she's flown
To her desired Posthumus.
Shakspeare. Cymbeline.

Your diver
Did hang a fish on his hook, which he
With *fervency* drew up. *Shakspeare.*

From the phlegmatick humour, the proper allay of *fervent* blood, will flow a future quietude and serenitude. *Wotton.*

How justly is the *fervency* of the prayer added to the righteousness of the person.
Bp. Hall's Contemplations.

He cares not how or what he suffers, so he suffer well, and be the friend of Christ; nor where nor when he suffers, so he may do it frequently, *fervently*, and acceptably. *Taylor.*

So spake the *fervent* angel; but his zeal
None seconded, as out of season judged,
Or singular and rash. *Milton's Paradise Lost.*

Were it an undeniable truth that an effectual *fervour* proceeded from this star, yet would not the same determine the opinion. *Browne.*

Like bright Aurora, whose refulgent ray
Foretells the *fervor* of ensuing day,
And warns the shepherd with his flocks retreat
To leafy shadows, from the threatened heat. *Waller.*

Let all enquiries into the mysterious points of theology be carried on with *fervent* petitions to God, that he would dispose their minds to direct all their skill to the promotion of a good life. *South.*

There will be at Loretto, in a few ages more, jewels of the greatest value in Europe, if the devotion of its princes continues in its present *fervour*.
Addison on Italy.

When you pray, let it be with attention, with *fervency*, and with perseverance. *Wake*

As to the healing of Malchus's ear, in the account of the meek Lamb of God, it was a kind of injury done to him by the *fervidness* of St. Peter, who knew not yet what spirit he was of. *Bentley.*

These silver drops, like morning dew,
Foretell the *fervour* of the day;
So from one cloud soft showers we view,
And blasting lightnings burst away. *Pope.*

What profound repose!
What *fervid* action, yet no noise! as awed
To silence by the presence of their Lord.
Young.

Yet, when the sense of sacred presence fires,
And strong devotion to the skies aspires,
Pour forth thy *fervours* for a healthful mind,
Obedient passions, and a will resigned.
Johnson. Vanity of Human Wishes.

Thus while she spoke, her eye, sedately meek,
Looked the pure *fervour* of maternal love. *Beattie.*

Ah! fondly youthful hearts can press,
To seize and share the dear caress:
But Love itself could never pant
For all that Beauty sighs to grant
With half the *fervour* Hate bestows
Upon the last embrace of foes,
When grappling in the fight they fold
Those arms that ne'er shall loose their hold.
Byron.

Yet did I love thee to the last
As *fervently* as thou,
Who did'st not change through all the past,
And can'st not alter now. *Id*

FE'RULA, *n. s.* } Fr. *ferule*, from Lat.
FE'RULE, *n. s.* & *v. a.* } *ferula*, giant fennel. An instrument of correction with which young scholars are beaten on the hand; so named because anciently the stalks of fennel were used for this purpose: to ferule is to apply the ferule.

These differ as much as the rod and *ferula*.
Shaw's Grammar

The birch upon the breeches of the small ones,
And humble with the *ferule* the tall ones.
Beaumont and Fletcher.

The eye of the parent, and the *ferule* of the master, is all too little to bring our sons to good. *Bp. Hall.*

FERULA has also been used to denote the prelate's cros er and staff.

FERULA, in the eastern empire, was the emperor's sceptre, as is seen on various medals; it consists of a long stem, or shank, and a flat square head. The use of the ferula is very ancient among the Greeks, who used to call their princes *ναρθηκοφοροι*, q. d. 'ferula-bearers.'

FERULA, in the ancient eastern church, signified a place separated from the church; wherein the penitents, or the catechumens of the second order, called auscultantes, *ακροαματικοι*, were kept as not being allowed to enter the church; whence the name of the place, the persons therein being under penance or discipline: sub ferula erant ecclesiæ.

FERULA, fennel-giant, in botany, a genus of the digynia order and pentandria class of plants: natural order forty-fifth, umbellatæ. The fruit is oval, compressed plane, with three striæ on each side. There are nine species; all herbaceous perennials, rising from three to ten or twelve feet high, with yellow flowers. They are propagated by seeds, which should be sown in autumn; and, when planted out, ought to be four or five feet distant from each other, or from any other plants; for no other will thrive under their shade. Asafetida is obtained from a species of ferula. The process of obtaining it is as follows: the earth is cleared away from the top of the roots of the oldest plants; the leaves and stalks are then twisted away, and made into a covering, to screen the root from the sun; in this state the root is left for forty days, when the covering is removed,

and the top of the root cut off transversely; it is then screened again from the sun for forty-eight hours, when the juice it exudes is scraped off, and exposed to the sun to harden. A second transverse section of the root is made, and the exudation suffered to continue for forty-eight hours, and then scraped off. In this manner it is eight times repeatedly collected in a period of six weeks. The juice thus obtained has a bitter, acrid, pungent taste, and is well known by its peculiar nauseous smell, the strength of which is the surest test of its goodness. This odor is extremely volatile, and of course the drug loses much of its efficacy by keeping. It is brought to us in large irregular masses, composed of various little shining lumps, or grains, which are partly of a whitish color, partly reddish, and partly of a violet hue. Those masses are accounted the best which are clear, of a pale reddish color, and variegated with a great number of elegant white tears.

FESCENNIA, or FESCENNIUM, in ancient geography, a town of Etruria, above Falerii, near the Tiber, where the Fescennine verses were first invented: now called Galese.

FESCENNINE VERSES, in Roman antiquity, were a kind of satirical verses, full of wanton and obscene expressions, sung or rehearsed by the company, with many indecent gestures and dances, at the solemnisation of a marriage (Hor. ep. i. lib. v. 145). The word is borrowed, according to Macrobius, from fascinum, a charm; the people supposing songs proper to drive away witches, or prevent their effect; but its more probable origin is from Fescennia.

FE'SCUE, *n. s.* Fr. *festu;* Dut. *veese.* A small wire by which those who teach to read point out the letters.

Why mought not he, as well as others done,
Rise from his *fescue* to his Littleton.
Bp. Hall's Satires.

Teach him an alphabet upon his fingers, making the points of his fingers of his left hand, both on the inside, to signify some letter, when any of them is pointed at by the fore-finger of the right hand, or by any kind of *fescue.* *Holder.*

Teach them how manly passions ought to move;
For such as cannot think, can never love;
And since they needs will judge the poet's art,
Point 'em with *fescues* to each shining part. *Dryden.*

FE'SELS, *n. s.* Fr. *faseole;* Ital. *fagiulo;* Lat. *phaseolus.* A kind of base grain.

Disdain not *fesels* or poor vech to sow,
Or care to make Egyptian lentils thrive. *May.*

FESSE, in heraldry, an honorable ordinary, possessing the third and middle part of the field horizontally. It is supposed to be a belt of honor given as a reward by kings, &c., for services in the army. See fig. 1. *argent,* a *fesse gules,* name *Wilkins.* A fesse is often borne couped or cut off as it were from the two sides as fig. 2. *Sable,* a fesse couped or between two swords pointing upwards and downwards.

Party per fess, is when a shield is parted across the middle or lesse part as fig. 3; partly per fesse dancette, *or* and *azure,* two mullets counterchanged, name *Doubleday.*

Fig. 1. Fig. 2. Fig. 3.

FESSE POINT, is the exact centre of the escutcheon. See POINT.

FESTER, *v. n.* Sax. ettep, an ulcer; Bav. *fesse,* a swelling corrupted, says Junius; Teut. *eissr;* Goth. *eiter;* from Goth. *festeen,* to putrefy.—Minsheu. To rankle; become virulent or corrupt.

But yet the cause and root of all his ill,
Inward corruption and infected sin,
Not purged nor healed, behind remained still,
And *festring* sore did ranckle yett within,
Close creeping twixt the marrow and the skin.
Spenser's Faerie Queene.

How should our *festered* sores be cured? *Hooker.*

I have some wounds upon me, and they smart,
To hear themselves remembered.
—Well might they *fester* 'gainst ingratitude,
And tent themselves with death.
Shakspeare. Coriolanus.

There was imagination, that between a knight whom the duke had taken into some good degree of favour, and Felton, there had been ancient quarrels not yet well healed, which might perhaps be *festering* in his breast, and by a certain inflammation produce this effect. *Wotton.*

I might, even in my lady's presence, discover the sore which had deeply *festered* within me. *Sidney.*

Passion and unkindness may give a wound that shall bleed and smart; but it is treachery that makes it fester. *South.*

When thus a squadron or an army yields,
And *festering* carnage loads the waves or fields.
Darwin.

Not Virtue's self, when Heaven its aid denies,
Can brace the loosened nerves, or warm the heart;
Not Virtue's self can still the burst of sighs,
When *festers* in the soul Misfortune's dart.
Beattie.

FESTI DIES, in Roman antiquity, certain days in the year, devoted to the honor of the gods. Numa, when he distributed the year into twelve months, divided the days into dies festi, dies profesti, and dies intercisi. The festi again were subdivided into sacrifices, banquets, games, and feriæ. See FERIÆ. The profesti were those days allowed for the administration of affairs, whether of a public or private nature: these were divided into fasti, comitiales, &c. See COMITIALES, FASTI, &c. The intercisi were days common both to gods and men, some parts of which were allotted to the service of the one, and some to that of the other.

FESTINATE, *adj.* } Lat. *festinatus.* Hasty;
FES'TINATELY, *adv.* } hurried. Not in use.
FESTINA'TION, *n. s.* }

Advise the duke, where you are going, to a most *festinate* preparation: we are bound to the like.
Shakspeare. King Lear.

Take this key; give enlargement to the swain, and bring him *festinately* hither. *Shakspeare.*

Lay hands on him with all *festination.*
Preston (1561).

FES'TIVAL, *adj.* & *n. s.* } Fr. (old) *festival*;
FES'TAL, *adj.* } Lat. *festivus*. Per-
FES'TIVE, } taining to a feast;
FESTIV'ITY, *n. s.* } joyous: hence, as a substantive, the time of a feast; which festivity also signifies, as well as gaiety, generally; joyfulness: festive is joyous; gay; befitting a feast.

So tedious is this day,
As is the night before some *festival*,
To an impatient child that hath new robes,
And may not wear them.
Shakspeare. Romeo and Juliet.

To some persons there is no better instrument to cause the remembrance, and to endear the affection to the article, than the recommending it by *festivity* and joy of a holy-day. *Taylor.*

The morning trumpets *festivals* proclaimed
Through each high street. *Milton's Agonistes.*

True *festivity* is called salt; and such it should be, giving a smart, but savoury relish to discourse; exciting an appetite, not irritating disgust. *Barrow.*

The daughter of Jephtha came to be worshipped as a deity, and had an annual *festivity* observed unto her honour. *Browne.*

There happening a great and solemn *festivity*, such as the sheep-shearings used to be, David condescends to beg of a rich man some small repast. *South.*

He appeared at great tables, and *festival* entertainments, that he might manifest his divine charity to men. *Atterbury.*

The *festival* of our Lord's resurrection we have celebrated, and may now consider the chief consequences of his resurrection, a judgment to come. *Id. Sermons.*

Follow, ye nymphs and shepherds all,
Come celebrate this *festival*,
And merrily sing and sport, and play;
'Tis Oriana's nuptial day. *Granville.*

By sacrifice of the tongues they purged away whatever they had spoken amiss during the *festival*. *Broome on the Odyssey.*

The glad circle round them yield their souls
To *festive* mirth and wit that knows no gall. *Thomson.*

His theology forms the most considerable part of his writings. He wrote comments upon almost the whole Scripture, and several Homilies on the principal *Festivals* of the Church. *Burke.*

Echoed the vale with many a cheerful note;
The lowing of the herds resounding long,
The shrilling pipe, and mellow horn remote,
And social clamours of the *festive* throng. *Beattie.*

Drunkenness is a social *festive* vice. The drinker collects his circle; the circle naturally spreads: of those who are drawn within it, many become the corrupters and centres of sets and circles of their own; every one countenancing, and perhaps emulating the rest, till a whole neighbourhood be infected from the contagion of a single example. *Paley.*

Blue as the garters which serenely lie
Round the patrician left-legs, which adorn
The *festal* midnight, and the levee morn. *Byron.*

FESTOON', *n. s.* Fr. *feston*; Ital. *festone*; a wreath; from Lat. *festum*, *festivum*; from its being an ornament worn at festivals.—(*Skinner*). 'An ornament of carved work in the form of a wreath or garland of flowers, or leaves twisted together, thickest at the middle, and suspended by the two extremes, whence it hangs down perpendicularly.'—(*Harris*).

With all its sinful doings, I must say
That Italy's a pleasant place to me,
Who love to see the sun shine every day,
And vines (not nailed to walls) from tree to tree
Festooned, much like the back scene of a play.
Byron.

FESTOONS are now chiefly used in friezes, and other vacant places which want to be filled up and adorned; in imitation of the long clusters of flowers, which the ancients placed on the doors of their temples and houses on festival occasions.

FESTUCA, fescue, in botany, a genus of the digynia order, and triandria class of plants: natural order thirty-fourth, gramina: CAL. bivalved; the spicula or partial spike oblong and a little roundish, with the glumes acuminated. There are twenty-seven species; of which the following are the most remarkably useful:—

1. F. fluitans, floating fescue, so called from its growing in wet ditches and ponds, is remarkable for the uses made of its seeds, which are small, but very sweet and nourishing. They are collected in several parts of Germany and Poland, under the name of manna seeds; and are used at the tables of the great, in soups and gruels, on account of their nutritious quality and grateful flavor. When ground to meal, they make bread very little inferior to that in common use. The bran, separated in preparing the meal, is given to horses as a vermifuge. Geese are also very fond of these seeds. Mr. Lightfoot recommends this as a proper grass to be sown in wet meadows.

2. F. ovina, 'sheep's fescue grass,' says Dr. Anderson, 'is much praised by the Swedish naturalists for its singular value as a pasture-grass for sheep; this animal being represented as fonder of it than of any other grass, and fattening upon it more quickly than on any other kind of food whatever. And indeed, the general appearance of the plant, and its peculiar manner of growth, seems very much to favor the accounts that have been given us of it. This plant is of the same family with the rubra, and agrees with it in several respects; although they may be easily distinguished from one another. Its leaves, in its natural state, are always rounded, but much smaller; being little bigger than large horse-hairs, or swine's bristles, and seldom exceeding six or seven inches in length. But these spring out of the root in tufts, so close upon one another, that they resemble, in this respect, a close hair-brush more than any thing else I know; so that it would seem naturally adapted to form that thick short pile of grass in which sheep are known chiefly to delight. Its flower-stalks are numerous, and sometimes attain the height of two feet; but are more usually about twelve or fifteen inches high. Upon gathering the seeds of this plant, and sowing them, it was found that they sprung up as quickly as any other kind of grass; but the leaves are at first no bigger than a human hair. From each side spring up one or two of these hair-like filaments, that in a short time send out new off-sets, so as quickly to form a sort of tuft, which grows larger and larger, till it at length attains a very large size, or till all the intervals are closed up, and

then it forms the closest pile of grass that it is possible to imagine. In April and May it pushed forth an innumerable quantity of flower-stalks, that afforded an immense quantity of hay; it being so close throughout, that the scythe could scarcely penetrate it. This was allowed to stand till the seeds ripened; but the bottom of the stalks were quite blanched, and almost rotten for want of air before that time. It is found in poor barren soils, where hardly any other plant can be made to grow at all; and on the surface of dry worn out peat moss, where no moisture remains sufficient to support any plant whatever; but in neither of these situations does it thrive; as it is there only a weak and unsightly plant, very unlike what it is when it has the good fortune to be established upon a good soil; although it is seldomer met with in this last state than in the former.

3. F. rubra, red or purple fescue grass. Dr. Anderson gives the following character of this species:—'It retains its verdure much better than rye-grass during the winter season. It likewise rises in the spring, as early as rye-grass.' 'Although this grass is very often found in old pastures, yet as it has but few flower stalks, and as it is greedily eaten by all domestic animals, these are seldom suffered to appear; so that it usually remains there unperceived. The leaves are long and small, and appear to be roundish, something like a wire; but, upon examination, they are found not to be tubulated like a reed or rush; the sides of the leaf being only folded together from the middle rib, exactly like the strong bent grass on the sea-shore. The flower stalk is small, and branches out in the head, a little resembling the wild oat; only the grains are much smaller, and the ears do not spread fully open but lie bending a little to one side. The stalks are often spotted with reddish freckles, and the tops of the roots are usually tinged with the same color; from whence it has probably obtained its distinctive name of festuca rubra, or red fescue. It is often to be met with in old garden walks; and, as its leaves advance very quickly after cutting, it may usually be discovered above the other grasses, about a week or fortnight after the walks are cut. Nor do they seem to advance only at one season, and then stop and decay, like the rye-grass; but continue to advance during the whole of the summer, even where they are not cut; so that they sometimes attain to a very great height. The leaves naturally trail upon the ground, unless where they meet with some accidental support; and if any quantity of it is suffered to grow for a whole season, without being eaten down or cut, the roots of the leaves are almost rotted by the overshadowing of the tops of the other leaves, before the end of the season. From the growth of this plant, it would seem to promise to be of great use to the farmer; as he could reap from a field of it, for the first two or three years, as great a weight of hay as he could obtain from any of the culmiferous grasses; and, if he meant afterwards to pasture it, he would suffer no inconveniences from the flower-stalks; and the succulent leaves, that continue to vegetate during the whole summer, would at all times furnish his cattle with abundance of wholesome food. It has also been remarked, that this grass rises as early in the spring as rye-grass; and continues green for the greatest part of winter, which the other does not.

FES'TUCINE, *adj.* } Lat. *festuca*. Straw-
FES'TUCOUS. } color, between green and yellow: formed of straw.

Therein may be discovered a little insect of a *festucine* or pale green, resembling a locust or grass-hopper. *Browne.*

We speak of straws, or *festucous* divisions, lightly drawn over with oil. *Id. Vulgar Errours.*

FET, *v. a.* & *n. s.* } Sax. ꝼeccan, ꝼ ꝛ-
FETCH, *v. a.*, *v. n.* & *n. s.* } ꝛan; Swed. *fatta*; Goth. *fa*; Dan. *fatte*; Belg. *vatten*. Fet is our old word for fetch. To go and bring; hence to derive; to reach to, or at; obtain as a price; to bring out; to bring within a particular line or compass; to perform: as a verb neuter, to move round quickly: a fet or fetch is a something fetched; a trick or stratagem, i. e. something performed in an indirect or circuitous way.

Go to the flock, and *fetch* me from thence two good kids of the goats. *Genesis.*

We will take men to *fetch* victuals for the people. *Judges.*

And they *fet* forth Urijah out of Egypt to Jehoiakim, who slew him with the sword. *Jer.* xxvi. 23.

My litel child, than wol I *fetchen* thee,
Whan that the grain is fro thy tonge ytake;
Be not agaste, I wol thee not forsake.
Chaucer. Canterbury Tales.

Get home with thy fewel, make ready to *fet*,
The sooner the easier carriage to get. *Tusser.*

An envious neighbour is easy to find,
His cumbersome *fetches* are seldom behind;
His *fetch* is to flatter; to get what he can;
His purpose once gotten, a pin for thee then. *Id.*

But for he was unable them to *fet*,
A little boy did on him still attend.
Spenser's Faerie Queene.

To come to that place they must *fetch* a compass three miles on the right hand through a forest. *Knolles's History.*

On, you noblest English,
Whose blood is *fetched* from fathers of war-proof.
Shakspeare.

They have devised a mean
How he her chamber window will ascend,
And with a corded ladder *fetch* her down. *Id.*

I'll *fetch* a turn about the garden, pitying
The pangs of barred affections; though the king
Hath charged you should not speak together. *Id.*

Like a shifted wind unto a sail,
It makes the course of thoughts to *fetch* about. *Id.*

It is a *fetch* of wit;
You laying these slight sullies on my son,
As 'twere a thing a little soiled i' th' working.
Id. Hamlet.

In smells we see their great and sudden effect in *fetching* men again, when they swoon. *Bacon.*

The conditions of weapons, and their improvements, are the *fetching* afar off; for that outruns the danger, as it is seen in ordnance and muskets. *Id.*

The bottom clear
Now laid with many a *fet*
Of seed-pearl, ere she bathed her there
Was known as black as jet. *Drayton.*

Mean time flew our ships, and straight we *fetcht*
The syrens' isle; a spleenless wind so stretcht
Her wings to waft us, and so urged our keel.
Chapman.

If Moses had received a command, that rod which *fetched* water from the rock, could as well have *fetched* the blood of the Amalekites out of their bodies.
Bp. Hall's Contemplations.

So have we seen a hawk, cast off at a hernshaw, to look and fly a quite other way; and, after many careless and overly *fetches*, to tour up unto the prey intended. *Bp. Hall.*

General terms may sufficiently convey to the people what our intentions are, and yet not *fetch* us within the compass of the ordinance. *Sanderson.*

These ways, if there were any secret excellence among them, would *fetch* it out, and give it fair opportunities to advance itself by. *Milton.*

If earth, industrious of herself, *fetch* day
Travelling East; and with her part averse
From the sun's beam, meet night; her other part
Still luminous by his ray. *Id. Paradise Lost.*

When evening grey doth rise, I *fetch* my round
Over the mount. *Milton.*

But Sidrophel, as full of tricks
As rota men of politicks,
Straight cast about to over-reach
The' unwary conqueror with a *fetch*.
Hudibras.

The seat of empire where the Irish come,
And the unwilling Scotch, to *fetch* their doom.
Waller.

With this *fetch* he laughs at the trick he hath played me. *Stillingfleet.*

The hare laid himself down, and took a nap; for, says he, I can *fetch* up the tortoise when I please.
L'Estrange.

The fox had a *fetch* in't. *Id.*

The fox *fetched* a hundred and a hundred leaps at a delicious cluster of grapes. *Id.*

During such a state, silver in the coin will never *fetch* as much as the silver in bullion. *Locke.*

They have no sooner *fetched* themselves up to the fashion of the polite world, but the town has dropped them. *Addison.*

An human soul without education is like marble in the quarry, which shews none of its beauties 'till the skill of the polisher *fetches* out the colours.
Id. Spectator.

Talk to her of an unfortunate young lady that lost her beauty by the small-pox, she *fetches* a deep sigh.
Addison.

From these instances and *fetches*
Thou makest of horses, clocks, and watches,
Quoth Mat, thou seemest to mean
That Alma is a mere machine. *Prior.*

Draw forth the monsters of the' abyss profound,
Or *fetch* the' aerial eagle to the ground. *Pope.*

FET'ID, *adj.* } Fr. *fetide*; Lat. *fœtidus.*
FET'IDNESS, *n. s.* } Rancid; of strong and offensive smell.

Most putrefactions are of an odious smell; for they smell either *fetid* or mouldy. *Bacon.*

In the most severe orders of the church of Rome, those who practise abstinence, feel after it *fetid* hot eructations. *Arbuthnot.*

Plague, fiercest child of Nemesis divine,
Descends from Ethiopia's poisoned woods,
From stifled Cairo's filth and *fetid* fields.
Thomson.

FETLAR, an island of Scotland, in the Northern Ocean, one of the most northerly of the Shetland Isles, six miles east of North Yell. It is four miles and a half long and three and a half broad, and forms a parish, which is united with that of North Yell. See YELL. The climate is salubrious, and the soil a rich black loam with some sand, producing barley, oats, and kitchen roots. There is a considerable quantity of bog iron ore of a good quality in this island; there are also some veins of copper.

FET'LOCK, *n. s.* Feet and lock. A tuft of hair that grows behind the pastern joint of many horses.

Their wounded steeds
Fret *fetlock* deep in gore, and with wild rage
Yerk out their armed heels at their dead masters.
Shakspeare. Henry V.

White were the *fetlocks* of his feet before,
And on his front a snowy star he bore. *Dryden.*

Stamping like Bucephall, whose slackened raynes,
And bloody *fet-locks* fry with seven men's braines.
Bp. Hall's Satires.

FE'TOR, *n. s.* Lat. *fœtor.* A stench; a strong and offensive smell.

The *fetor* may discover itself by sweat and humour.
Browne.

When the symptoms are attended with a *fetor* of any kind, such a disease will be cured by acescent substances, and none better than whey. *Arbuthnot.*

FE'TTER, *n. s.*, and commonly used in the plural, fetters, from feet; Sax. ꝑettepe. Chains for the feet; chains by which walking is hindered; to bind with such chains; to shackle.

Doctrine unto fools is as *fetters* on the feet; and like manacles on the right hand. *Eccles.* xxi. 19.

Fetter strong madness in a silken thread;
Charm ach with air, and agony with words.
Shakspeare.

Drawing after me the chains and *fetters* whereunto I have been tied, I have by other men's errours failed.
Raleigh.

Doth a master chide his servant because he doth not come, yet knows that the servant is chained and *fettered*, so as he cannot move? *Bramhall.*

Neither her great worthiness, nor his own suffering for her, could *fetter* his fickleness. *Sidney.*

It is no wonder, then, that learning has been so little advanced since it grew to be mercenary, and the progress of it has been *fettered* by the cares of the world, and disturbed by the desires of being rich, and the fears of being poor. *Sir W. Temple.*

Passion's too fierce to be in *fetters* bound,
And nature flies him like enchanted ground.
Dryden.

Pleasure arose in those very parts of his leg that just before had been so much pained by the *fetter*.
Addison.

Profuseness is a cruel and crafty demon, that gradually involves her followers in dependence and debts; that is, *fetters* them with 'irons that enter into their souls.' *Adventurer.*

A chain which man to *fetter* man has made;
By artifice imposed, by fear obeyed. *Prior.*

The wretch in double *fetters* bound,
Your potent mercy may release. *Id.*

I thought her pride
Had broke your *fetters*, and assured your freedom.
A. Philips.

If then, just then, all thoughts of mercy lost,
When hope, long lingering, at last yields the ghost,
The sound of pardon pierce his startled ear,
He drops at once his *fetters* and his fear;
A transport glows in all he looks and speaks,
And the first thankful tears bedew his cheeks.
Cowper.

There the curst spells of superstition blind,
And fix her *fetters* on the tortured mind;

She bids in dreams tormenting shapes appear,
With shrieks that shock Imagination's ear. *Darwin.*

FETTI (Dominico), an eminent painter in the style of Julio Romano, born at Rome, in 1589, and educated under Ludovico Civoli of Florence. He excelled in historical pieces; his pictures are much sought after, and are scarce. He shortened his days by excess, and died in his thirty-fifth year.

FETTLE, *v. n.* A diminutive of fet, probably. Dr. Johnson says, 'a cant word from feel.' Grose, that to fettle is 'to set or go about any thing; to dress, prepare, or put in order.' It is a word still used in this last sense in the North of England. To do or prepare trifling business; to bustle; to arrange household furniture.

Now doth he inly scorne his Kendall-Greene,
And his patcht cockers now despised beene.
Nor list he now go whistling to the carre
But sells his teme and *fetleth* to the warre.
Bp. Hall's Satires.

When your master is most busy in company, come in and pretend to *fettle* about the room; and if he chides, say you thought he rung the bell. *Swift.*

FETU, or AFFETU, a small kingdom of Africa, on the Gold Coast, east of Commendo, extending 160 miles in length, or into the interior, according to some geographers; but not above fifteen or sixteen miles in breadth along the coast: here is situated Cape Coast Castle, the capital of the English settlements. It was formerly governed by a chief, assuming the title of dey, and belonging to the class of fetishmen, or priests; but he was subdued by the Fantees, who are now, or were lately, in this town, subjugated by the Ashantees, See FANTEES. It was formerly very populous and powerful, but is now almost ruined, the inhabitants not being sufficient to till the ground; effects which Walker ascribes to war and the slave trade. It is naturally fertile, abounding in corn, fruits, trees, palm wine, oil, and cattle. The Dutch have a fort in it.

FETUS, *n. s.* Lat. *fœtus*. Properly therefore written fœtus. Any animal in embryo; any thing yet in the womb; unborn; young.

That paradox of Hippocrates some learned physicians have of late revived, that the *fetus* respires in the womb. *Boyle.*

FEUD, *n. s.* Sax. ꝑeahꝺ, enmity. Quarrel; contention; opposition; war.

Almighty Jove in wrathful mood,
To wreak the guilt of mortal sins is bent;
Hurls forth his thundering dart with deadly *feud,*
Inrolled in flames and smouldring dreariment.
Faerie Queene.

Though men would find such mortal *feuds*
In sharing of their publick goods. *Hudibras.*

In former ages it was a policy of France to raise and cherish intestine *feuds* and discords in Great Britain. *Addison.*

Swift contrived an intercourse, from which they both departed discontented; he procured a second, which only convinced him that the *feud* was irreconcileable. *Johnson. Life of Swift.*

Quarrels were transmitted from father to son, and, under the name of deadly *feuds,* subsisted for many generations with unmitigated rancour.
Robertson's History of Scotland.

FEUD, in ancient customs, is used for a capital quarrel or enmity, not to be satisfied but with the death of the enemy; and thence usually called deadly feud. Feud, called also feida, and faida, in the original German signifies guerram, i. e. war. Lambert writes it feeth, and says, 'it signifies capitales inimicitias, implacable hatred. In Scotland and the north of England, feud is particularly used for a combination of kindred, to revenge the death of any of their blood, against the killer and all his race, or any other great enemy.

FEUD, Feoda, in law, the same with fief or fee. See FEUDAL SYSTEM.

FEU'DAL, *adj.* & *n. s.* } Fr. (old) *feudal;*
FEU'DATORY, *n. s.* & *adj.* } Lat. *feudalis.* See FEODATORY. Pertaining to fees, feus, or tenures by which lands are held of a superior lord. A dependence; something held by tenure; a fee. A feudatory is one who holds lands by some conditional tenure from a superior. As an adjective it means, held by such tenure.

The duke of Parma was tempted to be true to that enterprize, by no less promise than to be made *feudatory,* or beneficiary king of England, under the seignory in chief of the pope, and the protection of Spain. *Bacon.*

Wales, that was not always the *feudal* territory of England, having been governed by a prince of their own, had laws utterly strange to the laws of England.
Hale.

Nothing is more suitable to *feudal* ideas, than that the same person should be both a lord and a vassal, independent in one capacity, and dependent in another. *Robertson's History of Scotland.*

If the one crown had been considered not as imperial and independent, but as *feudatory* to the other, a treaty of union could not have been concluded on equal terms. *Id.*

FEUDAL SYSTEM. About twelve centuries ago, this system was so universally received in Europe, that Sir Henry Spelman calls it 'the law of nations in our western world.' Hence it deserves our attention in a particular manner; a knowledge of the different feuds being indispensably requisite for a proper understanding either of the civil government of our own country, or the laws by which its landed property is regulated.

The military policy of the Celtic, or northern nations, known by the names of Goths, Vandals, Franks, Huns, and Lombards, furnished the original constitution or system of feuds. These people, pouring out in vast multitudes from the same officina gentium, or store-house of nations, over-ran all the European countries on the declension of the Roman empire. They brought the feudal system along with them from the countries out of which they emigrated; and, supposing it to be the most proper method of securing their new conquests, they introduced it into their more southerly colonies. According to this system, the victorious general allotted considerable tracts of land to his principal officers; while they, in like manner, divided their possessions among the inferior officers, and the common soldiers who were thought to be the most deserving. Allotments of this kind were named feoda, fiefs, fees, or feuds, from a combination of words, in the language of these barbarians, signifying a reward or stipend bestowed on certain conditions. See FEOD. The condition upon which these rewards were given, was, that the

possessors should faithfully serve the person from whom they were received, both at home and abroad, in the military way. To this they engaged themselves by a juramentum fidelitatis, or oath of fealty, in the event of a breach of which, either by not performing the service agreed upon, or by deserting their lord in time of battle, &c., the lands were to return to their original possessor.

The possessors of feudal allotments thus became interested in the defence of them; and not only the receivers, but those who gave them, were equally and mutually bound to defend their possessions, none of them being able to pretend any right but that of conquest. For this purpose, government and subordination were absolutely necessary; it being impossible to conduct any system of defence where every thing was tumultuous and irregular. Every person, therefore, who was a feudatory, i.e. who had received lands, was bound to do every thing in his power to defend the lord of his fee; while, on the other hand, the latter was no less subordinate to his immediate superior; and so up to the prince himself. In like manner a reciprocal bond of defence existed down from the prince to the lowest feudists. Such were the foundations on which the feudal system was properly established; and the natural consequence was, a military subjection throughout the whole community. The prince could always collect an army of feudatories ready to defend not only the kingdom in general, but the particular possessions of each person; and the propriety of this constitution was soon apparent in the strength which these newly erected kingdoms acquired, and the valor with which their conquests were defended. Europe owed to it, in after ages, as Mr. Hallam has observed, the free constitution of England, the firm monarchy of France, and the federal union of Germany. Besides these feudal grants, however, which were held only on the terms of military service above mentioned, there were others called allodial, which were given upon more enlarged principles. To these every free man had a title; and could not only claim his territory as well as the rest, but dispose of it at his pleasure; and this freedom was denominated allodiality. These allodials, however, were not exempted from military service. A part of their freedom consisted in liberty to go to the wars; for this, in the barbarous times we speak of, was the only way to acquire any degree of renown. Only the serfs or villeins were destined to follow the arts of peace; while every free person was not only at liberty to defend his country, but under an obligation to do it in case of any urgent necessity. Thus there was a feudal and a national militia. The free people only were allowed to possess property; the feudal vassals constituted the army, properly so called; while the national militia was composed of the allodial proprietors. This allodiality, however, was not confined to landed property, but included likewise moveable estates or money; so that proprietors of the latter kind were obliged also in times of danger to bear arms and appear in the field. Between the feudal and allodial proprietors, however, there was this farther difference, that the latter had no concern with any private quarrels which might take place among the lords themselves; so that they were never obliged to appear in the field unless when called forth by the sovereign against the enemies of the nation at large. This circumstance we might suppose to be an advantage, but it ultimately operated otherwise; becoming the means of changing the allodial right into a feudal tenure.

The holders of fiefs had for some time an eminent advantage over the allodial proprietors. This was owing to the imperfection of the existing public governments; so that the nobles had it in their power to revenge their own quarrels, while the weak were equally exposed to the insults of both parties. The lord and his vassals therefore were always formidable; but the allodial proprietors had scarcely any means of defending themselves. The reasons of this were, first, that the law did not allow them to commit any hostilities: and secondly, they were too distant and unconnected to form any proper league for mutual defence; and hence proceeded the necessity of converting allodial property into feudal tenure. This was indeed owing in a great measure to the absurdity and violence of the times, by which gifts of property, burdened with service, and which might return to the person who granted them, were rendered superior in value to the absolute and unconditional possession of a subject. Other considerations likewise contributed to produce the same effect. As in those dark ages no right existed but what had its origin in conquest, it thence followed, that the greatest conqueror was the most honorable person. The king, in whom the whole exploits of the community centered, as being their head, was the most honorable person; all others derived from him that portion of honor which they enjoyed, and which was most nicely adjusted in proportion as they approached him. Allodial proprietors, therefore, having no pretensions of this kind, were treated with contempt as a kind of poltroons. From this disagreeable situation they wished to free themselves, by converting their allodial property into feudal tenures; while the princes, supposing it their interest to extend those tenures as much as possible, discouraged the allodial possessions. As the feudists supported the importance of the nation, and dignity of the monarch, it was not thought proper to allow the allodial proprietors any greater compensations than what were given to vassals in similar cases. Thus they were exposed to continual mortifications in courts of justice; they were neglected by the king; denied sufficient protection from the laws; exposed not only to continual insults, but to have their property on all occasions destroyed by the great; so that they were without resource except from the feudal tenures, and were obliged even to solicit the privileges which were bestowed in other cases on vassals. In these unhappy circumstances, they were glad to yield up their lands to any superior whom they thought most agreeable, and to receive them back from him as a feudal gift. Thus the landed property was every where changed into feudal tenures, and fiefs became almost universal. See TENURE.

For some time the feudal system was not only

useful in itself, but honorable in its principles; but this continued no longer than while the importers of it into Europe adhered to their original simple and noble maxims. During that period, the lord exercised his bounty to the vassal, which the latter repaid by acts of gratitude; so that the intercourse between them was of the most affectionate kind; and this gave rise to what are called the feudal incidents. The expectants of fiefs were educated in the hall of the superior, while the tenures were precarious or only for life: and, even when they became hereditary, the lord took care of the son and estate of his deceased vassal; not only protecting his person, but taking charge of his education, and directing the management of his affairs. He took pleasure in observing his approach to maturity; and when he came of age never failed to deliver to him the lands, with the care of which he had been entrusted, and which he had been careful to improve. This was called the *incident of wardship*. The incident of *relief* was founded upon the gratitude of the vassal; who, upon entering on his fief, brought a present to his lord, as an acknowledgment of his care of him during the early part of his life, and in order to conciliate his future regard. The incident of *marriage* proceeded also upon the principle of gratitude on the part of the vassal. The latter, conscious of the favors he had received, did not choose to ally himself with a family inimical to his chief: while the superior himself, ambitious to aggrandise and augment the importance of his family, sought the most advantageous match for his vassal. Sometimes the superior himself was reduced in his circumstances by war or other accidents: but from whatever cause his distress proceeded, even though it had arisen from his own extravagance or prodigality, or when only destitute of means to support his ambition or grandeur, his vassals were bound to support and relieve him according to their circumstances; and this was called the *incident of aid*. The incident of *escheat* took place on the part of the vassal, when, through cowardice, treachery, or any remarkable misbehaviour, he rendered himself unworthy of his fief. In that case, the taking it from him, and giving it to one more worthy, was called an *escheat*. While the lords and vassals thus vied with one another in mutual acts of friendship and benevolence, universal happiness, liberty, and activity, were diffused through the society. The vassals behaved courteously towards the retainers, who were immediately below them; while they again were courted by the lords as constituting their importance and strength; the lords, lastly, giving a like importance and dignity to the sovereign himself. Thus a regular, powerful, and compact system of government took place; a unanimity and attention pervaded the various departments of the state; so that while the subjects were free, the nation at large was formidable. During this state of affairs, the members of the national assembly in every country in Europe appeared there in arms, whether they came personally or by their representatives. Such particularly was the case under the Anglo-Saxon government; and the happiness they at that time enjoyed made the oppression and tyranny of the Normans appear the more intolerable.

In process of time, the state of society began to suffer a remarkable alteration. The high and disinterested notions, from which the happiness above mentioned took its origin, declined; the romantic ideas of chivalry ceased (see CHIVALRY,) and much more interested notions of property came in their stead. The separation of the interests of the lords from their vassals was the first step towards the destruction of the feudal system. Then the *incidents*, which had hitherto promoted their happiness, now had a reverse tendency. Property being looked upon as a distinction superior to personal merit, introduced the most mercenary views. In consequence of these, the infant *ward*, the care of whom was wont to be considered as a sacred and honorary trust, was now only looked upon as a mean of procuring emolument to the superior. The latter regarded the profits of his vassals as so many diminutions of his own wealth. Instead of taking care to improve the state of his ward as formerly, he impoverished it; not only neglecting the education of the heir, but offering insults to himself: insomuch that the relations of the unfortunate vassal were often obliged to ransom from the avaricious superior both his person and effects. By merchandise of this kind the coffers of princes were filled, and wardships let out to strangers, who might exercise their rapacity with greater freedom. When the vassal at last attained the years of maturity, he came to the possession of his lands without any of that joy and festivity which usually took place on the occasion. He received an inheritance wasted and impoverished, while new grievances daily occurred, to augment the horrors of his situation. All the *incidents*, which formerly were so many expressions of gratitude on the part of the vassal, were now changed into taxes exacted at the pleasure of the lord. Before the vassal was invested in his land, the superior exacted from him a certain sum or gift, to be measured only by his own rapacity; and in case of delay or inability to pay this demand, the superior continued in possession of the estate. Such scandalous oppression could not but produce the greatest discontent and clamor. Applications were made to the law without success; nor were even the laws regarded which were fabricated on purpose for their relief. The incident of *marriage* now proved a source of the most dreadful oppression. The lord assumed a right of marrying his vassal to whom he pleased; and he not only exerted this right himself, but would sell it to a stranger, or allow the vassal to buy it himself; while the penalty annexed to a marriage without the consent of the superior involved no less punishment than the loss of the estate itself, or some such grievous infliction as for a crime of the first magnitude. The case was still worse with a female ward; whose beauty and accomplishments became a source of gain to the superior, or were sacrificed to please his whim or caprice: so that her relations were frequently obliged to buy from him the privilege of marrying her to the person she or they thought most proper. In like manner the *aid*, which was formerly a voluntary gift

from the vassal in cases of distress happening to his lord, now became an unavoidable tax. An aid formerly was demanded when the superior's eldest daughter was married, when his eldest son was knighted, or when he himself was taken prisoner in battle. These were the only legal causes of making a demand of this kind: but in the subsequent times of degeneracy, the most frivolous pretences were made use of by the prince to oppress the lords, and by the lords to oppress their vassals; demanding subsidies at pleasure, which their inferiors were always obliged to comply with. Lastly, the *escheat*, which in former times, took place only in cases of cowardice, treachery, or some other heinous crime, was now inflicted on the most trifling occasions. If the vassal happened to be too long in attending the court of his superior to take the oath of fealty; if he committed any action which could in the least be construed an infringement of the oath; if he neglected to give his lord warning of any misfortune which he might suppose was about to befal him; revealed any thing concerning him; made love to his sister or daughter, &c.; or even if he should grant a tenure of land to another person in form different from that in which he held his own; all these, nay others still more ridiculous, were judged sufficient reasons for the superior to seize on the estate of the vassal, and involve him and his family in ruin. Notwithstanding these oppressions, however, the vassal was still obliged to submit to his lord; to own him as his superior; and even, in appearance, to pay him the same respect as formerly, when the greatest unanimity and cordial affection subsisted between them. Still he was obliged to perform the same military service; because failure in that respect would have subjected him to a forfeiture of lands according to the original agreement. A vast difference, however, now took place in the valor and activity which inspired the army. The vassals, forced into the field with desponding hearts, were indifferent as to the success of the cause in which they were engaged, and frequently obstructed instead of forwarding the operations of the field. Hence the sovereign found himself embarrassed; and, though nominally at the head of a martial and powerful people, was frequently unable to effect any thing by reason of the mutual hatred and dissension which every where prevailed.

Thus the feudal states of Europe became unnaturally weak: a remedy was necessary; and it is remarkable, that the same remedy was applied all over the continent. This was, the making fiefs hereditary, which till now had only been granted for a long term of years; and, in return, burdening the lands with a certain number of soldiers, which were not to be refused upon any pretence whatever. Hence was derived the tenure of knight-service. A certain portion of land, burdened with the service of one soldier or knight, was called a knight's fee; and thus an estate, furnishing any number of soldiers, was said to contain as many knight's fees; so that now the manors, baronies, &c., became powerful according to the number of soldiers they were bound to furnish. In the grants from the crown, the nobility were obliged to furnish a certain number for the service of the sovereign; and in those from the nobility to their vassals, the like service was required. Even the commons who had grants from the crown furnished a certain proportion of knights. The force of the nation was called into action by grants *in capite*, or from the sovereign and nobility. A numerous and powerful army was instantly assembled, and at once ready for action. Of this army the king was the general, the nobility the officers, and the vassals soldiers; the whole being exactly arranged, and capable of entering upon any expedition without the least delay. Thus a remedy was found in some measure for the weakness of the feudal sovereigns; but though the knight's tenure could accomplish this, it could not bring back the former affection and cordiality, which had subsisted between the various ranks of people. On the contrary, by uniting them more firmly to one another by legalities, it rendered matters rather worse. But the oppression originating from the operation of the feudal *incidents*, still continued with unremitting violence. The grants of knight's tenure were attended with the same oaths of homage and fealty; the same incidents of relief, wardship, marriage, aid, and escheat, with the feudal tenures. The princes promised to abate somewhat of their rigor in demanding the feudal perquisites, but did not keep their word. Laws were occasionally promulgated, and for some time had an effect; but palliatives soon became ineffectual, and a new state of weakness began to commence. The two remarkable eras in the feudal history are, the time before the invention of knight-service (See KNIGHT), and that during which it continued. Fiefs were in a state of fluctuation from the destruction of the Roman empire till the ninth century; but they were rendered perpetual in France about A. D. 877, and were generally become so in every country of Europe about the beginning of the tenth. Du Cange, *voce* Militia, gives us an example of a knight-fee in A. D. 880. By the year 987, when Hugh Capet was raised to the throne of France, knight service was become general all over Europe, and was introduced into England after having made its appearance in other countries. Dr. Stuart informs us, that it appears from the records of Malcolm IV. in 1153, that knight-service was known in Scotland, and that it was a novelty at that time. He thinks it even probable that it was known in the time of David I. In England, however, there have been several doubts and enquiries among the learned concerning the introduction of the feudal laws. Many are of opinion that they were first introduced by William the Conqueror; and, consequently, that they were entirely unknown to the Anglo-Saxons: but others think, that they existed among the latter in the same form under which they were continued by the Normans. Dr. Stuart is of opinion that the Saxons who settled in England could not be strangers to fiefs. He supposes the conformity of manners, which undoubtedly prevailed between the Saxons and other barbarians, a sufficient proof that the hereditary grant of land, as well as the fluctuating state of feudal tenures which preceded it, was known to the former.

ollateral proofs are derived from the spirit and nure of the Anglo-Saxon laws, but especially om the grants of hereditary estates on condition military service. The condition of fiefs under e Anglo-Saxons was very different from what it as afterwards. In their times we find no men- on made of those oppressions of which so much otice has already been taken; and this may sily be accounted for from the alteration of e feudal spirit in different ages. During the me that a warm and generous affection sub- sted between the feudal superiors and vassals, e incidents were marks of generosity on the ne part and gratitude on the other; but as soon variance had taken place, by reason of the terested disposition which the introduction of uxury produced, the same incidents became ources of the most flagrant oppression. This as remarkably the case in the time of William ne Conqueror; and, during the reign of king ohn, matters were come to such a crisis, that ne people every where complained loudly, and emanded the restoration of the laws of Edward ne Confessor. 'What the laws of Edward the Confessor were,' says Mr. Hume, 'which the English every reign, during a century and a half, lesired so passionately to have restored, is much lisputed by antiquarians; and our ignorance of hem seems one of the greatest defects of the English history.' Dr. Stuart has offered an ex- planation, in a conjecture, that 'by the laws or ustoms of the Confessor, that condition of elicity was expressed which had been enjoyed luring the fortunate state of the feudal associ- ution. The cordiality, equality, and indepen- dence which then prevailed among all ranks in society continued to be remembered in less pros- perous times, and occasioned an ardent desire for the revival of those laws and usages which were the sources of so much happiness. Besides the great distinction between the state of fiefs under the Anglo-Saxons and under the Normans, they were no less distinguished by the introduction of knight-service. Hitherto the refinement of the English had been obstructed by the invasion of the Danes, and the insular situation of the king- dom; but after the Norman conquest the fiefs were made perpetual. Still, however, the knight's fee and knight-service were altogether unknown. William, the sixth duke of Normandy, was well acquainted with every thing relating to fiefs; for that duchy had experienced all the variety incidental to them from the time of its being granted to Rollo by Charles the Simple, A.D. 912 to 1066, when William conquered England. On this event a number of forfeitures took place among those who had followed the fortune of Harold II. Their estates were to be disposed of at the pleasure of the conqueror; and it was natural to suppose that he would follow the method practised in his own country. Hence the origin of knight-service in England. A grant of land, to any person whatever, was estimated at a certain number of knights' fees; and each of these required the service of a knight. The grants of lands were even renewed to the old te- nants under this tenure; so that by degrees the whole military people in the kingdom acquiesced in it. To accomplish this, Domesday Book is supposed to have been compiled, which contained an exact account o all the landed property of the kingdom. Hence it is to be concluded, not that William introduced fiefs into England, as some have imagined, but that he brought them to their ultimate state of perfection by the intro- duction of knight-service. This is evident from the laws enacted during his reign. In these it is not only mentioned that knight-service was en- acted, but that it was done expressly with the con- sent of the common council of the nation; which at that time was equivalent to an act of parlia- ment. The invention of knight-service proved generally agreeable; for, as only a few of the Anglo Saxon fiefs were hereditary, the advance- ment of the rest to perpetuity, under the tenure of knight-service, must have been accounted an ac- quisition of some importance; as not only aug- menting the grandeur and dignity of the sovereign, but securing the independence of the subject, and improving his property. In the happy state of the feudal association, there was indeed no ne- cessity for the knight's fee; but when the dis- cordance and oppression so often mentioned began to take place, it became then necessary to point out particularly every duty of the vassal, as well as of the lord; and this was fully done by the invention of knight-service. The nobles possessed duchies, baronies, and earldoms; which extensive possessions were divided into as many fees, each of them to furnish a knight for the service of the king, or of the superior: so that every feudal state could command a numerous army and militia to support and defend it in case of any emergency. The knights were also bound to assemble in complete armour whenever the superior thought proper to call, and to hold themselves in readiness whenever the king or superior found it convenient to take the field; so that thus the militia might be marched at the shortest notice to defend or support the honor of the nation. The knights were usually armed with a helmet, sword, lance, and shield; and each was obliged to keep a horse. This last requisite was owing to the contempt into which the infan- try had fallen, through the prevalence of tourna- ments and luxuries of various kinds, though it was by means of the infantry that the barbarians had originally distinguished themselves in their wars with the Romans, and become able to cope with these celebrated warriors. All proprietors of fees or tenants by knight-service fought on foot: the cavalry were distinguished by the name of battle; and the success of every encounter was supposed to depend on them alone. They only were completely armed; the infantry, being fur- nished by the villages under the jurisdiction of the barons, had at first only bows and slings; though afterwards they were found worthy of much greater attention. While the feudal asso- ciation remained in perfection, the superior could at any time command the military service of his vassals; but in the subsequent degeneracy this service could neither be depended upon when wanted, nor was it of the same advantage when obtained as formerly. The invention of knight- service tended in a great degree to remedy this inconvenience. Those who were possessed of knight's fees were now obliged to remain forty days in the field at their own expense; and this without exception, from the great crown vassals

to the smallest feudatories; but, if longer service was required, the prince was obliged to pay his troops. In those times, however, when the fate of nations was frequently decided by a single battle, a continuance in the field for forty days was sufficient for ordinary occasions. Thus matters seemed once more to be restored nearly to their former state. It was now, as much as ever, the interest of the nation to act with unanimity in its defence, not only against foreign enemies, but against the tyranny of the prince over his subjects, or of one part of the subjects over the other. New inconveniencies, however, soon began to take place, owing to the gradual improvements in life and the refinement of manners. From the first institution of military service, a fine had been accepted instead of actual appearance in the field. In the times of barbarity, however, when men accounted rapine and bloodshed their only glory, there were but few who made an offer of this compensation; but as wealth and luxury increased, and the manners of the people became softer, a general unwillingness of following the army into the field became also prevalent. A new tenure, called escuage, was therefore introduced; by which the vassal was only obliged to pay his superior a sum of money annually instead of attending him into the field. See ESCUAGE, and KNIGHT-SERVICE. Hence originated taxes and their misapplication; for, as the king was lord paramount of the whole kingdom, it thence happened that the whole escuage money collected throughout the nation centered in him. The princes, then, instead of recruiting their armies, frequently filled their coffers with the money, or dissipated it otherwise, hiring mercenaries to defend their territories when threatened with danger. These being composed of the dregs of the people, and disbanded at the end of every campaign, filled all Europe with a disorderly banditti, who frequently proved very dangerous to society. To avoid such inconveniencies, standing armies were introduced, and taxations began to be raised in every European kingdom. New inconveniencies, however, arose. The sovereigns in most of these kingdoms having acquired the right of taxation, as well as the command of the military power, became completely despotic: but in England the sovereign was deprived of this right by Magna Charta, which was extorted from him (See ENGLAND), so that though allowed to command his armies, he could only pay them by the voluntary contributions of the people, or their submitting to such taxations as were virtually imposed by themselves.

The author of A View of Society in Europe, (book I. chap. ii. sect. 1). has traced the remote sources of the feudal laws in an elegant and concise manner. Tacitus informs us, he observes, that the individuals of each of the German nations cultivated by turns a tract of land proportionable to their number, for the use of the whole; after which each individual received such an allotment of the cultivated tract as his dignity required. These nations had not altered their political principles at the time they overran the Roman empire; and hence the provinces of it were then divided after the same manner. The most considerable allotment was bestowed on the king, as the most dignified person in the community, and this allotment was styled his domain; while the shares of citizens and warriors, which were likewise in proportion to the merit or dignity of each, constituted what was called allodiality. But, as it often happened that all the land was not exhausted by these partitions, what remained was considered as the property of the community; and in the barbaric codes was called the lands of the fisc. In such German nations as had thus obtained a settlement, it was necessary that there should be a more close connexion betwixt the sovereign and the chiefs, as well as between the chiefs and people, than in others. This was effected by means of the lands of the fisc; for of these the sovereign took possession, dealing them out to the chiefs under the burden of appearing in arms whenever he should please to call; while the chiefs in like manner dealt out lands to those called their retainers, who were also obliged to supply them with military assistance in cases of necessity. Hence a political system was founded, which had a prodigious effect on society in all those countries where it prevailed. The intention and tendency of this system was to render the nation independent both at home and abroad; for, while the people were all armed in their common defence, individuals were also properly guarded against the attacks of despotism. The power of the chiefs, who formed a regular nobility, was a counterpoise to that of the sovereign; while the number of the retainers and vassals, constituting the greatness and power of the nobility, was a proper barrier against aristocratical oppression; for a chief who oppressed his vassals evidently acted against his own interest.

The feudal system, it has been well observed by another writer, was originally grounded on the universal principles of self-defence, and the necessity of relinquishing a portion of our individual rights for the public security. Every freeman, therefore, under this system, upon receiving a portion of the lands which were divided, bound himself to appear in arms against the enemies of the community. This military service was the condition upon which he received and held his lands; and, as they were exempted from every other burden, that tenure, among a warlike people, was deemed both easy and honorable. The king, or general, who led them to conquest, had the largest portion allotted to him; and he parcelled it out among those who entered into an obligation to bear arms in his defence. His chief officers imitated his example, in distributing portions of lands among their dependents, upon the same condition. Thus a feudal kingdom resembled a military establishment rather than a civil institution. The names of a soldier and a freeman were synonymous. Every proprietor of land, girt with a sword, was ready to march at the summons of his superior, and to take the field against the common enemy. The feudal government, however, though admirably calculated for defence against the assaults of any foreign power, was defective in its provisions for the interior order of society. The bond of political union was extremely feeble; and the sources of anarchy were

innumerable. The powerful vassals of the crown won extorted a confirmation for life of those grants of land which, being at first purely gratuitous, had been bestowed only during pleasure. They then succeeded in having them converted into hereditary possessions; and at length in rendering them unalienable. The crown vassals, after having secured the possession of their lands and dignities, were led by the feudal institutions to new, and still more dangerous encroachments on the prerogatives of the sovereign. They obtained the power of supreme jurisdiction, both civil and criminal, within their own territories; the right of coining money; together with the privilege of carrying on war against their private enemies in their own name, and by their own authority. Subordination was almost lost, and persons of superior rank aspired at independence. Hence a kingdom, considerable in name and extent, was broken into as many separate principalities as it contained powerful barons. A thousand causes of jealousy and discord sprang up among them, and gave rise to as many wars. Every country in Europe, wasted or kept in continual alarm during these endless contests, was filled with castles and places of strength, erected for the security of the inhabitants, not against foreign force, but against internal hostilities. Indeed an almost universal anarchy prevailed. The guilty escaped punishment, and the innocent could not find protection. Such was the state of Europe with respect to the interior administration of government from the seventh to the eleventh century. This system likewise prevented nations from acting with vigor in their external operations. Besides, the feudal anarchy had a fatal influence on the character and improvement of the human mind. Without the protection of a regular government, and the certainty of personal security, it cannot be expected that men will make any progress in the arts and sciences, or aim at attaining refinement in taste or manners. In less than a century after the barbarous nations settled in their new conquests, almost all the effects of the knowledge and civility which the Romans had spread through Europe disappeared. The human mind, neglected, uncultivated, and depressed, sunk into the most profound ignorance. The inhabitants of Europe during this period were not only strangers to the arts which embellish a polished age, but destitute of the virtues which abound among people who continue in a simple state.

The ablest modern picture of the advantages and disadvantages of the feudal system is found perhaps in Mr. Hallam's work on the Middle Ages. He thus exhibits both sides of the subject. 'The utility of any form of polity may be estimated, by its effect upon national greatness and security, upon civil liberty and private rights, upon the tranquillity and order of society, upon the increase and diffusion of wealth, or upon the general tone of moral sentiment and energy. The feudal constitution was certainly, as has been observed already, little adapted for the defence of a mighty kingdom, far less for schemes of conquest. But, as it prevailed alike in several adjacent countries, none had any thing to fear from the military superiority of its neighbours. It was this inefficiency of the feudal militia, perhaps, that saved Europe during the middle ages from the danger of universal monarchy. In times, when princes had little notion of confederacies for mutual protection, it is hard to say, what might not have been the successes of an Otho the Great, a Frederic Barbarossa, or a Philip Augustus, if they could have wielded the whole force of their subjects whenever their ambition required. If an empire equally extensive with that of Charlemagne, and supported by military despotism, had been formed about the twelfth or thirteenth centuries, the seeds of commerce and liberty, just then beginning to shoot, would have perished; and Europe, reduced to a barbarous servitude, might have fallen before the free barbarians of Tartary.

'If we look at the feudal polity as a scheme of civil freedom, it bears a noble countenance. To the feudal law it is owing, that the very names of right and privilege were not swept away, as in Asia, by the desolating hand of power. The tyranny which, on every favorable moment, was breaking through all barriers, would have rioted without control, if, when the people were poor and disunited, the nobility had not been brave and free. So far as the sphere of feudality extended, it diffused the spirit of liberty, and the notions of private right. Every one, I think, will acknowledge this, who considers the limitations of the services of vassalage, so cautiously marked in those law-books which are the records of customs, the reciprocity of obligation between the lord and his tenant, the consent required in every measure of a legislative or general nature, the security, above all, which every vassal found in the administration of justice by his peers, and even (we may in this sense say) in the trial by combat. The bulk of the people, it is true, were degraded by servitude; but this had no connexion with the feudal tenures.

'The peace and good order of society were not promoted by this system. Though private wars did not originate in the feudal customs, it is impossible to doubt that they were perpetuated by so convenient an institution, which indeed owed its universal establishment to no other cause. And as predominant habits of warfare are totally irreconcileable with those of industry, not merely by the immediate works of destruction which render its efforts unavailing, but through that contempt of peaceful occupations which they produce, the feudal system must have been intrinsically adverse to the accumulation of wealth, and the improvement of those arts, which mitigate the evils, or abridge the labors of mankind.

'But as a school of moral discipline, the feudal institutions were perhaps most to be valued. Society had sunk, for several centuries after the dissolution of the Roman empire, into a condition of utter depravity; where, if any vices could be selected as more eminently characteristic than others, they were falsehood, treachery, and ingratitude. In slowly purging off the lees of this extreme corruption, the feudal spirit exerted its ameliorating influence. Violation of faith stood first in the catalogue of crimes, most repugnant

to the very essence of a feudal tenure, most severely and promptly avenged, most branded by general infamy. The feudal law-books breathe throughout a spirit of honorable obligation. The feudal course of jurisdiction promoted, what trial by peers is peculiarly calculated to promote, a keener feeling and readier perception of moral as well as of legal distinctions. And as the judgment and sympathy of mankind are seldom mistaken in these great points of veracity and justice, except through the temporary success of crimes, or the want of a definite standard of right, they gradually recovered themselves, when law precluded the one, and supplied the other. In the reciprocal services of lord and vassal, there was ample scope for every magnanimous and disinterested energy. The heart of man, when placed in circumstances which have a tendency to excite them, will seldom be deficient in such sentiments. No occasions could be more favorable, than the protection of a faithful supporter, or the defence of a beneficent suzerain, against such powerful aggression, as left little prospect except of sharing in his ruin.

'From these feelings, engendered by the feudal relation, has sprung up the peculiar sentiment of personal reverence and attachment towards a sovereign, which we denominate loyalty; alike distinguishable from the stupid devotion of eastern slaves, and from the abstract respect with which free citizens regard their chief magistrate. Men who had been used to swear fealty, to profess subjection, to follow, at home and in the field, a feudal superior and his family, easily transferred the same allegiance to the monarch. It was a very powerful feeling, which could make the bravest men put up with slights and ill treatment at the hands of their sovereign; or call forth all the energies of disinterested exertion for one whom they never saw, and in whose character there was nothing to esteem. In ages when the rights of the community were unfelt, this sentiment was one great preservative of society; and, though collateral or even subservient to more enlarged principles, it is still indispensable to the tranquillity and permanence of every monarchy. In a moral view, loyalty has scarcely perhaps less tendency to refine and elevate the heart than patriotism itself; and holds a middle place in the scale of human motives, as they ascend from the grosser inducements of self-interest, to the furtherance of general happiness, and conformity to the purposes of Infinite Wisdom.'

FE'VER, *n. s.* & *v. a.*
FE'VER-COOLING, *adj.*
FE'VER-WEAKENED
FE'VERET, *n. s.*
FE'VERFEW,
FE'VERISH, *adj.*
FE'VERISHNESS, *n. s.*
FE'VEROUS, *adj.*
FE'VERY.

Sax. ꝼeꝼeꝛ; French, *fievre, fiebure*; Latin, *febris*. 'A disease characterised by an increase of heat, an accelerated pulse, a foul tongue, and an impaired state of several functions of the body.' —Hooper. See MEDICINE. Feveret is a diminutive of fever; a slight fever. Feverfew, a plant, a species of matricaria.

And Jhesus roos up fro the synagoge: and entride into the hous of Symount, and modir of Symoundis wiif · was holdun with grete *feveris*. *Wiclif. Luk.* 4.

Duncan is in his grave;
After life's fitful *fever* he sleeps well.
Shakspeare.

The white hand of a lady *fever* thee!
Shake to look on't. *Id. Antony and Cleopatra.*

Thou madest thine enemies shake, as if the world
Were *feverous*, and did tremble. *Id. Coriolanus.*

It hath been noted by the ancients, that southern winds, blowing much, without rain, do cause a *feverous* disposition of the year; but with rain not.
Bacon's Natural History.

O Rome, thy head
Is drowned in sleep, and all thy body *fev'ry*.
Ben Jonson's Catiline.

Those patients that have inured themselves to a set course of medicinal evacuations, if they intermit their springs and falls, fall into *feverous* distempers.
Bp. Hall.

All *feverous* kinds,
Convulsions, epilepsies, fierce catarrhs. *Milton.*

Should not a lingering *fever* be removed,
Because it long has raged within my blood?
Dryden.

Her blood all *fevered*, with a furious leap,
She sprung from bed distracted in her mind. *Id.*

We toss and turn about our *feverish* will,
When all our ease must come by lying still;
For all the happiness mankind can gain,
Is not in pleasure, but in rest from pain. *Id.*

More *fevers* and surfeits are got by people's drinking when they are hot than by any one thing I know.
Locke.

To other climates beasts and birds retire,
And *feverish* nature burns in her own fire.
Creech.

When an animal that gives suck turns *feverish*, that is, its juices more alkaline, the milk turns from its native genuine whiteness to yellow.
Arbuthnot on Aliments.

A *feverish* disorder disabled me. *Swift to Pope.*

Common *feverfew* is the sort used in medicine, and is found wild in many parts of England. *Miller.*

A light *feveret*, or an old quartan ague, is not a sufficient excuse for non-appearance. *Ayliffe.*

Sincere the' unaltered bliss her charms impart,
Sedate the enlivening ardours they inspire;
She bids no transient rapture thrill the heart,
She wakes no *feverish* gust of fierce desire.
Beattie.

FEVER. See MEDICINE, Index. The ancients deified the diseases as well as the passions and affections of men. Virgil places them in the entrance into hell, Æn. vi. 273. See FEBRIS.

FEVERSHAM, or FAVERSHAM, a market-town of Kent, seated on a branch of the river Thames, which is navigable for hoys. It was a royal demesne A. D. 811, and called, in Kenulf's charter the King's Little Town. It was inhabited by the Britons long before the invasion by Cæsar. In 903 king Athelstan held a great council here. King Stephen erected a stately abbey, in 1147, whose abbots sat in parliament; and he was buried in it, with Maud, his queen, and Eustace his son. Two mean gate-houses are all that now remain of it. The town was first incorporated by the title of the Barons of Feversham, afterwards by Henry VIII., with that of the mayor, jurats, and commonalty. The mayor holds a court of session twice a year, at which all offenders committed within the limits

of the town, except those for high-treason, are tried. It is a populous flourishing place, consisting chiefly of two long broad streets, with a market-house in the centre, built in 1574. Its ancient church was repaired in 1754, at the expense of £2300; it was originally built in the reign of Edward II. It is in the form of a cross; the walls are of flint, quoined with stone from Caen. The inside of the church is handsome, and well worthy of observation; it had originally a square castellated tower in the middle, but that was taken down in 1755. Before the Reformation there were several altars in various parts of the church. Many ancient mural monuments, and several of brass let into the floor, still remain. It has a free grammar school, built and endowed by queen Elizabeth in 1582; and two charity schools. It is a member of the cinque-port of Dover, and has a manufactory of gunpowder. The town was considerably improved in 1773, when a spacious avenue was opened from the London road into Preston Street, and a bridge was erected over the stream at the bottom of West Street: in 1789 an act was passed for paving, watching, and lighting the place. The markets, on Saturday and Wednesday, are well supplied with provision, and are well attended by the London dealers, who buy large quantities of the oysters caught on the coast. The Dutch also in time of peace, it is said, carry home as many oysters as amount to above £2000 a year. The fishermen admit none to their freedom but married men. It is nine miles west of Canterbury, and forty-seven east of London.

FE'UILLAGE, *n. s.* French. A bunch or row of leaves.

Of Homer's head I inclose the outline, that you may determine whether you would have it so large, or reduced to make room for *feuillage* or laurel round the oval. ***Jervas to Pope.***

FEVILLEA, in botany, a genus of the pentandria order and diœcia class of plants; natural order thirty-fourth, cucurbitaceæ. The male CAL. and COR. quinquefid; stamina five; nectarium consisting of five filaments closing together: female CAL. quinquefid; styles three; FRUIT, a hard trilocular apple with a hard bark. Species two, of the East and West Indies, both climbing plants.

FEUILLE'E (Lewis), a celebrated French naturalist and mathematician, of the religious order of Minims. He was a native of Provence, and sent by Louis XIV., in early life, to South America to make researches in natural history and philosophy, the result of which appeared in his Journal des Observations Physiques, Mathematiques, et Botaniques, faites sur les Côtes Orientales de l'Amerique Meridionale, et dans les Indes Occidentales, 1714, 2 vols. 4to. In 1724 he was employed, on the recommendation of the Academy of Sciences, in an expedition to the Canary Islands, to ascertain the position of the meridian of Ferro; a task he performed in a very able manner. He was rewarded with the post of botanist to the king, and a pension. He died in 1732, at Marseilles, where an astronomical observatory had been built for him. In the Royal library at Paris are preserved, in MS., a Journal of his Voyage to the Canaries, and a collection of corresponding drawings in natural history.

FE'UILLEMORT, *n. s.* French. The color of a faded leaf, corrupted commonly to philemot.

So to make a countryman understand what '*feuille-morte*' colour signifies, it may suffice to tell him, it is the colour of withered leaves falling in autumn. ***Locke.***

FEVRE (Claud le), an eminent French painter, born at Fontainbleau in 1633. He studied first in the palace, and afterwards at Paris under Le Sueur and Le Brun; the latter of whom advised him to adhere to portraits, for which he had a particular talent, and in his style equalled the best masters of that country. He died in England in 1675, aged forty-two.

FEVRE (Nicolas le), or Nicolaus Faber, was born at Paris, June 2nd, 1544. During the course of his studies a singular misfortune happened to him. In cutting a pen, a piece of the quill flew into his eye, and gave him such exquisite pain, that hastily lifting up his hand, he thrust the knife into his eye and cut it out. After acquiring the languages, he studied the civil law at Toulouse, Padua, and Bologna. He travelled through Italy, and spent eighteen months at Rome. In 1587 he published Seneca, with a learned preface and notes; and detected the defect in Scaliger's demonstration of the Quadrature of the Circle. He also wrote on ecclesiastical antiquities, and drew up a preface to the fragments of St. Hilary. He was appointed preceptor to the prince of Conde, by Henry the Great; after whose death, the queen dowager made him preceptor to Louis XII. He died in 1611; and his works were collected by his friend, John le Begue, and printed at Paris in 1614.

FEVRE (Tannegui le), an excellent scholar in Greek and Roman learning, born at Caen in Normandy, in 1615. Cardinal Richelieu gave him a pension of 2000 livres to inspect all the works published at the Louvre, and designed to have made him principal of a college he was about to erect at Richelieu. But the cardinal's death cut off his hopes; and his pension was ill paid. Some time after, the marquis de Franciere, governor of Langres, took him with him to his government, where he embraced the Protestant religion; after which he was invited to Saumur, where he was chosen Greek professor. He there taught with extraordinary reputation. Young men were sent to him from all the provinces in the kingdom, and even from foreign countries, while divines and professors themselves gloried in attending his lectures. He was preparing to go to Heidelberg, whither he was invited by the prince Palatine, when he died, aged fifty-seven. He wrote Notes on Anacreon, Lucretius, Longinus, Phædrus, Justin, Terence, Virgil, Horace, Ælian, Eutropius, Aurelius Victor, Dionysius, &c. A short account of the lives of the Greek poets. Two volumes of letters; and many other works. He left a son, and two daughters, one of whom was the celebrated Madame Dacier. In his Latin works he assumed the name of Tanaquil Faber.

FEU'TERER, *n. s.* Fr. *vautrier*. A dog-keeper.

——— If you will be
An honest yeoman *feuterer*, feed us first,
And walk us after. *Massinger.*

FEW, *adj.* } Sax. ꝼeu; Goth. *fauai, fa;*
FEW'NESS, *n. s.* } Icl. *fa;* Swed. *fæ;* Dan. *fua, faæ;* Fr. *peu*. Small in number; not many; used elliptically for 'not many words.'

And he seyde to hem, ther is myche rype corn: and *fewe* werkemen, therfore preie ye the Lord of the riipe corn: that he sende werkemen into his rype corn. *Wiclif. Luh.* x.

We are left but *few* of many. *Jer.*

To answer both allegations at once, the very substance of that they contain is in *few* but this. *Hooker.*

Give every man thine ear, but *few* thy voice;
Take each man's censure, but reserve thy judgment. *Shakspeare.*

Fewness and truth, 'tis thus. *Id.*

Many hands draw the cable with more violence than *few*. *Bp. Hall.*

No more shall be added in this place, his memory deserving a particular celebration, than that his learning, piety, and virtue, have been attained by *few*. *Clarendon.*

So having said, he thus to Eve in *few:*
Say, woman, what is this which thou hast done? *Milton.*

So much the thirst of honour fires the blood;
So many would be great, so *few* be good;
For who would virtue for herself regard,
Or wed without the portion of reward? *Dryden.*

On Winter seas we *fewer* storms behold,
Than foul diseases that infect the fold. *Id.*

These, by reason of their *fewness*, I could not distinguish from the numbers with whom they are embodied. *Id.*

The impartial lovers and searchers of truth are a great deal *fewer* than one could wish or imagine. *Locke.*

Thus Jupiter in *few* unfolds the charge. *Dryden.*
The firm resolve I here in *few* disclose. *Pope.*

The *fewer* still you name, you wound the more;
Bond is but one, but Harpax is a score. *Id.*

Party is the madness of many, for the gain of a *few*. *Swift.*

An experiment very frequent among modern authors, is to write upon nothing: when the subject is utterly exhausted, to let the pen still move on; by some called the ghost of wit, delighting to talk after the death of its body. And to say the truth, there seems to be no part of knowledge in *fewer* hands, than that of discerning when to have done. *Id.*

The imagination of a poet is a thing so nice and delicate, that it is no easy matter to find out images capable of giving pleasure to one of the *few*, who, in any age, have come up to that character. *Berkley to Pope.*

Man's rich with little, were his judgment true;
Nature is frugal, and her wants are *few:*
Those *few* wants answered, bring sincere delights;
But fools create themselves new appetites. *Young.*

Ralph did it justice, remarking a *few* imperfections, and applauding such parts as were excellent. *Franklin.*

FE'WEL, *n. s.* & *v. a.* Fr. *feu*. Now written FUEL, which see. Combustible matter; materials for keeping fire. To supply with fuel.

Get home with thy *fewel*, make ready to fet,
The sooner the easier carriage to get. *Tusser.*

If a spark of error have thus far prevailed, falling even where the wood was green, and farthest off from any inclination unto furious attempts, must not the peril thereof be greater in men, whose minds are as dry *fewel*, apt beforehand unto tumults, seditions and broils? *Hooker. Dedication.*

Never, alas! the dreadful name,
That *fewels* the infernal flame. *Cowley.*
Others may give the *fewel* or the fire;
But they the breath, that makes the flame, inspire. *Denham.*

A known quantity of *fewel*, all kindled at once, will cause water to boil, which being lighted gradually will never be able to do it. *Bentley's Sermons.*

FEY, *v. a.* Dut. *veghen;* Goth. *fægen*. To cleanse a ditch, or well, of mud.

Such muddy deep ditches and pits in the field,
That all a dry Summer no water will yield,
By *feying* and casting that mud upon heaps,
Commodities many the husbandman reaps. *Tusser.*

FEYJOO Y MONTENEGRO (Bened. Jerome), a Spanish Benedictine and writer of the last century. He has been sometimes styled the Spanish Addison. His principal works are Teatro Critico Universal, 14 vols. 4to., Madrid 1733, and his Cartas eruditas y curiosas; both works of great merit, and liberality of sentiment. Divinity, law, medicine, and philosophy, occupy his attention; and the superstitions of his church are animadverted on with considerable freedom. He died in 1765. An edition of his works was published in 1778, 15 vols. 4to.; and a selection from his Essays and Discourses appeared, in an English translation, 1780, 4 vols., 8vo.

FEZ, an extensive kingdom of West Barbary, Africa, now united with the empire of MOROCCO, which see; of which it forms the most valuable part. It is bordered by the chain of the Greater, and crossed by the Lesser Atlas, extending from the former to the sea, which it touches at Tetuan. The climate on the north of Mount Atlas is greatly modified by that range on the one hand, and the Mediterranean on the other. It differs, therefore, but little from that of southern Europe, either in its temperature or salubrity. The heat in some places, however, is occasionally very great. Ali Bey says that, in the beginning of June, it exceeded 90° of Fahrenheit, in his tent, a little north-east of Fez. The valleys of this region are luxuriantly fruitful: it is divided into nine provinces, Shavoya, Temsena, Fez Proper, Beni-hassen, Garb, Shaus, Rif, Tedla, and Garet. The principal rivers are the Mulluvia, the Lucos (Lixus of the ancients), the Suboe, and the river of Sallee. The principal towns are Fez, Mequinez, Melilla, Ceuta, Tangier, Larache, Mamora, and Sallee. The statistics, government, and commerce of this region, are the same in almost every respect as in MOROCCO, and will be found under that article.

FEZ PROPER, a fertile province of the above country, situated between the range of Atlas and the province of Beni-hassen. It consists of one entire plain, surrounded by ranges of hills, also capable of the highest cultivation. To the east it has extensive dependencies.

FEZ, a city of Morocco, the capital of the kingdom of that name, situated near the bottom of a funnel-shaped valley, the surrounding hills of which are covered with woods and orchards.

They surround it, indeed, on all sides except the north and north-east. It consists of the Old and New town, the latter of which is almost entirely built on the heights which encompass the other. It is chiefly inhabited by Jews. Chenier, though he thinks the description of Leo exaggerated, admits that Fez is one of the most agreeable cities in the empire. The finest edifice is the mosque of Carubin, built during the most flourishing period of Fez, and described by Leo as a mile and a half in circumference. Europeans, however, are not permitted to see it. The city contains 200 caravanseras, or inns, called fondaques, which are tolerably convenient. They are two or three stories high, with galleries towards the court, which is always in the centre and admits light into the apartments. The traveller, however, is not supplied with provisions, or even bedding. His whole accommodation is a room and a mat. The streets generally are dark and dirty, and so narrow in some parts that two persons can scarcely ride abreast. Several of the buildings that face the streets are dilapidated, and some of them propped up. The shops are little better than mere stalls, where the sedentary occupant sits surrounded by baskets, to which he points his customers as they enter. The markets, however, are immensely crowded, as there is no other place in that part of the country that deserves the name of a town; and the Arabs of the surrounding regions resort thither to purchase all the foreign and manufactured articles their domestic habits require, or their means afford. Fez and Morocco are also great marts for the Soudan trade; the former has about 200 caravanseras.

Old Fez was founded towards the close of the eighth century, by Edris, a Barbary farmer; and it soon became the capital of all the western Morocco states. In the twelfth century Leo Africanus describes it as containing 700 temples and mosques, of which fifty were magnificent, and adorned with marble pillars. Such was the veneration in which it was held, that, when the road to Mecca was occasionally shut up, pilgrimages were made to Fez. It was no less famous as a school of learning. Its numerous schools for philosophy, physic, and astronomy, were resorted to from all the Mahommedan kingdoms of Spain and Africa, and even attended by Christians. The population was also occasionally replenished from the opposite shores of Europe, during the whole period of the Moorish war with Spain. The remains of its institutions still exist, but most that was valuable has long since vanished.

The studies are confined to the Koran and its commentators, to a slight tincture of grammar and logic, and to clumsy astronomical observations, made solely with a view to regulate the time of their religious exercises. They have Euclid in folio volumes, neither copied nor read. The teacher sits crosslegged on the ground, and repeats in a drawling tone, between singing and crying, words which are echoed by the scholars seated round him. Their religious prejudices exclude them from the study of anatomy and medicine. Ali Bey describes Fez as a singular mixture of splendor and ruin. The magnificence usual in Mahommedan countries is displayed solely in the interior, where spacious courts are found, and the apartments are decorated with paintings, arabesques, and often with gold and silver, while the walls of the houses, next the street, are built of mud, and in many places cracked and falling. He states the population at 100,000, and it was double this amount till reduced by a late plague. Mr. Jackson, from the public documents to which he had access, makes it 380,000. It is 230 miles north-east of Morocco.

FEZZAN, a considerable country in the north-east part of Central Africa, to the south of Barbary, forms a sort of island in the midst of that immense desert of sand which reaches as far as the Niger. It is tributary to the dey of Tripoli, from which its nearest part is about 250 miles south-east. Its northern extremity, at the well of Bonjem, is in lat. 30° 35′, and its southern limit at Tegerry in lat. 24° 4′ N. Its length is therefore about 450 miles. On the north-east it is bounded by the White Mountains of Harutz. This country was known to the ancients under the title of the Phazania Regio, and the country of the Garamantes; Garama, its ancient capital, has been recognised by major Rennell in the modern Germa. The name of Fasan, or Fezzan, seems to have been imposed by the Saracens, when they overran this with all the rest of northern Africa, and established the Mahommedan faith here.

Though, compared with the surrounding districts, Fezzan is tolerably fertile, the want of water precludes almost every kind of steady cultivation: there are only three springs in the whole of this vast tract. Water is sometimes found in beds of clay, in some places at ten or twelve feet below the surface. Trees of the mimosa species, called talh, are occasionally seen, and near the towns a scanty stock of palms appears, with a few esculent vegetables. Small patches of grain are sometimes raised with great labor and care; but the trouble of keeping the soil moist causes the largest of these patches not to exceed an acre. The water is drawn by asses from the wells, by very complicated machinery, and small channels are cut from the reservoirs to the gardens. Nearly all the water of Fezzan is brackish. Wheat and barley are sown in October and November, and reaped in March and April, and until the last month the crops require watering twice a week. The principal vegetable products are—Indian corn, wheat, barley, beans, and peas, with some small seeds. A species of clover is sown in January and February, and will bear cutting repeatedly, as food for the horses and camels, till November. In such a country few domestic animals of course can be kept. The camel, best adapted to its wants, is therefore the most numerous. Horses, asses, cows, sheep, and goats are scarce, and only a very few dogs of the greyhound species are seen. The wild animals include the tiger-cat, the hyæna, fox, jackal, buffalo, antelope, gerboa, rabbits, and hares. Among the birds are the ostrich, eagle, vulture, hawk, wild turkey, and raven, with several smaller birds, besides domestic fowls, partridges, pigeons, ducks, and geese. The chief mineral productions are similar to those of many other

regions in this part of Africa, and may be taken as a specimen of the rest that are less known. Soda, rock-salt, alum, gypsum, saltpetre, and sulphur, are all said to exist. The first three are in sufficient quantities to form articles of commerce. There is said to be one plain of solid salt thirty miles in length. Mourzouk, the capital, is situated in the southern part, and there are three or four more considerable towns, as Sockna, Zuela, and Gatrone, all of which, except Zuela, lie in the common route. Mourzouk is a walled town, with about 2500 inhabitants. The walls consist of mud, and are strengthened by round towers with loop holes for the musketry. See MOURZOUK.

Most of the people here are capable of performing the business of carpenter and mason as far as domestic purposes require, and many work very well in leather. Others make substantial but clumsy articles in iron, and some display tolerable skill in working gold and silver. Some coarse hayks are also woven in the country. A considerable commerce in slaves, and other articles common to these countries, is carried on between Fezzan and the interior of the continent, as well as with Egypt, Bornou, &c.

The government of Fezzan is an absolute monarchy. All the boys are said to be taught to read the Koran, but of every other book they are perfectly ignorant. Dates constitute almost the only article of general subsistence. The Fezzanners are represented as possessing little courage, enterprise, or honesty, and are as completely submissive as their oppressors could wish. Their complexion is quite black, and the females the very reverse of handsome. Neither sex is noted for figure, strength, or activity. A peculiar cast of countenance distinguishes them from all other blacks, their cheek-bones being higher and more prominent; their faces fatter, and their noses less depressed. They have small eyes, wide mouths, but good teeth. Their hair is mostly woolly. The females arrive early at puberty, and have often the appearance of old women at sixteen. They are cheerful people, fond of singing and dancing, and kind and obliging to each other. But their affections are cold and interested; they manifest a general indifference to the common incidents of life; and are particularly devoid of that sudden anger, or determined revenge, which marks the Arab.

A tenth part at least of the population of Mourzouk are slaves. Many of them, however, were brought from their native countries so young, and are so mildly treated, that they are scarcely sensible of slavery. Very little difference can be perceived between the household slaves and the freemen. They are often entrusted with their master's affairs, and, when any of the family die, one of the slaves is generally liberated.

The population scattered over this wild waste is estimated by Mr. Horneman to amount only to 70,000 or 75,000 souls, of which Mourzouk, as we have seen, contains, according to Lyon, about 2,500. The government was hereditary in a black family of shreefs for more than five centuries, but tributary to the bashaw of Tripoli. This tribute was collected by Mukni, the present sultan of Fezzan, who contrived to get the government of the country into his own hands, by promising the bashaw to triple the amount of the annual tribute. For this purpose, in the year 1811, he came upon Mourzouk by surprise, caused the sultan, his brother, and the principal Mameluke, to be strangled, and by his oppressions of the people, but chiefly by the wars which he waged, and still continues to wage with his defenceless neighbours, for the sake of procuring slaves, he has hitherto managed to fulfil his promise, and retain his government. While, however, Messrs. Lyon and Ritchie were at Mourzouk, reports were circulated that another sultan was on his way from Tripoli to supersede him.

'These reports, corroborated by one or two private letters,' says captain Lyon, 'very much alarmed the sultan, and caused him to fall sick and take to his bed. He began, for the first time in his life, to pray at the regular hour ordered by the law; he ceased to swear, talked much of Paradise, and the superiority of the other world to this. Mr. Ritchie was at this time very weak, and began again to be indisposed, but he constantly visited Mukni, and at last succeeded in restoring him to health; thus returning by kindness the ill treatment we had received from him. We both went frequently to the castle, and learnt by degrees that some expressions of Mukni's had come to the ears of the bashaw, whose emissaries he expected would be sent to strangle him, and take all his wealth. Never was a haughty tyrant so completely humbled by his fears as this man; he sat constantly in a dark room, would receive only one or two visitors, aud was nursed by negresses day and night; always speaking in a low voice, and, in his terror, betraying all his secrets.'—p. 164. He determined, however, to try what bribes and promises would do; and with this view despatched his principal man of business to Tripoli with presents of civet, and other articles, ten fine slave girls for the bashaw, and handsome negresses for the bey, his son, for his brothers, and for the principal people about the court; making at the same time secret preparations for flight, such as getting all his horses shod by night, and all his women employed in grinding corn. For some time, however, his agent succeeded in diverting the storm.'

'The females are here allowed more liberty than those of Tripoli, and are more kindly treated. The effect of the plurality of wives is but too plainly seen, and their women, in consequence, are not famed for chastity. Though so much better used than those of Barbary, their life is still a state of slavery. A man never ventures to speak of his women; is reproached if he spends much time in their company; never eats with them, but is waited upon at his meals, and fanned by them while he sleeps; yet these poor beings, never having enjoyed the sweets of liberty or affection, are, in spite of their humiliation, comparatively happy. The authority of parents over children is very great, some fathers of the better class not allowing their sons to eat, or sit down in their presence, till they become men; the poorer orders, however, are less strict.'

Specimens of rock collected by captain Lyon,

n various parts of his journey, have enabled rofessor Buckland of Oxford, to determine the eological structure of Tripoli and Fezzan; all f which may be referred to the three formations, . Basalt; 2. Tertiary limestone, of about the ame age with the calcaire grossier of Paris; 3. Vew red sandstone. The Soudah, or Black Mountains, are of basaltic formation; their direction is east and west, and they extend probably across the continent, Horneman having rossed them nearly 200 miles to the south-eastward of Lyon, where they take the name of the Black Harutsch. Some basalt also appears in the Gharian Mountains; but this ridge, which runs robably to the borders of Egypt, is composed pparently of trap and calcareous rocks, the tertiary limestone above-mentioned. The rocks ontain marine shells, particularly two species of ardium, in a state of delicate preservation. Indeed most of the limestone formation, in every art of Northern Africa, appears to be loaded vith fragments of organic remains, the most disinct of which, brought away by captain Lyon, ıay be referred to the genera ostrea and pecton. Ve are informed by Horneman, that the ruins f the temple of Siwah are limestone, containing etrifactions of shells and small marine animals; nd from this place, westerly, the face of the ocky chain, rising abruptly from the sandy esert, was so crowded and filled with marine nimals, and shells, and white detached mounds, s it were, wholly composed of shells, that when ıken in connexion with the sea-sand, which overs the desert, this vast tract of country, he oncludes, must have been flooded at a period ıter than the great deluge. Farther south, and lose to the Black Harutsch, the calcareous hills, ising steep from the level desert, are so friable, ıat petrified conchs, snail-shells, fish, and other ıarine substances, may be taken out by the and. 'I found heads of fish', says Horneman, that would be a full burthen for one man to arry.' The third and last formation appears nder its usual form of loose red sand, accomanied by rock salt and gypsum, associated with eds of a calcareous breccia, cemented by magesian limestone, and of compact dolomite. The rift-sand is composed of extremely minute rains of red semi-transparent quartz. Mr. Buckand observes, that the frequent occurrence of alt-springs and of rock salt and gypsum goes ar to identify this sand of the deserts with the ew red sandstone in the south of England. In his also are ferruginous concretions, forming etites or geodes; the broken fragments of which re compact, sonorous, and of a dark liver color, aving a shining polished surface; they are bundantly found among the sand. A narrow ed entirely composed of tubular concretions of ron, of similar origin near the pass of Kenair, hrew out irregular ramifications through the and like the roots of trees, and presented at irst sight the resemblance of lava. Most of the plains are strewed with magnesian limestone or lolomite split into small laminated fragments, which break and rattle under the feet like pottery. Many other varieties of magnesian limestone and carbonates of lime are associated with the sand and sandstone of the hills and plains of this barren and miserable country. In our general article on AFRICA, par. 254—256, will be found several interesting particulars of the people and manners, supplied by captain Lyon.

FIANONA, a borough and castle of Italy, in the province of Istria, and district of Albona, four miles from Albona, and one from the coast. It has a good harbour, and a rivulet which turns twenty-two mills. It is seated on the Gulf of Carnero, seventeen miles north of Pola, and nineteen east of Rovigno.

FI'AT, *n. s.* [Lat. i. e. be it so.] Order; decree.

I resolve all into the sole pleasure and *fiat* of our Omnipotent Creator. *Bentley.*

What wealth in souls that soar, dive, range around,
Disdaining limit or from place or time,
And hear, at once, in thought extensive, hear
The' Almighty *fiat*, and the trumpet's sound.
Young.

FIB, *n. s.* & *v. n.* Probably contracted from fable, or the Latin *fabula*. A lie or falsehood: to tell lies: one of the cant terms in common use, to make lying appear less odious.

If you have any mark, whereby one may know when you *fib*, and when you speak truth, you had best tell it me. *Arbuthnot.*

Destroy his *fib* or sophistry; in vain,
The creature's at his dirty work again. *Pope.*

I so often lie,
Scarce Harvey's self has told more *fibs* than I.
Id.

FIBRARIÆ, a class of fossils, naturally and essentially simple, not inflammable nor soluble in water: and composed of parallel fibres, some shorter, others longer; their external appearance being bright, and in some degree transparent. They never give fire with steel, nor ferment with or are soluble in acid menstrua.

FI'BRE, *n. s.* } Fr. *fibre*; Lat. *fibra*. A small
FI'BRIL, } thread or string: the first con-
FI'BROUS. } stituent part of bodies: fibril is a diminutive of fibre.

The difference between bodies *fibrous* and bodies viscous is plain; for all wool and tow, and cotton and silk, have a greediness of moisture. *Bacon.*

My heart sinks in me while I hear him speak,
And every slackened *fibre* drops its hold,
Like nature letting down the springs of life:
The name of father awes me still. *Dryden.*

I saw Petreus' arms employed around
A well-grown oak, to root it from the ground;
This way and that he wrenched the *fibrous* bands,
The trunk was like a sapling in his hands. *Id.*

The *fibrous* and solid parts of plants pass unaltered through the intestines. *Arbuthnot on Aliments.*

A *fibre*, in physick, is an animal thread, of which some are soft, flexible, and a little elastick; and these are either hollow, like small pipes, or spongious and full of little cells, as the nervous and fleshy *fibres*: others are more solid, flexible, and with a strong elasticity or spring, as the membraneous and cartilaginous *fibres*: and a third sort are hard and flexible, as the *fibres* of the bones. Some so very small as not to be easily perceived; and others so big as to be plainly seen; and most of them appear to be composed of still smaller *fibres*: these *fibres* first constitute the substance of the bones, cartilages, ligaments, membranes, nerves, veins, arteries, and muscles. *Quincy.*

The muscles consist of a number of fibres, and each

fibre of an incredible number of little *fibrils* bound together, and divided into little cells.

Cheyne's Philosophical Principles.

Now sliding streams the thirsty plants renew,
And feed their *fibres* with reviving dew. *Pope.*

Inveterate habits choke the' unfruitful heart,
Their *fibres* penetrate its tenderest part,
And, draining its nutricious powers to feed
Their noxious growth, starve every better seed.
Cowper.

The age-worn *fibres* goaded to contract,
By repetition palsied, cease to act. *Darwin.*

New embryon *fibrils* round the trunk combine
With quick embrace, and form the living line. *Id.*

When strong desires or soft sensations move
The astonished Intellect to rage or love;
Associate tribes of *fibrous* motions rise,
Flush the red cheek, or light the laughing eyes.
Id.

If in a church one feels the floor and the pew tremble to certain tones of the organ; if one string vibrates of its own accord when another is sounded near it of equal length, tension, and thickness; if a person who sneezes, or speaks loud, in the neighbourhood of a harpsichord, often hears the strings of the instrument murmur in the same tone, we need not wonder, that some of the finer *fibres* of the human frame should be put in a tremulous motion, when they happen to be in unison with any notes proceeding from external objects. *Beattie.*

FIBRE, in anatomy, is defined to be a perfectly simple body, being fine and slender like a thread, and serving to form other parts. Some are hard, as the bony fibres; others soft, as those which form all the other parts. The fibres are divided, according to their situation, into straight, oblique, transverse, annular, and spiral; being found arranged in all these directions in different parts of the body. See ANATOMY.

FI'BULA, *n. s.* Lat. The outer and less bone of the leg, much smaller than the tibia: it lies on the outside of the leg; and its upper end, which is not so high as the knee, receives the lateral knob of the upper end of the tibia into a small sinus, which it has in its inner side. Its lower end is received into the small sinus of the tibia, and then it extends into a large process, which forms the outer ankle.—*Quincy.*

FIBULA, in antiquity, was a sort of button, buckle, or clasp, used by the Greeks and Romans for keeping close or tying up some part of their cloaths. They were of various forms, and often adorned with precious stones. Men and women wore them in their hair and at their shoes. Fibulæ are often found in the tombs of the ancient Romans, Gauls, Franks, and the ancient Britons. Many antique fibulæ of bronze are to be found in various cabinets and collections of antiquities, and a few in the British Museum, among other articles of the toilet or of personal decoration.

FIBULA, in surgery, an instrument used among the ancients for closing wounds. Celsus speaks of the fibula as to be used when the wound was so patent as not easily to admit of being sewed.

FICHARD (John), was born at Frankfort-on-the-Maine in 1512, and devoting himself to the study of jurisprudence became syndic of Frankfort. He wrote, The Lives of illustrious Men, distinguished for their Talents and Erudition during the fifteenth and sixteenth Centuries, in Latin, printed in 4to. 1536. The Lives of celebrated Lawyers, 1565, 4to. A work entitled, Onomasticon Philosophico-Medico Synonymum, 1574. De Cautelis, 1577. And Concilium Matrimoniale, 1580. He died in 1581.

FICHET (Alexander), a Jesuit and able writer on rhetoric, was born about 1589. He became professor of the classics and rhetoric in the college at Lyons, where he published an edition of the Latin poets, under the title of Chorus Poetarum, 1616. He also published a collection called Musæum, Rhetoricum et Poeticum; and a work with the title of Arcana Studiorum omnium methodus, et Bibliotheca Scientiarum, 8vo. He also printed Favus Patrum, or Thoughts of the Fathers, 12mo.

FICHTE (John Theophilus), a modern German metaphysician, the son of a riband manufacturer, was born at Rammenau, a village of Lusatia, on the 19th of May, 1762. Young Fichte displayed at school considerable genius, and was patronised by some respectable persons; but becoming impatient of restraint he absconded, and was found sitting on the banks of the Saale, with a map, on which he was endeavouring to trace the way to America. He after this prosecuted his studies in a very desultory manner; occasionally attending the lectures of various professors of Wirtemberg and Leipsic. Theology, however, was his favorite study. Possessing no fortune to enable him to indulge in the luxury of mere speculation, he was compelled by his circumstances to accept the situation of tutor in the family of a Prussian gentleman. Here he was enabled to cultivate the acquaintance of the celebrated Kant, to whose judgment he submitted his first work, the Critical Review of all Revelations, which was published, anonymously, in 1792, and which was for a time ascribed to the pen of that philosopher. Fichte now set out on a course of travels through Germany and Switzerland, and married at Zurich a niece of Klopstock's. In 1793 he published the first part of his very popular work, Contributions towards rectifying the Opinions of the Public respecting the French Revolution. His reputation was now so well established, that he was soon after appointed to the philosophical chair at Jena, and commenced his lectures by a programme, in which he endeavoured to give an idea of the doctrine of science (wissenschaftslehre), the name by which he distinguished the principles of his philosophical system. Besides the ordinary duties of his professorship, he gave a regular course of lectures, in the form of sermons, every Sunday, in the year 1794, on the literary calling, which were numerously attended. He now endeavoured to extend the application of his principles to the several departments of philosophy; and with this view published, in 1796, his Fundamental Principles of the Law of Nature; and two years afterwards, his System of Morals. In conjunction with Niethammar, he also published a Philosophical Journal, in which several articles were inserted, containing some views of religion which were considered atheistical. Among other objectionable propositions, it was maintained that God was nothing else than the moral order of the universe; and that

o worship God as a being who could only be represented as existing in time and space, would e a species of idolatry. One of Fichte's colleagues called the attention of the Saxon minister Burgsdorf to these heretical propositions; and he consequence was, the rigorous confiscation of the periodical work in question. Fichte and his friend Forberg wrote an Appeal to the Public, and several Apologies, in order to exculpate themselves from the imputation of atheism. The controversy was carried on with great violence, and excited considerable ferment throughout the whole of Germany. In the mean time Fichte resigned his professorship at Jena and repaired to Berlin, where his time was occupied in giving private lectures and in private composition. In 1800 he published a treatise, entitled The exclusive Commercial State. About this period he met with a formidable rival in Schelling, who had formerly been a partizan of the doctrine of science, but who now separated from his master, and propounded a new metaphysical theory, which soon acquired a large share of popularity at the German universities. Fichte, indeed, endeavoured to modify his theory of that doctrine, and to present it to the world in a more attractive form; but he never again recovered his popularity. Meanwhile, his wish to be re-placed in an academical chair was at length gratified by M. de Hardenberg, who, in 1805, procured for him the appointment of ordinary professor of philosophy in the university of Erlangen. This was accompanied with the especial favor of being permitted to pass the winter at Berlin, in order to finish his lectures. During the summer of 1805, he lectured at Erlangen on the Essence of the Literary Character (uber das Wesen des Gelehrten.) The following winter he delivered to a numerous audience the course which he afterwards published under the title of Guide to a Happy Life, one of the best expositions of his metaphysical doctrines. Erlangen having ceased to be a Prussian university in 1806, Fichte returned to Koningsberg, and from thence to Riga. In the summer of 1807 he delivered a popular course of philosophical lectures at the former place. The peace soon after enabled him to return to Berlin, where he pronounced his famous Orations to the German Nation, which were enthusiastically read and applauded throughout all Germany. On the university of Berlin being founded, he obtained, through the interest of Humboldt, the situation of rector, which secured to him an honorable revenue, and great academical influence. His health, however, had suffered from the varieties of fortune he had experienced, and he was just recovering his strength at the waters of Bohemia, when his wife was attacked with a nervous fever: she recovered; but Fichte, whose affection would not allow him to leave her for a moment, caught the disorder and died on the 29th of January, 1814.

Fichte was a voluminous writer; and we are indebted for the following list of his works to the Supplement of the Encyclopædia Britannica:— 1. Versuch einer Kritik aller Offenbarung. (Critical Review of all Revelation). Koningsberg, 1792, 1793, 8vo. 2. Ueber den Begriff der Wissenschaftslehre. (On the Notion of a Doctrine of Science). Jena, 1794. 8vo. 3. Grundlage der gesammten Wissenschaftslehre. (Foundation of the whole Doctrine of Science). Ibid. 1794. 8vo. 4. Grundriss des eigenthumlichen der Wissenscaftlehre. (Sketch of the Peculiarity of the Doctrine of Science). Ibid. 1795. 5. Vorlesungen ueber die Bestimmung des Gelehrten. (Lectures on the Literary Calling). Jena, 1794. 6. System der Sittenlehre. (System of the Doctrine of Morals). Jena and Leipsic, 1795. 7. Beyträge zur Berichtigung der Urtheile des Publicums ueber die Französische Revolution. (Materials for Rectifying the Opinions of the Public respecting the French Revolution). 8. Grundlage des Naturrechts. (Foundation of the Law of Nature). Jena, 1796, 1797. 2 vols. 8vo. 9. Appellation an das Publicum ueber die ihm beygemessenen atheistischen Aeussemngen. (Appeal to the Public respecting the Atheistical Expressions imputed to him). Jena and Leipsic, 1799. 10. Ueber die Bestimmung des Menschen. (On the Destiny of Man). 11. Der geschlossene Handelsstaat. (The exclusive Commercial State). 12. Sonnenklarer Bericht an das grössere Publicum ueber das eigentliche Wesen der neusten Philosophie. (Luminous Report to the greater Public, on the peculiar Character of the Modern Philosophy). Berlin, 1801. 13. Wissenschaftslehre. (Doctrine of Science.) Tübingen, 1802. 8vo. 14. Vorlesungen ueber das Wesen der Gelehrten. (Lectures on the Literary Character). Berlin, 1806. 15. Die Grundzuge des gegenwärtigen Zeitalters. (The Characteristics of the present Age). Ibid. 1806. 16. Anweisung zum seligen Leben. (Guide to a Happy Life). Ibid. 1806. 17. Reden an die Deutsche Nation. (Discourses to the German Nation). Ibid. 1806. 18. Die Wissenschaftslehre in ihrem allgemeinsten Umrisse dargestellt. (The Doctrine of Science exhibited in its most general Outline). Ibid. 1810. 19. Freidrich Nicolai's Leben und Sonderbare Meinungen, herausgegeben von Schlegel. (Life and singular Opinions of Frederic Nicolai, edited by Schlegel). Tübingen, 1801. 20. Antwortschrieben an K. L. Reinhold, auf dessen Beyträge zur leichtern Uebersicht des Zastandes der Philosophie, &c. (Answer to K. L. Reinhold, on his Materials for acquiring a more easy View of the State of Philosophy, &c.) Ibid. 1801. 21. Ueber die einzig mögliche Störung der academischen Freyheit. (On the only possible Disturbance of Academical Freedom). Berlin, 1812. 22. Uber den Begriff des wahrhaften Kriegs, in Bezug auf den Kreig in Jahre 1813. (On the Notion of real War, with Reference to the War in 1813). Tübingen, 1815. Fichte is also the author of numerous essays in periodical publications, and particularly in the philosophical journal, edited by himself and Niethammer.

FICHTELBERG, a mountain, or rather a ridge of mountains, in Franconia, extending nearly from Bareuth to Eger in Bohemia, sixteen miles in length from east to west, and as many in breadth from north to south. Cruttwell styles it 'one of the highest mountains in Germany.'

It contains many deserts, bogs, and morasses; and abounds with trees, particularly pines, oaks, elms, and beeches.

FICINUS (Marsilius), a modern philosopher and reviver of letters, was born in 1433 at Florence, where his father was physician to the Medici family. He was educated at Bologna; and persuaded his patron, Cosmo de Medici, to form an academy for the cultivation of the Platonic philosophy. He continued in favor under other princes of that house, and died, after taking orders, in 1499. He published a complete translation of Plato's writings into Latin. His own works were collected in 2 vols. folio, 1641.

FIC'KLE, *adj.* FIC'KLENESS, *n. s.* FICK'LY, *adv.* } Sax. picol; Goth. *huckul*; Belg. *ficken*; Lat. *vacillo*, to waver. Changeable; wavering; inconstant.

Beware of fraud, beware of *ficklenes*,
In choice and change of thy dear-loved dame.
Faerie Queene.

Remember where we are,
In France amongst a *fickle* wavering nation.
Shakspeare.

I am a soldier, and unapt to weep,
Or to exclaim on fortune's *fickleness*. *Id.*

He would be loth
Us to abolish; lest the adversary
Triumph, and say, *fickle* their state, whom God
Most favours! *Milton's Paradise Lost.*

Neither her great worthiness, nor his own suffering for her, could fetter his *fickleness*; but, before his marriage-day, he had taken to wife that Baccha of whom she complained. *Sidney.*

They know how *fickle* common lovers are;
Their oaths and vows are cautiously believed;
For few there are but have been once deceived.
Dryden.

Instability of temper ought to be checked, when it disposes men to wander from one scheme of government to another, since such a *fickleness* cannot but be attended with fatal consequences. *Addison.*

We in vain the *fickle* sex pursue,
Who change the constant lover for the new.
Prior.

Do not now,
Like a young wasteful heir, mortgage the hopes
Of godlike majesty on bankrupt terms,
To raise a present power that's *fickly* held
By the frail tenure of the people's will. *Southern.*

A few good works gain fame; more sink their price; Mankind are *fickle*, and hate paying twice. *Young.*

Fancy now no more
Wantons on *fickle* pinion through the skies;
But, fixed in aim, and conscious of her power,
Aloft from cause to cause exults to rise,
Creation's blended stores arranging as she flies.
Beattie.

But droop not: Fortune at your time of life,
Although a female moderately *fickle*,
Will hardly leave you (as she's not your wife)
For any length of days in such a pickle. *Byron.*

FI'CO, *n. s.* Ital. An act of contempt done with the fingers, expressing 'a fig for you.'

Having once recovered his fortress, he then gives the *fico* to his adversaries. *Carew.*

FIC'TILE, *adj.* Lat. *fictilis*. Moulded into form; manufactured by the potter.

The cause of fragility is an impotency to be extended; and therefore stone is more fragil than metal, and so *fictile* earth is more fragil than crude earth. *Bacon's Natural History.*

FIC'TION, *n. s.* FIC'TIOUS, *adj.* FICTI'TIOUS, FICTI'TIOUSLY, *adj.* FICTI'TIOUSNESS, *n. s.* FIC'TIVE, *adj.* } Fr. *fiction*; Ital. *fittiore*; Sp. *ficion*; Lat. *fictio*. A feigned thing or story; the act of feigning or inventing: fictious, and fictitious, are fabulous; false; counterfeit; not real or genuine: fictive, feigned; imaginary.

So also was the *fiction* of those golden apples kept by a dragon, taken from the serpent, which tempted Evah. *Raleigh.*

Time to those things—gave *fictive* ornament.
Drayton.

These pieces are *fictitiously* set down, and have no copy in nature. *Browne's Vulgar Errours.*

If through mine ears pierce any consolations,
By wise discourse, sweet tunes, or poets' *fictions*;
If ought I cease these hideous exclamations,
While that my soul, she lives in afflictions. *Sidney.*

If the presence of God in the image, by a mere *fiction* of the mind, be a sufficient ground to worship that image, is not God's real presence in every creature a far better ground to worship it? *Stillingfleet.*

Fiction is of the essence of poetry, as well as of painting: there is a resemblance in one of human bodies, things, and actions, which are not real; and in the other of a true story by a *fiction*. *Dryden.*

Draw him strictly so,
That all who view the piece may know,
He needs no trappings of *fictitious* fame. *Id.*

Another way to make a book unanswerable is to lay a stress on matters of fact foreign to the question as well as to truth, and to stuff it with scurrility and *fiction*. *Locke.*

It is the part of a poet to humour the imagination in our own notions, by mending and perfecting nature where he describes a reality, and by adding greater beauties than are put together in nature, when he describes a *fiction*. *Addison.*

Milton, sensible of this defect in the subject of his poem, brought into it two characters of a shadowy and *fictitious* nature in the persons of Sin and Death, by which means he has interwoven in his fable a very beautiful allegory. *Addison's Spectator.*

With fancied rules and arbitrary laws
Matter and motion man restrains,
And studied lines and *fictious* circles draws.
Prior.

The human persons are as *fictitious* as the airy ones; and Belinda resembles you in nothing but in beauty. *Pope.*

FICUS, the fig-tree, a genus of the triœcia order, and polygamia class of plants: natural order fifty-third, scabridæ. The receptacle is common, turbinated, carnous, and connivent; enclosing the florets either in the same or in a distinct one: male CAL: tripartite: COR. none: STAM. three: female CAL: quinquepartite: COR. none: pistil one; and one seed.—There are fifty-six species, of which the following are the most remarkable:

F. carica, the common fig tree, with an upright stem branching fifteen or twenty feet high, and garnished with large palmated or hand-shaped leaves. Of this there are many varieties; as, The common fig tree, with large, oblong, dark purplish blue fruit, which ripens in August either on standards or walls, and of which it carries a great quantity. The brown or chestnut fig; a large, globular, chestnut-colored fruit, having a purplish delicious pulp, ripening in July and

August. The black Ischia fig; a middle sized, shortish, flat-crowned, blackish fruit, having a bright pulp; ripening in the middle of August. The green Ischia fig; a large, oblong, globular-headed, greenish fruit, slightly stained by the pulp to a reddish-brown color; ripens in the end of August. The brown Ischia fig; a small, pyramidal, brownish-yellow fruit, having a purplish very rich pulp; ripening in August and September. The Malta fig; a small flat-topped brown fruit, ripening in the middle of August or beginning of September. The round brown Naples fig; a globular, middle-sized, light brown fruit, and brownish pulp; ripe in the end of August. The long, brown, Naples fig; a long dark brown fruit, having a reddish pulp; ripe in September. The great blue fig; a large blue fruit, having a fine red pulp. The black Genoa fig; a large, pear-shaped, black-colored fruit, with a bright red pulp; ripe in August. The carica is frequently cultivated in this country, and is the only species which does not require to be kept in a stove. It may be propagated either by suckers arising from roots, by layers, or by cuttings. The suckers are to be taken off as low down as possible; trim off any ragged part at bottom, leaving the tops entire, especially if for standards; and plant them in nursery lines at two or three feet distance, or they may at once be planted where they are to remain; observing, that if they are designed for walls or espaliers, they may be headed to six or eight inches in March, the more effectually to force out lateral shoots near the bottom; but, if intended for standards, they must not be topped, but trained with a stem, not less than fifteen or eighteen inches for dwarf standards, a yard for half-standards, and four, five, or six feet for full standards. Then they must be suffered to branch out to form a head; observing, that, whether against walls, espaliers, or standards, the branches or shoots must never be shortened unless to procure a necessary supply of wood: for the fruit is always produced on the upper parts of the young shoots; and, if these are cut off, no fruit can be expected.—The best season for propagating these trees by layers is in autumn; but it may be also done any time from October to March or April. Choose the young pliable lower shoots from the fruitful branches; lay them in the usual way, covering the body of the layers three or four inches deep in the ground, keeping the top entire, and as upright as possible; and they will be rooted and fit to separate from the parent in autumn; when they may be planted either in the nursery, or where they are to remain. The time for propagating by cuttings is either at the fall of the leaf, or in March: choose well ripened shoots of the preceding summer; short, and of robust growth, from about twelve to fifteen inches long; having an inch or two of the two years wood at their base, the tops left entire; and plant them six or eight inches deep, in a bed or border of good earth, in rows two feet asunder. When planted in autumn, it will be eligible to protect their tops in time of hard frost, the first winter, with any kind of long loose litter. For an account of the CAPRIFICATION of the fig tree, see that article.

F religiosa, the Banian tree, or Indian fig, is a native of several parts of the East Indies. It has a woody stem, branching to a great height and vast extent, with heart-shaped entire leaves ending in acute points. Of this tree Milton has given a description equally beautiful and just, in his Paradise Lost, b. ix. The Banian tree is perhaps the most beautiful of nature's productions in that genial climate, where she sports with the greatest profusion and variety. Some of these trees are of amazing size and great extent; as they are continually increasing, and seem to be exempted from decay. Every branch from the main body throws out its own roots; at first, in small tender fibres, several yards from the ground: these continually grow thicker until they reach the surface; and there striking in, they increase to large trunks, and become parent trees, shooting out new branches from the top: these in time suspend their roots, which, swelling into trunks, produce other branches; thus continuing in a state of progression as long as the earth, the first parent of them all, contributes her sustenance. The Hindoos are peculiarly fond of the Banian tree; they look upon it as an emblem of the deity, from its long duration, its outstretching arms, and overshadowing beneficence. Near these trees the most esteemed pagodas are generally erected; under their shade the Brahmins spend their lives in religious solitude; and the natives of all casts and tribes are fond of recreating in the cool recesses, beautiful walks, and lovely vistas of this umbrageous canopy, impervious to the hottest beams of a tropical sun. The largest known Banian tree grows on an island in the Nerbedda, ten miles from the city of Baroche in the province of Guzerat. It is distinguished by the name of Cubbeer Burr, which was given it in honor of a famous saint. It was once much larger, but high floods have carried away the banks of the island where it grows, and with them such parts of the tree as had thus far extended their roots: yet what remains is about 2000 feet in circumference, measured round the principal stems; the over-hanging branches, not yet struck down, over a much larger space. The chief trunks of this single tree (which in size greatly exceed our English elms and oaks), amount to 350; the smaller stems, forming into stronger supporters, are more than 3000; and every one of these is casting out new branches, and hanging roots, in time to form trunks, and become the parents of a future progeny. Cubbeer Burr is famed throughout Hindostan for its great extent and surprising beauty: armies have encamped around it; and, at stated seasons, solemn jatarras, or Hindoo festivals, are held here, to which thousands of votaries repair from various parts. It is said that 7000 persons find ample room to repose under its shade. The English gentlemen, on their hunting and shooting parties, used to form extensive encampments, and spend weeks together under this delightful pavilion, which is generally filled with green wood pigeons, doves, peacocks, and a variety of feathered songsters; crowded with families of monkeys performing their antic tricks; and shaded by bats of a large size. This tree not only affords shelter, but sustenance to all its inhabitants, being covered

amidst its bright foliage with small figs of a rich scarlet color.

F. sycamorus, the sycamore tree, is very common in Lower Egypt. It buds in the end of March, and the fruit ripens in the beginning of June. It is cut by the inhabitants at the time it buds; for without this precaution they say it would not bear fruit. The wood of the sycamore tree is not subject to rot; and has therefore been used for making coffins, in which embalmed bodies were put. Hasselquist affirms, that he saw in Egypt coffins made of this kind of wood, which had been preserved sound for 2000 years.

FID, *n. s.* Ital. *fitta*. A pointed iron with which seamen untwist their cords.—*Skinner*.

Fids or Fidds, are likewise used at sea to splice or fasten ropes together. There are also fids of wood, made tapering at one end, but much larger than the iron ones.—The pin in the heel of the topmast, which bears it upon the chess tree, is likewise called a fid.

FID'DLE, *n. s.* & *v. a.* } Sax. fibel; Goth. *fidla*; Swed. *fidla*; Belg. *vedel*; Lat. *fidicula*. A stringed musical instrument; a violin: to fiddle is to play upon this instrument; also to 'shift the hands often and do nothing like a fellow that plays upon a fiddle,' as Dr. Johnson says: the fiddlestick is otherwise called the bow, and the fiddlestring a portion of the stringed part of this instrument.

Fid'dler, *n. s.*
Fid'dlestick,
Fid'dlestring.

Christofre him served longe,
The kinge loved the melody of *fithele* and of song.
Life of St. Christofre in the Bodleian Library, A. D. 1200.

Themistocles being desired at a feast to touch a lute, he said he could not *fiddle*, but he could make a small town a great city. *Bacon's Essays.*

There is a subordinate wit, as much inferiour to a wit of business, as a *fiddler* at a wake is to the lofty sound of an organ. *Saville.*

Let no saucy *fiddler* presume to intrude,
Unless he is sent for to vary our bliss.
Ben Jonson.

Nero put the *fiddlers* to death, for being more skilful in the trade than he was. *Taylor.*

For what can be more ridiculous than we do make ourselves, when we do thus *fiddle* and fool with our own souls; when, to make vain people merry, we incense God's earnest displeasure. *Barrow.*

The adventure of the bear and *fiddle*
Is sung; but breaks off in the middle.
Hudibras.

His grisly beard was long and thick,
With which he strung his *fiddlestick*. *Id.*

In trials of musical skill the judges did not crown the *fiddle*, but the performer. *Stillingfleet.*

These will appear such chits in story,
'Twill turn all politicks to jests,
To be repeated like John Dory,
When *fiddlers* sing at feasts. *Dryden.*

She tried the *fiddle* all over, by drawing the bow over every part of the strings; but could not, for her heart, find whereabout the tune lay. *Addison.*

A cunning fellow observed, that old Lewis had stole away part of the map, and saw him *fiddling* and turning the map, trying to join the two pieces together. *Arbuthnot.*

A *fiddlestring*, moistened with water, will sink a note in a little time, and consequently must be relaxed or lengthened one-sixteenth. *Id.*

Others import yet nobler arts from France,
Teach kings to *fiddle*, and make senates dance.
Pope.

All human actions seem to be divided like Themistocles and his company; one man can *fiddle*, and another man can make a small town a great city; and he that cannot do either one or the other, deserves to be kicked out of the creation. *Swift.*

I do not call him a poet that writes for his own diversion, any more than that gentleman a *fiddler* who amuses himself with a violin. *Id.*

There is nothing in which the power of art is shown so much as in playing on the *fiddle*: in all other things we can do something at first. Any man will forge a bar of iron, if you give him a hammer; not so well as a smith, but tolerably. A man will saw a piece of wood, and make a box, though a clumsy one; but give him a *fiddle* and a *fiddle-stick*, and he can do nothing. *Johnson.*

If he the tinkling harpsichord regards
As inoffensive, what offensive in cards?
Strike up the *fiddles*, let us all be gay;
Laymen have leave to dance, if parsons play.
Cowper.

Hence all this rice, meat, dancing, wine, and *fiddling*,
Which turned the isle into a place of pleasure;
The servants all were getting drunk or idling,
A life which made them happy beyond measure.
Byron.

FIDDLE-FADDLE, *n. s.* & *adj.* } From
Fid-fad, *n. s.* } fiddle. A toying with the fingers; trifling; making 'much ado about nothing.'

She said that her grandfather had a horse shot at Edgehill, and their uncle was at the siege of Buda; with abundance of *fiddlefaddle* of the same nature. *Spectator.*

She was a troublesome *fiddlefaddle* old woman, and so ceremonious that there was no bearing of her. *Arbuthnot.*

FIDEL'ITY, *n. s.* Fr. *fidelité*; Lat. *fidelitas*; Ital. *fedelita*; Span. *fidelidud*, faithfulness. Honesty; veracity.

The church, by her publick reading of the book of God, preached only as a witness; now the principal thing required in a witness is *fidelity*. *Hooker.*

He, that after the misuse of the one talent, would not trust the evil servant with a second, because he saw a wilful neglect; will trust Moses with his second law, because he saw *fidelity* in the worst error of his zeal. *Bp. Hall's Contemplations.*

They mistake credulity for *fidelity*. *Clarke.*

Having taken leave of my friends, and interchanged promises of *fidelity* with Miss Read, I quitted Philadelphia. *Franklin.*

As good subjects of God's kingdom, we are bound to pay a due regard and reverence to his ministers; especially if they discover an uncorrupted *fidelity* to his cause. *Mason.*

But nothing unpleasant, or sad, or severe,
Or that indicates life in its winter—is here.
Yet all is expressed with *fidelity* due,
Nor a pimple or freckle concealed from the view.
Cowper.

FIDES, Faith or Fidelity, one of the virtues deified by the Romans, had a temple near the capitol, founded by Numa Pompilius; but no animals were offered, or blood spilt, in her sacrifices. During the performance of her rites, her priests appeared in white vestments, with

their heads and hands covered with linen, to show that fidelity ought to be sacred. The greatest oaths were taken in her name. Horace clothes her in white, places her in the retinue of Fortune, and makes her the sister of Justice, Od. 24, 35, l. i. Public faith is represented on a great number of ancient medals; sometimes with a basket of fruit in one hand, and some ears of corn in the other; and sometimes holding a turtle dove. But the most usual symbol is two hands joined together. The inscriptions are generally, Fides Augusti, Fides exercitus, or Fides militum, &c.

FIDGE, or FIDG'ET, *v. n.* & *n. s.* Goth, *fika, feyka;* Dan. *fikke* (to move briskly). To move in a hurried restless manner: restless agitation.

Why what can the viscountess mean?
Cried the square hoods in woful *fidget*. *Gray.*

Tim, thou'rt the Punch to stir up trouble;
You wriggle, *fidge*, and make a rout,
Put all your brother puppets out. *Swift.*

But sedentary weavers of long tales,
Give me the *fidgets*, and my patience fails.
Cowper.

FIDU'CIAL, *adj.* } Lat. *fiducia*. Con-
FIDU'CIARY, *n. s.* & *adj.* } fident; undoubting.

Faith is cordial, and such as God will accept of, when it affords *fiducial* reliance on the promises, and obediential submission to the commands.
Hammond's Practical Catechism.

The second obstructive is that of the *fiduciary*, that faith is the only instrument of his justification; and excludes good works from contributing any thing toward it. *Hammond.*

Elaiana can rely no where upon mere love and *fiduciary* obedience, unless at her own home, where she is exemplarily loyal to herself in a high exact obedience. *Howel.*

That faith, which is required of us, is then perfect, when it produces in us a *fiduciary* assent to whatever the Gospel has revealed. *Wake.*

FIEF, *n. s.* Fr. *fief.* A fee: a manor; a possession held by some tenure of a superior. See FEOFF.

To the next realm she stretched her sway,
For painture near adjoining lay,
A plenteous province and alluring prey;
A chamber of dependencies was framed,
And the whole *fief*, in right of poetry, she claimed.
Dryden.

As they were honoured by great privileges, so their lands were in the nature of *fiefs*, for which the possessors were obliged to do personal service at sea.
Arbuthnot on Coins.

Towards the end of the thirteenth century, this monarch (Edward I. of England) called in question the independence of Scotland; pretending that the kingdom was held as a *fief* of the crown of England, and subjected to all the conditions of a feudal tenure.
Robertson's History of Scotland.

FIEF. See FEE, FEOD, and FEUDAL SYSTEM. It has been an object of enquiry among the learned, in what nation of barbarians fiefs had their origin? It is probable, that they took place in the different nations of Europe, nearly about the same time, on the same principles, and were continued by similarity of manners, conquests, &c.; so that we cannot ascribe the prevalence of them to imitation. In France, we find fiefs mentioned as early as the age of Childebert I. They were introduced into Italy by the Lombards; among whom the customs and laws relating to fiefs seem very early to have made rapid advances. See Giannone, History of Naples. They were introduced into Spain before the invasion of the Moors, A. D. 710. Lands were granted for service and attachment among the Goths; among whom also the person who received the gift was the retainer of him who granted it. If he refused his service, the grant was forfeited, and he was said to receive it in patrocinio: he also swore fealty to his lord; and on this footing the national militia was regulated. Leg. Wisigoth, lib. v. tit. 7. There can be little doubt that the feudal law was known in England in the Saxon times. See Whitaker's History of Manchester. In Scotland the history of fiefs is more uncertain; which has been ascribed partly to the mutilated state of the Scottish records, and partly to the want of able antiquaries in the nation. But Dr. Stuart, in Observations on the Law and Constitution of Scotland, insists, that allodiality and feudality have existed ever since the foundation of the Scottish monarchy. It has indeed been supposed, that these customs were introduced from some foreign model by Malcolm II. Some say they were introduced directly from England; and the policy of Malcolm in establishing them has been highly extolled: but, according to our author, there is no foundation for this notion. Both these opinions either assert or imply, that the feudal maxims were introduced into this country upon the principle of imitation: but it is very improbable that they could be imported from one people to another, on account of their excessive contrariety to the common usages and precepts of government among mankind. It must undoubtedly have been very absurd, if not altogether impracticable, to transplant the feudal tenures when the grants of land were precarious, or depending entirely on the will of the prince, to a country which had never known superiority or vassalage. This would have required an alteration of all the orders of society from the king to the peasant; while the whole chain of customs, as well as the jurisdiction of the kingdom, both high and low, must have sustained a corresponding alteration, to conform them to the new system. It is likewise obvious, that no conquest could be made on purpose to obtain a settlement by any nation who had already received the knowledge of fiefs. The establishment of them implied, that the people had already a fixed and settled residence; and accordingly history does not furnish us with any account of a nation among whom fiefs were known, who ever migrated from the country they already possessed, to seek for one in which they might settle. Feudal institutions must have originated wherever they have been observed to flourish. Scotland was formerly a feudal kingdom, and we know pretty nearly the time when the fiefs were hereditary in it; but in that form they could not be introduced by the sovereign; and there was no nation among whom fiefs were already known, who conquered, or made an establishment by conquest, in Scotland. Fiefs therefore must have gradually advanced to such a state of perfection. The progress they made may be likewise pointed out. At first they were

precarious, or at the pleasure of the lord; afterwards they were granted for life; then for a course of years longer than the natural life of a man; and, lastly, they became hereditary, which was their most perfect stage. This progress has been observed in every country where feudal tenures exist; and the same must have been known in Scotland, though in considering it we are necessarily carried back to periods of remote antiquity; for as fiefs were hereditary as early as the time of Malcolm II. they must have been in their precarious state several centuries before. See FEUDAL SYSTEM.

FIELD, *n. s.*, FIELDED, *adj.*, FIELD-BASIL, *n. s.*, FIELD-BED, FIELDFARE, FIELD-MARSHAL, FIELD-MOUSE, FIELD-OFFICER, FIELD-PIECE, FIELD-PREACHING, FIELD-ROOM, FIELD-SPORT, FIELDY, *adj.* Sax. ꝑeld; Goth. *field*; Teut. *feld*; Belg. *velt*; all from Goth. *fa*, level, flat, as Mr. Thomson suggests. Champaign; open ground; meadow; any wide space or expanse; the ground of a picture or drawing; the ground of a battle; the action or exploits of an army in the field: fielded is used by Shakspeare for, being in a field of battle: field-basil is a plant: a field-bed, one contrived for ready use in the field: fieldfare, the bird turdus pilaris: field-marshal is, strictly, the commander of a whole army in the field: as a field-officer is one associated in the command of a whole regiment: a field-piece is a piece of ordnance used in fields of battle as distinct from sieges: a field-mouse, the NITEDULA, which see: field-preaching, field-room, and field-sports, are sufficiently plain: fieldy, is an excellent old adjective, meaning roomy; open as a field.

Beholde ye the lilies of the *feeld!*
Wiclif. Luk. xi.

Jhesus cam down fro the hil with hem, and stood in a *feeldy* place, and the cumpany of hise disciples.
Id. Luk. vi.

I was borne free; and because I might live freely I made election of the solitude of the *fields*. The trees of these mountaines are my companions: the cleare water of these streams my mirrours. With the trees and waters I communicate my thoughtes and beautie. *Shelton.*

The bassa planting his *fieldpieces* upon the hills, did from thence grievously annoy the defendants.
Knolles.

You maintain several factions;
And whilst a *field* should be dispatched and fought,
You are disputing of your generals. *Shakspeare.*
Romeo, good night; I'll to my truckle bed,
This *fieldbed* is too cold for me to sleep. *Id.*
Since his majesty went into the *field*,
I have seen her rise from her bed.
Id. Macbeth.

Now, Mars, I pry'thee, make us quick in work;
That we with smoking swords may march from hence,
To help our *fielded* friends. *Id. Coriolanus.*

Live with me, and be my love,
And we will all the pleasure prove,
That hills and vallies, dale and *field*,
And all the craggy mountains yield.
Raleigh.

Winter birds, as woodcocks and *fieldfares*, if they come early out of the northern countries, with us shew cold winters. *Bacon.*

Falling back where they
Might *field-room* find. *Drayton.*

It is a base cowardliness, so soon as ever we are called from the garrison to the *field*, to think of running away. *Bp. Hall's Contemplations.*

What though the *field* be lost,
All is not lost. *Milton's Paradise Lost.*

Around the *fields* did nimble lightning play,
Which offered us by fits, and snatched the day;
'Midst this was heard the shrill and tender cry
Of well pleased ghosts, which in the storm did fly.
Dryden.

The *fieldmouse* builds her garner under ground.
Id.

Let the *field* or ground of the picture be clean, light, and well united with colour. *Id.*

The god a clearer space for heaven designed;
Where *fields* of light and liquid ether flow,
Purged from the ponderous dregs of earth below.
Id.

When a man is in the *field*, a moderate skill in fencing rather exposes him to the sword of his enemy, than secures him from it. *Locke.*

Field lands are not exempted from mildews, nor yet from smut, where it is more than in inclosed lands. *Mortimer.*

Fieldmice are apt to gnaw their roots, and kill them in hard Winters. *Id. Husbandry.*

The ill-natured man gives himself a large *field* to expatiate in; he exposes failings in human nature.
Addison's Spectator.

I should enter upon a *field* too wide, and too much beaten, if I should display all the advantages of peace. *Smalridge.*

Who can this *field* of miracles survey,
And not with Galen all in rapture say,
Behold a God, adore him and obey.
Blackmore.

Ask of yonder argent *fields* above,
Why Jove's satellites are less than Jove?
Pope.

Or great Osiris, who first taught the swain
In Pharian *fields* to sow the golden grain. *Id.*

All *field-sports* I look upon as frivolous.
Lord Chesterfield.

The tumults of *field-preaching* and the freaks of the new birth. *Warburton.*

Let us venture into this large *field*, and take a view of the political, of the moral, of the religious, and of the domestic state of the world. *Robertson's Sermon.*

Not yet the hawthorn bore her berries red,
With which the *fieldfare*, wintry guest, is fed:
Nor Autumn yet had brushed from every spray,
With her chill hand the mellow leaves away.
Cowper.

First with fond gaze blue *fields* of air they sweep,
Or pierce the briny chambers of the deep;
Earth's burning line, and icy poles explore,
Her fertile surface, and her caves of ore. *Darwin.*

Field-marshal is a modern military rank in England, but superior to all others (except the captain-general), having the chief command of the whole army in the *field*. *James.*

When there is a *field-officer* of the day, it is his duty to visit all guards frequently during the day and night. In the morning, on the dismounting of the guards, he will collect the reports, and carry them to the governor or commandant. *Id.*

FIELD, in heraldry, is so called, because it contains those achievements anciently acquired in the field of battle. It is the ground on which the colors, bearing, metals, furs, charges, &c., are represented. Among the modern heralds, field

is less frequently used in blazoning than shield or escutcheon. See SHIELD.

FIELD COLORS, in war, are small flags of about a foot and a half square, which are carried along with the quarter-master general, for marking out the ground for the squadrons and battalions.

FIELDFARE, in ornithology. See TURDUS.

FIELDING (Henry), the son of lieutenant-general Fielding who served under the duke of Marlborough, was born in 1707. On the death of his mother, his father married again; and Sir John Fielding, who succeeded him in the commission of the peace for Middlesex, was his brother by this marriage. Henry was sent to study at Leyden; but a failure in his remittances obliged him to return in two years, when his own propensity to gaiety and profusion drove him to write for the stage at twenty years of age. His first dramatic piece, Love in several Masques, which was well received, appeared in 1727: all his plays and farces, to the amount of eighteen, were written before 1737; and many of them are still acted with applause. While thus employed, he married a young lady with a fortune of £1500 and inherited an estate of £200 a year from his mother; all which, though he retired into the country, he contrived to dissipate in three years; and then applied to the study of the law for a maintenance. In losing his fortune, he acquired the gout; which rendering it impossible for him to attend the bar, he therefore had recourse to his pen for immediate supplies; until he obtained the office of acting justice for Middlesex, an employment more profitable than honorable to him. Reduced at last by the fatigues of this office, and by a complication of disorders, he by the advice of his physicians went to Lisbon, where he died in 1754. He wrote a number of fugitive pamphlets and periodical essays; but is chiefly distinguished by his Adventures of Joseph Andrews, his Amelia, and his History of Tom Jones. His works have been collected and published, with his life prefixed, by Mr. Murphy. Besides these mentioned, he published The Champion, 2 vols.; A Journey from this World to the next; The History of Jonathan Wild; and after his death appeared his Voyage to Lisbon.

FIELDING (Sarah), sister of Henry Fielding, was born in 1714, and lived unmarried, and died at Bath in April 1768. She was the author of the novel of David Simple; a less popular production of a kindred class, called The Cry, a dramatic Fable; Xenophon's Memoirs of Socrates, translated from the Greek (for which she was favored with some valuable notes by Mr. Harris of Salisbury); The Countess of Delwyn; The History of Ophelia; The Lives of Cleopatra and Octavia, &c. &c.

FIELD-STAFF, a weapon carried by the gunners, about the length of a halbert, with a spear at the end; having on each side ears screwed on like the cock of a match-lock, where the gunners screw in lighted matches when they are upon command; and then the field-staffs are said to be armed.

FIELD-WORKS, in fortification, are those thrown up by an army in besieging a fortress, or by the besieged to defend the place. Such are the fortifications of camps, highways, &c.

FIEND, *n. s.* Sax. } Sax. ꝼıenꝺ, ꝼıonꝺ, a
FIEND-LIKE, *adj.* } foe; Goth. and Teut. *fiend*; Dan. *fiende*. An enemy; the great enemy of mankind; the devil.

I nyle that ghe be maad felowis of *fendis*. For ghe moun not drynke the cuppe of the lord, and the cuppe of *fendis*; ghe moun not be parteneris of the boord of the lord, and of the boord of *fendis*.
Wiclif. 1 *Corynth.* x.

Here hauntis that *feend*, and does his daily spoyle;
Therefore henceforth be at your keeping well,
And ever ready for your foeman fell.
Spenser's Faerie Queene.

Tom is followed by the foul *fiend*. *Shakspeare.*
—This dead butcher and his *fiend-like* queen.
Id. Macbeth.

What now, had I a body again, I could,
Coming from hell; what *fiends* would wish should be,
And Hannibal could not have wished to see.
Ben Jonson's Catiline.

The hell-hounds, as ungorged with flesh and blood,
Pursue their prey, and seek their wonted food;
The *fiend* remounts his courser. *Dryden.*

O woman! woman! when to ill thy mind
Is bent, all hell contains no fouler *fiend*. *Pope.*

Vain wish! for lo, in gay attire concealed,
Yonder she comes! the heart inflaming *fiend!*
(Will no kind power the helpless stripling shield?)
Swift to her destined prey see Passion bend.
Beattie.

FIENUS (Thomas), an ingenious and learned physician, born at Antwerp in 1566. He went into Italy to study physic under Mercurialis and Aldrovandus; and on his return distinguished himself so much in the university of Louvain, that he was chosen professor of physic, and was afterwards made physician to the duke of Bavaria. He wrote several works, among which were, De Viribus Imaginationis; and De Formatione Fœtus. He died at Louvain in 1631.

FIERCE, *adj.* } Fr. *fier*, *feroce*; Ital.
FIERCE'LY, *adv.* } *feroce*; Lat. *ferus*; Heb.
FIERCE'NESS, *n. s.* } פרץ, violence.—Minsheu.

Cruel; savage; ravenous; furious; violent.

Therfore se the goodnesse and the *fersnesse* of god, ghe the *fersnesse* into hem that felden doun, but the goodnesse of god into thee, if thou dwellist in goodnesse. *Wiclif. Rom.* xi.

Cursed be their anger, for it was *fierce*; and their wrath, for it was cruel. *Gen.* xlix. 7.

The ships, though so great, are driven of *fierce* winds; yet are they turned about with a very small helm. *James* iii. 4.

Soone as thy dreadful trompe begins to sound,
The god of warre with his *fiers* equipage
Thou doest awake, sleepe never he so sownd,
And scared nations doest with horror sterne astownd.
Spenser's Faerie Queene.

With greedy force each other both assail,
And strike so *fiercely* that they do impress
Deep-dinted furrows in the battered mail:
The iron walls to ward their blows were weak and frail.
Id.

The defendants, *fiercely* assailed by their enemies before, and beaten with the great ordnance behind, were grievously distressed. *Knolles.*

Battle joined, and both sides *fiercely* fought.
Shakspeare

This *fierce* abridgement
Hath to it circumstantial branches, which
Distinction should be rich in. *Id. Cymbelinc.*

The Greeks are strong, and skilful to their strength, *Fierce* to their skill, and to their *fierceness* valiant. *Shakspeare.*

The air, if very cold, irritateth the flame, and maketh it burn more *fiercely*, as fire scorcheth in frosty weather. *Bacon.*

Suddenly there came out of a wood a monstrous lion, with a she-bear not far from him, of little less *fierceness*. *Sidney.*

His pride and brutal *fierceness* I abhor;
But scorn your mean suspicions of me more. *Dryden.*

Thus we see, when their young stand in need of it, the timorous become valiant, the *fierce* and savage kind, and the ravenous, tender, and liberal. *Locke.*

Kindness has resistless charms,
All things else but weakly move;
Fiercest anger it disarms,
And clips the wing of flying love. *Rochester.*

'Tis the curse of mighty minds oppressed,
To think what their state is, and what it should be:
Impatient of their lot, they reason *fiercely*,
And call the laws of providence unequal. *Rowe.*
Tyrants *fierce*, that unrelenting die. *Pope.*

The defect of heat which gives *fierceness* to our natures, may contribute to that roughness of our language. *Swift.*

By the brook the shepherd dines;
From the *fierce* meridian heat
Sheltered by the branching pines,
Pendant o'er his grassy seat. *Cunningham.*

As united fires burn the more *fiercely*, so a sinful society improve and grow in impiety, and every member joins his brother's pollution to his own. It is not easy to say, how much profane companions are instrumental in reciprocally undoing one another. *Witherspoon.*

His son, I am told, even at that early period of life, maintained his opinions, on every subject, with the same sturdy, dogmatical, and arrogant *fierceness* with which he now overbears all opposition to them in company. *Seward.*

FIERI FA'CIAS, *n. s.* In law. A judicial writ, that lies at all times within the year and day, for him that has recovered in an action of debt or damages, to the sheriff, to command him to levy the debt or the damages of his goods against whom the recovery was had.

FIE'RY, *adj.* } Once written firy, from
FIERINESS, *n. s.* } FIRE, which see. Containing fire; fire-like; heated: hence passionate, unrestrained.

Scarcely had Phœbus in the gloomy East
Yet harnessed his *fiery* footed team,
Ne reared above the earth his flaming crest,
When the last deadly smoak aloft did stream. *Faerie Queene.*

The sword which is made *fiery* doth not only cut by reason of the sharpness which simply it hath, but also burn by means of that heat which it hath from fire. *Hooker.*

I know, thoud'st rather
Follow thine enemy in a fiery gulph
Than flatter him in a bower. *Shakspeare.*

Then, as I said, the duke, great Bolingbroke,
Mounted upon a hot and *fiery* steed,
Which his aspiring rider seemed to know,
With slow but stately pace kept on his course. *Id.*

I drew this gallant head of war,
And culled these *fiery* spirits from the world,
To outlook conquest, and to win renown
Even in the jaws of danger and of death. *Id.*
Then *fiery* expedition be my wing,
Jove's Mercury, and herald for a king. *Id.*

Will any man put his finger into a *fiery* crucible, to pull out gold? *Bp. Hall.*

The ashes, by their heat, their *fieriness*, and their dryness, belong to the element of earth. *Boyle.*

Through Elis and the Grecian towns he flew;
The' audacious wretch for *fiery* coursers drew. *Dryden.*

The Italians, notwithstanding their natural *fieriness* of temper, affect always to appear sober and sedate. *Addison.*

See! from the brake the whirring pheasant springs,
And mounts exulting on triumphant wings:
Short is his joy; he feels the *fiery* wound,
Flutters in blood, and panting beats the ground. *Pope.*

Though now with hopeless toil we trace
Time's backward rolls to find its place;
Whether the *fiery*-tressed Dane
Or Roman's self o'erturned the fane. *Collins.*

The Boy was sprung to manhood: in the wilds
Of *fiery* climes he made himself a home,
And his soul drank their sunbeams. *Byron.*

FIESCO (John Lewis), count of Lavagna, head of one of the noblest houses in Genoa, became master of a large patrimony at the age of eighteen, and headed a remarkable conspiracy against the Doria family. France and the pope (Paul III.) seem to have favored his plans. On the evening of the 1st of January, 1547, he had prepared a galley under pretence of a cruise against the corsairs, and waited upon Andrew Doria, to request permission to depart from the harbour early in the morning. The same night he assembled a large body of partisans at his house, on the pretence of an entertainment, to whom he made an eloquent appeal on the subject of this undertaking; and then hastened to the apartment of his wife, and acquainted her with his intention. She earnestly, but in vain, entreated him to abandon his desperate enterprise. He took leave of her, saying, 'Madam, you shall never see me again, or you shall see every thing in Genoa beneath you.' He now sallied forth, preceded by 500 armed men, and despatching parties to different quarters, himself proceeded to secure the darsena, or dock, in which the galleys lay. Going on board one of these, from which he was proceeding across the plank to the captain galley, the board gave way; and falling into the water, incumbered with his armour, he sank to rise no more! Thus terminated the life of this able ambitious young noble at the early age of twenty-two. His confederates failed in their attempt on Andrew Doria, but Giannetino his nephew fell beneath their swords. The loss of the leader however proved fatal to their conspiracy; his brother Jerome was deserted, and the whole family was ruined and banished.

FIESOLE (the ancient Fæsulæ), an ancient town of Tuscany, one of the twelve cities of Etruria, and the spot to which Catiline retired on the discovery of his conspiracy. It is a bishop's see, but at present little more than a

heap of ruins: the situation is, however, elevated and salubrious, and the Florentines have villas here, where there are traces of an amphitheatre of great extent. Three miles north-east of Florence.

FIFE. Fr. *fifre*; Teut. *pfeiffi*. A military music-pipe; an accompaniment to the drum.

> Farewell the plumed troops, and the big war
> That make ambition virtue! oh farewell!
> Farewell the neighing steed and the shrill trump,
> The spirit-stirring drum, the ear-piercing *fife*.
> *Shakspeare.*

> Thus the gay victim, with fresh garlands crowned,
> Pleased with the sacred *fife's* enlivening sound,
> Through gazing crowds in solemn state proceeds.
> *Philips.*

FIFE, or FIFESHIRE, a county of Scotland, bounded on the west by those of Clackmannan Kinross, and Perth; on the north and north-east by the Tay; on the east by the German Ocean, and on the south by the Frith of Forth. Though it extends to a much greater length along the coast, its mean dimensions are not above thirty-six miles in length, by fourteen in breadth; and its superficial area has been computed at 504 square miles, or 322,560 English acres. The face of the country is various. Towards the west it is mountainous having the Lomond hills rising to a great height; and a ridge of hills extends eastward almost to the coast, occupying the central district; towards the north and south the surface descends gradually to the Friths of Tay and Forth, exhibiting the most beautiful prospect of fertile and well-cultivated fields. Woods and plantations abound through the whole, and the hills are covered with sheep, whose wool is in high estimation.

Agriculture has been greatly improved of late years; and the farms, particularly on the northern declivity, bring very high rents. The rental of the lands, in 1811, was £335,290 14*s*. 6*d*. sterling, or almost a guinea an acre over the whole, and of the houses £38,756 1*s*. 6*d*. The farms in general are of a moderate size; few of them are what may be called large, the greater number are small, and the average perhaps about 150 acres. But there are many possessions from fifty down to eight or ten acres, occupied by their proprietors, or by manufacturers, tradesmen, and mechanics. In all new leases the rent is made payable in money, though in a few instances the amount may depend upon the price of grain, and vary therefore from year to year. The common length of a lease here, as throughout Scotland, is nineteen years. The farm-buildings present a great variety in regard to their materials and construction; but on the whole have much improved of late. More than a third of this country is completely and substantially enclosed with dry stone walls or thorn hedges, chiefly the latter. This is one of the Scottish counties where flax is grown to some extent: though it is by no means a favorite with landlords, who, in some instances, have prohibited their tenants from sowing more than one acre in a year. The cattle of Fifeshire have long been in high repute, both as fattening and dairy stock. The prevailing color is black; horns small, white, turned up at the points; bone small in proportion to the carcase; weighing, when fat, from three to four years old, from forty to sixty stone. The cows, when well fed, yield from ten to fourteen Scots pints of milk daily (nearly half as many English wine gallons) during the best of the grass season, and continue long in milk; yet the dairy is here but a secondary object. The oxen were formerly much employed in labor, and were in request for this purpose for the counties along the north-east coast, but they are now very seldom to be seen at work. The horses are much the same as are found in all the lowlands of Scotland.

The staple manufacture is linen. Dunfermline has long been famous for its damasks and diapers. In several towns checks, ticks, osnaburgs, and other fabrics are made. In 1812 4,500,000 yards of linen cloth were stamped, of the value of £280,000; and in 1800, 600,000 yards of plain linen were supposed to be made by private families for their own use, which were not stamped. The number of hands employed in all the branches of this manufacture in 1800 was computed to be 23,192. Flax is spun into yarn almost in every family. The other manufactures are spirits, at four distilleries, one of which works for the English market; ship-building at Dysart, Kirkaldy, Wemyss, and Anstruther; salt at the two former places and other towns; leather at Kirkaldy, Cupar, Auchtermuchty, and Falkland; and there are breweries in every town, and most of the villages. At Cupar, Kirkaldy, and Leven, bricks and tiles are made to a large amount; and vitriol or sulphuric acid at Burntisland.

The principal rivers are the Eden and the Leven, both abounding with trout and salmon; and on no part of the coast of Scotland is the white fishery more productive than on that of Fife. Many lakes, formerly seen here, have been drained, and converted into arable land; but some of small extent remain, such as the Loch of Lindores, Kilconquhar Loch, together with Lochgellie, Comilla, and Lochpitty. Lead and copper and iron ore have been found here, and the sulphuretted ore of zinc; but coal is the most important and abundant of its mineral productions, and is well known to have been wrought here for above five centuries. There is a charter, dated 1291, allowing a coal-pit to be opened near Dunfermline. Another has been recently mentioned by Mr. Chalmers, which is dated 1284-5, by which it appears that coal was used at Tranent before that period. The greatest lime-works in Scotland are those belonging to the earl of Elgin, at Charles Town on the Forth, from which about 100,000 tons are raised annually; part of which is sold as it comes from the quarry, and 12,000 tons of coals are employed in calcining the remainder on the spot. Stones, resembling the precious garnet, are found in considerable numbers at Elie, and known by the name of Elie rubies.

This county is little distinguished by commerce. In 1800, 142 vessels, carrying 13,513 tons, and navigated by 883 seamen, were under the two custom-houses at Kirkaldy and Anstruther, within the county, and about half the number of each was supposed to be under those

out of it. These vessels are partly employed in foreign trade with Russia and the ports on the Baltic, but chiefly in the coasting trade. The exports are the manufactures already mentioned, with coal, lime, and grain of all sorts; and the imports from foreign parts, timber, bark, hides, and tallow, flax and flax-seed, hemp, tar, iron, &c.; and coastwise, groceries, and other articles for home consumption. Fifeshire contains thirteen royal boroughs, which still possess parliamentary representations: viz. Cupar, St. Andrews, Inverkeithing, Dunfermline, Burntisland, Kinghorn, Kirkaldy, Dysart, Pittenweem, Anstruther Wester and Easter, Kilrenny, and Crail; besides several which have lost that privilege, from their being unable to bear the expense of sending a commissioner to the Scottish parliament; but which yet retain all their other privileges; such are Auchtermuchty, Strathmiglo, Newburgh, Falkland, Kilconquhar, Elie, Earls-ferry, &c. These are joined with burghs belonging to other counties; Cupar and St. Andrews, with Dundee, Perth, and Forfar; and Dunfermline and Inverkeithing, with Stirling, Culross, and Queensferry. Fifeshire thus sends three members to parliament, one for the county and two for its burghs; besides that the latter have a share in the election of two members more. None of these towns are now considerable, Dunfermline excepted, which is a thriving place. See DUNFERMLINE. Packets and ferry-boats ply regularly across the Forth from several places in this county; but the great thoroughfares are between Leith and Kinghorn, or Pettycur, and between Queensferry and Inverkeithing, or the North Ferry. Vestiges of royal splendor are still visible at St. Andrews, Dunfermline, Falkland, and Kinghorn, and various monastic remains are scattered throughout the county. Among the most remarkable are the ruins of St. Regulus's chapel and tower, at St. Andrews, said to have been built in the fourth century; the cathedral at the same place, founded in 1161; the abbey of Dunfermline, remarkable for its being a royal cemetery, where the remains of Robert Bruce were lately discovered and reinterred with becoming solemnity. To the county also belong the small islands of May and Inchgarvie. There is a great number of elegant seats in the county, of which ten belong to eight peers, and seven to baronets, besides more than seventy to other proprietors. It is divided into sixty-one parochial districts, having one full synod, and four presbytery seats within itself. Fife affords an Irish title of earl to the Duffs of Braco, the descendants of the ancient Thanes of Fife. Cupar is the county town.

FIFE-RAILS, in a ship, are those placed on banisters, on each side of the top of the poop, and so along with hauncers or falls. They reach down to the quarter-deck, and to the stair of the gang-way.

FIF'TEEN, *adj.* } Sax. ꝼẏꝼtẏne, ꝼiꝼteoða.
FIF'TEENTH. } Five and ten: fifteenth is the ordinal of fifteen; the fifth after the tenth; containing one part in fifteen.

And Bethanye was besides Jerusalem, as it were *fiftene* furlongis. *Wiclif. Jon* xi.

I have dreamed and slept above some *fifteen* years and more. *Shakspeare. Taming of the Shrew.*

A *fifteenth* part of silver incorporate with gold, will not be recovered by any water of separation, except you put a greater quantity of silver to draw up the less. *Bacon's Nat. History.*

London sends but four burgesses to parliament, although it bear the *fifteenth* part of the charge of the whole nation in all public taxes and levies. *Graunt's Bills of Mortality.*

Towards the end of the *fifteenth* century, and beginning of the sixteenth, all the princes of Europe attacked, as if by concert, the power of their nobles. *Robertson's History of Scotland.*

FIFTH, *adj.* } Sax. ꝼiꝼta. The ordinal
FIFTH'LY, *adv.* } of five; the next to the fourth. Note: all our ordinals are taken elliptically for the part of which they express: as a fifth, a fifth part; a third, a third part, &c.

Fifthly, living creatures have a more exact figure than plants. *Bacon's Nat. History.*

With smiling aspect you serenely move,
In your *fifth* orb, and rule the realm of love.
Dryden.

Just as I wished the lots were cast on four,
Myself the *fifth*. *Pope's Odyssey.*

The publick shall have lost four *fifths* of its annual income for ever. *Swift.*

FIFTH MONARCHY MEN, a set of fanatical Levellers, who arose in the time of Cromwell, and who supposed the period of the Millenium to be just at hand, when Jesus Christ should descend from heaven, and erect the fifth universal monarchy! Acting under this illusion, these enthusiasts actually proceeded to the length of proclaiming Jesus Christ king at London: but Oliver soon dispersed them, and put an end to their visionary monarchy. See GREAT BRITAIN.

FI'FTY, *adj.* } Sax. ꝼiꝼtiȝ, ꝼiꝼteoȝoða. Five
FI'FTIETH. } tens: the ordinal of fifty.

Thanne the Jewis seiden to him thou hast not yet *fifti* yeer, and hast thou seyen Abraham. *Wiclif. Jon* viii.

Judas ordained captains over thousands, hundreds, *fifties*, and tens. 1 *Mac.* iii. 55.

A withered hermit, five-score Winters worn,
Might shake off *fifty* looking in her eye.
Shakspeare.

Be then desired
Of *fifty* to disquantity your train;
And the remainders, that shall still depend,
To such men as may besort your age. *Id.*

If this medium be rarer within the sun's body than at its surface, and rarer there than at the hundredth part of an inch from its body, and rarer there than at the *fiftieth* part of an inch from its body, and rarer there than at the orb of Saturn, I see no reason why the increase of density should stop any where. *Newton's Opticks.*

In the Hebrew there is a particle consisting but of one letter, of which there are reckoned up above *fifty* several significations. *Locke.*

FIG, *v. a.* See FICO. To insult with ficos, or contemptuous motions of the fingers; to delude.

When Pistol lies, do this, and *fig* me like
The bragging Spaniard. *Shakspeare. Henry IV.*

Away to the sow she goes, and *figs* her in the crown with another story. *L'Estrange.*

FIG, *n. s.* } Sax. fic; Fr. *figue*; Ital.
FIG'APPLE, } and Span. *figo*; Teut. *feig*;
FIG'GNAT, } Lat. *ficus*; Heb. פג. See
FIG LEAF, } FICUS. The tree which
FIG'MARIGOLD, } bears figs; the fruit of the
FIG'WORT. } ficus. The fig-apple Mortimer defines in the extract. The fig-gnat is a species of culex. Fig-leaf, the leaf of the ficus, and metaphorically any flimsy, imperfect covering. Fig-marigold, a plant—see the extract. Fig-wort, a plant also called SCROPHULARIA, which see.

Every tree is knowen of his fruyt, and men gaderin not *figis* of thornes: nether men gaderin a grape of a buysch of brieris. *Wiclif. Luk.* vi.

It maketh *figs* better, if a fig-tree, when it beginneth to put forth leaves, have his top cut off.
Bacon's Natural History.

A *figapple* hath no core or kernel, in these resembling a *fig*, and differing from other apples.
Mortimer's Husbandry.

What pitiful *figleaves!* What senseless and ridiculous shifts are these! *Lowth.*

Figs are great subduers of acrimony. *Arbuthnot.*

Full on its crown a *fig's* green branches rise,
nd shoot a leafy forest to the skies.
Pope's Odyssey.

Or lead me through the maze,
Embowering endless of the Indian *fig*.
Thomson.

Figmarigold is succulent, and has the appearance of houseleek; the leaves grow opposite by pairs.
Miller.

Will not wounding the branch of a pear-tree, which is too vigorous, prevent the blossoms from falling off; as from some *fig-trees* the fruit is said to fall off unless they are wounded by caprification? *Darwin.*

FIG, or FIG-TREE. See FICUS. Figs are a considerable article in the materia medica, chiefly employed in emollient cataplasms and pectoral decoctions. The best are those which come from Turkey. Many are also brought from the south of France, where they prepare them in the following manner:—The fruit is first dipped in scalding hot lie made of the ashes of the fig-tree, and then dried in the sun. Hence these figs stick to the hands, and scour them like lixivial salts: and for the the same reason they excite to stool, without griping. They are moderately nutrimental, grateful to the stomach, and easier to digest than any other of the sweet-fruits They have been said to produce lice, when eaten as a common food; but this is entirely without foundation.

FIGHIG, a town and district of Africa, in the country of Sigilmessa, to the south of the greater Atlas and included within the dominions of the emperor of Morocco. A fine woollen cloth is manufactured here; and the place is a considerable rendezvous for the Mecca and Tombuctoo caravans. 240 miles E. S. E. of Mequinez.

FIGHT, *v. n., v. a.* & *n. s.* } Sax. feohtan; Gothic,
FIGHT'ER, } *vigan, figta;*
FIGHT'ING, *part. adj.*, & *n. s.* } Swed. *fecta, fegd* (war); Teut. *fechten;* all, as Mr. Thomson thinks, from the Goth. *eiga*, to contend. To combat in battle; to war; make war; contend in arms; contend generally; taking both *with* and *against* before the party opposed: as an active verb, to war against: as substantives, fight and fighting are battle or combat of any kind; contention: fight is particularly used for a screen of the combatants in ships.

The stars in their courses *fought against* Sisera.
Judges.

An host of *fighting* men went out to war by bands.
2 Chron.

Ye *fight with* the Chaldeans. *Jer*

At mortal battails had he ben fiftene,
And *foughtin* for our feith at Tramesene,
In listis thrys, and alwey slein his fo. *Chaucer.*

For nothing is more blameful to a knight,
That court'sie doth as well as armes professe,
However strong and fortunate in *fight*,
Then the reproach of pride or cruelnesse.
Spenser's Faerie Queene.

The poor wren,
The most diminutive of birds, will *fight*,
The young ones in her nest, against the owl.
Shakspeare. Macbeth.

Fierce fiery warriors *fight* upon the clouds
In ranks and squadrons, and right form of war.
Shakspeare.

I will return again into the house, and desire some conduct of the lady: I am no *fighter*. *Id.*

Richard, that robbed the lion of his heart,
And *fought* the holy wars in Palestine,
By this brave duke came early to his grave. *Id.*

Here might be seen a great difference between men practised to *fight*, and men accustomed only to spoil.
Hayward.

The hot and cold, the dry and humid *fight*.
Sandys.

Gabriel, lead forth to battle these my sons.
Invincible, lead forth my armed saints,
By thousands and by millions ranged for *fight*.
Milton.

On the *foughten* field
Michael and his angels prevalent
Encamping, placed in guard their watches round
Cherubick waving fires. *Id. Paradise Lost.*

Himself alone an equal match he boasts,
To *fight* the Phrygian and the Ausonian hosts.
Dryden's Æneid.

Herilus in single *fight* I slew,
Whom with three lives Feronia did endue;
And thrice I sent him to the Stygian shore,
'Till the last ebbing soul returned no more.
Dryden.

Who ever saw a noble sight,
That never viewed a brave sea *fight!*
Hang up your bloody colours in the air,
Up with your *fights* and your nettings prepare.
Id.

O, 'tis the coldest youth upon a charge,
The most deliberate *fighter*. *Id. All for Love.*

For her confederate nations *fought*, and kings were slain,
Troy was o'erthrown, and a whole empire fell.
Philips.

Greatly unfortunate, he *fights* the cause
Of honour, virtue, liberty, and Rome. *Addison.*

In *fighting* fields as far the spear I throw,
As flies the arrow from the well-drawn bow.
Pope.

The common question is, if we must now surrender Spain, what have we been *fighting* for all this while? The answer is ready: we have been *fighting* for the ruin of the publick interest, and the advancement of a private. *Swift.*

While chairs and slavery were the certain lot of the conquered, battles were *fought*, and towns de-

fended with a rage and obstinacy, which nothing but horror at such a fate could have inspired.
Robertson's Sermon.

And when they smiled because he deemed it near,
His heart more truly knew that peal too well
Which stretched his father on a bloody bier,
And roused the vengeance blood alone could quell:
He rushed into the field, and, foremost *fighting*, fell.
Byron.

FIG'MENT, Lat. *figmentum*. A fiction; invention; feigned notion.

Upon the like grounds was raised the *figment* of Briareus, who, dwelling in a city called Hecatonchiria, the fancies of those times assigned him an hundred hands. *Browne.*

Those assertions are in truth the *figments* of those idle brains that brought romances into church history.
Bishop Lloyd.

It carried rather an appearance of *figment* and invention, in those that handed down the memory of it, than of truth and reality. *Woodward.*

FIGUERAS, a town of Catalonia, situated in the middle of a plain near the French frontier. It has a spacious square, with a piazza and wide ill-built streets. In the vicinity is a strong castle erected on an eminence, at an immense cost, in the middle of the eighteenth century. The approaches are all undermined, and every building is bomb proof. This important fortress was delivered over to the French in 1808, but surprised by the insurgent Spaniards in the night of 10th April 1811. The French garrison were made prisoners without firing a shot; but the place being besieged anew was compelled to surrender on 19th August, for want of provisions. Population 4600. Twenty miles north of Gerona, and twenty-five south of Perpignan.

FIG'URE, *n. s., v. a.* & *v. n.*
FIG'URABLE, *adj.*
FIGURABIL'ITY, *n. s.*
FIG'URAL, *adj.*
FIG'URATE,
FIGURA'TION, *n. s.*
FIG URATIVE, *adj.*
FIG'URATIVELY, *adv.*
FIG'URE-CASTER, *n. s.*
FIG'URE-FLINGER.

Fr. *figure*; It. Span. Port. and Lat. *figura* à *fingo*, to make. Form; shape; outline; appearance: applied intensively to remarkable appearance; eminence; numerical characters; representations of the human form; statues; also to the combination of figures in an astrological horoscope; to theological types and representations; and in rhetoric to various modes of speaking which depart from the literal and primitive sense of words. See FIGURE, in rhetoric, below. To figure is to mould; form into shape; represent in any way; to cover, adorn, or diversify with figures; to form figuratively; to express in numerical or other characters: as a verb neuter to make a figure. Figurable is capable of receiving and retaining forms: figurability, the corresponding substantive: figural, represented by figure or delineation: figurate, of a determinate form, or resembling a determinate form: figuration, determination to, or the act of giving, a particular form: figurative, not literal; meaning something else under the literal terms or representations used; changed by rhetorical figures from the primitive meaning: figuratively is the corresponding adverb. Figure-caster and figure-flinger are both names of the contemptible race of astrologers.

Who was the *figure* of him that is to come.
Romans.

Arachne *figured* how Jove did abuse
Europa like a bull, and on his back
Her through the sea did bear; so lively seen,
That it true sea, and true bull ye would ween.
Spenser.

When sacraments are said to be visible signs of invisible grace, we thereby conceive how grace is indeed the very end for which these heavenly mysteries were instituted: and the matter whereof they consist is such as signifieth, *figureth*, and representeth their end. *Hooker.*

We do not know what's brought to pass under the profession of fortunetelling; she works by charms, by spells, by the *figure*, and daubry beyond our element. *Shakspeare.*

He hath borne himself beyond the promise of his age, doing in the *figure* of a lamb the feats of a lion.
Id.

Hearts, tongues, *figures*, scribes, bards, poets cannot
Think, speak, cast, write, sing, number
His love to Antony. *Id. Antony and Cleopatra.*

Three glorious suns, each one a perfect sun;
In this the heaven *figures* some event.
Shakspeare.

Silken terms precise
Three piled hyperboles, spruce affectation,
Figures pedantical, these Summer flies
Have blown me full of maggot ostentation. *Id.*

There is a history in all men's lives,
Figuring the nature of the times deceased. *Id.*

I'll give my jewels for a set of beads,
My gorgeous palace for a hermitage,
My gay apparel for an almsman's gown,
My *figured* goblets for a dish of wood. *Id.*

He that seeketh to be eminent amongst able men, hath a great task; but that is ever good for the publick: but he that plots to be the only *figure* among cyphers, is the decay of a whole age. *Bacon.*

Flowers have all exquisite *figures*, and the flower numbers are chiefly five and four: as in primroses, briar-roses, single muskroses, single pinks and gilliflowers, which have five leaves; lilies, flowerdeluces, borage, bugloss, which have four leaves. *Id.*

Trees and herbs, in the growing forth of their boughs and branches, are not *figured*, and keep no order. *Id.*

The differences of impressible and not impressible, *figurable* and not *figurable*, scissable and not scissable, are plebeian notions. *Id.*

Plants are all *figurate* and determinate, which inanimate bodies are not; for look how far the spirit is able to spread and continue itself, so far goeth the shape or *figure*, and then is determined. *Id.*

Neither doth the wind, as far as it carrieth a voice, with motion thereof confound any of the delicate and articulate *figurations* of the air in variety of words.
Id. Natural History.

Marriage rings are not of this stuff:
Oh! why should ought less precious or less tough
Figure our loves? *Donne.*

He set a *figure* to discover
If you were fled to Rye or Dover. *Hudibras.*

As sins proceed, they ever multiply, and, like *figures* in arithmetic, the last stands for more than all that went before it. *Sir T. Browne.*

Incongruities have been committed by geographers in the *figural* resemblances of several regions.
Id

Men find green clay that is soft as long as it is in e water, so that one may print on it all kinds of *ures*, and give it what shape one pleases. *Boyle.*

Here is a strange *figure* invented against the plain id natural sense of the words; for by praying to stow, must be understood only praying to pray. *Stillingfleet.*

How often have we been railed at for understand-g words in a *figurative* sense, which cannot be lite-lly understood without overthrowing the plainest idence of sense and reason. *Id.*

The blue German shall the Tigris drink,
Ere I, forsaking gratitude and truth,
orget the *figure* of that godlike youth. *Dryden.*

While fortune favoured while his arms support he cause, and ruled the counsels of the court, made some *figure* there; nor was my name bscure, nor I without my share of fame. *Id.*

In the principal *figures* of a picture the painter is employ the sinews of his art; for in them consists ie principal beauty of his work. *Id.*

Each thought was visible that rolled within,
As thro' a crystal glass the *figured* hours are seen. *Id.*

Sublime subjects ought to be adorned with the ublimest and with the most *figurative* expressions. *Id. Juvenal, Preface.*

Satyr is a kind of poetry in which human vices re reprehended, partly dramatically, partly simply; ut, for the most part, *figuratively* and occultly. *Id. Dedication.*

Figure-flingers and star-gazers pretend to foretell he fortunes of kingdoms, and have no foresight in what concerns themselves. *L'Estrange.*

Figures are properly modifications of bodies; for ure space is not any where terminated, nor can be: whether there be or be not body in it, it is uniformly continued. *Locke.*

They have been taught rhetorick, but never taught language; as if the names of the *figures* that embellished the discourse of those, who understood the art of speaking, were the very art and skill of speaking well. *Id.*

Figured and metaphorical expressions do well to illustrate more abstruse and unfamiliar ideas, which the mind is not yet thoroughly accustomed to. *Id.*

As in accounts cyphers and *figures* pass for real sums, so in human affairs words pass for things themselves. *South's Sermons.*

A good *figure*, or person, in man or woman, gives credit at first sight to the choice of either. *Clarissa.*

The emperor appears as a rising sun, and holds a globe in his hand to *figure* out the earth that is enlightened and actuated by his beams. *Addison.*

Not a woman shall be unexplained that makes a *figure* either as a maid, a wife, or a widow. *Id. Guardian.*

I was charmed with the gracefulness of his *figure* and delivery, as well as with his discourses. *Addison.*

Several statues, which seemed at a distance of the whitest marble, were nothing else but so many *figures* in snow. *Id.*

None that feels sensibly the decays of age, and his life wearing off, can *figure* to himself those imaginary charms in riches and praise, that men are apt to do in the warmth of their blood. *Temple.*

If love, alas. be pain, the pain I bear
No thought can *figure*, and no tongue declare. *Prior.*

My favourite books and pictures sell;
Kindly throw in a little *figure*,
And set the price upon the bigger. *Id.*

Quacks, *figure*-flingers, pettifoggers, and republican plotters cannot well live without it. *Collier.*

This is a *figurative* expression, where the words are used in a different sense from what they signify in their first ordinary intention. *Rogers.*

The custom of the apostle is *figuratively* to transfer to himself, in the first person, what belongs to others. *Hammond.*

Now marks the course of rolling orbs on high,
O'er *figured* world now travels with his eye. *Pope.*

The *figure* of a syllogism is the proper disposition of the middle term with the parts of the question. *Watts's Logick.*

If it be his chief end in it to grow rich, that he may live in *figure* and indulgence, and be able to retire from business to idleness and hurry, his trade, as to him, loses all its innocency. *Law.*

I grant you the periods are very well turned: so, a fresh egg is a very good thing; but when thrown at a man in a pillory it does not at all improve his *figure*, not to mention the irreparable loss of the egg. *Burns.*

SIR ANTH. And it is my wish, while yet I live, to have my boy make some *figure* in the world. I have resolved, therefore, to fix you at once in a noble independence. *Sheridan.*

There's one, though tall and stiffer than a pike,
Yet has a sentimental kind of air
Which might go far, but she don't dance with vigour;
The more's the pity, with her face and *figure*. *Byron.*

Like the *figures* on arras, that gloomily glare,
Stirred by the breath of the wintry air,
So seen by the dying lamp's fitful light,
Lifeless, but life-like, and awful to sight.
Id. Siege of Corinth.

FIGURE, in logic, denotes a certain order and disposition of the middle term in any syllogism. Figures are fourfold. 1. When the middle term is the subject of the major proposition, and the predicate of the minor, we have what is called the first figure. 2. When the middle term is the predicate of both the premises, the syllogism is said to be in the second figure. If the middle term is the subject of the two premises, the syllogism is in the third figure. And lastly, by making it the predicate of the major, and subject of the minor, we obtain syllogisms in the fourth figure. Each of these figures has a determinate number of moods, including all the possible ways in which propositions differing in quantity or quality can be combined, according to any disposition of the middle term, in order to arrive at a just conclusion. See LOGIC.

FILACER, FILAZER or FILIZER. *Filizarius.* Fr. *file*, *filace*; from Lat. *filum*, a thread. An officer of the court of common pleas, so called because he files those writs whereon he makes out process. There are fourteen of those filazers in their several divisions and counties, and they make forth all writs and processes upon original writs, issuing out of chancery, as well real, as personal and mixed, returnable in that court; and in actions merely personal, where the defendants are returned summoned, they make out pones or attachments; which being returned and executed, if the defendant appears not, they make forth a distringas, and so ad infinitum, or until he doth appear; if he be returned nihil, then process of capias infinite, &c. They enter all

appearances and special bails, upon any process made by them: and make the first scire facias on special bails, writs of habeas corpus, distringas nuper vice comitem vel ballivum, and all supersedeas's upon special bail: in real actions, writs of view, of grand and petit cape, of withernam, &c.; also writs of adjournment of a term, in case of public disturbance, &c. An order of court, 14 Jac. I., first limited their proceedings to all matters before appearance, and the prothonotaries to all after. The filazers of the common pleas have been officers of that court before the stat. 10 Hen. VI. c. 4., wherein they are mentioned: and in the king's bench, of later times, there have been filazers who make out process upon original writs returnable in that court, on actions in general.

FIL'AMENT, *n. s.* } Fr. *filament*; Lat. *fila-*
FILA'CEOUS, *adj.* } *menta*. A slight or slender thread: filaceous is thread-like, or composed of threads.

They make cables of the bark of lime trees; it is the stalk that maketh the *filaceous* matter commonly, and sometimes the down that groweth above.
Bacon's Natural History.

The lungs of consumptives have been consumed, nothing remaining but the ambient membrane, and a number of withered veins and *filaments*. *Harvey.*

Men that look no further than their outsides, think health an appurtenance unto life, and quarrel with their constitutions for being sick; but I that have examined the parts of man, and know upon what tender *filaments* that fabric hangs, do wonder that we are not always so; and, considering the thousand doors that lead to death, to thank my God that we can die but once. *Sir T. Browne.*

The ever-rolling orb's impulsive ray
On the next threads and *filaments* does bear,
Which form the springy texture of the air;
And those still strike the next, 'till to the sight
The quick vibration propagates the light.
Blackmore.

The dung of horses is nothing but the *filaments* of the hay, and as such combustible. *Arbuthnot.*

FILANDERS, in entomology and falconry, are worms as small as thread, and about an inch long, that lie wrapt up in a thin skin or net, near the reins of a hawk, apart from either gut or gorge. The malady is known by the hawk's poverty; by her ruffling her tail; by straining the fist, or perch, with her pounces; and, lastly, by croaking in the night, when the filanders prick her. The disease proceeds from bad food; and must be remedied early, to prevent its spreading over the whole body, and destroying the bird. These worms must not be killed as others are, for fear of imposthumes from their corruption, being incapable of passing away with the hawk's feces. They must only be stupified, to prevent their being offensive, by giving the hawk a clove of garlic; after which she will feel nothing of them for forty days. The falconer, when he observes the hawk poor and low, should give her a clove of garlic once a month by way of prevention.

FILANDERS, in falconry, are also the name of another disease in hawks, &c., consisting of filaments or strings of blood coagulated; and occasioned by a violent rupture of some vein, by which the blood extravasating, hardens into these figures, and incommodes the reins, hips, &c.

FILANGIERI (Gætan), one of the few modern Neapolitan writers of eminence, was born in 1752, and destined, as the younger son of a noble family, to the army. He however applied himself in 1774 to the study of the law, and produced a tract, in which he defended a new enactment against the arbitrary decision of a judge. He soon after withdrew from public life, but in 1777 at the advice of his uncle, the archbishop of Naples, entered into the service of the court, and was appointed gentleman of the bed-chamber and an officer in the royal corps of marine volunteers. In 1780 he published the first part of his great work on The Science of Legislation, the whole of which was to be completed in seven books. In the first he proposed to expound the general rules of legislation; in the second, civil and economical laws; in the third, criminal laws; in the fourth, legislation as applied to education and morals; in the fifth, ecclesiastical laws; in the sixth, laws respecting property; and in the seventh, laws relative to paternal authority and domestic economy. Of this work the first four books only appeared during the life of the author. In 1783, having married a lady from Hungary who was governess to one of the princesses, he resigned his employments and resided for some time in the country; but in March, 1787, was appointed to a place in the royal college of finance. He died suddenly while engaged in some extensive plans of improvement in the resources of the state, in July 1788. A part of the fifth book of his Science of Legislation was published in 1791, and attracted great public attention, from the bold and original views, and the liberality of sentiment by which it is characterised. Several editions appeared in Italy, and it was translated into the French, German, English, and Spanish languages.

FILBERT', *n. s.* A hazel nut. A corruption, as Junius and Skinner think, of 'full beard', from the long beard or husk of this fruit. Dr. Johnson conjectures it may have been originally called after some proper name, like Filbert or Filibert. Mr. Horne Tooke reminds us of the following curious passage in Gower's Amantis on the subject of its etymology:—

'Upon a grene bough
A seynt of sylke, which she (Phillis) there had,
She knit; and so herself she lad,
That she about her white severe
It did, and henge hirselfe there.
Whereof the goddes were amoved,
And Demophon was reproved,
That of the goddes' providence
Was shape such an evidence
Ever afterwarde ayen the slowe,
That Phillis in the same throwe
Was shape into a nutte tree,
That all men it might see:
And after Phillis *Philberd*
This tree was cleped in the yerd:
And yet, for Demophon to shame,
Unto this day it beareth the name.
Gower. Confess. Amantis.

In August comes fruit of all sorts; as plums, pears, apricots, barberries, *filberts*, muskmelons, monkshoods of all colors. *Bacon's Essays.*

Thou hast a brain, such as it is indeed!
On what else should thy worm of fancy feed?
Yet in a *filbert* I have often known
Maggots survive, when all the kernel's gone.
Dorset.

There is also another kind, called the *filbert* of Constantinople; the leaves and fruit of which are bigger than either of the former; the best are those of a thin shell. *Mortimer.*

FILCH, *v. a.* FILCH'ER, *n. s.* FILCH'ING. } Fr. *filouter;* Goth. *fela, filgia;* Swed. *filska*: probably, as Minsheu suggests, from the Latin *fallax, fallacis*. To steal; thieve; particularly in a secret and paltry manner.

The champion robbeth by night,
And prowleth and *filcheth* by daie.
Tusser's Husbandman.

He shall find his wealth wonderfully enlarged by keeping his cattle in inclosures, where they shall always have safe being, that none are continually *filched* and stolen. *Spenser.*

Who steals my purse, steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;
But he that *filches* from me my good name,
Robs me of that which not enriches him,
And makes me poor indeed. *Shakspeare. Othello.*

He could discern cities like hives of bees, wherein every bee did nought else but sting; some like hornets, some like *filching* wasps, others as drones.
Burton on Melancholy.

What made the venture to betray,
And *filch* the lady's heart away. *Hudibras.*

Fain would they *filch* that little food away,
While unrestrained those happy gluttons prey.
Dryden.

The pismire was formerly a husbandman, that secretly *filched* away his neighbour's goods.
L'Estrange.

So speeds the wily fox, alarmed by fear,
Who lately *filched* the turkey's callow care. *Gay.*

Your business is not to steal from them, but to improve upon them, and make their sentiments your own; which is an effect of great judgment; and, though difficult, yet very possible without the scurvy imputation of *filching*. *Swift.*

The tree of knowledge has been plucked—all's known—
And life yields nothing further to recall
Worthy of this ambrosial sin, so shown,
No doubt in fable, as the unforgiven
Fire which Prometheus *filched* for us from heaven.
Byron.

FILE, *n. s., v. a.* & *v. n.* Fr. *file;* Lat. *filum* (à *pilus*, Gr. πιλος, hair). A thread; a line on which papers are strung; a muster-roll; line of soldiers: to place papers or documents on a file; to march in file.

Our present musters grow upon the *file*
To five and twenty thousand men of choice.
Shakspeare.

Those goodly eyes,
That o'er the *files* and musters of the war
Have glowed like plated Mars, now bend, now turn
Upon a tawny front.
Shakspeare. Antony and Cleopatra.

All records, wherein there was any memory of the king's attainder, should be cancelled and taken off the *file*. *Bacon.*

But let me resume the *file* of my narration, which this object of books, best agreeable to my course of life, hath a little interrupted. *Wotton.*

If remarkable considerations be put into it by others, they are as some loose pearls, which, for want of *filing* upon a string, shake out of our pockets.
Bp. Hall.

So saying, on he led his radiant *files*,
Dazzling the moon. *Milton's Paradise Lost.*

The' apothecary train is wholly blind;
From *files* a random recipe they take,
And many deaths of one prescription make.
Dryden.

All ran down without order or ceremony, 'till we drew up in good order, and *filed* off. *Tatler.*

Did all the grosser atoms at the call
Of chance *file* off to form the pondrous ball,
And undetermined into order fall? *Blackmore.*

From the day his first bill was *filed* he began to collect reports.
Arbuthnot and Pope's Martin Scriblerius.

Now at the camp arrived, with stern review
Thro' groves of spears from *file* to *file* he darts
His sharp experienced eye. *Somervile.*

Then broader leaves in shadowy *files* advance,
Spread o'er the crystal flood their green expanse;
And, as in air the adherent dew exhales,
Court the warm sun, and breathe ethereal gales.
Darwin.

FILE, *n. s.* & *v. a.* FI'LE-CUTTER, *n. s.* FI'LINGS. } Sax. feol; Goth. *thil;* Swed. *fil;* Belgic, *vyle;* Teut. and Dan. *fiel* (q.?) of the same origin as the preceding word, the regular teeth lying like threads or hairs on the instrument. A rubbing or cutting instrument to smooth prominences, sharpen other instruments, &c. To file is to apply this instrument: hence to smooth or polish in any way. A file-cutter is a maker of files: filings, the fragments worn or cut off by a file.

A *file* for the mattocks and for the coulters.
1 *Sam.* xiii. 21.

They which would *file away* most from the largeness of that offer, do in more sparing terms acknowledge little less. *Hooker.*

His humour is lofty, his discourse peremptory, his tongue *filed*, and his eye ambitious. *Shakspeare.*

The *filings* of iron infused in vinegar, will, with a decoction of galls, make good ink, without any copperose. *Browne.*

The smiths and armourers on palfreys ride,
Files in their hands and hammers at their side.
Dryden.

Let men be careful how they attempt to cure a blemish by *filing* or cutting off the head of such an overgrown tooth. *Ray.*

The rough or coarse-toothed *file*, if it be large, is called a rubber, and is to take off the unevenness of your work which the hammer made in the forging: the bastard-toothed *file* is to take out of your work the deep cuts, or *file*-strokes, the rough *file* made: the fine-toothed *file* is to take out the cuts or *file*-strokes, the bastard *file* made; and the smooth *file* is to take out those cuts, or *file*-strokes, that the fine *file* made.
Moxon.

Gad-steel is a tough sort of steel: *filecutters* use it to make their chissels, with which they cut their *files*.
Id.

The chippings and *filings* of these jewels are of more value than the whole mass of ordinary authors.
Felton on the Classics.

FILE *v. a.* Sax. afylan, to foul; defile; sully: said to be still in use in this sense in Scotland.

For Banquo's issue have I *filed* my mind,
For them the gracious Duncan have I murdered.
Shakspeare.

His weeds divinely fashioned,
All *filed* and mangled. *Chapman's Iliad.*

FILE, in law, is a record of the court; and the filing of a process of a court makes it a record of that court. An original writ may be filed after judgment given in the cause, issued forth before; declarations, &c., are to be filed, and affidavits must be filed, some before they are read in court, and some immediately after. Before filing a record removed by certiorari, the justices of B. R. may refuse to receive it, if it appear to be for delay, &c.; and remand it back for the expedition of justice; but if the certiorari be once filed, the proceedings below cannot be revived. An indictment, &c., cannot be amended after it is filed.

FILE, in the art of war, is the depth of the battalion or squadron. The files of a battalion of foot are generally three deep; as are sometimes those of a squadron of horse. The files must be straight and parallel one to another.

A FILE on horseback occupies in the ranks about two feet eight inches; thus three file eight feet. A file on foot occupies in the ranks twenty-two inches.

FILES, CLOSE, of infantry, are soldiers standing in rank, contiguous to one another, upon any given depth of line or column. The soldiers in the ranks should then touch lightly each other, without crowding or pressing.

FILES, OPEN, are soldiers standing in rank at given distances without touching each other.

FILES, INDIAN, a line of men advancing or retreating from either of the flanks, from the centre, or from any proportion of a line in succession to one another.

FILE-LEADER is the soldier placed in the front of any file, or the man who is to cover all those that stand directly in the rear of him, and by whom they are to be guided in all their movements. File-leaders must be particularly careful to preserve their proper distances from which ever hand they are to dress to, and the followers of each file must only be attentive to cover, and be regulated by their proper file-leaders.

FILES, CLOSE, in cavalry, are at the distance when each man's boot-top touches, but does not press, that of his neighbour.

FILES, LOOSE, in cavalry movements, are six inches distant from boot-top to boot-top, being calculated for the gallop as well as the walk of a squadron.

FILES, OPEN, in cavalry, are the full breadth of a horse from boot-top to boot-top. They contain the distance which is left, when from close files, the left files rein back to dismount.

FILE MAKING. Many useful tools have been invented for performing mechanical operations, which consist of a number of wedges or teeth, which may be conceived to stand upon, or rise out of a flat or curved metallic surface. When these teeth are formed on the edge of a plate, the instrument is called a saw (see SAW); but when they are formed upon a broad surface, it constitutes what is denominated a file. The comb-makers use a tool of this description, called a quonet, having coarse single teeth, to the number of about seven or eight to an inch. Fine tools of this description are called floats. When teeth are crossed they are called files; and when, instead of the notches standing in a right line, a number of single teeth are raised all over the surface, it is called a rasp. Files are cut upon the surface with a sharp-edged chisel. In rasps, the tooth is raised with a triangular punch. The file is adapted for working metals, but the rasp is more fitted for wood, bone, and horn. Files are distinguished by being single or double cut. The single cut file is simply cut once over, and is employed for filing brass, and the softer metals. A second course of teeth is cut to form the double cut file, crossing the first diagonally. This kind is best suited to iron and steel.

The steel employed for files requires to be very hard, and in consequence undergoes a longer process in the conversion (see STEEL). It is said to be doubly converted. The very heavy files, such as smiths' rubbers, are made of the inferior marks of blistered steel: the more delicate kind, such as watch-makers' files, of cast steel. The steel is previously drawn at the tilt, into rods of suitable size. The flat and square files are made wholly with the hammer, and the plain anvil. Two workmen, one called the maker and the other striker, are required in the forging of heavy files. The anvil is provided with a groove, for the reception of bosses or dies, which are used for the purpose of forging the half-round and three-angled files. The half-round boss contains a hollow which is the segment of a sphere, less than half a circle. That used for the triangular files has a hollow consisting of two sides, terminating in an angle at the bottom. In forging the half-round file, the steel is drawn out, as if intended to make a flat file. It is then laid in the die, and hammered, till the under side becomes round. The steel for the triangular file is tilted into square rods. The part to form the file is first drawn out with the hammer, as if intended to form a square file. It is then placed in the die with one of the angles downwards, and by striking upon the opposite angle, two sides of the square are formed into one, and consequently a three-sided figure produced. By successively presenting the different sides to the action of the hammer, the figure is rendered still more complete. In forming the tangs of most files, it is necessary to make the shoulders perfectly square and sharp. This is performed by cutting into the file a little on each side with a sharp instrument, and afterwards drawing out the part so marked off, to form the tang.

After forging, and previously to their being ground and cut, the files require to be annealed. This process is generally performed by piling up a great quantity together in a furnace for the purpose, and heating them red hot; suffering them afterwards to cool slowly; on the whole a very objectionable method, since the surface of steel, when heated red hot in the open air, is so liable to oxidation. A superior method of annealing is practised by some file-makers, and, since hardness in a file is so essential a property, it ought to be generally adopted. This method consists in placing the files in an oven

or trough, having a close cover, and filling up the interstices with sand. The fire is made to play on every side of the vessel, as gradually and uniformly as possible, till the whole mass becomes red hot. The fire is then discontinued, and the whole suffered to cool before the cover is removed from the trough. Another evil may however arise from keeping steel red hot, even in a close vessel, for too great a length a time. It assumes a kind of crystallisation, under which its tenacity is much impaired. Steel annealed in this way, is perfectly free from that scaly surface acquired in the open air; and if each corticle be perfectly surrounded with the sand, and the cover not removed before the steel is cold, the surface will appear of a silvery white color. If the steel be suspected to be too hard, from containing too little carbon, powdered charcoal may be employed instead of sand, or sand mixed with charcoal. In this case the files should be stratified alternately with the charcoal, in order that the extra-conversion may be uniform.

The next thing is to prepare the files for cutting, by making the surface to contain the teeth as level as possible. This was formerly effected by means of files, and the process is called striping. The same is still practised by the Lancashire file-makers, and by others not having convenience for grinding. The greatest quantities of files, however, are ground to prepare them for cutting. The stones employed for the purpose are of the sand-stone kind, the texture of which is compact and sharp, but rather rough. They are of as great diameter as can be used with convenience; and about eight inches broad over the face. When used, the surface is kept immersed in water. The grinder sits in such a position as to lean over the stone, while its motion is directly from him. Its surface moves at about the same speed with those used in grinding cutlery. Since the object in grinding files is to make the surface as even and flat as possible, and as this cannot be done so completely upon a small stone, the stones of the file-grinder are laid aside when they are reduced to a certain size, and are employed for grinding other articles. Though grinding is by far the most expeditious method, it does not give that truth to the surface which can be effected by filing. If the price of the articles would admit, however, it would be well to render the surface more even by the file after grinding. If the surface be not flat, it is obvious, that when the file is used for filing a large surface, those teeth in the hollow parts of the file will not be brought into action. It is from attention to this circumstance, and to the care in annealing and hardening, that the Lancashire file-makers have generally excelled. They are, however, confined chiefly to the small articles, since the larger files would not pay for the process of striping. The tools of the file-cutter consist of an anvil placed upon a block of such a height that the man sits to his work. He has also a piece of lead alloyed with tin, on which he lays the files when one side is cut. The chisel and hammer are of such size as the size and cut of the file require. He is also provided with a leathern strap, which goes over each end of the file and passes round his feet, which are introduced into the strap on each side in the same manner as stirrups are used. The file-cutter, therefore, sits as if he were on horseback, holding his chisel with one hand, his hammer in the other, at the same time he secures the file in its place by the pressure of his feet in the stirrups.

Great pains ought to be taken in preparing the edge of the chisel. It is, in the first place, hardened and tempered by heating it gradually till it appears of a yellowish brown. It is next ground very true to form the edge, which is afterwards finished upon a Turkey stone with oil. It is not required to be very sharp, the bottom of the tooth requiring to be rather open, to prevent the file from clogging with the substance to be filed. The edge is also required to be very smooth, in order that it may slip easily upon the surface of the files: this is also facilitated by slightly greasing the surface. From this advantage the worker, after making one tooth, is enabled by feeling only, to form at its proper distance the succeeding tooth, by sliding the chisel close up against the back of the preceding one.

In the double-cut files, the first set of teeth, which the workmen call up-cutting, are, previous to cutting the second course, filed slightly upon the face, in order to allow the chisel to slide freely. The single-cut file is more durable than the double-cut, and ought to be preferred for all purposes excepting for iron and steel. The same method is employed in cutting the rasp. The workman is, however, guided completely by his eye in regulating the distance of the teeth from each other. The rasp ought to be cut in such a manner that no one of the teeth may stand opposite to another; this not only allows the rasp to cut faster, but makes the surface either of wood or other substance much smoother.

The operation of simple file-cutting seems to be of such easy performance that it has for almost two centuries been a sort of desideratum to construct a machine to perform that, which is not only done with great facility by the hand, but with wonderful expedition. We are told that a lad not very much experienced in the business will produce, with his hammer and chisel, nearly 300 teeth in a minute. With respect to machinery, it is said, that a Frenchman named Mathurin Jousse, in a work entitled La fidelle Ouverture de l'Art de Serrurier, published at La Fleche, in Anjou, so long ago as the year 1627, gives a drawing and description of one, in which the file is drawn along by shafts by means of wheel-work, and the blow is given by a hammer. There are several machines of this kind, or at least to effect the same purpose, in the Machines Approuvées par l'Academie Royale de Paris: there is also one published in the second volume of the Transactions of the American Philosophical Society, of which we shall give some account, as we shall of another for which Mr. William Nicholson obtained a patent in the year 1802; premising that the principal requisites, in a machine for file-cutting, are that the metal

from which it is manufactured should be steadily supported, and the chisel adapted to the face without any unequal bearing.

The American machine consists of a bench of well seasoned oak, and the face of it planed very smooth; and a carriage on which the files are laid, which moves along the face of the bench parallel to its sides, and carries the files gradually under the edge of the cutter or chisel while the teeth are cut. The carriage is made to move by a contrivance somewhat similar to that which carries the log against the saw of a saw-mill. The lever or arm, which carries the cutter, works on the centres of two screws which are fixed into two pillars in a direction right across the bench. By tightening or loosening these screws, the arm which carries the chisel may be made to work more or less steadily. There is likewise a regulating-screw, by means of which the files may be made coarser or finer: also a bed of lead, which is let into a cavity formed in the body of the carriage, somewhat broader and longer than the largest-sized files: the upper face of this bed of lead is formed variously, so as to fit the different kinds of files which may be required.

When the file or files are laid in their place, the machine must be regulated by the screw to cut them of a due degree of fineness. This machine is described as being so simple, that when properly adjusted a blind person may cut a file with more exactness than can be done in the usual method with the keenest sight; for by striking with a hammer on the head of the cutter or chisel all the movements are set at work; and by repeating the stroke with the hammer, the files on one side will at length be cut; then they must be turned, and the operation repeated for cutting the other side. This machine may be made to work by water as readily as by hand, to cut coarse or fine, large or small files, or any number at a time: but it may be more particularly useful for cutting the very fine small files for watchmakers.

We shall now give an account of the machine for which Mr. Nicholson obtained his majesty's letters patent. 'My machinery,' says the patentee, 'consists in four essential parts, suitably constructed and combined together; namely, First, a carriage or apparatus, in or by which the file is fixed or held and moved along, for the purpose of receiving the successive strokes of a cutter or chisel. Secondly, the anvil, by which the file is supported beneath the part which receives the stroke. Thirdly, the regulating gear, by which the distance between stroke and stroke is determined and governed. And, fourthly, the apparatus for giving the stroke or cut. The four several parts are supported by, or attached to a frame or platform of solid and secure workmanship, either of wood or metal, or both, according to the nature of the work intended to be performed, and the judgment and choice of the engineer. The carriage is a long block of wood, or metal, of the figure of a parallelipidon, or nearly so, having a portion cut out between its upper and lower surfaces to admit the anvil to stand therein, without coming into contact with the carriage itself. The said carriage is made of such a length that the excavation here described shall be considerably longer than the longest files intended to be cut; and it is supported upon straight bearers from the platform, upon which by projecting pieces, or slides, or wheels, or friction-rollers, it can be moved endwise in a straight-lined direction, without shake or deviation. At one end of the said excavation is fixed a clip, resembling a hand-vice, for holding the file by its tail or tang; and in the opposite end of the said excavation there is a sliding block or piece, which being brought up to the other end of the file does, by means of a notch or other obvious contrivance, prevent it from being moved sideways. The said clip is so fixed at its head or shank, by means of an horizontal axis on gudgeons and sockets, that the file is at liberty to move up and down, but not sideways or a-twist. In this manner it is that the file being fixed in the carriage is pressed down upon the anvil by a lever and weight proceeding from the platform, and bearing upon the face of the file by a small roller of wood, ivory, bone, or soft metal. The anvil is solidly fixed on the platform, and may be of any suitable figure which shall be sufficiently massy to receive and resist the blow; but its upper part must be so contracted as to stand up in the excavation of the carriage and support the file; and the upper part of all must be constructed in such a manner that it shall fairly apply itself to the under surface of the file, and support it without leaving any hollow space, notwithstanding any casual irregularities of the said surface. I produce this effect by making a cavity in the anvil of the figure of a portion of a sphere, not much less than a hemisphere, and in this cavity I place (with grease between) a piece of iron or steel made exactly to fit, but of which the lower surface is a greater portion of the sphere, and the upper surface flat and plain. The file rests upon this last flat or plain surface, which is either faced with lead, or (in preference) a slip of lead is put under the file and turned round the tang thereof, so as to move along with it. It is evident that the upper or moveable piece of the said anvil will, by sliding in its socket, accommodate and apply itself constantly to the surface of the file, which is pressed and struck against it. Or, otherwise, I make the concavity in the upper moveable piece, and make the fixed part convex: or, otherwise, I support the upper part, or in some cases the whole of my anvil upon opposite gudgeons, in the manner of the gimbals of sea compasses: or, otherwise, I form the upper part of my anvil cylindrical, of a large diameter, supported on thick gudgeons, the axis of the said cylinder being short, and at right angles to the motion of the carriage: or, otherwise, I form only a small portion, namely, the upper extremity of my anvil, of a cylindrical form as aforesaid, and cause the same to continue motionless by fashioning the same out of the same mass as the rest of the anvil, or fixing the same thereto. And in both the last-mentioned cases of the cylindrical structure I fix the head or shank of the clip (by which the tang is held), not by a single axis or pair of gudgeons, but by an universal joint or ball and socket, so that the

file becomes at liberty to adapt itself not only upwards and downwards, but also in the way of rotation or a-twist, and supplies the want of motion in the anvil by the facility with which itself can be moved in the last-mentioned manner.

'The regulating-gear is that part of the machinery by which the carriage, and consequently the file, is drawn along. It consists of a screw revolving between centres fixed to the platform, and acting upon a nut attached to the carriage with usual and well known precautions for working of measuring screws; and the nut being made to open by a joint when the carriage is required to be disengaged and slided back. And the said screw is moved either constantly by a slow motion from the first mover, or (which is better) by interrupted equal motions, so as to draw the carriage during the interval between stroke and stroke. And the quantities of those respective equal motions may be produced and governed at pleasure by wheel-work applied to the head of the screw, or by the well known apparatus used in the mathematical dividing engine for circles; or by other contrivances well known to workmen of competent skill, and therefore unnecessary to be described at large: or, otherwise, the motion of the carriage may be produced by a toothed rack from the carriage drawn by a pinion; and this pinion moved by a ratchet-wheel on the same arbor moved by a click-lever, which shall gather up and drive a greater or less number of teeth, according to the coarseness or fineness of the file; and the click-lever itself may be moved by a tripping piece from the first mover, or by various other evident means of connexion: or, otherwise, the said carriage may be moved by a small cylinder, and rope or chain constantly acting: or, otherwise, the said motion may be effected by a train of two or more wheels, suffered to move by any of the escapements used in time-pieces, and the fineness of stroke may be regulated either by changing the wheels as in the common fuzee engine, or by the greater or less frequency of escape during each turn of the first mover. And in every case I prefer a counter-weight to the carriage, acting either constantly against, or constantly in the direction of its motion; though this is not absolutely necessary when the work is well executed. I may also observe, that it is possible to construct my said machinery by fixing and rendering motionless that part which I have called the carriage, provided the other three principal parts be made to move instead of the carriage itself; but I consider this disposition as less eligible than that which requires the carriage to be moved. The apparatus for giving the stroke or cut, consists of a chisel, which is held between the jaws of a mouth-piece or claws resembling a strong hand-vice without teeth. One of the jaws is made very stout, and the chisel is formed narrow from edge to back, and wide from side to side, and has a semi-circular protuberance on its back, which rests in a circular notch in the strong jaw aforesaid; and there are two or three bended flat rings or washers of iron or metal under the thumb-screw of the said mouth-piece or claws, which prevent the chisel from becoming loose by the stroke: or, otherwise, the said chisel may have a notch, or a hole, instead of a protuberance, to meet a correspondent part in the mouth-piece or claws; but I prefer the first-mentioned construction. By the construction of the chisel, as here mentioned and fixed, the edge of the said instrument is at liberty to apply itself fairly from side to side of the file notwithstanding any winding or irregularity, whatever may be the fineness of the cut upon a broad surface. The mouth-piece, with its chisel, is firmly fixed in another piece, which by its motion gives the stroke. This last-mentioned piece may either be a lever, or a moveable carriage between upright sliders; but I greatly prefer the lever. The chisel must be so fixed that the moving piece shall carry it fairly edge-onwards to the file without scraping or slapping in the least; and the obliquity of the stroke may be adjusted by fixing the centres of the level either higher or lower at pleasure, or by inclining the last-mentioned sliders. The lever may be raised and let fall (or the other chisel apparatus moved) by a tripping-piece or snail-work, or other usual connexion with the first mover; and its power of stroke may be increased by the addition of a weight, or by the action of a spring; which last method is of excellent use, and may, (if required from the varying breadth of the file) be made to increase or diminish its power during the run by several easy and commonly used methods or contrivances for pressing more or less against the spring. Or, otherwise, the lever, or holding-piece, may be kept immediately above the file by the re-action of a slight spring, or weight, and be struck by a hammer moved and acted upon by the first mover, as aforesaid: and to this method I give the preference, because the lever will then have less strain upon its pivots; or the said lever may even be supported by spring-joints without any pivots or centres at all. Or, instead of a hammer, the blow may be given by a ram, or a fly and screw, but I give the preference to the hammer. The lever may move in a vertical circle immediately over the file, or in an oblique circle at right angles to it, or at any intermediate angle consistent with the foregoing instructions: and the chisel may be set with its edge at any angle whatever, with the line of the length of the lever; but, in general, I have set the lever in the first-mentioned position, and have varied the angle between the chisel-edge and the lever, according to the intended slope of the cut upon the face of the file. The edge of the chisel must be sharpened to such an angle as the intended cut and strength of burr may require. Lastly, I describe the general action of the said machinery as follows: 1. The file being prepared as usual for cutting, must be fixed in the clip of the carriage, and the sliding-block brought up and fixed, to steady its other extremity. 2. The nut of the screw being then opened (or the other regulating gear disengaged) the carriage is slided to its place, so that the chisel may be situated over that part of the file which is to receive the first stroke. 3. The nut is then closed (or the other regulating gear connected) and the small roller of the pressing lever is made to bear upon the face

of the file. 4. The first mover being then put into action, raises and lets fall the apparatus for giving the stroke by which the file receives a cut. And, 5, immediately afterwards, or during the same action, as the case may be (according to the construction as before described), the regulating gear moves the carriage, and consequently the file, through a determinate space. 6. The cut is then again given; and in this manner (the strength of cut being duly proportioned to the space between cut and cut) the file becomes cut throughout. 7. The file is then taken out and cut on the other side. 8. The burr is then taken off, or not, as the artist may think best; and the cross-strokes are given over the surfaces as before. And the said machinery, by certain slight, necessary, and obvious changes in the structure and disposition of the chisels, and some other of the parts thereof, is adapted to manufacture all other forms and descriptions of files, whether floats, rasps, half-round, three-square, or any other figure or denomination.

Three things are strictly to be observed in hardening files; first, to prepare the file on the surface, so as to prevent it from being oxydated by the atmosphere, when the file is red hot, which effect would not only take off the sharpness of the tooth, but render the whole surface so rough, that the file would, in a little time, become clogged with the substance it had to work. Secondly, the heat ought to be very uniformly red throughout, and the water in which it is quenched fresh and cold, for the purpose of giving it the proper degree of hardness. Lastly, the manner of immersion is of great importance, to prevent the files from warping, which in long thin files is very difficult. The first object is accomplished by laying a substance upon the surface, which, when it fuses, forms as it were a varnish upon it, defending the metal from the action of the oxygen of the air. Formerly the process consisted in first coating the surface of the file with ale-grounds, and then covering it over with pulverised common salt. After this coating becomes dry the files are heated red-hot, and hardened; then the surface is lightly brushed over with the dust of cokes; when it appears white and metallic, as if it had not been heated. This process has lately been improved, at least so far as relates to the economy of the salt, which, from the quantity used, and the increase of duty, had become a serious object. Those who use the improved method do not consume above one-fourth the quantity of salt used in the old way. The process consists in dissolving the salt in water to saturation, which is about three pounds to the gallon, and stiffening it with ale-grounds, or with the cheapest kind of flour, such as that of beans, to about the consistence of thick cream. The files only require to be dipped into this substance, and immediately heated and hardened. The grounds or the flour are of no other use than to give the mass consistence, and by that means, allowing a larger quantity of salt to be laid upon the surface. In this method, the salt forms immediately a firm coating. As soon as the water is evaporated, the whole of it becomes fused upon the file. In the old method, the dry salt was so loosely attached to the file, that the greatest part of it was rubbed off into the fire, and was sublimed up the chimney, without producing any effect. Some file-makers are in the habit of using the coal of burnt leather, which doubtless produces some effect; but the carbon is generally so ill-prepared for the purpose, and the time of its operation so short, as to render the effect very little. Animal carbon, when properly prepared and mixed with the above hardening composition, is capable of giving hardness to the surface even of an iron file. The carbonaceous matter may be readily obtained from any of the soft parts of animals, or from blood. For this purpose, however, the refuse of shoe-makers and curriers is the most convenient. After the volatile parts have been distilled over, from an iron still, a bright shining coal is left behind, which, when reduced to powder, is fit to mix with the salt. Let about equal parts, by bulk, of this powder, and muriate of soda, be mixed together, and brought to the consistence of cream, by the addition of water. Or mix the powdered carbon with a saturated solution of the salt, till it becomes of the above consistence. Files which are intended to be very hard, should be covered with this composition, previously to hardening. By this method, files made of iron, which in itself is insusceptible of hardening, acquire a superficial hardness sufficient to answer the purposes of any file whatever. Files of this kind may be bent into any form, and in consequence are rendered useful for sculptors and die-sinkers.

The mode of heating the file for hardening, is by means of a fire similar to that employed by common smiths. The file is to be held in a pair of tongs by the tang, or tail, and introduced into the fire, consisting of very small cokes, pushing it more or less into the fire, for the sake of heating it regularly. When it is uniformly heated of a cherry color, it is fit to quench in the water. An oven is commonly used for the larger kind of files, into which the blast of the bellows is directed, being open at one end for the purpose of introducing the files and the fuel. After the file is properly heated, for the purpose of hardening, it should be cooled as quickly as possible; this is usually done by quenching it in the coldest water. Clear spring water, free from animal and vegetable matter, is best calculated for the hardening of files.

When files are properly hardened, they are brushed over with water and powdered coke, when the surface becomes clean and metallic. They may likewise be dipped into lime-water, and dried before the fire as rapidly as possible, after which they should be rubbed over with olive oil, in which is mixed a little oil of turpentine, while warm, and then they are finished.

In the operations of filing, the coarser cut files are always to be succeeded by the finer; and the general rule is, to lean heavily on the file in thrusting it forward, because the teeth of the file are made to cut forwards. But in drawing the file back again, for a second stroke, it is to be lifted just above the work, to prevent its cutting as it comes back. The rough, or coarse-toothed file, called a rubber, serves to take off the unevenness of the work, left by the hammer in forging.

The bastard-toothed file, as it is technically called, is to take out too deep cuts and file-strokes made by the rough file. The fine-toothed files take out the cuts or file-strokes which the bastard file made, and the smooth file those left by the fine file.

FI'LEMOT, *n. s.*, corrupted from Fr. *feueille morte*, a dead leaf A brown or yellow-brown color.

The colours you ought to wish for are blue or *filemot*, turned up with red. *Swift.*

FIL'IAL, *adj.* } Fr. *filial, filiale;* Lat.
FILIA'TION, *n. s.* } *filius*, or *filia* (à Greek φιλεα, love). Pertaining to a son or daughter; befitting a child. Filiation is the relation of a child to its parents; a legal order of filiation is a declaration of the justices that a particular party therein named is the father of a child. Why Dr. Johnson should have restricted the application of filial to 'pertaining to a son,' we cannot understand: filiation he himself defines as 'correlative to paternity,' generally, while his own extract from Prior proves that it may also be the correlative of maternity,

'Where the old myrtle *her* good influence sheds.'

In the modern legal use of filiation also we believe but too many instances occur of its application to both sons and daughters.

And thus the *filial* godhead answering spoke. *Milton.*

From imposition of strict laws, to free
Acceptance of large grace; from servile fear
To *filial*; works of law, to works of faith. *Id.*

The relation of paternity and *filiation*, between the first and second person, and the relation between the sacred persons of the Trinity, and the denomination thereof, must needs be eternal, because the terms of relation between whom that relation ariseth were eternal. *Hale's Origin of Mankind.*

My mischievous proceeding may be the glory of his *filial* piety, the only reward now left for so great a merit. *Sidney.*

He grieved, he wept, the sight an image brought
Of his own *filial* love, a sadly pleasing thought. *Dryden.*

Where the old myrtle her good influence sheds,
Sprigs of like leaf erect their *filial* heads;
And when the parent rose decays and dies,
With a resembling face the daughter buds arise. *Prior.*

So when Arabia's Bird, by age oppressed,
Consumes delighted on his spicy nest;
A *filial* Phœnix from his ashes springs,
Crowned with a star on renovated wings. *Darwin.*

By stat. 49 George III. c. 68. the reputed father of a bastard is chargeable with the expenses incident to the birth, and of his own apprehension, and of the order of *filiation*. *Tomlins.*

——even while I kiss
Thy garment's hem with transport, can it be
That doubt shall mingle with my *filial* joy?
Deal with me as thou wilt, but spare this boy. *Byron.*

FILICACIA (Vincent), a celebrated Italian poet, born at Florence, 1642. He was a member of the academies Della Crusca and Arcadi, and secretary to the duke of Tuscany. He died in 1707. His poems are much esteemed for the delicacy and nobleness of their sentiments. Scipio de Filicacia, his son, had them all printed together under the title of Poesie Fosiano di Vincenzo da Filicacia, in 1707, 4to.

FILICES, from filum, a thread, quasi filatim incisa, ferns; one of the seven tribes or families of the vegetable kingdom. See BOTANY. They constitute the first order in the class cryptogamia, and consist of eighteen genera, which are divided into fructificationes spicatæ, frondosæ, et radicales. Lee however says they admit of no certain distinction from their fructification. This order comprehends the entire twenty-sixth class of Tournefort, in whose system the filices make only a single genus, in the first section of this class.

FILICES also constitute a class or order of plants in the natural method. See BOTANY.

FIL'IGRANE, *n. s.* } Lat. *filum*, a thread,
FIL'IGREE. } and *granum*, grain. A kind of wire work generally in gold and silver, wrought in the manner of threads or grains.

Several *filigrane* curiosities. *Tatler.*

FILIGRANE, FILIGREE, or FILLAGREE WORK, from Lat. filum, a thread, and granum, a grain, a kind of enrichment on gold or silver, wrought delicately, in manner of small threads or grains, or both intermixed. It was formerly much more employed than at present, in the manufacture of small articles, which served more for show than for use; such as vases, needle-cases, caskets to hold jewels, small boxes, particularly shrines, decorations for the images of saints, and other church furniture. This art, however, is of great antiquity, and seems to have been brought into Europe from the East. Among church furniture we meet with filigree work of the middle ages. The Turks, Armenians, and Indians make at present some master-pieces of this sort, and with tools that are exceedingly coarse and imperfect. There is no manufacture in any part of the world that has been more admired and celebrated, than the fine gold and silver filigree of Sumatra. The surprising delicacy of this work is the more extraordinary as the tools are rudely and inartificially formed by the pandi, or goldsmith, from any old iron he can pick up. When you engage one of them to execute a piece of work, his first request is usually for a piece of iron hoop, to make his wire-drawing instrument; an old hammer-head, stuck in a block, serves for an anvil, and a pair of compasses is often composed of two old nails tied together at one end. The gold is melted in a piece of preeoo, or earthen rice pot, or sometimes in a crucible of their own make, of ordinary clay. In general they use no bellows, but blow the fire with their mouths, through a joint of bamboo; and, if the quantity of metal to be melted is considerable, three or four persons sit round their furnace, which is an old broken quallee or iron pot, and blow together. At Padang alone, where the manufacture is more considerable, they have adopted the Chinese bellows. Their method of drawing the wire differs little from that used by Europeans. When drawn to a sufficient fineness, they flatten it by beating it on their anvil; and, when flattened, they give it a twist like that in the whalebone handle of a punch-ladle, by rubbing it on a

block of wood with a flat stick. After twisting they again beat it on the anvil, and, by these means, it becomes flat wire with indented edges. With a pair of nippers they fold down the end of the wire, and thus form a leaf, or element of a flower in their work, which is cut off. The end is again folded and cut off, till they have got a sufficient number of leaves, which are laid on singly. Patterns of the flowers or foliage, in which there is not very much variety, are prepared on paper, of the size of the gold plate on which the filigree is to be laid. According to this, they begin to dispose on the plate the larger compartments of the foliage, for which they use plain flat wire of a larger size, and fill them up with the leaves before mentioned. To fix the work, they employ a glutinous substance, made of the red hot berry, called boca sago, ground to a pulp on a rough stone. This pulp they place on a young cocoa nut about the size of a walnut, the top and bottom being cut off. After the leaves have been all placed in order, and stuck on bit by bit, a solder is prepared of gold filings and borax moistened with water, which they strew over the plate; and then, putting it in the fire for a short time, the whole becomes united. This kind of work on gold plate they call carrang papan: when the work is open they call it carrang trouse. In executing the latter the foliage is laid out on a card, or soft kind of wood, and stuck on, as before described, with the sago berry; and the work, when finished, being strewed over with their solder, is put into the fire, when, the card or soft wood burning away, the gold remains connected. If the piece be large, they solder it at several times. In the manufacture of badjoo buttons, they first make the lower part flat, and having a mould formed of a piece of buffalo's horn indented to several sizes, each like one half of a bullet mould, they lay their work over one of these holes, and, with a horn punch, they press it into the form of a button. After this they complete the upper part. When the filigree is finished, they cleanse it by boiling it in common salt and alum, or sometimes lime juice; and, in order to give it that fine purple color which they call sapo, they boil it in water with brimstone. The manner of making the little balls, with which their works are sometimes ornamented, is as follows:—They take a piece of charcoal, and having cut it flat and smooth, they make in it a small hole, which they fill with gold dust, and this melted in the fire becomes a little ball. They are very inexpert at finishing and polishing the plain parts, hinges, screws, and the like, being in this as much excelled by the European artists, as these fall short of them in the fineness and minuteness of the foliage.

FILIPPO D'ARGIRONE, a town in the Val di Demone, Sicily, situated on a high hill on the Jaretta. It contains about 6000 inhabitants, and is a place of great antiquity, having given birth to Diodorus Siculus. It is defended by a castle. Nine miles south of Nicosia.

FILL, *v. a.*, *v. n.* & *n. s.* } Saxon, fyllan;
FIL'LER, *n. s.*, } Teutonic, *feellen*; Belg. *vullen*; Goth. and Swed. *filla*. Minsheu traces these to Gr. πολυ, many; which Parkhurst derives from Heb. מלא, 'π being substituted for its sister labial ב.' To store to the utmost; satisfy; glut; surfeit: applied both to time and space, as well as metaphorically to the mind, affections, &c. To fill out, is to extend or rather stretch out to the utmost, by filling; and the preposition *up*, 'to fill up,' occasionally adds intensity to this verb. As a neuter verb, to fill is to satiate; glut; give to drink; 'to fill up;' to grow full. As a substantive, a fill is a satisfying quantity. A filler is any thing that occupies room; any thing useless for any other purpose; or one whose employment is to fill.

Fill the waterpots with water; and they *filled* them up to the brim. *John* ii. 7.

In the cup which she hath *filled*, *fill* to her double. *Rev.* xviii.

Her neck and breasts were ever open bare,
That aye thereof her babes may suck their *fill*.
Faerie Queene.

Thou art going to lord Timon's feast,
—Ay, to see meat *fill* knaves, and wine heat fools.
Shakspeare.

We *fill* to the general joy of the whole table,
And to our dear friend Banquo, whom we miss.
Id. Macbeth.

Things that are sweet and fat are more *filling*, and do swim and hang more about the mouth of the stomach, and go not down so speedily. *Bacon.*

But thus inflamed bespoke the captain,
Who scorneth peace shall have his *fill* of war.
Fairfax.

Which made me gently first remove your fears,
That so you might have room to entertain
Your *fill* of joy. *Denham's Sophy.*

I am who *fill*
Infinitude, nor vacuous space. *Milton.*

Amid the tree now got, where plenty hung
Tempting so nigh, to pluck and eat my *fill*,
I spared not. *Id. Paradise Lost.*

He with his consorted Eve
The story heard attentive, and was *filled*
With admiration and deep muse to hear. *Milton.*

I only speak of him
Whom pomp and greatness sits so loose about,
That he wants majesty to *fill* them *out*. *Dryden.*

'Tis a mere *filler*, to stop a vacancy in the hexameter, and connect the preface to the work of Virgil.
Dryden's Æneid. Dedication.

This mule being put in the *fill* of a cart, ran away with the cart and timber. *Mortimer's Husbandry.*

They have six diggers to four *fillers*, so as to keep the *fillers* always at work. *Id.*

There would not be altogether so much water required for the land as for the sea, to raise them to an equal height; because mountains and hills would *fill up* part of that space upon the land, and so make less water requisite. *Burnet.*

When the several trades and professions are supplied, you will find most of those that are proper for war absolutely necessary for *filling up* the laborious part of life, and carrying on the underwork of the nation. *Addison on the War.*

Neither the Palus Meotis, nor the Euxine, nor any other seas, *fill up*, or by degrees grow shallower.
Woodward.

The first stage of healing, or the discharge of matter, is by surgeons called digestion; the second, or the *filling up* with flesh, incarnation; and the last, or skinning over, cicatrization. *Sharp.*

Nothing but the supreme and absolute Infinite can adequately *fill* and superabundantly satisfy the infinite desires of intelligent beings. *Cheyne.*

Your barbarity may have its *fill* of destruction. *Pope.*

Hope leads from goal to goal,
And opens still, and opens on his soul;
Till lengthened on to faith, and unconfined,
It pours the bliss that *fills up* all the mind. *Id.*

A mixture of tender gentle thoughts and suitable expressions, of forced and inextricable conceits, and of needless *fillers* up to the rest. *Id.*

And after we have seen the light of the gospel penetrate into so many dark places of the earth, why should it seem a thing incredible, that its splendor should, at last, *fill* the world, and scatter the remainder of darkness which covereth the nations. *Robertson. Sermon.*

FILLET, *n. s.* & *v. a.* Fr. *filet*; Lat. *filum*, a thread. See FILE. A bandage: hence applied to the part of veal formerly bandaged, now skewered, and any meat thus rolled up; an ornament in architecture. To fillet is to bind, or adorn, with a bandage.

Pillars and their *fillets* of silver. *Exodus.*

He made hooks for the pillars, and overlaid their chapiters, and *filleted* them. *Id.* xxxviii. 28.

Fillet of a fenny snake,
In the cauldron boil and bake. *Shakspeare.*

His baleful breath inspiring as he glides,
Now like a chain around her neck he rides;
Now like a *fillet* to her head repairs,
And with his circling volumes folds her hairs.
Dryden's Æneid.

The youth approached the fire, and as it burned,
On five sharp broachers ranked, the roast they turned;
These morsels stayed their stomachs; then the rest
They cut in legs and *fillets* for the feast. *Dryden.*

She scorned the praise of beauty, and the care;
A belt her waist, a *fillet* binds her hair. *Pope.*

The mixture thus, by chymick art
United close in every part,
In *fillets* rolled, or cut in pieces,
Appeared like one continued species. *Swift.*

Above twelve hundred of these *fillets* have been counted by which this animal fixes itself; and when afloat, it contracts these *fillets* between the bases of its points, the number of which often amounts to two thousand. *Darwin.*

Her tresses, when no *fillets* bind,
Wanton luxurious in the wind:
Like Dian's auburn locks they shone—
But Venus wreathed them like her own.
Sheridan.

And still they seem resentfully to feel
The silken *fillet's* curb, and sought to shun
Their bonds, whene'er some Zephyr, caught, began
To offer her young pinion as her fan. *Byron.*

FILLET, in heraldry, a kind of orle or bordure, containing only a third or fourth part of the breadth of the common bordure. It is supposed to be withdrawn inwards, and is of a different color from the field. It runs quite round, near the edge, as a lace over a cloak. Fillet is also used for an ordinary drawn like the bar from the sinister point of the chief across the shield, in manner of a scarf; though it is sometimes likewise seen in the situation of a bend, fesse, cross, &c. According to Guillim, the fillet is a fourth part of the chief, and is placed in the chief point of the escutcheon.

FIL'LIBEG. Gael. *filleadh-beg*, i. e. little plaid. The lower part of the Highland dress, reaching to the knees.

In the islands the plaid is rarely worn. The *fillibeg*, a lower garment, is still very common. *Johnson's Journey to the Hebrides.*

FIL'LIP, *v. a.* & *n. s.* Belg. *flip*, a flap; Teut. and Swed. *fil.* A word conjectured by Skinner and Minsheu to be formed 'from the sound': Dr. Johnson thinks from fill up, by some combination of ideas which cannot be recovered: Mr. Todd suggests the Lat. *alapa*, a blow, or stroke, as the origin; but the northern languages evidently supplied us with it; and FLABBY, FLAP, FLIPPANCY, are of the same family. See those words. To strike with the finger nail by catching it against the thumb: a fillip is a jerk, or stroke, of this kind.

Man's life is a glass, and a *fillip* may crack it.
Old Play (1599).

Then let the pebbles on the hungry beach
Fillip the stars; then let the mutinous winds
Strike the proud cedars 'gainst the fiery sun.
Shakspeare.

If I do, *fillip* me with a three-man beetle. *Id.*

We see, that if you *fillip* a lutestring, it sheweth double or treble. *Bacon's Natural History.*

The cards obedient to his words,
Are by a *fillip* turned to birds. *Gay.*

FIL'LY, *n. s.* Swed. *fola*; Welsh *ffilog*; Icel. *filia*, of Lat. *filia*, 'as it were the daughter of the mare.'—Minsheu. A young female horse; and, metaphorically, a light or wanton woman.

Geld *fillies*, but tits, yet a nine days of age,
They die else of gelding, and gelders do rage:
Young *fillies* so likely of bulk and of bone,
Keep such to be breeders, let gelding alone.
Tusser.

I jest to Oberon, and make him smile.
When I a fat and bean-fed horse beguile,
Neighing in likeness of a *filly* foal. *Shakspeare.*

A well-wayed horse will convey thee to thy journey's end, when an unbacked *filly* may give thee a fall. *Suckling.*

I am joined in wedlock, for my sins, to one of those *fillies* who are described in the old poet. *Addison's Spectator.*

FILM, *n. s.* & *v. a.* } Sax. fylm; Belg. *vilm.*
FILM'Y, *adj.* } A thin skin or pellicle; to cover with a thin skin.

It will but skin and *film* the ulcerous place,
Whilst rank corruption, mining all within,
Infects unseen. *Shakspeare. Hamlet.*

While the silver needle did work upon the sight of his eye, to remove the *film* of the cataract, he never saw any thing more clear or perfect than that white needle. *Bacon.*

Michael from Adam's eyes the *film* removed,
Which that false fruit that promised clearer sight
Had bred. *Milton's Paradise Lost.*

A stone is held up by the *films* of the bladder, and so kept from grating or offending it. *Graunt.*

So the false spider, when her nets are spread,
Deep ambushed in her silent den does lie;
And feels, far off, the trembling of her thread,
Whose *filmy* cord should bind the struggling fly.
Dryden.

The wasps with fruitless toil
Flap *filmy* pinions oft, to extricate
Their feet in liquid shackles bound, 'till death
Bereave them of their worthless souls; such doom
Waits luxury, and lawless love of gain. *Philips.*

There is not one infidel so ridiculous as to pretend

to solve the phænomena of sight, fancy, or cogitation, by those fleeting superficial *films* of bodies.
Bentley's Sermons.

He from thick *films* shall purge the visual ray,
And on the sightless eyeballs pour the day. *Pope.*

Loose to the winds their airy garments flew,
Thin glittering textures of the *filmy* dew;
Dipt in the richest tincture of the skies,
When light disports in ever-mingling dyes. *Id.*

Nor less amused have I quiescent watched
The sooty *films*, that play upon the bars
Pendulous, and foreboding in the view
Of superstition, prophesying still,
Though still deceived, some stranger's near approach.
Cowper.

Emerged from ocean springs the vapourous air,
Bathes her light limbs, uncurls her amber hair,
Incrusts her beamy form with *films* saline,
And beauty blazes through the crystal shrine.
Darwin.

FILMER (Sir Robert), son of Sir Edward Filmer, of East Sutton, Kent, was born towards the close of the sixteenth century, and educated at Trinity College, Cambridge. His works are,—The Anarchy of limited and mixed Monarchy, 1646; Patriarcha, in which he endeavours to prove that all governments were originally monarchical, and that all legal titles are derived from the heads of families. This work was completely answered by Locke in his two Treatises on Government. Filmer died in 1647.

FILMER (Edward), son of Sir Robert, who took his degree of LL. D. at Oxford, and was author of a tragedy called the Unnatural Brother. He defended the stage against Jeremy Collier.

FILOTI, a town of European Turkey, in the pachalic of Joannina, and the chief place of a small independent tribe of that name, consisting of 6000 or 8000 men. It is eight miles west of Joannina.

FILTER, *v. a.* & *n. s.* } Fr. *filtre*; It. *feltro*;
FIL'TERING-STONE, } Lat. *filtro* (per *filum*
FIL'TRATE, *v. a.* } *trahere*). To draw off
FILTRA'TION, *n. s.* } by threads; hence to purify by drawing off, in any way: the substantive was once applied to the twist of thread depending from a vessel by which liquors were cleansed; it is now used for any strainer or cleansing vessel: hence the modern 'filtering-stone.' See below.

Having, for trial sake, *filtered* it through cap-paper, there remained in the *filtre* a powder. *Boyle.*

We took then common nitre, and having, by the usual way of solution, *filtration*, and coagulation, reduced it into crystals, we put four ounces of this purified nitre into a strong new crucible. *Id.*

That the water passing through the veins of the earth, should be rendered fresh and potable, which it cannot be by any percolations we can make, but the saline particles will pass through a tenfold *filter*.
Ray on the Creation.

Dilute this liquor with fair water, *filtre* it through a paper, and so evaporate it. *Grew's Mus.*

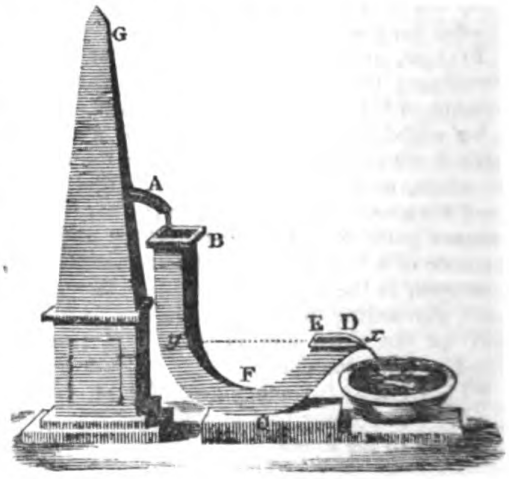
The extract obtained by the former operation, burnt to ashes, and those ashes boiled in water and *filtrated*, yield a fiery salt. *Arbuthnot on Aliments.*

FILTER, or FILTRE, in chemistry, &c., is used only for separating fluids from solids, or particles that may happen to be suspended in them, and not chemically combined with the fluids; and for this purpose, filters of various kinds and various substances have been employed. That which is twisted up like a skain or wick, acts like a siphon, while it draws off only the purest part of the liquor. Others are of paper, flannel, fine linen, sand, pounded glass, or porous stones. When paper is used, it is shaped into the form of a cone, and placed in a funnel, to support it with the liquid, otherwise it would burst; but flannel or linen may be used in the form of a bag or otherwise. Filtering stones, basins, &c., are either natural or artificial, for the purpose of purifying water. Natural filters are found in rocks, mountains, beds of sand, &c. Artificial filtering basins are made of pipe-clay and coarse sand. In 1790 a female potter obtained a patent for discovering a composition to make filtering basins, as a succedaneum for that porous stone which in many places is not to be found. A patent was also obtained by Mr. Peacock, in 1791, for a new kind of filtration, by means of gravel of different sizes, suitable to the several strata. The various sizes of the particles of gravel, as placed in layers, should be nearly in the quadruple ratio of their surfaces; that is, upon the first layer a second is to be placed, the diameters of whose particles are not to be less than one-half of the first, and so on in this proportion. This arrangement of filtering particles will gradually fine the water by the grosser particles being quite intercepted in their ascending with the water. These filters may be readily cleansed by withdrawing the body of the fluid, when that which covered the strata will descend, and carry away all the foul and extraneous substances.

A patent was also granted to Mr. Collier, of Southwark, for a most ingenious method of filtering water, oil, and other liquids.

The principle of the improved filtering machines consists in combining hydrostatic pressure with the mode of filtering per ascensum, which procures the peculiar advantage of causing the fluid and its sediment to take opposite directions The filtering surface remains the same, while the dimensions of the chamber in which the sediment is received may be varied.

Professor Parrot jun. of Paris also invented a very ingenious and portable filtering machine, represented in the diagram annexed:—



The reservoir G may be of any form or dimension which is convenient; the principal part of the machinery consisting of a square vessel, D, bent in the form of an inverted syphon. The curve may be circular, elliptic, or in any other direction, and made of block-tin. This vessel is filled with fine sand, till nearly the height of the dotted line *x y*, which denotes the descent of the water to D, whence it flows into the receiver. To the part marked A B, which must always be above this line (according to the size of the filtering machine), a woollen bag is attached, open at the top, the lower part of which touches the sand: this collects the coarsest impurities, and preserves the sand for a longer time from becoming foul. It is evident that the water flows at A, through the bag into the filter, and rises at the place marked D, which is considerably lower than the former.

In large machines a water-tight trap-door may be made at F, for the purpose of removing the sand when it is overcharged with impurities. The small diameter of the machine from which the drawing was taken was eight Paris inches from B to E; the perpendicular height of the lower side, from C, its basis, to the rim D, whence the water issues, four inches and one-twelfth; the opposite height of the mouth, A B, eight inches and three-fourths; and the height of the sand on the side marked D, three inches and one-sixth. A machine of these dimensions will furnish about three quarts of water in an hour, or eighteen gallons in twenty-four hours. This quantity, however, being too large in proportion to the size of the machine, it is advisable to prolong the stratum of sand, in order to reduce the filtration of the water to half the quantity above stated, and to obtain it in greater purity.

Thus a filtering apparatus eighteen inches long from A to D, two inches thick, and four broad, would afford every hour six pints of very pure water.

The society of Arts, &c., voted their silver medal, in the session of 1810, to Mr. W. Moult, Bedford Square, for his new method of applying the filtering stone, for purifying water. The method of using this stone is that of placing it in the water to be purified; by which means the water presses against the outside of the filter, and, oozing through its pores, fills the stone, from which it is to be conveyed into a proper receptacle. The stone is suspended in the cistern by a ring round the inside of it, upon which a projecting part round the top of the stone rests. The impurities are thus left at the bottom of the cistern, instead of at the bottom of the stone.

FILTER, or FILTRE, from φιλτρον or φιλεω I love, is also a charm, supposed to have a virtue of inspiring love. This is more properly written PHILTER, which see.

FILTH, *n. s.* / FILTH'ILY, *adv.* / FILTH'INESS, *n. s.* / FILTHY, *adj.* } Sax. ꝼylð, from ꝼỳlan, to defile; Goth. *fyla*; Teut. *foulheit*. Dirt; pollution; uncleanness; corruption.

How perfect then is man? from head to foot
Defiled with *filth*, and rotten at the root. *Sandys.*

They held this land, and with their *filthiness*
Polluted this same gentle soil long time,
That their own mother loathed their beastliness,
And 'gan abhor her brood's unkindly crime
All were they born of her own native slime.
Spenser.

Wisdom and goodness to the vile seem vile;
Filths favour but themselves. *Shakspeare. King Lear.*

Fair is foul, and foul is fair;
Hover through the fog and *filthy* air.
Id. Macbeth.

Neither may you trust waters that taste sweet; for they are commonly found in rising grounds of great cities, which must needs take in a great deal of *filth*.
Bacon's Natural History.

Little would neatness of vestures avail us with a *filthy* soul. *Bp. Hall's Contemplations.*

Men of virtue suppressed it, lest their shining should discover the other's *filthiness*. *Sidney.*

Such do likewise exceedingly dispose us to piety and religion, by purifying our souls from the dross and *filth* of sensual delights. *Tillotson.*

As all stories are not proper subjects for an epick poem or a tragedy, so neither are they for a noble picture: the subjects both of the one and of the other ought to have nothing of immoral, low, or *filthy* in them. *Dryden's Dufresnoy.*

It struck *filthily* in the camel's stomach that bulls, bears, and the like, should be armed, and that a creature of his size should be left defenceless.
L'Estrange.

They never duly improved the utmost of such a power, but gave themselves up to all the *filthiness* and licentiousness of life imaginable.
South's Sermons.

Though perhaps among the rout
He wildly flings his *filth* about;
He still has gratitude and sap'ence,
To spare the folks that give him ha'pence.
Swift.

Thee will a land of liberty we name,
Where all are free to scandal and to shame;
Thy sons, by print, may set their hearts at ease,
And be mankind's contempt, whene'er they please;
Like trodden *filth*, their vile and abject sense
Is unperceived, but when it gives offence. *Young.*

Like caterpillars, dangling under trees
By slender threads, and swinging in the breeze,
Which *filthily* bewray and sore disgrace
The boughs in which are bred the' unseemly race.
Cowper.

Hence! ye, who snare and stupify the mind,
Sophists of beauty, virtue, joy, the bane!
Greedy and fell, though impotent and blind,
Who spread your *filthy* nets in Truth's fair fane,
And ever ply your venomed fangs amain!
Beattie.

FI'MBLE HEMP, *n. s.* Corrupted from female.

Good flax and good hemp, for to have of her own,
In May a good housewife will see it be sown;
And afterwards trim it, and serve at a need;
The *fimble* to spin, and the carle for her seed.
Tusser.

The light Summer hemp, that bears no seed, which is called *fimble hemp*. *Mortimer.*

FIN, *n. s.* / FIN'-FOOTED, *adj.* / FIN'LESS, / FIN'-LIKE, / FIN'NED, / FIN'NY, / FIN'-TOED. } Saxon ꝼin; Belg. *vine*; Goth. *fawn*; Swed. *fewna*; Lat. *pinna*. 'The wing,' says Dr. Johnson, 'of a fish;' the cartilaginous membrane on the sides of fish, which assists them in swimming: fin-footed, and fin-toed, mean web-footed, or web-toed; palmipedous.

He that depends
Upon your favours, swims with *fins* of lead,
And hews down oaks with rushes.
Shakspeare. Othello.

He angers me
With telling of the moldwarp and the ant,
And of a dragon and a *finless* fish.
Id. Henry IV.

It is described like sissipedes, or birds which have their feet or claws divided; whereas it is palmipedous or *fin-footed*, like swans and geese, according to the method of nature in latirostrous or flat-billed birds; which being generally swimmers, the organ is wisely contrived unto the action, and they are framed with *fins* or oars upon their feet. *Browne.*

Thus at half-ebb a rolling sea
Returns, and wins upon the shore;
The watry herd, affrighted at the roar,
Rest on their *fins* awhile, and stay,
Then backward take their wond'ring way.
Dryden.

New herds of beasts he sends the plains to share;
New colonies of birds to people air;
And to their oozy beds the *finny* fish repair. *Id.*

In shipping such as this, the Irish kern
And untaught Indian on the stream did glide;
Ere sharp-keeled boats to stem the flood did learn,
Or *finlike* oars did spread from either side. *Id.*

They plough up the turf with a broad *finned* plough.
Mortimer.

While black with storms the ruffled ocean rolls,
And from the fisher's art defends her *finny* shoals.
Blackmore.

With hairy springes we the birds betray;
Slight lines of hair surprize the *finny* prey. *Pope.*

Their *fins* consist of a number of gristly bones, long and slender, like pins and needles. *More.*

—Her playful sea-horse woos her soft commands,
Turns his quick ears, his webbed claws expands,
His watery way with waving volutes wins,
Or listening librates on unmoving *fins*. *Darwin.*

But ye were safe, ye *finny* brood,
And safely stemmed your native flood,
Secure around his float to glide,
And dash the' unbaited hook aside.
Sheridan.

Oft from out it leaps
The *finny* darter with the glittering scales,
Who dwells and revels in thy glassy deeps;
While chance some scattered water-lily sails
Down where the shallower wave still tells its bubbling tales. *Byron.*

FI'NABLE. See FINE.

FI'NAL, *adj.* } Fr. *fin, final;* Ital. *fino;*
FI'NALLY, *adv.* } Lat. *finis, finalis.* Ultimate;
FINE, *n. s.* } last; decisive; conclusive; mortal: finally follows these senses: fine, in this sense, is sometimes used as a substantive for end, conclusion; but more commonly with *in*, as 'in fine;' meaning, adverbially, to conclude; sum up all.

Forsothe the most soveraine and *finall* perfeccion of man is in knowynge of a sothe, withouten any entent decevable, and in love of one very God, that is inchaungeable, that is to knowe, and love his creatour.
Chaucer.

At last resolved to work his *final* smart,
He lifted up his hand, but back again did start.
Spenser's Faerie Queene.

Some things in such sort are allowed, that they be also required as necessary unto salvation, by way of direct, immediate, and proper necessity *final*; so that, without performance of them, they cannot by ordinary course be saved, nor by any means excluded from life, observing them. *Hooker.*

His resolution, *in fine*, is, that in the church a number of things are strictly observed, whereof no law of scripture maketh mention one way or other. *Id.*

Still the *fine's* the crown;
Whate'er the course, the end is the renown.
Shakspeare.

Your daughter, ere she seems as won,
Desires this ring; appoints him an encounter;
In fine, delivers me to fill the time,
Herself most chastely absent. *Id.*

There be many examples where sea-fights have been *final* to the war. *Bacon.*

Henry spent his reign in establishing himself, and had neither leisure nor opportunity to undertake the *final* conquest of Ireland. *Davies on Ireland.*

Not any house of noble English in Ireland was utterly destroyed, or *finally* rooted out by the hand of justice, but the house of Desmond only. *Id.*

The *final* absence of God is hell itself.
Bp. Hall's Contemplations.

And over them triumphant death his dart
Shook; but delayed to strike, though oft invoked
With vows, as their chief good, and *final* hope.
Milton.

Sight bereaved
May chance to number thee with those
Whom patience *finally* must crown.
Id. Agonistes.

In fine, whatsoever he was, he was nothing but what it pleased Zelmane, the powers of his spirit depending of her. *Sidney.*

In fine, he wears no limbs about him sound,
With sores and sicknesses beleaguered round.
Dryden.

By its gravity air raises the water in pumps, siphons, and other engines; and performs all those feats which former philosophers, through ignorance of the efficient cause, attributed to a *final*, namely, nature's abhorrence of a vacuity. *Ray.*

Doubtlessly many men are *finally* lost, who yet have no men's sins to answer for but their own. *South.*

Your answering in the *final* cause, makes me believe you are at a loss for the efficient. *Collier.*

FINALE, a town of the territory of the king of Sardinia, once belonging to the Genoese. It is situated on the Di Ponente, at the end of a beautiful valley, and consists of two parts, half a league distant from each other; the one called Finale Borgo, standing on a hill, the other Finale Marino, situated along the shore. The latter has an insecure harbour. Both towns are well built, and are defended by three forts. The adjacent country, formerly the marquisate of Finale, is very productive in olives, oranges, and fruits. It has repeatedly been the scene of military operations, especially in the outset of Buonaparte's career in April, 1796, and at the time of the successes of the Austrians in 1800. The population of the whole is 7000. Twenty-three miles north-east of Oneglia, and thirty-five south-west of Genoa.

FINANCE', *n. s.* } Fr. *finance.* Revenue;
FINAN'CIAL, *adj.* } income; the science of na-
FINANCIER', *n. s.* } tional income and expenditure: financial is relating to or respecting finance: financier, one skilled in, or a collector of the public revenue.

This sort of *finance* hath been increased. *Bacon.*

The residue of these ordinary *finances* be casual or uncertain; as be the escheats and forfeitures. *Id.*

His pretence for making war upon his neighbours s their piracies, though he practised the same trade ıen he was straitened in his *finances* at the siege of ɜantium. *Arbuthnot.*

It was thought long justly no small proof of nanal strength and *financial* skill. *Burke.*

FI'NARY, *n. s.* From To fine. In the iron ɔrks, the second forge at the iron mills.

FINCASTLE, the capital of Bottecourt unty, Virginia, and situated on the east side of ıtabaw Creek, a branch of James River. It is 6 miles west of Richmond.

FINCH (Heneage), first earl of Nottingham, ıs the son of Heneage Finch, recorder of the y of London. He was born in 1621, and ucated at Westminster school, and Christurch, Oxford, whence he removed to the Inner mple. At the Restoration his reputation as lawyer raised him to the post of solicitorneral, in which capacity he exerted great zeal the prosecution of the regicides. In 1661 he ıs elected member for the university of Oxford, d obtained a baronetcy. Six years afterwards took a prominent part in the impeachment of e earl of Clarendon. In 1670 he became ɔorney-general, and succeeded the earl of ıaftesbury in 1673, as lord-keeper. In two ars afterwards he attained the chancellorship. 1681 he was created earl of Nottingham, but rvived his elevation little more than a year. ryden has handed down to posterity his portrait Absalom and Achitophel, under the character Amri. Several of his speeches on the trials the judges of Charles I. have been published, have also some of his parliamentary orations, s powers as an orator having been highly reɪrded.

FINCH (Daniel), son of the preceding, born 1647, was a member of the privy-council hich caused James II. to be proclaimed; he ɜver, however, sat at the board, or visited the ıurt during the reign of that monarch. On his ɔdication he exerted himself strongly in favor a regency. But this did not prevent his ɜting as secretary of state under William and lary, though he is said to have declined the ıancellorship. In 1704 he went out of office, ıt acted as one of the lords justices on the ɜath of queen Anne, in whom the administraon of affairs was vested till George I.'s arrival. ı 1716 he retired from public life, and died in 730, having been the author of an eloquent ɜply to Whiston on the subject of the Trinity.

FINCK (Thomas), a celebrated Danish ıathematician, was a native of Flensburg in outh Jutland, and received his education at trasburgh. After visiting other universities he ɜent to Basil, and there published a geometrical ɜeatise which established his fame. He afterɜards studied at Padua and Pisa, and returning ɔ Basil took the degree of M.D. in 1587. Having travelled in Germany and the north of ɔurope, he settled at Gottorp as a physician. ı 1591 he was appointed professor of matheıatics in the university of Copenhagen: in 1602 ıe was made professor of rhetoric; and in 1603 ɔrofessor of medicine. He was likewise presilent and administrator of the Royal Economical ɔchool and Corporation, and d ed in 1656, at the age of ninety-five. He wrote on astronomy, medicine, and the mathematics.

FIND, *v. a.* } Sax. fyndan; M. Goth. *findan;*
FIND'ER, *n. s.* } Sw. Goth. *finna;* Teut. *finden;*
FIND'FAULT. } Belg. *vinden.* To discover; obtain by search; meet with; feel; know; attain: hence to settle; determine by judicial verdict; supply: to find in 'one's heart,' is to discover there: 'to find one's self,' is to perceive, or be conscious of, any particular or general state of one's health or affairs: the adverb gives intensity to this verb, in the first sense specified. A finder is a discoverer; inventor; one who meets with or falls upon any thing. A find-fault, a censurer.

Seke ye and 'ye schulen *fynde,* knocke ye and it schal be openyd to you. For ech that axith takith, and he that sekith *fyndith:* and to a man that knockith: it schal be openyd. *Wiclif. Luk.* xi.

Whereas thou hast searched all my stuff, what hast thou *found* of all the household stuff?
Gen. xxxi. 37.

Canst thou by searching *find out* God? Canst thou *find out* the Almighty unto perfection? *Job* ii.

They are glad when they can *find* the grave.
Id. iii.

When he hath *found* his sheep, he layeth it on his shoulders rejoicing. *Luke* xv. 5.

The fox that first this cause of grief did *find,*
'Gan first thus plain his case with words unkind.
Hubberd.

In my school days, when I had lost one shaft,
I shot his fellow of the self-same flight
The self-same way, with more advised watch,
To *find* the other forth; by vent'ring both,
I oft *found* both. *Shakspeare. Merchant of Venice.*

His peers, upon this evidence,
Have *found* him guilty of high treason.
Shakspeare.

We will bring the device to the bar, and crown thee for a *finder* of madmen. *Id. Twelfth Night.*

We are the makers of manners, Kate; and the liberty that follows our places, stops the mouth of all *findfaults.* *Shakspeare.*

If he have several dwellings, let him sort them so, that what he wanteth in the one he may *find* in the other. *Bacon.*

They would enforce them to *find* as they would direct; and if they did not, convent, imprison, and fine them. *Id.*

A war with Spain is like to be lucrative, if we go roundly on at first; the war in continuance will *find* itself. *Id.*

Some lewd squeaking cryer,
May gall the *finder's* conscience, if they meet.
Donne.

O yes! if any happy eye
This roving wanton shall descry,
Let the *finder* surely know
Mine is the wag; 'tis I that owe
The winged wand'rer. *Crashaw*

How oft will he
Of thy changed faith complain!
And his fortunes *find* to be
So airy and so vain! *Cowley.*

They build on sands, which if unmoved they *find,*
'Tis but because there was no wind. *Id.*

Some men
The marks of old and catholick would *find.* *Id.*

A bird that flies about,
And beats itself against the cage,
Finding at last no passage out,
It sits and sings. *Id.*

While she proudly marched about,
Greater conquests to *find out*,
She beat out Susan by the by. *Id.*
A curse on him who *found* the oar. *Id.*
She disappeared, and left me dark; I waked
To *find* her, or for ever to deplore
Her loss. *Milton.*
Our voluntary service he requires,
Not our necessitated; such with him
Finds no acceptance, nor can *find*. *Id.*
The sun that barren shines,
Whose virtue on itself works no effect,
But in the fruitful earth; there first received
His beams, unactive else, their vigour *find*. *Id.*
Thus I emboldened spake, and freedom used
Permissive, and acceptance *found*. *Id.*

In mentioning the joys of heaven, I use the expressions I *find* less detractory from a theme above our praises. *Boyle.*

In these last three weeks, I have almost forgot what my teeth were made for: last night, good Mrs. Bibber here took pity on me, and crummed me a mess of gruel, with the children, and I popt and popt my spoon three or four times to my mouth, before I could *find* the way to it.
Dryden. The wild Gallant, act i. sc. 1.

Physicians
With sharpened sight some remedies may *find*.
Dryden.

The principal part of painting is to *find out*, and thoroughly to understand, what nature has made most beautiful. *Id.*

Pray, sir, how d'ye *find* yourself? says the doctor.
L'Estrange.

He *finds* no reason to have his rent abated, because a greater part of it is diverted from his landlord.
Locke.

When first *found* in a lie, talk to him of it as a strange monstrous matter, and so shame him out of it. *Id.*

He was afraid of being insulted with Greek; for which reason he desired a friend to *find* him *out* a clergyman rather of plain sense than much learning.
Addison's Spectator.

It is agreeable to compare the face of a great man with the character, and to try if we can *find out* in his looks and features either the haughty, cruel, or merciful temper. *Addison.*

She drilled him on to five-and-fifty, and will drop him in his old age, if she can *find* her account in another. *Id.*

There are agents in nature able to make the particles of bodies stick together by very strong attractions, and it is the business of experimental philosophy to *find* them *out*. *Newton.*

If we suppose a man perfectly accommodated, and trace him through all the gradations betwixt necessity and superfluity, we shall *find* that the slavery which occasioned his first activity, is not abated, but only diversified. *Steele.*

The bad must miss, the good unsought shall *find*.
Pope.
We oft review, each *finding* like a friend
Something to blame, and something to commend.
Id.
There watchful at the gate they *find*
Suspicion with her eyes behind.
Dodsley's Miscellanies.

When we are old our friends *find* it difficult to please us, and are less concerned whether we be pleased or not. *Swift.*

Pride is a vice, which pride itself inclines every man to *find* in others, and to overlook in himself.
Johnson.

Do not therefore shut your eyes against your ar-ling sin, or be averse to *find* it out. *Mason.*

She made the cleverest people quite ashamed,
And even the good with inward envy groan,
Finding themselves so very much exceeded
In their own way by all the things that she did.
Byron.

F'INDY, *adj.* Saxon ȝeꝑinðiȝ. Plump; weighty; firm; solid. Not used. Thus the proverb,

A cold May and a windy,
Makes the barn fat and *findy*;

means that it stores the barn with plump and firm grain. *Junius.*

FINE, *adj.* & *v. a.*
FINE'DRAW, *v. a.*
FINE'FINGERED, *adj.*
FINE'LY, *adv.*
FINE'NESS, *n. s.*
FI'NER,
FINE'RY,
FINE'SPOKEN, *adj.*
FINE'SPUN.

Sax. ꝼijn; Goth. *fin, thyn*; Belg. *fyn*; Teut. *fein*; Swed. and Fr. *fin*; Ital. *fino*; French *fien*; Icel. *fynner* (polished, beautiful). Dr. Johnson says perhaps from Lat. *finitus*, completed: Minsheu, à Gr. φαινω, to shine. Pure, clear, subtle; pellucid, transparent; nice; delicate in texture; slender: hence skilful; elegant; beautiful; and, by easy transition, over-wrought; tawdry; showy; wretched; mean; and, metaphorically, artful, sly; fraudulently subtle: as a verb, to fine is to purify; make pure or transparent; make less coarse; embellish. To finedraw is to sew up rents with nicety; fine-fingered is nice; artful; delicate: a finer is applied particularly to a purifier of metals: finery is show; tawdry display; gaiety of colors: fine-spoken; and fine-spun, express respectively and contemptuously, abundant in fine words contrived ingeniously.

There is a vein for the silver, and a place for gold, where they *fine* it. *Job* xxviii. 1.

The *fining* pot is for silver, and the furnace for gold.
Prov.

Take away the dross from the silver, and there shall come forth a vessel for the *finer*. *Id.* xxv. 4.

The most *finefingered* workman on the ground,
Arachne by his means was vanquished. *Spenser.*
Hugh Capet, also, who usurped the crown,
To *fine* his title with some shows of truth,
Conveyed himself as heir to the lady Lingare.
Shakspeare.

That same knave, Ford, her husband, hath the *finest* mad devil of jealousy in him, master Brook, that ever governed frenzy. *Id.*

Our works are, indeed, nought else
But the protractive tryals of great Jove,
To find persistive constancy in men;
The *fineness* of which metal is not found
In fortune's love. *Id. Troilus and Cressida.*
Those, with the *fineness* of their souls,
By reason guide his execution. *Shakspeare.*

The wisdom of all these latter times, in prince's affairs, is rather *fine* deliveries, and shiftings of dangers and mischiefs, than solid and grounded courses to keep them aloof. *Bacon.*

Great affairs are commonly too rough and stubborn to be wrought upon by the *finer* edges or points of wit. *Id.*

He was alone, save that he had two persons of honour, on either hand one, *finely* attired in white.
Id. New Atlantis.

I am doubtful whether men have sufficiently refined metals; as whether iron, brass, and tin be refined to

the height: but when they come to such a *fineness* as serveth the ordinary use, they try no farther. *Id. Natural History.*

Are they not senseless then, that think the soul
Nought but a *fine* perfection of the sense? *Davies.*

Get you black lead, sharpened *finely*. *Peacham.*

Every thing was full of a choice *fineness*, that, if it wanted any thing in majesty, it supplied with increase in pleasure; and if at the first it struck not admiration, it ravished with delight. *Sidney.*

Saltpetre was but grossly beaten; for it should not be *finely* powdered. *Boyle.*

Whether the scheme has not been pursued so far as to draw it into practice, or whether it be too *fine* to be capable of it, I will not determine. *Temple.*

As the French language has more *fineness* and smoothness at this time, so it had more compass, spirit, and force in Montaigne's days. *Id.*

To call the trumpet by the name of the metal was *fine*. *Dryden.*

For him she loves!
She named not me; that may be Torrismond,
Whom she has thrice in private seen this day:
Then I am *finely* caught in my own snare. *Id.*

It *fines* the grass, but makes it short, though thick. *Mortimer.*

It is good also for fuel, not to admit the shavings of it for the *fining* of wine. *Id. Husbandry.*

Let laws be made to obey, and not to be obeyed, and you will find that kingdom *finely* governed in a short time. *South.*

The irons of planes are set *fine* or rank: they are set *fine* when they stand so shallow below the sole of the plane, that in working they take off a thin shaving. *Moxon's Mechanical Exercises.*

Plutarch says very *finely*, that a man should not allow himself to hate even his enemies; because if you indulge this passion on some occasions, it will rise of itself in others. *Addison.*

The softness of her sex, and the *fineness* of her genius, conspire to give her a very distinguishing character. *Prior.*

The ancients were careful to coin their money in due weight and *fineness*, only in times of exigence they have diminished both the weight and *fineness*. *Arbuthnot on Coins.*

He was not only the *finest* gentleman of his time, but one of the *finest* scholars. *Felton on the Class.*

It is with a *fine* genius as with a *fine* fashion; all those are displeased at it who are not able to follow it. *Pope.*

The satirical part of mankind will needs believe, that it is not impossible to be very *fine* and very filthy. *Swift.*

The capacities of a lady are sometimes apt to fall short in cultivating cleanliness and *finery* together. *Id.*

Though Diogenes lived in a tub, there might be, for aught I know, as much pride under his rags, as in the *fine-spun* garments of the divine Plato. *Id.*

Dress up your houses and your images,
And put on all the city's *finery*,
To consecrate this day a festival. *Southern.*

They taught us, indeed, to cloath, to dwell in houses,
To feast, to sleep on down, to be profuse:
A *fine* exchange for liberty. *Philip's Briton.*

They want to grow rich in their trades, and to maintain their families in some such figure and degree of *finery*, as a reasonable Christian life has no occasion for. *Law.*

The *fineness* of cloaths destroys the ease: it often helps men to pain, but can never rid them of any: the body may languish under the most splendid cover. *Decay of Piety.*

Next to clothes being *fine*, they should be well made, and worn easily: for a man is only the less genteel for a *fine* coat, if in wearing it he shows a regard for it, and is not as easy in it as if it were a plain one. *Chesterfield.*

Be upon your guard against *fine*-dressed and *fine-spoken* chevaliers 'd'industrie.' *Id.*

I think the sermons published in his life-time are *fine*, moral discourses. They bear indeed the character of their author, simple, elegant, candid, clear, and rational. *Warburton to Hurd.*

There is no wonder, now one sees the fountain Milton drew from, that, in admiration of this poetical philosophy (which nourished the *fine* spirits of that time, though it corrupted some), he should make the other speaker in the scene cry out, as in a fit of extacy,

How charming is divine philosophy. *Hurd.*

Let the wine without mixture or stum be all *fine*,
Or call up the master. *Johnson.*

You speak very *fine*, and you look very grave,
But apples we want, and apples we'll have!
If you will go with us, you shall have a share,
If not, you shall have neither apple nor pear. *Cowper.*

FINE, *n. s.*, *v. a.* & *v. n.* } Barbarous Lat.
FINI'ABLE, *adj.* } *finum*; Old Fr. *fin*. A payment; forfeit; mulct; pecuniary penalty: to fine is used both for impose, or punish with, fines, as well as to pay a fine. Finable is, admitting or discovering a fine.

Even this ill night your breathing shall expire,
Paying the *fine* of rated treachery.

Two vessels of *fine* copper precious as gold. *Ezra.*
Shakspeare. King John.

The spirit of wantonness is sure scared out of him: if the devil have him not in fee-simple, with *fine* and recovery, he will never, in the way of waste, attempt us again. *Shakspeare.*

This is the order for writs of covenant that be *finable*. *Bacon.*

The killing of an Irishman was not punished by our law as manslaughter, which is felony and capital; but by a *fine* of pecuniary punishment called an ericke. *Davies on Ireland.*

He sent letters to the council, wherein he acknowledged himself favored in bringing his cause *finable*. *Hayward.*

There have been ways found out to banish ministers, to *fine* not only the people, but even the grounds and fields where they assembled in conventicles. *Marvell.*

What poet ever *fined* for sheriff? or who
By rhymes and verse did ever lord mayor grow?
Oldham.

To *fine* men one-third of their fortune, without any crime committed seems very hard. *Locke.*

Besides *fines* set upon plays, games, balls, and feasting, they have many customs which contribute to their simplicity. *Addison.*

How vain that second life in other breath,
The' estate which wits inherit after death!
Ease, health, and life, for this they must resign,
Unsure the tenure, but how vast the *fine*! *Pope.*

FINE, in law, has divers applications: as 1. A formal conveyance of lands or tenements, or of any thing inheritable, being in esse temporis finis, in order to cut off all controversies. 2. A final agreement between persons, concerning any lands or rents, &c., of which any suit or writ is depending between them in any court. 3. A sum of money paid for entering lands or tene-

ments let by lease; and 4. a pecuniary mulct for an offence committed against the king and his laws, or against the lord of the manor.

Fines for Alienation, in feudal law. One of the attendants or consequences of tenure by vassalship, or knight-service, was that of fines due to the lord for every alienation, whenever the tenant had occasion to make over his land to another. This depended on the nature of the feudal connexion; it not being reasonable, nor allowed, that a feudatory should transfer his lord's gift to another, and substitute a new tenant to do the service in his own stead, without the consent of the lord: and, as the feudal obligation was considered reciprocal, the lord also could not alienate his seignory without the consent of his tenant, which consent of his was called an attornment. This restraint upon the lord soon wore away; that upon the tenant continued longer. For, when every thing came in process of time to be bought and sold, the lords would not grant a license to their tenants to aliene, without a fine being paid; apprehending that, if it was reasonable for the heir to pay a fine or relief on the renovation of his paternal estate, it was much more reasonable that a stranger should make the same acknowledgment on his admission to a newly purchased feud. In England these fines seem only to have been exacted from the king's tenants in capite, who were never able to aliene without a license: but as to common persons they were at liberty, by Magna Charta, and the statute of quia emptores (if not earlier), to aliene the whole of their estate, to be holden of the same lord as they themselves held it of before. But the king's tenants in capite, not being included under the general words of these statutes, could not aliene without a licence; for, if they did, it was in ancient strictness an absolute forfeiture of the land; though some have imagined otherwise. But this severity was mitigated by statute 1 Edward III. c. 12, which ordained that, in such case, the lands should not be forfeited, but a reasonable fine be paid to the king. Upon which statute it was settled, that one-third of the yearly value should be paid for a license of alienation; but, if the tenant presumed to aliene without a license, a full year's value should be paid. These fines were at last totally taken away by statute 12 Car. II. c. 24. See Knight-service.

Fine of Lands. 'The law on this subject,' says Tomlins, 'of itself very extensive, is also closely implicated with that of recoveries. A fine, finis, or finalis concordia, from the words with which it begins (and, also from its effect in putting a final end to all suits and contentions,) is a solemn amicable agreement or composition of a suit (whether that suit be real or fictitious) made between the demandant and tenant, with the consent of the judges; and enrolled among the records of the court, where the suit was commenced; by which agreement freehold property may be transferred, settled and limited.' See Cruise on Fines, 1st. edit. 4. 89. 92.

Shepherd says, Sometimes it is taken for a final agreement or conveyance upon record for the settling and securing of lands and tenements; and so it is designated by some to be an acknowledgment, in the king's court, of the land or other things to be his right that doth complain: and by others a covenant made between parties and recorded by the justices; and by others a friendly, real, and final agreement amongst parties, concerning any land, or rent, or other thing whereof any suit or writ is hanging between them in any court: and by others more fully an instrument of record of an agreement concerning lands, tenements, or hereditaments; duly made by the king's license, and acknowledged by the parties to the same, upon a writ of covenant, writ of right, or such like, before the Justices of the common pleas or others thereunto authorised, and engrossed of record in the same court; to end all controversies thereof, both between themselves which be parties and privies to the same, and all strangers not suing or claiming in due time. Shep. Touchst. c. 3. and the authorities there cited.

The distinguishable properties of a fine are, 1. The extinguishing dormant titles by barring strangers; unless they claim within five years. 2. Barring the issue in tail immediately. (But not barring the remainders or reversions, which depend on the estate-tail barred; except where the tenant in tail has the immediate reversion in fee in himself. (See Cruise on Fines, 2d edit. 176. 1 Show. 370. 1 Salk. 338. 4 Mod. 1.) 3. Binding Femmes Covert, see post, IV.—These constitute the peculiar qualities on account of which a fine is most usually, if not always, resorted to, as one of the most valuable of the common assurances of the realm; being now in fact a fictitious proceeding to transfer or secure real property by a mode more efficacious than ordinary conveyances. 1 Inst. 121. a note 1, 2, for which see at full length, Mr. Hargrave's excellent abridgment of the History of Fines and their purposes.

Fines being agreements solemnly made in the king's courts were deemed to be of equal notoriety with judgments in writs of right; and therefore the common law allowed them to have the same quality of barring all who should not claim within a year and a day. See Plowd. 357. Hence we may probably date the origin and frequent use of Fines as feigned proceedings. But this puissance of a fine was taken away by stat. 34 E. III. c. 16; and this statute continued in force till stat. 1 Ric. III. c. 7, and 4 H. VII. c. 24, which revived the ancient law, though with some change; proclamations being required to make fines more notorious, and the time for claiming being enlarged, from a year and a day to five years. See post, 1. The force of fines on the rights of strangers being thus regulated, it has ever since been a common practice to levy them merely for better guarding a title against claims, which, under the common statutes of limitation, might subsist with a right of entry for twenty years and with a right of action for a much longer time. 1 Inst. ubi supra, and see post.

Fines, for offences, or pecuniary punishment, or as a recompense for an offence committed against the king and his laws, or against the lord of a manor. In these cases a man is said finem facere de transgressione cum rege, &c. Origi-

nally, perhaps, all punishments were corporal: but after the use of money, when the profits of the courts arose from the money paid out of the civil causes, and the fines and confiscations in criminal ones, the commutation of punishments was allowed of, and the corporal punishment, which was only in terrorem, changed into pecuniary, whereby they found their own advantage.

Thus arose the distinction between greater and less offences; for in the crimina majora there was at least a fine to the king, which was levied by a capiatur; but upon the lesser offences there was only an amercement, which was affeered, and for which a distringas, or action of debt lay. 2 New. Ab. 502. The discretionary fines (and discretionary length of imprisonment), which the courts of justice are enabled to impose, may seem an exception to the general rule, that the punishment of every offence is ascertained by the law. But the general nature of the punishment is in these, as in other cases, fixed and determinate; though the duration and quantity of each must frequently vary, from the aggravations, or otherwise, of the offence, the quality and condition of the parties, and from innumerable other circumstances.

The quantum in particular of pecuniary fines, neither can nor ought to be ascertained by an invariable law. Our statute law, therefore, has not often ascertained the quantity of fines, nor the common law, ever; it directing certain offences to be punished by fine in general, without specifying the certain sum; which is fully sufficient when we consider that, however unlimited the power of the court may seem, it is far from being wholly arbitrary; but its discretion is regulated by law. For the Bill of Rights, stat. 1 W. & M. stat. 2, c. 2. has particularly declared, that excessive fines ought not to be imposed, nor cruel and unusual punishments inflicted; and the same statute further declares, that all grants and promises of fines and forfeitures of particular persons before conviction, are illegal and void. Now the Bill of Rights was only declaratory, of the old constitutional law; and accordingly we find it expressly holden, long before, that all such previous grants are void; since thereby, many times, undue means, and more violent prosecution, would be used for private lucre, than the quiet and just proceeding of law would permit. 2 Inst. 48.

The reasonableness of fines in criminal cases has been usually regulated by the determination of Magna Charta, c. 14, concerning amercements for misbehaviour by the suitors in matters of civil right. 'Liber homo non amercietur pro parvo delicto nisi secundum modum ipsius delicti, et pro magno delicto, secundum magnitudinem delicti; salvo contenemento suo: et mercator eodem modo, salvâ mercandisâ suâ; et villanus eodem modo amercietur, salvo wainagio suo.' A rule that obtained even in Henry II's time (Glan. l. 9. cc. 8, 11.) and means only, that no man shall have a larger amercement imposed upon him than his circumstances or personal estate will bear: saving to the land-holder his contenement or land; to the trader his merchandise; and to the countryman his wainage or team and instruments of husbandry. In order to ascertain which, the great charter also directs, that the amercement, which is always inflicted in general terms (sit in misericordia) shall be set, ponatur, or reduced to a certainty by the oath of good and lawful men of the neighbourhood. Which method of liquidating the amercement to a precise sum, was usually performed in the superior courts by the assessment or affeerment of the coroner, a sworn officer chosen by the neighbourhood, under the equity of the stat. West. 1. c. 18; and then the judges estreated them into the exchequer. F. N. B. 76. But in the court-leet and court-baron it is still performed by affeerors or suitors sworn to afferee, that is tax and moderate the general amercement according to the particular circumstances of the offence and the offender: the affeeror's oath is conceived in the very terms of Magna Charta, Fitzh. Surv. c. 11. Amercements imposed by the superior courts on their own officers and ministers were affeered by the judges themselves; but when a pecuniary mulct was inflicted by them on a stranger (not being party to any suit) it was then denominated a fine. 8 Rep. 40. And the ancient practice was, when any such fine was imposed to enquire by a jury quantum inde regi dare valeat per annum, salva sustentatione sua et uxoris, et liberorum suorum. Gilb. Exch. c. 5. And since the disuse of such inquest it is never usual to assess a larger fine than a man is able to pay, without touching the implements of his livelihood: but to inflict corporal punishment, or a limited imprisonment, instead of such fine as might amount to imprisonment for life. And this is the reason why fines in the king's court are frequently denominated ransoms, because the penalty must otherwise fall upon a man's person unless it be redeemed or ransomed by a pecuniary fine. Mirr. c. 5. § 3. Lamb. Eir. 575. According to an ancient maxim, qui non habet in crumenâ luat in corpore. Yet where any statute speaks both of fine and ransom, it is holden that the ransom shall be treble to the fine at least.

Finers, or Refiners, of Gold and Silver, persons who purify and part those metals from coarser ones by fire and acids. They are also called parters in our old law-books, and sometimes departers.

Fine-stilling, that branch of the art of distilling which is employed in distilling the spirit from treacle, or other preparations or recrements of sugar. It is so called by way of distinction from malt-stilling. This operation is the same with that used in making the malt spirit; a wash of the saccharine matter being made with water, from treacle, &c., and fermented with yeast. It is usual to add in this case, however, a considerable portion of malt, and sometimes powdered jalap, to the fermenting backs. The malt accelerates the fermentation, and makes the spirit come out the cheaper; and the jalap prevents the rise of any musty head on the surface of the fermenting liquor, so as to leave a greater opportunity for the free access of the air, and thus to shorten the work, by turning the foamy into a hissing fermentation.

FINE'SSE, *n. s.* Fr. Artifice; stratagem: an unnecessary word which is creeping into the language.—Johnson.

A circumstance not much to be stood upon, in case it were not upon some *finesse*. *Hayward.*

In what the world calls a suit of clothes, embroidery is sheer wit; gold fringe is agreeable conversation; gold lace, repartee; a huge long peruke, humour; and a coat full of powder very good raillery: all which require abundance of *finesse* and delicatesse to manage with advantage, as well as a strict observance of the times and fashions. *Swift.*

But he (his musical *finesse* was such,
So nice his ear, so delicate his touch)
Made poetry a mere mechanic art;
And every warbler has his tune by heart. *Cowper.*

FINET (Sir John), an English writer, descended from an ancient family of Italy, was born near Dover in 1571. He was brought up at court, where he made himself by his wit a favorite with James I. In 1614 he was sent into France upon public business, and soon after was knighted. In 1626 he was made assistant-master of the ceremonies. He was the author of Fineti Philoxenus, some choice observations touching the reception and precedency, &c., of foreign ambassadors in England. He also translated from the French, The Beginning, Continuance, and Decay, of Estates, 1606.

FINGAL, king of Morven, in ancient Caledonia. He flourished in the third century; and, according to the Irish histories, died A. D. 283, although there is some reason from Ossian's poems for placing his death a few years later. Fingal was descended in all probability from those Celtic tribes who were the first inhabitants of Britain. Tradition, and the poems of Ossian, give him a long line of royal ancestors, such as Combal, Trenmor, Trathal, &c., who had all reigned over the same territory. Whether this territory was bounded by the Caledonian forest, or extended somewhat farther south towards the Roman province, is uncertain; but it doubtless extended over all the North and West Highlands, comprehending the Hebrides, whose petty chiefs were all subject to the king of Morven. His principal place of residence was Selma, which was probably in the neighbourhood of Glenco, supposed to be the Cona of Ossian; though some imagine it to have been in Strath-Conan in Moray. The truth seems to be, that, as Fingal and his people lived by hunting, they often shifted their habitation. Hence, in all parts of the Highlands, we find in the names of places, buildings, &c., such monuments as justify their several claims for the honor of Fingal's residence. Fingal acquired great fame by his prowess in arms. He made many successful incursions into the Roman province, whence he carried away spoils; and by sea we find him frequently making voyages to Scandinavia, the Orkneys, and Ireland; called by Ossian Lochlin, Innistore, and Ullin. The time of his death is uncertain.

'The character of Fingal,' Dr. Blair observes, speaking of him as he appears in Ossian, 'is perhaps the most perfect that was ever drawn by a poet, for we may boldly defy all the writers of antiquity to show us any hero equal to Fingal. Throughout the whole of Ossian's works he is presented to us in all that variety of lights which give the full display of a character. In him concur almost all the qualities that can ennoble human nature; that can either make us admire the hero, or love the man. He is not only unconquerable in war, but he makes his people happy by his wisdom in the days of peace. He is truly the father of his people. He is known by the epithet of 'Fingal of the mildest look,' and distinguished on every occasion by humanity and generosity. He is merciful to his foes, full of affection to his children, full of concern about his friends, and never mentions Agandecca, his first love, without the utmost tenderness. He is the universal protector of the distressed; none ever went sad from Fingal.' The controversy respecting the genuineness of the originals of these celebrated poems, at one time so long and so ably defended by the partizans on each side the question, we need not here enter upon. A real hero of the above name seems to be known to history. On the subject of the poems in question, see OSSIAN.

FINGER, *n. s.* & *v. a.*
FINGERFERN,
FINGERING,
FINGER-STONE.
} Sax. ꝼinʒeꝛ, from ꝼanʒeꝛ, to hold; Sw. *finger*; Goth. *finge*; Belg. *vinger*. See FANG. The flexible member of the hand, by which we seize, or hold; the hand; any instrument of work; a small measure of extension: fingerfern is a plant (asplenum); finger-stone, a fossil (selenites): fingering, the act of touching lightly; manner of playing music; fine or delicate work.

Woo to you wise men of lawe, for ye chargen men with birthuns whiche thei moun not bere: and ye you silf with your o *fyngir* touchen not the heuynessis. *Wiclif. Luk.* xi.

Not any skilled in loops of *fingering* fine,
With this so curious net-work might compare. *Spenser.*

You seem to understand me,
By each at once her choppy *finger* laying
Upon her skinny lips. *Shakspeare. Macbeth.*

Go, get you gone, and let the papers lie;
You would be *fingering* them to anger me. *Shakspeare.*

She hath broke the lute;
I did but tell her she mistook her frets,
And bowed her hand to teach her *fingering*. *Id.*

With what eye should we have beheld this stone, which was hewen and written with the very *finger* of God. *Bp. Hall's Contemplations.*

One of these bows with a little arrow did pierce through a piece of steel three *fingers* thick. *Wilkins.*

Diogenes, who is never said,
For aught that ever I could read,
To whine, put *finger* i' the' eye, and sob,
Because h' had ne'er another tub. *Hudibras.*

Fool, that forgets her stubborn look,
This softness from thy *finger* took. *Waller.*

Go now, go trust the wind's uncertain breath,
Removed four *fingers* from approaching death;
Or seven at most, when thickest is the board. *Dryden.*

The hand is divided into four *fingers* bending forward, and one opposite to them bending backwards, and of greater strength than any of them singly, which we call the thumb, to join with them severally or united; whereby it is fitted to lay hold of objects of any size or quantity. *Ray.*

One that is covetous is not so highly pleased with the meer sight and *fingering* of money, as with the thoughts of his being considered as a wealthy man. *Grew.*

His ambition would needs be *fingering* the sceptre, and hoisting him into his father's throne. *South.*

A hand of a vast extension, and a prodigious number of *fingers* playing upon all the organ pipes of the world, and making every one sound a particular note. *Keil against Burnet.*

The *fingers* and thumb in each hand consist of fifteen bones, there being three to each *finger*. *Quincy.*

Poor Peg sewed, spun, and knit, for a livelihood,
'till her *fingers'* ends were sore.
Arbuthnot. John Bull.

I tread his deck,
Ascend his top-mast, through his peering eyes
Discover countries, with a kindred heart
Suffer his woes, and share in his escapes;
While fancy, like the *finger* of a clock,
Runs the great circuit, and is still at home.
Cowper.

Thy Druids struck the well-hung harps they bore
With *fingers* deeply dyed in human gore;
And, while the victim slowly bled to death,
Upon the rolling chords rung out his dying breath.
Id.

Young Philanthropy, with voice divine,
Convolves the adoring youth to Virtue's shrine;
Who with raised eye and pointing *finger* leads
To truths celestial, and immortal deeds. *Darwin.*

Anon her thin wan *fingers* beat the wall
In time to his old tune; he changed the theme,
And sung of love; the fierce name struck through all
Her recollection. *Byron.*

FIN'GLE-FANGLE, *n. s.* From FANGLE, which see. A trifle; a burlesque word.

We agree in nothing but to wrangle
About the slightest *fingle-fangle*. *Hudibras.*

FIN'ICAL, *adj.* } Apparently from FINE,
FIN'ICALLY, *adv.* } which see. Nice; over-
FIN'ICALNESS, *n. s.* } particular; foppish. A low and burlesque word.

A whoreson, glassglazing, superserviceable, *finical* rogue. *Shakspeare. King Lear.*

I cannot hear a *finical* fop romancing, how the king took him aside at such a time; what the queen said to him at another. *L'Estrange.*

Taylor and Barrow are incomparably the greatest preachers and divines of their age. It is true they are both incompti or rather exuberant. But it is for such little writers as the preachers of Lincoln's Inn to hide their barrenness by the *finicalness* of culture. *Warburton to Hurd.*

FINING OF WINES. The usual method of fining down wines, so as to render them expeditiously bright, clear, and fit for use, is this:—Take an ounce of isinglass, beat it into thin shreds with a hammer, and dissolve it by boiling in a pint of water; this when cold becomes a stiff jelly. Whisk up some of this jelly into a froth with a little of the wine intended to be fined, then stir it well among the rest in the cask, and bung it down tight; by this means the wine will become bright in eight or ten days. This method, however, is found to be best suited to the white wines; for the red ones the wine-coopers commonly use the whites of eggs beat up to a froth and mixed in the same manner with their wines. The method by which these viscous bodies act in the operation is this: they entangle themselves among the flying lee or light fæculencies that float in the wine, and thus forming a mass specifically heavier than the wine, they sink through the body thereof like a net, carrying down all the foulness they meet in the way to the bottom; but when the wine is extremely rich, so that its specific gravity is greater than that of the mass formed by the ingredients used in fining and the dregs or lee; this mass then rises upwards, and floats at the surface of the wine, which will in this case also draw off fine. See CLARIFICATION.

FIN'ISH, *v. a.* } Fr. *finir*; Span. and
FINISHER, *n. s.* } Port. *fenecer*; Lat. *finio*,
FINISHING. } *fio*; à Gr. φνω, to produce. —Ainsworth. To bring to an end; complete; make perfect; polish.

For which of you, intending to build a tower, sitteth not down first and counteth the cost, whether he have sufficient to *finish* it. *Luke* xiv. 28.

When Jesus, therefore, had received the vinegar, he said, 'It is *finished!*' and he bowed his head and gave up the ghost. *John* xix. 30.

The author and *finisher* of our faith. *Hebrews.*

They hindered the *finishing* of the building. *Esdras* v. 73.

This was the condition of those times; the world against Athanasius, and Athanasius against it: half an hundred of years spent in doubtful trials which of the two, in the end, would prevail; the side which had all, or else that part which had no friend but God and death; the one a defender of his innocency, the other a *finisher* of all his troubles. *Hooker.*

He that of greatest works is *finisher*,
Oft does them by the weakest minister.
Shakspeare.

O prophet of glad tidings! *finisher*
Of utmost hope. *Milton's Paradise Lost.*

Though here you all perfection should not find,
Yet is it all the Eternal Will designed;
It is a *finished* work, and perfect in his kind.
Blackmore.

I would make what bears your name as *finished* as my last work ought to be; that is more *finished* than the rest. *Pope.*

A poet uses episodes; but episodes, taken separately, *finish* nothing. *Broome on the Odyssey.*

When these are once stirred, there wants nothing but the assent of the will, and then the work is *finished*. *Mason.*

I am out of Humanity's reach,
I must *finish* my journey alone,
Never hear the sweet music of speech;
I start at the sound of my own. *Cowper.*

FINISTERRE, Lat. finis terræ, i. e. land's end. A department of France, bounded on the north-west and south by the sea, and on the east by the departments of the North and Morbihan. It is about fifty miles long from north to south, and between forty and forty-five broad from east to west, comprehending the west part of the ci-devant province of Bretagne. It is the most western part of France, and contains the five arrondissements of Quimper, Brest, Chateaulin, Morlaix, and Quimperle. Quimper is the capital, but Brest its largest town; the Aulne and the Oder are the chief rivers. The climate here is very wet, and the soil not very fertile in the interior: along the coast good buck-wheat, oats, and flax are grown; the fisheries are abundant, and the pasturage is good. The manufactures are woollen, coarse linens, and leather.

FI'NITE, *adj.* FI'NITELESS, FI'NITELY, *adv.* FI'NITENESS, *n. s.* FIN'ITUDE. } Lat. *finitus*, participle of *finio*. See FINISH. Limited; bounded; having an end: finiteless is boundless, a word hardly worth perpetuating while we have the far better one infinite to express the same sense: finiteness and finitude, mean limitation; state of being finite; confinement within boundaries.

Servius conceives no more thereby than a *finite* number for indefinite. *Browne's Vulgar Errours.*

It is ridiculous unto reason, and *finiteless* as their desires. *Id.*

They are creatures still, and that sets them at an infinite distance from God; whereas all their excellencies can make them but *finitely* distant from us. *Stillingfleet.*

Finite of any magnitude holds not any proportion to infinite. *Locke.*

I ought now to unbay the current of my passion, and love without other boundary than what is set by the *finiteness* of my natural powers. *Norris.*

That supposed infinite duration will, by the very supposition, be limited at two extremes, though never so remote asunder, and consequently must needs be *finite*. *Bentley.*

Finitude, applied to natural or created things, imports the proportions of the several degrees of affections, or properties of these things to one another; infinitude, the unboundedness of these degrees of affections, or properties. *Cheyne.*

Sometimes he doth act in methods of wisdom, and by rules of justice, surpassing our capacity to know, either from the *finiteness* of our nature, or the feebleness of our reason, or the meanness of our state and circumstances here. *Barrow.*

FINLAND, or FINNLAND, a country of European Russia, bounded on the north by Lapland, on the east by Russia, on the south by a gulf to which it gives name, and on the west by the gulf of Bothnia. It was divided by the Swedes, who formerly possessed the sovereignty, into Finland Proper and East Bothnia, an extensive country to the northward; but the whole is now comprised under the general name of Finland, containing seven provinces, of which East Bothnia is the least fertile. In superficial extent Finland is equal to England; but the population, including Russian Finland and the islands of Aland, does not exceed 1,100,000. Though the pastures are good, the cattle are small, and the forests of firs furnish the principal articles of commerce, in wood, charcoal, timber, and plank. Game is abundant of various kinds. The lakes and rivers abound in fish, and pearls are found on the coasts. At the bottom of the morasses earth is dug, from which iron is extracted. There are also some mines of lead. In the more favored districts rice, oats, and barley, are successfully cultivated, and wheat in particular situations. The exports of the country consist in tar, pitch, wood, iron, and copper.

The towns lie generally along the coast; the principal are Abo, the capital, Helsingfors, Nistadt, Wasa, and Uleaborg; in the interior is Tavasthus, and adjacent to the southern frontier is the town of Wyborg. The houses, and even the public edifices, are generally built of wood; yet the poorest of the peasantry have a small building for the purpose of taking the warm bath. Thinly peopled as Finland still is, it was much more so in the middle of the eighteenth century; the inhabitants continue visibly on the increase, although their habitations, particularly in the north, are very wretched. They speak a language quite different both from Russian or Swedish; this language is spoken also in Lapland, Esthonia, and in part of Livonia. In point of religion the Finlanders are in general Lutherans.

The Fins are a race of people very distinct from their neighbours and masters, the Russians. They are of a middle stature, fair complexion, generally red hair, their beards shaven. Their hair, parted at top, is suffered to hang over their shoulders. A thoughtful disposition, often darkening into melancholy, and a singular language, without prepositions, complete the picture of their national characteristic.

'The villages we saw,' says Mr. James, speaking of his journey from Wyburg to St. Petersburgh, 'were of the meanest appearance and character, for whatsoever in this country is not made for display and show, is poor indeed; and, by our recollection of the different state of things we had left behind, Sweden was now as much raised as she had before been sunk on comparison. Instead of the neat-built red-ochred cottages, the road-side was disfigured by large dismal huts, with walls made of the round trunks of trees barely stripped of their bark, and resembling externally a casual pile of timber, rather than a human dwelling. The interstices of this framework were caulked with moss and clay, and though a few glazed windows were seen, their place was generally supplied by square open crannies. These structures called to mind the first rude efforts of primitive man after he left the shelter of the forest-oak, and looked as if age after age had passed over the heads of the people without their attempting any improvement in the arts of civil life. The ancient Russian Chroniclers, who speak of the founder of any place as having cut the town (roubitgorod) might easily be supposed to be describing in that phrase the builders of the present day;—so little different is the modern process; the felling of the timber in fact, is the only part of the labor which a peasant thinks it behoves him to calculate upon when about to erect his habitation.

'The cottages of the islanders,' says our traveller, 'are rough-hewn log-houses, and they were themselves people apparently of such simple manners and habits, as their secluded situation and scanty number might lead one to expect; each rustic householder was provided with the tools and implements of a dozen necessary arts or professions; performing for himself, with equal address, the duties of carpenter, shoemaker, tailor, fisherman, baker, miller, &c. So little was the division of labor studied, or the appropriation of means, that we observed the corn mills almost equalled in number the houses of the villagers; they were cheap and of simple form, acting by sails constructed of wooden planks, and their mill-stones shaped like the querne or old Celtic machine, for grinding with

the hand. Luxuries, such as ochre paint for their cabins, or coats of woollen cloth, where sheeps-skins would suffice, were not common. Caps of the most ordinary fur served as covering for their heads; and for their feet, the want of shoes was supplied by a mis-shapen bag of dried seal-skin: the harness of their horses consisted of nothing more than a plain collar attached to the shafts of the cart or sledge; the horse's neck was thrust through, and he had nothing to do but proceed; the contrivance answers all the purposes of draught, because neither here nor in Sweden is the animal trained to resist the weight of a carriage on a descent, however steep it may be.'

Speaking of his arrival at the chief town of the southern frontier, he says, 'I gazed with wonder at the spectacle that presented itself in the streets of Wyborg; the glare of white houses, their green roofs and oriental cupolas, the noble mansions of the wealthy, and the religious fane, all so spacious and splendid in comparison of what we had lately been accustomed to see; and yet above all, the new costume of the by-standers dressed in long caftans, their bare necks, their flowing beards, their sash, cap, and boots of red, were altogether objects so singular, that the spectacle impressed itself on my mind rather as a dream of the morning than as a scene of real life. The men seemed quite another race of beings; no longer the modest homely Fin, but persons of strong masculine habit, carrying a stubborn and listless mien, that, combined with their majestic stature, seemed not altogether devoid of dignity: while the colored ornaments with which they were set off lent them an air of grotesque magnificence, not ill according with the showy buildings that surrounded us; every object, in short, which met our eyes, partook of the same character, and bore a hint of Asiatic origin.' (p. 224.)

Dr. Clarke, who visited that part of Finland which borders on the top of the Bothnian Gulf, thus describes the dress of the inhabitants of those regions. 'The pure costume of the Finland peasants is very elegant; we saw it here generally worn. It consists, among the men, of a jacket, with pantaloons, buskins, and a yellow sash, worn as a girdle round the loins. The sash, although generally yellow, is sometimes red, and sometimes it is variegated with flowers. The buskins are bound about the ancles with scarlet garters, ending in a black tassel. The jacket and pantaloons are of the same color, and generally white; but blue, black, and gray, are also used. Some of the men, but very few, appear in long white coats, bound with the same sort of sash with the Don Cossacks. The dress of the women resembles the costume of the females of the Venetian territory, and is very beautiful. They appear in a short scarlet or striped vest, made as gaudy as possible, with large and loose shift sleeves of very white linen, and white hoods or handkerchiefs upon their heads. The vests are often of silk or rich damask, embroidered with large brocade flowers.'

One Finnish custom mentioned by Mr. James would provide so appropriate an occupation for a numerous body of respectable females in this country, and keep them out of mischief so much to the peace and comfort of their neighbours, that we cannot but refer to it. 'The solemnisation of marriages takes place only once a year, and that on a fixed day in the teeming autumn. Before this time arrives, the expectant lover is not permitted, by the custom of the land, to pay his addresses in person to the object of his wishes: his offer is made by sending a piece of money, that is accepted or not as the fair one is inclined to approve or reject his suit: but both the conveyance of this token of love, and the whole of the after-ceremonials of courtship, are carried on through the intervention of some old woman of the village, whose occupation and calling may seem enviable to some bustling gentlewomen in other countries, being that of a regularly established match-maker.' (p. 214, 215).

Finland was formerly an independent kingdom, then an archduchy annexed to Sweden. In 1742 great part of it was conquered by the Russians; but ceded again to Sweden except Carelia, Kexholm, &c. In the twelfth century great pains were taken for the conversion of the Finns to Christianity; and Henry, who was bishop of Upsal in 1157, fell a martyr to his zeal in carrying on that pious undertaking. That prelate founded the first cathedral in Finland at Randamoke; but the see was afterwards removed to Abo, which lies in the neighbourhood of the former. Martin Skytte and Peter Serkilar were the first preachers of the Lutheran doctrine here. It was in 1808 that Finland was overrun by a Russian army, and annexed to that empire; its vicinity to Petersburgh, and its advantages for naval purposes, had long made its conquest a favorite object with that court: East Bothnia and Kemi-Lappmark shared the same fate.

On the east of the Baltic is the Gulf of Finland, eighty leagues long, and from eleven to twenty-two broad. Its entrance is between Spinthamer Point in Estonia, and Hangœ-head in Finland. The latter point is the extremity of a peninsula, with a fire tower, and off it several islands, forming a port, defended by some batteries. The greatest depth of the gulf is sixty fathoms; but it is encumbered with a vast number of rocky islands and reefs, level with the water, distinguished by fire beacons, or flags of different colors, hoisted on high wooden crosses, to superintend which two Russian galliots are constantly employed, while the gulf remains open; nevertheless, shipwrecks are extremely frequent.

FINMARK, an extensive province of Sweden, lying to the north of Norway, and usually considered a part of Lapland. It is divided into four districts, West and East Finmark, Senjen, and Tromsoe. The inhabitants derive their principal subsistence from fishing; and it is only on the coast that human beings are to be met with in any number. To this province belong several islands, on one of which, Magheroe, is the North Cape, the most northern promontory of Europe. Finmark was ceded to Sweden with the rest of Norway in 1814. It contains 27,000 inhabitants, of whom 6000 are Laplanders.

FINNI, or FENNI, the ancient people of Finningia; 'whose ferocity,' says Tacitus, 'was

extraordinary, poverty extreme, herbs their food, skins their covering, and the ground their couch: regardless of man and of gods, they attained to a very difficult thing, not to have a single wish to form.'

FINNINGIA, or FENNINGIA, in ancient geography, the proper reading for Eningia in Pliny, which he makes an island, but is more truly a peninsula: now called Finland.

FI'NOCHIO, *n. s.* A species of fennel; a plant.

FIONDA, or PHIONDA, anciently Phaselis, a decayed city of Asia Minor, on the west coast of the Gulf of Satalia. It is called Tekrova by the Turks, and is still the see of a Greek bishop. It is situated on a small peninsula, at the foot of the mountain Yakhtalu. Here are still three ports and a lake, as described by Strabo (though the last is now a mere swamp), together with the ruins of a theatre, 150 feet in diameter, which has had twenty-one rows of seats. Some large sarcophagi, of the finest marble, stand on the beach. Two bear a human figure, in low relief, on the lid, and are sculptured with various subjects; but the sea is making rapid and destructive encroachments here. Twenty-six miles south of Adalia.

FIORENZO (St.), a sea-port on the northern coast of the island of Corsica, with 1500 inhabitants; it is fortified, but the air is unwholesome from the vicinity of marshes. In 1783 the town was set on fire by lightning, and in great part consumed. It is six miles west of Bastia. Long. 9° 17′ 43″ E., lat. 42° 41′ 2″ N.

FI'PPLE, *n. s.* Lat. *fibula*. A stopper.

You must know, that in recorders, which go with a gentle breath, the concave of the pipe, were it not for the *fipple* that staiteneth the air, much more than the simple concave, would yield no sound. *Bacon.*

FIR, FIR-TREE. } Sax. ꝼiꞃh; Swed. *fur*; Dan. *fyr*; Welsh *fyur*; all perhaps from fire, from its inflammable nature; or from Goth. *thar*; Sax. tær, a drop, as Mr. Thomson conjectures, 'which also signifies gum or tar.' A species of pinus.

He covered the floor of the house with planks of *fir*. 1 *Kings.*

The *fir-trees* rejoice at thee, and the cedars of Lebanon. *Isa.* xiv.

The spiring *fir* and stately box. *Pope.*

FIR, in botany. See ABIES and PINUS.

FIR PLANTATIONS. It has been stated by the author of the Essays on Rural Affairs that, in the vicinity of plantations of the fir kind, houses can be raised at so little expense, and the roofs are so much straighter and better than the ordinary ones, that settlers in such situations are induced to make their houses much neater and more commodious than in other places; and, besides, rails and other kinds of materials for dead fences, can be so easily procured, that the poor people are first enabled to have good well fenced gardens, and then commodious enclosures of larger extent; the branches likewise afford fuel to them, which adds greatly to the comforts of their situation. The cutting and manufacturing of the wood into various kinds of utensils furnish employment for a great many persons; population is thereby increased; and, with an augmentation of population, its necessary consequences, the desire for land to procure the necessaries of life, and of course an increase of rent to the proprietor. These new settlers in the desert wastes of Scotland, like those in America, cultivate and improve the soil in proportion as the trees are removed from it. At this moment, it is added, Mr. G. Dempster, who will be long respected by his countrymen, sees fields on his estate rapidly converting, in this way, into cultivated ground, and yielding him ten or twelve shillings per acre in rent, not only without any expense to himself, but after having derived a considerable profit from the sale of woods of his own planting, which grew upon land that twenty-five years ago was not worth to him above twopence the acre, and which might have remained in that state perhaps for ages to come, had it not been planted at all. It is contended by the same writer, that it is by a judicious management of this sort, that men of large landed estates, by a little fore-sight, find themselves enabled to provide both employment and subsistence, with much profit, to a numerous people, who must otherwise have either remained in a destitute condition, or have abandoned a country, which did not properly provide for their accommodation.

It may be remarked likewise that a plantation of Scotch firs may be made at much less expense than of any other sort of trees in those northern parts of the kingdom, as the young plants can be afforded at a lower price than any others. In Aberdeenshire, where planting is so general as to have become a sort of occupation, fir plants of two years growth, above which age no experienced planter will ever buy them, sometimes will be sold at the very low rate of fourpence the 1000, which consists of 1200 plants; and they formerly seldom exceeded eightpence; on the average about sixpence, or one halfpenny the 100; but they have lately been considerably higher. There are men who make a business of forming plantations, who will undertake to complete the whole, enclosing and planting, at the distance of one yard each way, and uphold them for five years, that is, supply any deficiencies that may take place, at the rate of from ten to fifteen or thirty shillings the Scotch acre, which is nearly equal to one and a quarter English, according to the size of the enclosure, and the nature of the fence. In all cases of this kind, it is supposed that the plantations are of the extent of thirty or forty acres or upwards; for, where the enclosures are smaller, the expense of enclosing is proportionably augmented. The charge is thus not only rendered moderate, but the whole of the expense that is to be incurred ascertained before the plantation is begun, by which the being involved in unforeseen difficulties is fully obviated.

Experience has fully shown that there is scarcely any soil so bad, or any exposure so bleak, that the fir-tree will not live in, if the plantation be of sufficient extent, and not upon the very summits of high peaked hills. They do not indeed bear the sea air very well, where they are much exposed to the severity of its

blasts; nor is the wood ever of so good a quality, or the tree long-lived, upon soils of the clayey kind. It has been found that in the southern parts of the kingdom, the pineaster bears the sea blast much better than any other of the fir tribe. This is a discovery of great importance, and which deserves the attention of improvers in the way of planting. The spruce fir will however bear a still more exposed situation than the Scotch fir; and after a few years from the time of planting it shoots up with still greater luxuriance. This is the case probably only in particular situations. But the cones are not to be had in equal abundance; and the plants being more difficult in the rearing, they are sold at a much higher price, usually at about six shillings the 1000, fit for being planted out. It is a native of Sweden and Norway. In a good soil the silver fir also prospers well, and is a beautiful tree on account of the depth of its shade. A silver fir at Panmuc measured in September 1810, at the surface of the earth, eight feet four inches; at four feet high, seven feet one inch; length of the stem to the fork, forty-one feet; total height, eighty feet. Several others in the same place are nearly as large. In the Ray Wood at Castle-Howard, there was at the same time a silver fir, in girth, at four feet high, eleven feet six inches, with a stem eighty feet high; total height, by estimate, 100 feet, and some others in the same wood nearly as large. The grand silver fir, as it is called, at Woburn, is in girth, at the same height, nine feet ten inches, with a stem of seventy-five feet; total height, by estimate, 110 feet. Both these trees were measured in the summer of 1810.

But the price of the plants is too great to admit of large plantations of silver fir being made with advantage. Wherever the situation is bleak, and much exposed to strong blasts of wind, the plantation, however, must not only be of considerable extent, if the trees be expected to thrive, but they must be planted very close together, so that each plant may stand at the distance of from two to three feet at most from each other. The more exposed the situation is, the closer they should be planted; as it may be observed that until the branches begin to intermix, and give a mutual support to each other, the trees never begin to advance with vigor. Where the plantations are thus thick, there is a necessity for beginning to thin them out at a pretty early period, so that after the tenth to the fifteenth year from the time of planting, persons must be constantly employed in thinning them: and there are very few situations, indeed, in which the thinnings cannot be disposed of to advantage, or in which such sorts of plantations cannot be made.

It has been remarked, by a writer in the transactions of the Bath Agricultural Society, that though he does not think that the Scotch fir can, in this country, ever equal the yellow deal from the Baltic, yet it may be worth propagating, as being useful in ordinary buildings. The drier the soil is on which this sort of timber grows, the slower is its progress; but the closer its pores, the more superior its quality. When planted in rich land these trees will shoot three or four feet in a season, and equal, if not surpass the abele in growth. In his plantations, though chiefly confined to chalky banks, in a north-west exposure, the trees evince, that, when once rooted, few obstacles will prevent their profitable progress. From observing the mistakes of others in endeavouring to ornament their naked downs too suddenly, he has learnt the necessity of planting firs when only a foot in height, and by opening the ground some time before, inverting the turf at the bottoms of the holes, and throwing the mould upon it in hillocks to meliorate, his plantations succeeded well: for though the soil is scarcely six inches in depth, the firs set in 1766 are now thirty feet in height, and from two feet six inches to two feet in circumference, at four feet from the ground; some few planted at the same time in a deeper soil, and warmer situation, are now about three feet round. And spruce firs, planted in 1776, likewise in a tolerably good soil, are now forty feet in height, and from two feet ten inches and a half to three feet round. But he has seen plantations that far surpassed either of these in growth; they, however, occupied ground which was infinitely more valuable. See PINUS.

FIRE, *n. s.*, *v. a.* & *v. n.*
FIRE'-ARMS, *n. s.*
FIRE'-BALL,
FIRE'-BRAND,
FIRE'-BREATHING, *adj.*
FIRE'-BRUSH, *n. s.*
FIRE'-CROSS,
FIRE'-DRAKE,
FIRE'-ENGINE,
FIRE'-FLAKE,
FIRE'-LOCK,
FIRE'-MAN,
FIRE'-MOUTHED, *adj.*
FIRE'-NEW,
FIRE'-OFFICE, *n. s.*
FIRE'-PAN,
FIRE'-PLUG,
FIRE'R,
FIRE'-SHIP,
FIRE'-SHOVEL,
FIRE'-SIDE,
FIRE'-STICK,
FIRE'-STOVE,
FIRE'-WOOD,
FIRE'-WORK,
FI'RING.

Sax. ꝼyꝛ; Icel. and Swed. *fyr*; Belg. *foir*; Teut. *feuer*; Fr. *feu*; Ital. *fuoco, fuogo*; Span. *huego, fuego*; Portug. *fogo*. 'Vox antiquissima Scytho-Phrygica.' Serenius. Minsheu says, à Gr. πυρ; from Heb. אור, fire. Mr. Thomson conjectures that to this word, or the Coptic *or*, or Pers. *ur*, may have been prefixed the Coptic article *pi* or *ph*. Ignition; a supposed igneous element; any thing that burns, or the state of burning; hence flame; light; lustre; and, figuratively, that which provokes or inflames the temper; enlivens the fancy or imagination; the passion of love: to fire is to kindle; set on fire, or a-fire (see letter A); inflame (figuratively), animate; it is also used by Shakspeare for to drive away by fire: as a neuter verb it signifies to take fire; be kindled or inflamed; to discharge fire-arms: a fire-cross was once a Scottish or rather Highland signal to take arms, consisting of a wooden cross, having the ends burnt black, and in some parts smeared with blood, carried from one place to another. Upon refusal to send it forward, or to rise, the person who brought it would frequently shoot the other dead: firedrake is a fiery serpent: I suppose the prester, says Dr. Johnson: fireman, an incendiary; a person of fiery temper: firenew, new from the

forge, or the melting-house: firer, an incendiary: firestick, a lighted stick or brand: fireworks, shows of fire; pyrotechnical performances: firing, fuel: the other compounds do not seem to require explanation.

And now an axe is sett to the roote of the tre, and therefore every tre that makith not good fruyt schal be ki. doun. and schal be cast into the *fier*. *Wiclif. Luk.* iii.

His *firepans*, and all the vessels thereof, thou shalt make of brass. *Exodus* xxvii. 3.

Who among us shall dwell with the devouring *fire*? Who among us shall dwell with everlasting burnings? *Isaiah* xxxiii.

His eyes red sparcling as the *fire* glow
His nose frounced full kirked stood
He came criand as he were wood.
Chaucer. Romaunt of the Rose, fol. 130.

Is this the battaile which thou vauntst to fight
With that *fire-mouthed* dragon, horrible and bright?
Spenser's Faerie Queene.

Hermosilla courageously set upon the horsemen, and set *fire* also upon the stables where the Turks horses stood. *Knolles.*

A wise riche man is like the backe or stocke of the chimney, and his wealth the *fire*; he receives it not for his own need, but to reflect the heat to others good. *Sir T. Overbury.*

A little *fire* is quickly trodden out,
Which, being suffered, rivers cannot quench.
Shakspeare.

What *fire* is in my ears? Can this be true?
Stand I condemned for pride and scorn so much?
Id.

Stars, hide your *fires!*
Let not night see my black and deep desires. *Id.*

He that parts us shall bring a brand from heaven
And *fire* us hence. *Id. King Lear.*

Troy must not be, nor goodly Ilion stand;
Our *firebrand* brother, Paris, burns us all.
Shakspeare.

Armado is a most illustrious wight,
A man of *firenew* words, fashion's own knight.
Id.

Some excellent jests, *firenew* from the mint. *Id.*

The king would have me present the princess with some delightful ostentation, or pageant, or antick, or *firework*. *Id.*

The surest way to prevent seditions is to take away the matter of them; for, if there be fuel prepared, it is hard to tell whence the spark shall come that shall set it on *fire*. *Bacon.*

He sent Surrey with a competent power against the rebels, who fought with the principal band of them, and defeated them, and took alive John Chamber, their *firebrand*. *Id.*

Pour of it upon a *firepan* well heated, as they do rose-water and vinegar. *Id. Natural History.*

My judgment is, that they ought all to be despised, and ought to serve but for winter talk by the *fireside*. *Bacon.*

We represent also ordnance, and new mixtures of gunpowder, wildfires burning in water, and unquenchable; and also *fireworks* of all variety. *Id.*

They spoiled many parts of the city, and *fired* the houses of those whom they esteemed not to be their friends; but the rage of the fire was at first hindred, and then appeased by the fall of a sudden shower of rain. *Hayward.*

By the hissing of the snake,
The rustling of the *firedrake*,
I charge thee thou this place forsake,
Nor of queen Mab be pratling. *Drayton.*

So inflamed by my desire,
It may set her heart *a-fire*. *Carew.*

Others burned Moussel, and the rest marched as a guard for the defence of these *firers*. *Id.*

Love no more is made
By the *fireside*, but in the cooler shade. *Id.*

Happy are those that are from under the terrors of that law, which was given in *fire*, and in *fire* shall be required. *Bp. Hall's Contemplations.*

Now see I *fire-flakes* sparkle from his eyes,
Like to a comets tayle in the angrie skies.
Bp. Hall's Satires.

Children, when they play with *firesticks*, move and whirl them round so fast, that the motion will cozen their eyes, and represent an entire circle of *fire* to them. *Digby on Bodies.*

Nor can the snow that age does shed
Upon thy reverend head,
Quench or allay the noble *fire* within,
But all that youth can be thou art. *Cowley.*

He that *set* a *fire on* a plane-tree to spite his neighbour, and the plane-tree *set fire on* his neighbour's house, is bound to pay all the loss, because it did all arise from his own ill intention. *Taylor.*

Ammunition to supply their new *firearms*.
Clarendon.

Culinary utensils and irons often feel the force of *fire*; as tongs, *fireshovels*, prongs, and irons. *Browne.*

The ancients were imperfect in the doctrine of meteors, by their ignorance of gun-powder and *fireworks*. *Id.*

The *fire* of love in youthful blood,
Like what is kindled in brush-wood,
But for a moment burns. *Shadwell.*

Love various hearts does variously inspire,
It stirs in gentle bosoms gentle *fire*,
Like that of incense on the altar laid;
But raging flames tempestuous souls invade;
A *fire* which every windy passion blows,
With pride it mounts, and with revenge it glows.
Dryden.

Yet, if desire of fame, and thirst of power,
A beauteous princess with a crown in dower,
So *fire* your mind, in arms assert your right. *Id.*

The neighbours are coming out with forks and *fireshovels*, and spits, and other domestick weapons.
Id. Spanish Fryar.

In *fireworks* give him leave to vent his spite:
Those are the only serpents he can write. *Dryden.*

I have eased my father-in-law of a *firebrand*, to set my own house in a flame. *L'Estrange.*

They burn the cakes, *firing* being there scarce.
Mortimer.

Firestone, if broke small, and laid on cold lands, must be of advantage. *Id. Husbandry.*

The fainting Dutch remotely *fire*,
And the famed Eugene's iron troops retire.
Smith.

I had last night the fate to drink a bottle with two of these *firemen*. *Tatler.*

Their *fireworks* are made up in paper. *Id.*

Judge of those insolvent boasts of conscience, which, like so many *fireballs*, or mouth grenadoes, are thrown at our church. *South.*

Upon the wedding day, I put myself, according to custom, in another suit *firenew*, with silver buttons to it. *Addison.*

Our companion proposed a subject for a *firework*, which he thought would be very amusing. *Id.*

He sent his heralds through all parts of the realm, and commanded the *firecross* to be carried; namely, two *firebrands* set in fashion of a cross, and pitched upon the point of a spear. *Haywood.*

Did Shadrach's zeal my glowing breast inspire,
To weary tortures, and rejoice in *fire?* *Prior.*

By his *fireside* he starts the hare,
And turns her in his wicker chair. *Id.*

He brings, to make us from our ground retire,
The reasoner's weapons and the poet's *fire.*
Blackmore.

The *firestone*, or pyrites, is a compound metallic fossil, composed of vitriol, sulphur, and an unmetallic earth, but in very different proportions to the several masses. It has its name of pyrites or *firestone*, from its giving fire on being struck against a steel much more freely than a flint will do; and all the sparks burn a longer time, and grow larger as they fall, the inflammable matter struck from off the stone burning itself out before the spark becomes extinguished. *Hill's Mat. Med.*

Prime all your *firelocks*, fasten well the stake.
Gay.

The *fireman* sweats beneath his crooked arms;
A leathern casque his vent'rous head defends,
Boldly he climbs where thickest smoke ascends.
Id.

He had *fire* in his temper, and a German bluntness; and, upon provocations, might strain a phrase.
Atterbury.

There is another liberality to the citizens, who had suffered damage by a great *fire*. *Arbuthnot on Coins.*

What art thou asking of them, after all? Only to sit quietly at thy own *fireside*. *Id.*

Our men bravely quitted themselves of the *fire-ship*, by cutting the spritsail tackle. *Wiseman.*

Though safe thou thinkest thy treasure lies,
Concealed in chests from human eyes,
A *fire* may come, and it may be
Bury'd my friend, as far from thee. *Granville.*

They have no notion of life and *fire* in fancy and in words, and any thing that is just in grammar and in measure is good oratory and poetry to them. *Felton.*

Exact Racine, and Corneille's noble *fire*,
Taught us that France had something to admire.
Pope.

The god of love retires;
Dim are his torches, and extinct his *fires*. *Id.*

Before the use of *fire-arms* there was infinitely more scope for personal valour than in the modern battles.
Id.

The same great man hath sworn to make us swallow his coin in *fire-balls*. *Swift.*

When you are ordered to stir up the fire, clean away the ashes from betwixt the bars with the *fire-brush*. *Id.*

New charms shall still increase desire,
And time's swift wing shall fan the *fire*.
Moore's Fables.

BOOKSELLER. The monsters of your Botanic Garden are as surprising as the bulls with brazen feet, and the *fire-breathing* dragons, which guarded the Hesperian fruit. *Darwin.*

If bleak and barren Scotia's hills arise;
There plague and poison, lust and rapine grow;
Here peaceful are the vales, and pure the skies,
And freedom *fires* the soul, and sparkles in the eyes.
Beattie.

Each at their departure took away a greater or less *fire-brand*, and the remains were scattered to the wind, which was to drive away every evil as it dispersed the ashes. *Brand's Antiquities.*

FIRE. Under this popular name for what is now more usually treated in works of science under the titles of caloric, heat, or combustion, we may still classify a few exploded speculations, important only for the names attached to them. The opinions of the ancients respecting fire were various and fanciful. Ignorant of the leading facts which a theory is required to account for, and unassisted by experiments or tools, they generally made use of words which conveyed no definite ideas. They called it an active fermentation, an intestine motion, a repulsive agent, and so forth; but no real attempt towards a rational investigation is to be found in their works. And, though some of their assertions seem to coincide with the more rational modern theories, yet that apparent coincidence must be considered as being accidental; for it is not grounded upon any regular reasoning. It must be acknowledged, however, that almost all the opinions, either ancient or modern, respecting fire, may be divided into two classes; for some of them asserted that fire was nothing more than a violent agitation, in some unknown manner, of the parts of burning bodies; whilst others attributed it to something peculiar, and sui generis, which either existed in all combustible bodies, or was communicated to them. The former, which is called the mechanical hypothesis, was believed and maintained by the most able philosophers of much earlier and much more enlightened times. The celebrated philosophers of the sixteenth century, Bacon, Boyle, and Newton, were of opinion that fire was no distinct substance from other bodies, but that it consisted entirely in the violent motion of the parts of any body. As no motion, however, can be produced without a cause, they were obliged to have recourse to a mechanical force or impulse as the ultimate cause of fire in all cases. Thus Boyle tells us, that when a piece of iron becomes hot by hammering, 'there is nothing to make it so, except the forcible motion of the hammer impressing a vehement and variously determined agitation on the small parts of the iron.' Bacon defines heat, which he makes synonymous with fire, to be an expansive undulatory motion in the minute particles of a body, whereby they tend with some rapidity from a centre towards a circumference, and at the same time a little upwards. Sir Isaac Newton said nothing positive upon the subject; but conjectured that gross bodies and light might be convertible into one another; and that great bodies, of the size of our earth, when violently heated, might continue and increase their heat by the mutual action and re-action of their parts. But while the mechanical philosophers thus endeavoured to account for the phenomena of fire, upon the same principles which they judged sufficient to explain those of the universe in general, the chemists as strenuously asserted, that fire was a fluid of a certain kind, distinct from all others, and universally present throughout the whole globe. Boerhaave particularly maintained this doctrine; and in support of it argued, that steel and flint would strike fire, and produce the very same degree of heat in Nova Zembla, which they would do under the equator. Other arguments were drawn from the increased weight of metalline calces, which they supposed to proceed from the fixing of the element of fire in the substance whose weight was thus increased. By these experiments Mr. Boyle himself seems to have been staggered: as

he published a treatise on the possibility of making fire and flame ponderable; though this was directly contrary to his own principles already quoted. For a long time, however, the matter was most violently disputed; and the mechanical philosophers, though their arguments were equally inconclusive with those of their adversaries, at last prevailed, through the prejudice in favor of Sir Isaac Newton, who, indeed, had scarcely taken any active part in the contest. The first of the chemists who attempted to form chemistry into a regular system, was John Joachim Becher; but the famous George Ernest Stahl (who was born in the year 1660, and died in the year 1734), by following Becher's plan, continued to raise the edifice, endeavouring to collect the principal facts then known into a coherent system, by connecting them by means of general principles. This intelligent man, amongst other improvements, formed the famous phlogistic theory of fire (see the article COMBUSTION), which was almost universally adopted, notwithstanding its insufficiency to account for some of the most essential phenomena of combustion. This theory continued in vogue until towards the close of the last century. The experiments on which the modern theory of combustion was first developed were those of Dr. Black, concerning what he called latent heat; on which some other names, such as absolute heat, specific fire, &c., have been bestowed. See CHEMISTRY. From these discoveries it appeared that fire may exist in bodies in such a manner as not to discover itself in any other way than by its action upon the minute parts of the body; but that suddenly this action may be changed in such a manner as no longer to be directed upon the particles of the body itself, but upon external objects: in which case we then perceive its action by our sense of feeling, or discover it by the thermometer, and call it sensible heat. It is certain, from the experiments just mentioned, that fire may exist in substances actually cold to the touch. From this discovery made by Dr. Black, along with many others in electricity, and recorded at length in various articles of this work, it is now almost universally allowed that fire is a distinct fluid, capable of being transferred from one body to another. But when this was discovered, another question no less perplexing occurred, viz. what kind of a fluid it was? or whether it bears any analogy to those with which we are better acquainted? Here we find two fluids, viz. the solar light, and the electric matter, both of which occasionally act as fire, and which therefore seem likely to be the same. See ELECTRICITY. By the vulgar, indeed, the matter has long ago been determined, and the rays of the sun as well as the electrical fluid have been promiscuously denominated elementary fire. Philosophers, however, have withheld their assent. The most strange suppositions have been made concerning the nature of both these fluids; and on the most slender grounds, or rather on no grounds at all, they have been supposed to be phologiston itself, or to contain a large proportion of it. Mr. Scheele went so far in this way as to form an hypothesis, which he endeavoured to support by some experiments, that fire is composed of dephlogisticated air and phlogiston. But it is now ascertained beyond dispute, that the result of such a combination is not fire, but fixed air: so that this hypothesis would have been altogether untenable, even though this discovery had not been made; because the dephlogisticated air itself is not a simple but a compound substance; and in all cases of combustion the one part of the air is separated from the other. It was long ago observed by Sir Isaac Newton, that heat was certainly conveyed by a medium more subtile than common air; because two thermometers, one included in the vacuum of an air-pump, the other placed in the open air, at an equal distance from the fire, would grow equally hot in nearly the same time. The consequence of this, had he pursued the thought, was, that fire itself was equally present in all places, and as active where there was no terrestrial matter as where there was. New improvements in the air-pump have enabled succeeding philosophers to make more perfect vacuums, such as it has been supposed even the electric matter cannot pass through. It is not to be doubted, however, that even there the thermometer would be heated by a fire as well as in the open air. See HEAT and COMBUSTION.

The word fire has also been used both figuratively and incorrectly. The allegorical expressions, of the fire of the imagination, the fire of youth, the fire of contention, and so forth, do not fall under the cognizance of natural philosophy,—but the scientific use of that word for expressing heat without light, or light without heat, or lastly, things which have neither heat nor light, is in want of correction. Thus, phosphorescent substances, like certain pieces of decayed wood, fish, &c., are frequently said to be on fire, whereas they are not attended with any degree of heat. Also the heat of fermenting substances, and of other kinds of chemical combinations, has often been called their fire.

FIRE, St. ANTHONY'S. Erysipelas was first so called, it seems, in the south of France, in the twelfth century, where, and when, this disorder was exceedingly prevalent, from the success of the monks of St. Anthony (whose profession it was to attend the sick, and who therefore carried the figure of a crutch upon the left shoulder) in curing it. They made great use of lard in these cures, hence their pigs were allowed to range free through the neighbouring grounds; and that they might be distinguished from other pigs, bells were hung round their necks. These circumstances account for the figure of St. Anthony, the Egyptian hermit of the fourth century, being represented with the pig, the bell, and the letter tau upon his shoulder. *Paquot in Molanum, de Imaginibus.*

FIRE, in theology. God has made several revelations of Himself under the appearance of fire: He appeared to Moses under the form of a fire burning in a bush; the Holy Ghost descended on the apostles in tongues of fire; and the camp of the Israelites was guided and conducted in the night-time by a pillar of fire. The Jews kept up the holy fire in the temple. This holy fire descended from heaven, first upon the altar

in the tabernacle, at the consecration of Aaron and his sons to the priesthood, Lev. ix. 24. It afterwards descended anew on the altar in the temple of Solomon, at the consecration of that temple, 2 Chron. vii. 1. There it was constantly maintained by the priest, day and night, without suffering it ever to go out; and with this all the sacrifices were offered that required fire. This fire, according to some of the Jewish writers, was extinguished in the days of Manasseh; but the more general opinion among them is, that it continued till the destruction of the temple by the Chaldeans; after that it was never more restored; but instead of it they had only common fire in the second temple.

The Chaldeans had a high veneration for fire, which they accounted a divinity; and in the province of Babylon there was a city consecrated to this usage, which was called the city of Ur, or of Fire. The Persians also adored God under the image or representation of fire, because it is fire that gives motion to every thing in nature. They had temples, which they called 'Pyræa,' fire temples, set apart solely for the preservation of the sacred fire. They are said to have in that empire fires still subsisting, which have burnt many thousand years. The worship of the goddess Vesta (see VESTA) and of fire was brought into Italy by Æneas and the other Trojans, who landed there; but the Phrygians themselves had received it from the eastern nations. Fire was held in religious veneration among the Gauls; and similar sentiments and practices have prevailed in several countries of America.

Vulcan was worshipped among the ancients, and particularly the Egyptians, as the inventor of Fire; and Boerhaave has made it highly probable, that the Vulcan of the heathens was the Tubal-Cain of the Hebrews, the first who appears to have known the use of fire, and to have applied it in the fusion of metals and other preparations of chemistry. See PROMETHEUS.

FIRE, in theology, is frequently understood of the punishment of the wicked after death. See HELL.

FIRE, DIVINATION BY. See PYROMANCY.

FIRE-ARROW, in naval artillery, is a small iron dart furnished with springs and bars, together with a match impregnated with sulphur and powder, which is wound about its shaft. It is intended to fire the sails of the enemy, and is for this purpose discharged from a musquetoon or swivel gun. The match being kindled by the explosion, communicates the flame to the sail against which it is directed, where the arrow is fastened by means of its bars and springs. This weapon is peculiar to hot climates, particularly the West Indies, where the sails being extremely dry by reason of the great heats, they instantly take fire, and of course set fire to the rigging, masts, and vessel.

FIRE-BALL, in artillery. See BALL.

FIRE-BALL, in METEOROLOGY. See that article.

FIRE-BARRELS, a sort of small barrels used for fire-ships, of a cylindrical form, as best adapted to contain the reeds with which they are filled, and more convenient for stowing between the troughs in the fire-room. The inside chambers should not be less than twenty-one inches, and thirty inches is sufficient for their length. The bottom parts are first well stored with short double-dipped reeds placed upright; and the remaining vacancy is filled with fire-barrel composition well mixed and melted, and then poured over them. The composition used for this purpose is a mass of sulphur, pitch, tar, and tallow. There are five holes, of three-fourths of an inch in diameter and three inches deep, formed in the top of the composition while warm; one being in the centre, and the other four at equal distances round the sides of the barrel. When the composition is cold and hard, the barrel is primed by filling those holes with fuse-composition, which is firmly driven into them, so as to leave a little vacancy at the top to admit a strand of quick-match twice doubled. The centre hole contains two strands at their whole length, and every strand must be driven home with mealed powder. The loose ends of the quick-match being then laid within the barrel, the whole is covered with a dipped curtain, fastened on with a hoop that slips over the head of the barrel, to which it is nailed. The barrels should be made very strong, not only to support the weight of the composition before firing, when they are moved or carried from place to place, but to keep together whilst burning: for if the staves are too light and thin, so as to burn very soon, the remaining composition will tumble out and be dissipated, and the intention of the barrels, to carry the flame aloft, will be frustrated. The curtain is a piece of coarse canvas, nearly a yard in breadth and length, thickened with melted composition, and covered with saw-dust on both sides.

FIRE-BAVINS, or FASCINES, are made of birch-heath, or other brush wood, which is tough and readily kindled. They are usually two or three feet long, and have all their bush-ends lying one way, the other ends being tied together with small cords. They are dipped in the composition at the bush-ends, whose branches are afterwards confined by the hand, to prevent them from breaking off by moving about; and also to make them burn more fiercely. They are then sprinkled with sulphur.

FIRE-COCKS. Church-wardens in London and within the bills of mortality, are to fix fire-cocks at proper distances in the streets, and keep a large engine and hand-engine for extinguishing fire, under the penalty of £10 by statute 6 Ann. c. 31. On the breaking out of any fire in London or Westminster, the constables and beadles of parishes shall repair to the place with their staves, and assist in extinguishing it, and cause the people to work for that end, &c. Rewards for assistance are payable to the first turncock 10*s*.—To the first engine not exceeding 30*s*.—The second not exceeding 20*s*.—The third 10*s*.—To be paid by the churchwardens or overseers, but not without the approbation of an alderman or justice of the peace.—The churchwardens, &c., to be repaid by the inhabitant if the fire begins in a chimney.

The FIRE ENGINE is an apparatus of comparatively modern invention, although the forcing-

pump, of which it is an application, is more than 2000 years old. There are laws still unrepealed which make it penal for persons to be unprovided with 'hand squirts' for the purpose of extinguishing fires, and the rude contrivances that were employed for that purpose in the last century must still be in the recollection of many of our readers.

The apparatus for extinguishing fires, contrived by Mr. Newsham is exceedingly simple in the arrangement of its parts, and, as such, appears best calculated to explain the construction of this important engine. It is shown at fig. 1, plate I. HYDRAULICS, and consists of a cistern A B, about three times as long as it is broad, made of thick oaken planks, the joints of which are lined with sheet copper, and easily moveable by means of a pole and cross bar C in the fore part of the engine, which is so contrived as to slide back under the cover of the cistern, and on four solid wheels, two of which are seen at D and E. The hind axle-tree, to which the wheel E and its opposite are fixed, are fastened across under the bottom of the cistern; but the fore axle-tree, bearing the wheel D, &c., is put on a strong pin or bolt, strongly fastened in a horizontal situation in the middle of the front of the bottom of the cistern, by which contrivance the two fore wheels and the axle-tree have a circular motion round the bolt, so that the engine may stand as firm on rough or sloping ground as if it was level.

Upon the ground next to the hind part of the engine may be seen a leathern pipe F, one end of which may be screwed on and off upon occasion to a brass cock at the lower end of the cistern: the other end is immersed in the water, supplied by a pond, fire-plug, &c., and the pipe becomes a sucking pipe for furnishing the pumps of the engine by its working, without pouring water into the cistern. To the hind part of the cistern is fastened a wooden trough G, with a copper grate for keeping out stones, sand, and dirt, through which the cistern is supplied with water when the sucking pipe cannot be used. The fore part of the cistern is also separated from the rest of its cavity by another copper grate, through which water may be poured into the cistern. Those that work the pumps of this engine move the handles visible at the long sides up and down, and are assisted by others who stand on two suspended treadles; throwing their weight alternately on each of them, and keeping themselves steady by taking hold of two round horizontal rails, H, I, framed into four vertical stands, which reach to the bottom of the cistern, and are well secured to its sides.

Over the hind trough there is an iron handle or key K, serving to open or shut a cock placed under it on the bottom of the cistern. L is an inverted pyramidal box or case which preserves the pumps and air-vessels from damage, and also supports a wooden frame M, on which stands a man, who, by raising or depressing, and turning about the spout N, directs the stream of water as occasion requires. This spout is made of two pieces of brass pipe, each of which has an elbow; the lower is screwed over the upper end T of the pipe that goes through the air-vessel, and the upper part screws on to the lower by a screw of several threads, so truly turned as to be water tight in every situation. The conic form of the spouting-pipe serves for wire-drawing the water on its passage through it, which occasions a friction that produces such a velocity of the jet as to render it capable of breaking windows, &c., whilst the valves and leathern pipes of the engines have sufficient water-way to supply the jet in its greatest velocity. Leathern pipes of considerable length may be screwed at one end of the nozle of the engine, and furnished at the other end with a wooden or brass pipe for guiding the water into the inner apartments of houses, &c. Between the pyramidal box L, and the fore-end of the engine, there is a strong iron bar O, lying in a horizontal position over the middle of the cistern and playing in brasses supported by two wooden stands; one of which, P, is placed between the two fore-stands of the upper rails, and the other is hid in the enclosure over the hind part. Upon proper squares of this bar are fitted, one near each end, two strong cross bars, which take hold of the long wooden cylindrical handles, by means of which the engine is worked; and the treadles by which they are assisted are suspended at each end by chains in the form of a watch-chain, and receive their motion jointly with the handles that are on the same side, by means of two circular sectors of iron fastened together, and fixed upon proper squares of the middle horizontal bar; the two fore ones may be seen at Q; the two hind ones, represented on a large scale in fig. 2, differ from the former only in thickness; for the fore sectors are made to carry only one chain each fastened by one end to their upper part, and by the lower end to the treadles; whereas the sole of the two hind sectors is wide enough to carry two chains each; one set fastened like those of the fore ones for the motion of the treadles: and the other two chains are fastened by their lower ends to the lower part of these sectors, and by their upper ends to the top of the piston bars, in order to give them motion. See fig. 2, in which the hind sectors and their apparatus are represented as they would appear to a person standing betweeen the two fore-wheels, and looking at the hind part of the engine. The square over the letter A is the section of the middle bar, on which, right over the two barrels, are placed the two sectors B C A and D E A, forged together. E G H K and *f g h k* are the two piston-rods; and the openings between the letters G, H, and *g*, *h*, are the spaces through which the hind parts of the two treadles pass. L and M represent two strong studs rivetted on the other side of the bars on which they are placed; and to each of these is fastened a chain like a watch-chain, fixed by their upper ends to the upper extremities D and B of the iron sectors by which they are drawn up and down alternately. These sectors give also an alternate motion up and down to the piston-rods, by means of two other chains left white in the figure, in order to distinguish them from the others: these are fastened by their lower ends to the lower extremities of the sectors E and C, and their upper ends, terminating in a male screw, are made tight to the piston-rods at I and F, by two nuts. The

shape of the piston-rods, and the size and situation of the chains that give them motion, are so contrived, that the vertical axis of the pistons is exactly in the middle of the breadth of the perpendicular part of the chains, and the upper part of the piston-rod taken together. PQ represents one of the two cross bars through the ends of which pass the long handles to which the men apply their hands when they work the engine; these cross bars are fitted on the middle bar at some distance from the sectors. The other parts of this useful engine may be understood by the help of fig. 3, which represents a vertical section taken through the middle line of the hind part of the engine, as also the section of the air-vessel, and that of one of the barrels, and likewise the profiles of the hind sectors, and of several other parts. AB is the section of the bottom of the cistern, and C that of the hindmost axle-tree. DE is the vertical section of a strong piece of cast brass or hard metal so worked as to have a hollow in it, represented by the white part, and fixed to the bottom of the cistern: this reaches from the opening D through the cock W, and afterwards divides itself into two branches, so as to open under the two barrels; one of these branches is exhibited in the figure and the other is exactly behind this. Through this channel, which may be called the sucking-piece, water is conveyed to the pumps by the pressure of the atmosphere, either from the cistern itself, or from any place at a distance, by means of a leathern pipe, F. fig. 4, which screws on to the sucking-piece at D, fig. 3, under the hind trough Z, the grate of which is represented by the horizontal strokes. FG represents the vertical section of another piece of cast brass or hard metal that may be called the communication-piece, having two hollows for conveying the water from under the two pistons to the two openings of the flanch of the air-vessel; one of these hollows appears in the figure; the other lies exactly behind this, though not in a parallel direction. Between the section of the sucking-piece DE, and that of the communication-piece FG, may be observed the section of one of the plates of leather, which makes all tight, and forms one of the two sucking-valves, of which there is another just behind this under the other barrel. RST is the section of the copper air-vessel, and TV that of the conduit-pipe; this vessel is screwed on to the hind part of the communication-piece, and at top is fastened by a collar of iron to a cross piece of timber.

Between the flanch of the air-vessel and the communication-piece may be observed the section of one of the plates of leather, making all tight, and screwing one of the two forcing valves, of which there is another just behind this, exactly over the other opening of the communication from the air-vessel. These valves are loaded with a lump of cast iron or lead, having a tail or teat let through the flap of the valve and cross-pinned under it; and it is to be observed that, though both the valves are represented open in the figure, they are never both open at the same time; for when the engine is not at work they are closed down by the weights on their upper surfaces; and, when the engine works, two are shut, and the other two are open alternately by the motion of the pistons and the action of the atmosphere, together with the re-action of the air contained in the air-vessel. HI is the section of one of the barrels of the two pumps, which are both sucking and forcing, as is evident from the position of the valves and the structure of the pistons, each of which is composed of two iron plates, of two wooden trenchers, and of two flat pieces of leather turning one up and the other down. LK represents one of the piston-rods edge-wise, behind which is one of the chains, the top screw of which, K, can only be seen. M is the end of the middle bar, and N a section of the hindmost of the two middle stands which support the middle bar.

The principle on which the common engine acts, so as to produce a continued stream, is obvious; the water being driven into the air-vessel, as in the operation of common sucking and forcing pumps, will compress the air contained in it, and proportionably increase its spring, since the force of the air's spring will always be inversely as the space which it possesses; therefore, when the air-vessel is half filled with water, the spring of the included air, which in its original state counterbalanced the pressure of the atmosphere, being now compressed into half the space, will be equal to twice the pressure of the atmosphere; and, by its action on the subjacent water, will cause it to rise through the conduit-pipe, and to play a jet of thirty-two or thirty-three feet high, abating the effect of friction. When the air-vessel is two-thirds full of water, the space which the air occupies is only one-third of its first space; therefore its spring, being three times as great as that of the common air, will project the water with twice the force of the atmosphere, or to the height of sixty-four or sixty-six feet. In the same manner, when the air-vessel is three-fourths full of water, the air will be compressed into one-fourth of its original space, and cause the water to ascend in air with the force of three atmospheres, or to the height of ninety-six or ninety-nine feet, &c., as in the following table.

Height of the water.	Height of the Compressed Air.	Proportion of the Air's Spring.	Height to which the Water will Rise.
$\frac{1}{2}$	$\frac{1}{2}$	2	33
$\frac{2}{3}$	$\frac{1}{3}$	3	66
$\frac{3}{4}$	$\frac{1}{4}$	4	99
$\frac{4}{5}$	$\frac{1}{5}$	5	132
$\frac{5}{6}$	$\frac{1}{6}$	6	165
$\frac{6}{7}$	$\frac{1}{7}$	7	198
$\frac{7}{8}$	$\frac{1}{8}$	8	231
$\frac{8}{9}$	$\frac{1}{9}$	9	264
$\frac{9}{10}$	$\frac{1}{10}$	10	297

Since it is impossible, when a pump is well made and is in good order, that its piston can move without displacing the water that is above or below it, according to the circumstances of its construction, so in all pumps that consist of cylindrical working barrels and pistons, nothing

more is necessary to ascertain the quantity of water they will deliver, than to calculate the solid or cubical contents of that part of the barrel in which the vacuum is produced, and to reduce this to some standard measure, and then to multiply this by the number of strokes made in a given time; thus, if a pump is nine inches diameter, and makes an effective stroke of about eighteen inches, such a cylinder will be found to contain about 1134 cubic inches; and, as 282 cubic inches make a gallon, so four gallons will be equal to 1128 cubic inches, consequently such a barrel will contain and throw out rather more than four gallons at every stroke; and supposing this pump to make ten strokes in a minute, it would yield forty gallons in a minute, or sixty times that quantity in an hour, and so on. This rule applies in every case, whether the water is sent to a small or great elevation, because the piston cannot move without displacing the water in the barrel; but a small allowance must be made for leakage or waste, because some water will constantly pass the piston and escape, or be otherwise lost and wasted.

This mode of calculation, as before observed, only applies to such pumps as have cylindrical working barrels and pistons; but sometimes pumps are otherwise constructed, of which the fire-engine of the late Mr. Bramah, and the executric pump are instances. In the former of these contrivances, the working barrel, instead of being an entire cylinder, is a semi-cylinder, and lies horizontally, while the place of a piston is supplied by a parallelogram of the same radius and length as the semi-cylinder, moving by an iron bar passing through its axis and properly packed at its exterior edges. This parallelogram is made to vibrate through about 170° by its handles, while its outer edges keep in contact with the interior surface and ends of the semi-cylinder, and two feeding and two delivering valves are placed upon the flat top or covering of the whole. This pump, therefore, in effect is the same as that of M. De la Hire, though quite different in form, and its mode of operation is nearly allied to the excentric pump, a section of which is shown at fig. 5, Hydraulics. It consists of a hollow drum or cylinder of metal *a d*, in the interior of which a solid cylinder *b*, of the same length, but of only half the diameter or thereabouts, is made to revolve by its axles passing through water-tight stuffing-boxes in the sides of the larger and exterior cylinders. The internal cylinder does not revolve in the centre of the larger, but is so placed that one of its convex exterior edges may come into close contact with some one part of the concave or internal surface of the larger cylinder, as shown in the figure, and the circular exterior surface of the small cylinder is equipped with four metal flaps or valves, *c*, *c*, *c*, *c*, turning on hinges, and partaking of its own curvature, so that when they are shut down or closed they form no projections, but appear as parts of the same cylinder. These flaps are made to open either by springs placed underneath them, or, what is still better, by two cross wires, sliding through the internal cylinder in such manner that they may cross each other exactly in its centre, by which their operation will be rendered equable in every part of their revolution. From the formation of this machine, when one of these flaps is brought by the revolution of the internal cylinder between itself and the external one, it will be pressed down close and will shut, but, as the inner cylinder moves, it will be carried into a continually widening space until it arrives at *d*, opposite to the last-mentioned situation, when the cavity formed between it and the smaller and larger cylinder will have so far increased as to form a vacuum which is filled with water by the feeding pipe *e*. This cavity is no sooner so increased to its largest dimensions than it is diminished by a continuation of the revolution, in consequence of which the water, being pent up and squeezed into less compass, makes its escape by the delivering pipe *f*; and, as each of the flaps performs the same operation in its turn, this pump affords a very equable and constant supply of water. The greatest difficulty in its construction is that of keeping the sides of the flaps so packed as to maintain a perfect contact with the sides of the larger cylinder without unnecessary friction, a fault which equally holds good in Mr. Bramah's fire-engine, in all excentric pumps, and in all the rotatory steam-engines that have yet been invented. The excentric pump is of the lift and force variety, since it will deliver water to an indefinite height above its working cylinders. In order to determine the force or power necessary to work a pump of any description, the height to which the water is to be raised must always be taken into account; for this height multiplied into the area of the piston, and reduced to any of the usual denominations of weight, will give the amount of resistance to be overcome (friction of the pump only excepted). The size of the pipe containing the water is quite immaterial, provided it be large enough to prevent friction and an unnatural velocity in the water; and the entire perpendicular height from the surface of the water raised to the point where it is delivered, whether occupied by suction or feeding pipe, or delivering pipe from a forcing pump, must be added together and considered as the height of the lift; so that if a lift and force pump of four inches diameter in the working barrel has ten feet of three-inch suction pipe below its piston, and twenty feet of two-inch delivering pipe (including the length of the working barrel) about it, the column to be lifted will be equal to thirty feet of four-inch pipe filled with water. The contents in gallons of thirty feet of four-inch pipe must therefore be found, and, as each gallon of water weighs about 10·2 pounds, the weight or load upon the pump will be immediately found, to which must be added from one-tenth to one-sixth, according to the construction of the pump, for friction. The load upon an excentric or any other pump may be found by the same rule if the effective horizontal area of the piston, or its substitute be found, and this be, in like manner, multiplied into the height of the lift.

The Society of Arts voted a silver medal and twenty guineas to Mr. Furst, in consideration of the utility of a contrivance produced by him, and of which trial was made, for increasing the effect of engines for extinguishing fires: a com-

plete model remains in the Repository of the Society, of which the following is a short description:—From a platform rises an upright pole or mast of such height as may be judged necessary; up this pole or mast slides a gaft, and along the upright pole and gaft the leather hose from the engine is conveyed; at the extremity of the gaft the branch of the engine projects; towards this extremity is fixed an iron frame whence hang two chains, and from them ropes serving to give an horizontal direction to the branch, whilst other ropes running through proper pullies, and being thus conveyed down the mast, serve also to communicate a vertical motion to it; by these means the branch or nose pipe of the engine is conveyed into the window of any room where the fire more immediately rages, and the effect of the water discharged therefrom applied in the most efficacious manner to the extinguishing of it.

Mr. Perkins's method of fastening the seams of hose for fire-engines, and connecting two or more lengths together, consists in rivetting, instead of sewing it; and in connecting the hose with a new modification of the swivel joints, in such a manner as not to contract the water way at the joints. The first idea of rivetting hose belongs to Messrs. Pinnock and Sellers, of Philadelphia, and has been in successful practice for some years, but without the leathers being overlapped sufficiently. The method of connecting the hose belongs to Mr. Perkins. The advantage of rivetting over sewing is, that the seam lasts much longer, and is much tighter. The rivets, which should be made of copper, will last four or five times longer than the best thread. If care is taken to have sufficient overlap, the pressure of water against the overlap acts as a valve to tighten the seam. It has been found by experience, that the portion of hose next the engine is much the most likely to burst, especially when the water is carried perpendicularly; to obviate this difficulty, the first, third, or fourth portions are double-rivetted.

When a rivet breaks, it is replaced by making an opening in the seam of sufficient size to allow the hand to replace not only the broken rivet, but the rivets taken out to enlarge the opening. After the rivets are fixed in the holes, they are rivetted by placing them on a flat bar of iron, introduced into the entrance of the hose, and capable of being removed at pleasure. Copper has been found to answer best. It is of such importance that the rivet and burr should be of the same material, that it would not answer well to have the rivets of cast copper (they being an alloy of tin and copper), and the burr of wrought copper. Tin rivets, with copper burrs, will completely destroy the leather in a few months, occasioned, undoubtedly, by the operation of galvanism.

Many have been the attempts to produce some machine by means of which fires might be more rapidly extinguished than by the common application of water. These machines have been principally constructed with a view to exploding, and thus driving the liquids more forcibly to the fire. The first person who attempted this with any tolerable degree of success was Zachary Greyl. He contrived certain engines, easily manageable, which he proved to be of sufficient efficacy, and offered to discover the secret by which they were contrived, for a large premium given either from the crown, or raised by a subscription of private persons. The secret was this: a wooden vessel was provided holding a very considerable quantity of water; in the centre of this there was fixed a case made of iron plates, and filled with gunpowder; from this vessel, to the head of the larger vessel containing the water, there proceeded a tube or pipe, which might convey the fire to the gunpowder in the inner vssel. This tube was filled with a preparation easily taking fire, and quickly burning away; and the manner of using the engine was to convey it into the room or building where the fire was, with the powder in the tube lighted. The consequence of this was, that the powder in the inner case soon took fire, and, with a great explosion, burst the vessel to pieces, and dispersed the water every way: thus was the fire put out in an instant, though the room was flaming before in all parts at once. In our own country a chemist of the name of Godfrey, has brought forward similar machines which he called water-bombs. They were however so very similar to Greyl's as to need no further description, except that instead of water Godfrey used a medicated liquor, probably sal-ammoniac and water. But though these machines will prevent great fires by a timely application, they will not extinguish them after they have reached a frightful height, and several houses are in flames. The floors must be standing, and access to the building safe, otherwise no person can be supposed to approach near enough to apply them in a proper manner. Every fire has its beginning for the most part in some apartment; and, as soon as discovered, the family should immediately apply one or more of these machines, which will then fully answer the intention. In 1761 Mr. Godfrey's experiment for extinguishing fire, was tried in a house erected for that purpose near Mary-le-bone. The then duke of York, prince William Henry, prince Henry Frederic, and a great number of persons of rank, gave their attendance on this singular occasion. The house, which was of brick, consisted of three rooms one above another, a staircase, chimney, lath and plaster ceilings, and a kind of wainscotting round the rooms, of rough deal. Exactly at twelve o'clock the ground room, and that of one pair of stairs, were set on fire, by lighting the faggots and shavings laid in there for that purpose. In about fifteen minutes the wainscot of the under room was thought to be sufficiently in flames, and three of the machines were thrown in; which, by almost immediate and sudden explosions instantaneously extinguished the flames, and the very smoke in that apartment in a few minutes totally disappeared. By this time, the firemen, &c., who had the care of throwing in the machines, gave an alarm that the stair-case had taken fire, and that it was necessary directly to go to work upon the next room, which was accordingly done, and with the same effect. The experiment however hitherto did not universally satisfy, in the last

instance especially it was thought to be too hastily put in execution. For the sake of the experiment, therefore, and to remove all manner of doubt, Mr. Godfrey consented to a third experiment in the upper room, which was entirely of wood. The flames were now suffered to get to a considerable height, and even the window frames destroyed, before the machines were thrown in: which, however, answered exactly as the former had done; and met with universal approbation.

Professor Palmer, of Brunswick, invented a powder for extinguishing fire; composed of equal parts of sulphur and ochre, mixed with six times their weight of vitriol. These ingredients are mixed, and the mass afterwards pulverized. The powder is to be scattered over the places on fire; two ounces are sufficient for a surface of a foot square. When it is not possible to approach the flames, cartridges may be made of it, and shot with a cross-bow against such parts of the building where the fire rages with the greatest violence.

In order to preserve timber from fire, the professor directs, to rub it over with common carpenter's glue, and then sprinkle the powder over it, repeating the operation three or four times, as the preceding layer becomes dry. If you wish to preserve cloth, paper, ropes, cables, &c., against fire, use water instead of glue, in applying the powder.

Mr. Knox of Gotenburg recommends to mix seventy-five gallons of water with ten quarts of clay, ten quarts of vitriol, and ten quarts of common salt; or a similar quantity of water, with eighteen quarts of the strongest solution of wood-ashes and eighteen quarts of fine clay reduced to powder; or the same proportion of water, with fifteen quarts of red ochre, or the residuum of aquafortis, and fifteen quarts of common salt: or, lastly, to mix fifteen quarts of the strongest herring-pickle, and fifteen quarts of red ochre, with seventy-five gallons of water. All these different solutions, Mr. Knox remarks, are equally efficacious in extinguishing fire.

Another of the various inventions for extinguishing fire by chemical means, deserving of notice, is the composition prepared by M. Von Aken, and which consists of the following ingredients:—

	lbs.
Burnt alum	3
Green vitriol in powder	4
Red ochre, pulverized	2
Potter's clay, finely pounded and sifted	20
Water	63

Dr. Hales proposes to *check the progress of fires* by covering the floors with earth. The proposal is founded on an experiment which he made with a fire board half an inch thick, part of which he covered with an inch depth of damp garden mould, and then lighted a fire on the surface of the mould; though the fire was kept up by blowing, it was two hours before the board was burnt through and the earth prevented it from flaming. The thicker the earth is laid on the floors, the better; however, Dr. Hales apprehends that the depth of an inch will generally be sufficient; and he recommends to lay a deeper covering on the stairs, because the fire commonly ascends by them with the greatest velocity. M. Hartley made several trials, in 1775 and 1776, to evince the efficacy of a method which he had invented for restraining the spreading of fire in buildings. For this purpose thin iron plates are well nailed to the tops of the joists, &c., the edges of the sides and ends being lapped over, folded together, and hammered close. Partitions, stairs, and floors may be defended in the same manner: and plates applied to one side have been found sufficient. The plates are so thin as not to prevent the floor from being nailed on the joists, in the same manner as if this preventive were not used; they are kept from rust by being painted or varnished with oil and turpentine. The expense of this addition, when extending through a whole building, is estimated at about five per cent. Mr. Hartley obtained a patent for this invention, and parliament voted a sum of money towards defraying the expense of his numerous experiments. The same preservative may also be applied to ships, furniture, &c. The late earl of Stanhope also published a very simple and effectual method of securing every kind of building against all danger of fire. This method he divided into three parts, viz. underflooring, extra-lathing, and inter-securing. 1. The method of underflooring is either single or double. In a single underflooring, a common strong lath of oak or fir, about one-fourth of an inch thick, should be nailed against each side of every joist, and of every main timber supporting the floor which is to be secured. Other similar laths are then to be nailed along the whole length of the joists, with their ends butting against each other. The top of each of these laths or fillets ought to be at one inch and a half below the top of the joists or timbers against which they are nailed; and they will thus form a sort of small ledge on each side of all the joists. These fillets are to be well bedded in a rough plaster hereafter mentioned, when they are nailed on, so that there may be no interval between them and the joists; and the same plaster ought to be spread with a trowel upon the tops of the fillets, and along the sides of that part of the joists which is between the top of the fillets and the upper edge of the joists. To fill up the intervals between the joists that support the floor, short pieces of common laths, whose length is equal to the width of these intervals, should be laid in the contrary direction to the joists, and close together in a row, so as to touch one another: their ends must rest upon the fillets, and they ought to be well bedded in the rough plaster, but not fastened with nails. They must then be covered with one thick coat of the rough plaster, which is to be spread over them to the level of the tops of the joists: and in a day or two this plaster should be troweled over close to the sides of the joists, without covering the tops of the joists with it. 2. In the method of double-flooring, the fillets and short pieces of laths are applied in the manner already described; but the coat of rough plaster ought to be little more than half as thick as that

in the former method. Whilst this rough plaster is laid on, some more of the short pieces of laths above-mentioned must be laid in the intervals between the joists upon the first coat, and be dipped deep in it. They should be laid as close as possible to each other, and the same direction with the first layer of short laths. Over this second layer of short laths there must be spread another coat of rough plaster, which should be troweled level with the top of the joists without rising above them. The rough plaster may be made of coarse lime and hair; or, instead of hair, hay chopped to about three inches in length may be substituted with advantage. One measure of common rough sand, two measures of slaked lime, and three measures of chopped hay, will form in general a very good proportion, when sufficiently beat up together in the manner of common mortar. The hay should be put in after the two other ingredients are well beat up together with water. This plaster should be made stiff; and, when the flooring boards are required to be laid down very soon, a fourth or fifth part of quicklime in powder, formed by dropping a small quantity of water on the limestone a little while before it is used, and well mixed with this rough plaster, will cause it to dry very fast. If any cracks appear in the rough plaster work near the joists when it is thoroughly dry, they ought to be closed by washing them over with a brush wet by putting two measures of quicklime and one of common sand in a pail, and stirring the mixture with water till the water becomes of the consistence of a thin jelly. Before the flooring boards are laid, a small quantity of very dry common sand should be strewed over the plaster work, and struck smooth with a hollow rule, moved in the direction of the joists, so that it may lie rounding between each pair of joists. The plaster work and sand should be perfectly dry before the boards are laid, for fear of the dry rot. The method of under-flooring may be successfully applied to a wooden stair-case; but no sand is to be laid upon the rough plaster work. The method of extra-lathing may be applied to ceiling joists, to sloping roofs, and to wooden partitions. 3. The third method, which is that of inter-securing, is very similar to that of under-flooring; but no sand is afterwards to be laid upon it. Inter-securing is applicable to the same parts of a building as the method of extra-lathing, but it is seldom necessary.

Fire-Escape. The best mode of constructing an apparatus, capable of furnishing prompt and efficient aid to persons placed in any exposed and insulated situation, during the progress of this destructive element, may be considered as a matter of considerable importance, though it is one that has hitherto been little attended to. We propose, in the present article, to furnish a brief outline of the various contrivances that have been suggested for the purpose.

Mr. Witty's fire-escape resembles, when folded up, a small chair, being furnished with arms, cushions, and a cover, all of which are easily moveable, and have nothing to do with the machine when used as a fire-escape. Implements of this kind are generally unsightly, and not applicable to any use except that, for which they were primarily intended; the natural consequence of which is, that they are put out of the way and neglected, so that when wanted on a sudden emergency, they would probably not be forthcoming. It is this consideration which has induced Mr. Witty to convert his fire-escape into an elegant and convenient article of furniture, the natural position of which would be the recess of a window in a bed-chamber, which is the precise place, where, in case of fire, it would be most conveniently used.

It consists of a chair capable of having its seat-part lifted through the window, at any time; the top which contains the roller catches withinside the sill of the window-frame, the chair instantly adjusts itself on the same principle as the painter's machine, and requires no kind of fixing or fastening whatever, but is perfectly ready for a person to descend, which may be done from a four-story window to the street in half a minute from the time of getting out of bed. The bag is kept open by being made fast to a strong frame, and well secured by girth-web, which passes under it, and by which it hangs; these webs go over rollers, and pass on to the end of the upper roller, where a sufficient quantity is coiled round to reach from the top of the house to the bottom. When a person gets into the bag, it begins to descend, and as the web uncoils itself from the rollers, it causes the flexible rope to wind round the middle part of the roller; a person within the room lays hold of this rope to prevent the too rapid descent, and, if that is not enough, the handle of the break or regulator is raised by him. In case of alarm of fire, take off the seat and cover by the two arms and throw it entirely away from you, pull the chair over towards you as it stands, and lift the seat part through the window.

To rescue a family, one person will manage it for the whole. On putting the machine out, a rope immediately falls, which winds on the roller as the bag descends; when one person is down, the rope must be redrawn and the bag ascends for another, or two or three children may descend at once; each descent occupying about one minute, a family of twelve persons may be saved in as many minutes: at the right-hand end of the roller is the break or regulator, by merely lifting which any person may prevent the too rapid descent of a great weight; but this is not of importance, as the same may be done by the rope, but not so easily as not affording so much purchase on the roller. When all are down but the person who conducts the machine, he will enter the bag taking the rope with him and letting himself down; after which, should any one appear at the window; he may, while in the street, draw the bag up to them and let them down; should the bag ever be destroyed after the first ascent, the rope (which is a patent one) may be thrown down, and, being held by a person at a distance, a descent may be attempted by sliding down it; and, should both fail, in the greatest extremity four persons might sit on the machine outside the window, thus affording time to bring fire-ladders, &c., for their relief.

Mr. Forster of Walthamstow, has contrived a very ingenious fire-escape. It was originally suggested by Mr. Maseres, and an account of the invention was published in the Philosophical Magazine. It consists of a suspension-iron, which is formed like the ramhead commonly used for slinging goods from warehouses, with this difference, however, that the bottom hooks are turned up close to the upright part, to form two close rings or eyes: the length of this iron is about four inches and a half; the thickness of the iron out of which it is hammered is about half an inch. The rope is made of flax, and platted in a peculiar manner. It should be about three-eighths of an inch in diameter, and must be somewhat more than twice the height of the window from the ground. The regulator is an oblong piece of beech wood, six inches and a half in length, three inches and a quarter broad, and about seven-eighths of an inch thick: in this there are four holes pierced for the rope to pass through; one of these is open at the side: there is also a notch at the top of this piece of wood, and an oblong hole about seven-eighths of an inch from the bottom. The upper bolt is a stout leathern strap, about four feet three inches long and one and a half broad, with a buckle to it. The lower belt is a strap of the same sort as the other; but the end, after being put through the buckle, is sewed down: this is for the purpose of security, in case the tongue of the buckle should by accident break. The union strap, so called from its connecting the regulator to the other parts of the machine, is leathern, and is about a foot and a half long and an inch and a quarter broad: it has, like the others, a buckle to it. It is stained black, which distinguishes it from the other leathern straps. The method of putting together all these parts of the machine is, first to pass one end of the rope through the holes in the regulator, then through the two lower rings of the suspension-iron: the upper belt is then to be passed through a doubling of the union strap; after which the rope is to be tied to that belt, and the knot secured by a string from slipping (which string is to pass through two small holes in the leather); and at a foot below the rope is to be tied to the lower belt in like manner. Next the union strap is to be put through the oblong hole in the regulator, and buckled; by which the upper belt and the regulator will be connected. The other end of the rope may be kept wound on a wooden roller, to prevent it from getting entangled. Persons who purchase these machines should have a very strong iron hook, with a spring catch, fixed to some secure part of the window-frame, or elsewhere; on this hook the suspension iron is to be hung by the upper ring, when any one wishes to descend from the window. The next operation is to step into the lower belt with both feet, and draw it up sufficiently high, so as to form a kind of swing to sit in; the part of the strap which is through the buckle is to be laid hold of with the left hand; and the buckle, with the right hand, is to be slipped to its proper place, according to the size of the person: the tongue is then to be put into one of the holes, as in buckling common straps. After this is done, the upper belt is to be somewhat loosely buckled round the chest, and then the rope which is on the roller is to be thrown out of the window on the ground. Now, all being ready for descending, the person is to get out of the window, grasping tight, with one or with both hands, the rope at some convenient part, taking especial care not to meddle with the suspension iron until quite out of the window; after which the rope below the regulator is to be laid hold of with the right hand, and to be let to run through the holes as fast as there may be occasion; for which purpose, if necessary, it may be easily slipped out of the open hole; it will then have the check of only three holes: if the motion is wanted to be retarded, the rope is to be put into the notch at the upper part of the regulator. When one person has descended, and there is a necessity for a second immediately to follow, the union strap is to be unbuckled, when the regulator will be separated from the upper belt: the belts may then be very easily drawn up, having the friction of the suspension-iron only, and the person above is to put on the belts as the other did, and is to be let down gradually, partly by the one below, and partly by managing the rope as the first did; in this case great care must be taken, as the check occasioned by the regulator is gone. It is not easy to lay down exact rules for what number of holes the rope must pass through, as this must vary according to the weight of the person, and other circumstances. It would be well, before the person gets out of the window, to examine, first, whether the suspension-iron is in the hook, this is absolutely necessary: then, that the three buckles are fast, the two knots tied, and that the rope is in the hole of the regulator which has the opening. Great care must be taken that there is not any impediment to the free running of the rope; for which the wall of the house must be examined, and any nails or hooks which may chance to be there removed; also iron scrapers, and every thing wherein the rope may be likely to catch.

Mr. Davis's fire-escape is calculated for the use of a parish; its principle consists in three ladders applied to each other by four clasp irons on the top of each of the two lowermost, which are so contrived that each ladder may slide into the one beneath it; on the top of the lowermost ladder, two pulleys are fixed on the inside, over which two ropes pass. The ropes are made fast to the bottom of the middle one on each side in a proper direction with the pulleys on the top. The upper ladder is attached to the middle one in the same manner, and on the top it carries two horn-pieces, made of iron, and turned off at each end similar to two horns which are four feet wide; their ends are sharp, to pitch on each side of a window, and with their points hold the ladders steady. The three ladders when shut down are about fifteen feet in height. They are placed perpendicularly in the middle of a framed carriage of nine feet six inches long, and five feet six inches wide, mounted upon four wheels. On each side of the carriage a windlass is placed, and, by turning it, the ladders may be wound out from their standing height of fifteen feet to forty. Over this windlass is a screw turned by a winch, by turning which the ladders may be inclined

ainst the house with all imaginable ease. On
top of the upper ladder on the outside, are
o pulleys, over which chains are conducted to
windlass for the purpose of carrying up a
x: two of these travel with the fire-escape, so
it in the event of one being filled with small
luables, it may be unhooked, and the other put
, which will save time. The whole apparatus may
drawn by one horse or six men, and when ar-
ed at the scene of danger may be adjusted in
o minutes. If every parish would provide one
these escapes, and keep it where it may be
ought out on the first alarm, there is no doubt
t that it would tend materially to lessen the
mber of accidents which occur by fire in the
tropolis.

The Society for the Encouragement of Arts
ve rewarded M. Bordier for the construction
a bag fire-escape. It consists of a tube or
de of coarse cloth, of any convenient length,
hich may be carried to any required distance.
is tube, which is attached to a ladder of ropes,
firmly fastened at one end to a light but strong
uare frame, of the same dimensions as a
iddling sized window, to which the frame is
ed. The other end of the tube is closed. In
e middle of the upper cloth a longitudinal slit
made, sufficiently large to admit a man: this
d is fastened to a solid place, a little elevated
ove the ground, and distant from the face of
e wall about half the height of the window, to
hich the other extremity of the tube is attached.
ersons, therefore, that enter, or are put into the
pper orifice of this bag, will slide down by their
wn weight, and with an accelerated or retarded
otion, according to the manner in which the
pparatus is placed, or at the pleasure of the per-
ons descending, who, by spreading their hands
nd feet, can regulate their own movements.
he lower end of the tube being fixed to a point,
little raised from the ground, no part of the
ube can touch the ground, consequently the
ersons descending run no risk of being hurt by
oming suddenly upon the ground or pavement.

Feather beds have, within the last few years,
been recommended as a means of escape from
ire, when others fail or cannot be obtained. The
plan suggested is, that a few strong men should
hold one in their hands extended, and that the
persons in danger should throw themselves on to
it, endeavouring to leap outward as far as pos-
sible, from the front or wall of the house on fire.
The neighbours would furnish the beds, and, that
they may instantly be ready, an ingenious asso-
ciation of the word *feather-beds* is proposed with
the cry of *fire*, usual at those times, *fire-feather-beds*. The humanity of the suggestion, its easy
application, and the importance of its successful
results, entitle it to universal diffusion.

It may also be suggested here, that one means
of escaping when the lower part of a house is on
fire, is through the roof. This in many cases
could be very easily effected. Retiring to the
upper chamber and shutting the door, to prevent
a current of air, an aperture may be made in a
few minutes through the lath and plaster of the
ceiling, and the tiled or slated roof, by a poker,
the back of a chair, or a tester rod; and a way
of exit procured. There are few cases where a
table or box would not elevate the person high
enough; and still fewer, where the roof would
resist the force, even of a delicate female.

FIRE-GRATE. A grate or stove to produce
the most perfect combustion of fuel in heating
buildings, must be furnished with apertures for
the constant supply of oxygen, which is the es-
sential food of fire. Hence the word 'grate,' or
'grating,' which is usually placed at the bottom
of the fire-place.

The theory of the common fire-grate is so
simple, that but little attention need be paid to
the matter; and we had better, in the present ar-
ticle, direct our attention to those useful varia-
tions from the ordinary arrangement best calcu-
lated to answer the purpose of the domestic eco-
nomist.

In 1785 Dr. Franklin published the descrip-
tion of a grate which has the flame reversed;
that is, it passes downwards through the fuel.
The appearance of this stove is that of a vase of
cast-iron, with its pedestal, and this is mounted
upon the top or lid of an air-box, standing upon
the hearth of the fire-place, and built close in a
niche in the stone-work: but the vase, being
wholly detached from the back of the niche, has
a very neat appearance. The top of the vase turns
back upon a hinge, so as to open like a lid, to
put in the fuel; and the opening is covered by
a brass frame, which allows the air to enter.
The bottom of the vase has in it an opening, of
about two inches diameter, which leads through
the stem or foot of the vase into a hollow iron
box, forming the pedestal: at the bottom of this
pedestal there is a grating in the lid or top of the
air-box, upon which the vase stands. The air-
box is divided by four partitions, between which
the smoke passes and re-passes horizontally in a
waving direction, until it escapes into the chim-
ney. Thus the smoke and flame, immediately
after it has descended through the grate in the
top of the air-box, passes backwards towards the
chimney between the two middle partitions; but
as it cannot enter into the chimney at that part,
it turns round the ends of those partitions, and
returns in two currents towards the front of the
box; then returns again round the end of the
other partitions, and goes back into the chimney
which is behind, or rather at the sides of the
niche in which the vase stands. The front plate
of the air-box is made to slide in a groove, in
two pieces, which meet together in the front like
folding-doors; and these pieces being slided
back, expose the spaces between the partitions,
which, as before mentioned, act as winding flues
for the smoke to circulate in, and give out its
heat through the metal of the air-box. In the
space between the two middle partitions, and
into which the smoke first descends, a drawer is
fitted to receive the ashes or cinders, which may
fall through the grate in the top of the air-box:
and it can be readily withdrawn, to clear it out.
There is likewise a small grate at the lower part
of the vase, upon which the fuel contained in the
vase will rest. When this fuel is lighted, the
flame and smoke will draw downward, and, de-
scending through the grate, will pass through the
hole in the bottom of the vase into the hollow
pedestal, and through the grate in the top of the

air-box: it then passes horizontally in the space between the two middle partitions of the air-box, and proceeds in the same direction towards the back of the chimney; there dividing, one part of it turns to the right, and passes round the farther end of the middle partition; then coming forwards, it turns round the near end of the outside partition; then, moving backwards, it arrives at the opening into the bottom of one of the upright corner funnels behind the niche, through which it ascends into the chimney, thus heating that half of the box and that side of the niche. The other part of the divided flame passes to the left, round the far end of the middle partition, round the near end of the outside partition, and so into and up the other corner funnel; thus heating the other half of the box, and the other side of the niche. The vase itself, and the box, will also be very hot; and the air surrounding them being heated, and rising as it cannot get into the chimney, it spreads in the room; colder air succeeding, is warmed in its turn, and rises and spreads, till by the continual circulation the whole is warmed.

If there is occasion to make the fire when the chimney does not draw, it must not be begun in the vase, but in one or more of the passages of the lower air-box; first withdrawing the sliding front of the air-box, and covering the mouth of the vase. After the chimney has drawn some time with the fire thus low, and begins to be a little warm, those passages may be closed, and another fire kindled in the hollow pedestal, leaving its sliding shutter a little open; and when it is found that the chimney, being warmed, draws forcibly, that passage may be shut, and the vase opened, to make the fire there, as above directed. The chimney, well warmed by the first day's fire, will continue to draw constantly all the winter, if the fire is made daily.

In the management of this stove, there are certain precautions to be observed, at first with attention, till they become habitual. To avoid the inconvenience of smoke the grate must be cleared before beginning to light a fire. If it is found clogged with cinders and ashes, the grate must be lifted up with the tongs, to let them fall upon the grate in the top of the air-box: the ashes will go through it into the drawer, and the cinders may be raked off through a sliding door in the pedestal, and returned into the vase, when they are to be burnt. Care must be taken that all the sliding-plates are in their places, and closely shut, that no air may enter the stove but through the round opening at the top of the vase; and, to avoid the inconvenience of dust from the ashes, let the ash-drawer be taken out of the room to be emptied. The passages should be cleaned or raked out, when the draught of the air is strong inwards; and the ashes must be put carefully into the ash-box, whilst it remains in its place.

If it is required to prevent the fire burning in the absence of the proprietor, it may be done by removing the brass frame from the top of the vase, and covering the passage or opening into the top of the vase with a round tin-plate, which will prevent the entry of more air than barely sufficient to keep a few of the coals alive. When the fire is wanted, though some hours afterwards, by taking off the tin-plate, and admitting the air, the fire will soon be recovered.

The effect of this machine, well managed, is to burn not only the coals, but all the smoke from them; so that while the fire is burning, if the top of the chimney is observed, no smoke will be seen issuing, nor any thing but clear warm air, which, as usual, makes the bodies seen through it appear waving. But it must not be imagined from this, that it can be a cure for bad or smoky chimneys, much less that, as it burns the smoke, it may be used in a room that has no chimney. It is only by the help of a good chimney, and the higher the better, that it produces its effect at all; and, though a flue of plate iron sufficiently high might be raised in a very lofty room, the management to prevent all disagreeable vapor would be too nice for common practice, and small errors would have unpleasing consequences. It is certain that clear iron yields no offensive smell, when heated: whatever smell of that kind is perceived when there are iron stoves, proceeds, therefore, from some foulness burning or fuming on their surface; they should therefore, never be spit upon, or greased, nor should any dust be suffered to lie upon them. But, as the greatest care will not always prevent these things, it is well once a week to wash the stove with soap-lees and a brush, rinsing it with clean water.

The advantages of this reversed flame in stoves, are very considerable. The chimney does not grow foul, nor ever need sweeping; for as no smoke enters it, so no soot can form in it.

The air heated over common fires instantly quits the room, and goes up the chimney with the smoke; but, in the stove, it is obliged to descend in flame, and pass through the long winding horizontal passages, communicating its heat to a body of iron-plate, which, having thus time to receive the heat, communicates the same to the air of the room, and thereby warms it to a greater degree.

The whole of the fuel is consumed by being turned into flame, and the benefit of its heat is obtained; whereas, in common chimneys, a great part goes away in smoke, which may be seen as it rises, but it affords no rays of warmth. Some idea may be formed of the quantity of fuel thus wasted in smoke, by reflecting on the mass of soot that a few weeks firing will lodge against the sides of the chimney; and yet this is formed only of those particles of the column of smoke which happen to touch the sides in its ascent. How much more must have passed off in the air? And we know that this soot is still fuel, for it will burn and flame as such; and, when hard caked together, is indeed very like and almost as solid as the coal from which it proceeds. The destruction of fuel goes on nearly in the same quantity in smoke as in flame, but there is no comparison in the difference of heat given. When fresh coals are first put on a fire, a considerable body of smoke arises. This smoke is, for a long time, too cold to take flame; but if a burning candle is plunged into it, the candle, instead of inflaming the smoke, will instantly be itself extinguished. Smoke must have a certain

egree of heat to be inflammable. As soon as it is acquired that degree, the approach of a can-e will inflame the whole body, and the differ-ence of the heat which it gives will be very sen-ble. A still easier experiment may be made ith a candle itself. Hold your hand near the de of its flame, and observe the heat it gives: en blow it out, the hand remaining in the same ace, and observe what heat may be given by e smoke that rises from the still burning snuff; ou will find it very little: and yet the smoke is in it the substance of so much flame, and ill instantly produce it, if you hold another ndle above it so as to kindle it. Now the noke from the fresh coals, laid on this stove, stead of ascending and leaving the fire, while o cold to burn, being obliged to descend rough the burning coals, receives among them at degree of heat which converts it into flame: nd the heat of that flame is communicated to the r of the room, as above explained.

The flame from the fresh coals laid on in this ove, descending through the coals already ig-ited, preserves them long from consuming, and ontinues them in the state of red coals, as long s the flame continues that surrounds them, by hich means the fires made in this stove are of uch longer duration than in any other, and fewer oals are therefore necessary for the day. This a very material advantage indeed. That flame ould be a kind of pickle to preserve burning oals from consuming, may seem a paradox to any, and very unlikely to be true, as the doctor lls us it appeared to himself the first time he bserved the fact; he therefore relates the cir-umstances, and mentions an easy experiment, y which his reader may be in possession of very thing necessary to the understanding of it. n the first trial he made of this kind of stove, hich was constructed of thin iron plate, he had, stead of the vase, a kind of inverted pyramid, ke a mill-hopper; and fearing at first that the mall grate contained in it might be clogged by inders, and the passage of the flame sometimes bstructed, he ordered a little door near the rate, by means of which he could occasionally lear it; though after the stove was made, and efore he had tried it, he began to think this recaution superfluous, from an imagination that he flame, being contracted in the narrow part here the grate was placed, would be more owerful in consuming what it should there meet ith, and that any cinders between or near the ars would be presently destroyed and the pas-age opened. After the stove was fixed, and in ction, he had a pleasure now and then in open-ng that door a little, to see through the crevice ow the flame descended among the red coals, nd, observing once a single coal lodged on the ars in the middle of the focus, he observed by watch in what time it would be consumed: he ooked at it long without perceiving it to be at ll diminished, which surprised him greatly. At ength it occurred to him that he had seen the same hing a thousand times, in the conversion of the ed coal formed in the snuff of a burning candle, hich, while enveloped in flame, and thereby revented from the contact of the passing air, is ong continued, and augments instead of diminishing, so that we are often obliged to re-move it by the snuffers, or bend it out of the flame into the air, where it presently consumes to ashes. He then supposed, that to consume a body of fire, passing air was necessary to receive and carry off the separated particles of the body: and that the air passing in the flame of the stove, and in the flame of a candle, being already satu-rated with such particles, could not receive more, and therefore left the coal undiminished as long as the outward air was prevented from coming to it by the surrounding flame, which kept in a situation somewhat like that of charcoal in a well luted crucible, which, though long kept in a strong fire, comes out unconsumed.

Mr. Craigie has a patent fire-grate of a very peculiar construction. It consists of a founda-tion or basis of about four feet in length by about two feet eight inches in breadth, and about twenty inches in height; at one end in the front is to be placed the chimney grate, eighteen inches wide and six deep. On the foundation in the centre, at nineteen inches distant from each other, are to be raised two sides in stone or brick, the whole length thereof, about eight inches in height; on these sides is to be placed a pan of cast iron, of size to cover the whole, with rims to rest on the sides, but leaving a small space vacant, say about half an inch from each side below; the depth of the pan may be about five or six inches, and will be raised above the basis, so as to leave an aperture throughout of about an inch and a half; at the end of the furnace, opposite to the fire-grate, the aperture will terminate in a flue of brick or iron to convey the smoke into the chim-ney of the house, which flue should be furnished with a register or damper.

A plate projecting from the lower end of the pan will form the top of the fire-place, of eigh-teen inches by six or eight; the sides will be formed of fire-bricks; the back of the fire-brick will ascend towards the top in a sloping direction under the pan. A frame of iron will be placed to receive the door or front, which will be in the clear about eighteen inches in width by about sixteen inches in depth, that is to say, to cover the ash-pit four inches, and about twelve inches above the grate for the fire-place, in front of which there should be an inner grate of about five or six inches high; this door must have in the lower part of it, about an inch and a half from the bottom, a small door of about three inches wide by two in depth, to furnish air through the ash-pit. When wood is used for fuel, the depth of the fire-place may be twelve inches instead of six. The iron pan being filled with dry sand, will form a sand bath, with heat sufficient according to the depth to which the vessel is placed in it for all ordinary purposes, and being once heated will retain the heat for a considerable time, especially if the doors are kept close shut; the plate or front will serve for broiling or frying. Roasting may be performed to perfection before the door in front even with the doors shut; an oven for baking may be fixed at the flue. Convenience will be found in having the meat, &c., to be roasted suspended from a moveable fire-screen.

The great numbers of manufactories destroyed

by fire in consequence of the large quantities of loose shavings in carpenters' and joiners' shops, induced Mr. Davis to contrive a fire-grate for a safe and economical mode of burning shavings; the object of which is to employ these useful combustible materials as fuel, instead of coal, by such a construction of the grate, that they will not burn too fast, as they do in an open fire, making an intense heat, but only of a momentary duration. This is effected by putting the shavings into a sheet iron cylinder, closed at top, which is fitted into the top of a grate, very similar to those used for burning coals; and the flame produced by the shavings passes through flues conducted in the usual manner; the air which supports the combustion being supplied through the bars of the grate.

The fire-grate is twelve inches wide, and one foot three inches high; it is of cast iron, and lined with fire tiles, having a door with an ash-pit beneath, in the usual manner; the sheet iron pipe conveys the smoke and flame from the fire-place into a brick flue, and this leads into the chimney; there is an iron door opening into the chimney for the sweeping machine, or boy, to pass through to sweep the chimney; the sheet iron cylinder, in which the shavings are put to be consumed, is about nine inches in diameter, and sixteen inches high: it is placed over a circular aperture in the top of the fire-grate, and has a neck to prevent the sparks of the shavings from flying out into the workshop. The cylinder is covered at top with a lid, having also a neck, which is removed at pleasure by a handle, to put in a supply of shavings; this fits very close, and, as no air can pass by it, a sufficient draught to burn the shavings, but slowly, is afforded by the air passing through the bars of the grate, which is impeded by the ashes that may be therein; but this flame may be increased to a rapid combustion, when necessary, by opening the door of the stove; the flame passes along the flues, and gives out an equable heat to the room. Iron bearers are fixed across the flue, which may be used to support any work which requires drying, or for any other purpose of this kind. The supply of this stove with fuel from shavings is attended with so little trouble, and is such an advantage to the workmen, that they will always prefer burning the shavings to coals; so much so, that where ten men are at work, there is a difficulty to collect shavings sufficient even to light the fire the next morning. By this means the danger of fire, which has been fatal to so many manufactories, is greatly removed; the loose shavings being consumed as soon as they are made, and that in lieu of more expensive fuel; and so slowly are the shavings consumed, that the iron cylinder will hold enough, when completely filled, to supply the fire for upwards of half an hour. To guard the workshops still more effectually from danger, the stove and its iron flue is supported upon a mass of brick-work, which prevents any sparks from falling on the floor; and the sides of the brick-work afford very convenient shelves on which to lay any wood-work that requires heating or drying; and when a greater heat is required to extend to a considerable length horizontally, as, for instance, four or five feet, by merely putting a few shavings into the cylinder frequently, in place of filling it, they become converted into flame, which is carried the whole length of the iron flue, heating it uniformly throughout. No soot lodges in the flue, but merely light ashes, which can be easily cleared out from time to time, as may be necessary.

The Swedish or Russian mode of warming buildings is thus described by M. Guyton in the Annales de Chimie. The construction of the apparatus which is there recommended may be improved, to adapt it to our use in England, where pit coal is used; but the following principles, which the author lays down, are very useful as guides in making all kinds of stoves for warming apartments. 1. Heat is produced only in proportion to the volume of air consumed by the fuel. 2. The quantity of heat produced is greatest (the quantity and quality of the fuel being the same) when the combustion is most complete. 3. The combustion is the more complete, in proportion as the fuliginous part is longer retained in channels where it may undergo a second combustion. 4. The only useful heat is that sent out into, and retained in, the space intended to be heated. The temperature of that space will be higher in proportion as the current, which must be renewed from without to support the combustion, is less enabled to take up in its passage the heat produced.

Hence the following inferences evidently arise:—1. The fire-place ought to be insulated from all bodies that are rapid conductors of heat. All the heat that goes out of the apartment is absolutely lost, unless intentionally directed into another apartment. 2. Heat being produced only by combustion, and combustion being sustained only by a current of air, the current should be brought in by channels, where the needful rapidity may be preserved without being too distant from the space to be warmed, so that the heat it there deposits may be gradually accumulated in the whole of the insulated surface, in order afterwards to flow out of it slowly, according to the laws of the equilibrium of that fluid. 3. The wood being so far consumed as to give no more smoke, it is advantageous to close the mouth of these channels, in order to retain there the heat that would otherwise be carried off through the upper flue, by the continuance of a current of fresh air, necessarily of a low temperature. 4. Lastly, it follows from these maxims, that, all things being equal, a higher temperature will be obtained, and supported during a much longer time, by forming in the internal parts of the stove, or under the hearth of a chimney, and in their vicinity, tubes in which the air that comes from without may be warmed before it enters the apartment, to serve the purpose of combustion, or replace that which has been consumed. These have been called *bouches de chaleur* (mouths or apertures of heat), because, instead of contemplating their principal use and intention, it is commonly imagined that they are only made in order to give, by their issues, a more rapid current to the heat produced. Nor is this idea absolutely devoid of foundation, since the air that issues from them has only changed its temperature, by carrying

off a portion of the heat that would have remained in the interior. Those, however, who would proscribe them, as opposing the most important object, which is the retaining of the heat as long as possible, do not consider that they may be closed, and all communication with the external air cut off by a simple slide, and, therefore, it is easy to derive from them every possible advantage without any inconvenience. And we may add that in small apartments, or such as are accurately closed, they are often indispensably requisite, if we would avoid being exposed to currents of cold air. Dr. Franklin very justly quotes a Chinese proverb to this effect: 'Shun a current of air from a narrow passage as you would the point of an arrow.'

The Swedish or Russian stoves, which have chambers for the reception of the flame and smoke, are little known in this country: but those which are in common use in the halls and vestibules of our great houses are French stoves. They differ from the others in having a very great length of small flues or winding passages, through which the smoke passes, and communicates its heat to the air, which circulates in similar passages, until it becomes warmed, and makes its exit through the mouths into the apartment. This method is not so simple as the small chambers or apartments of the Russian stoves, nor is it so good in the long run; because the passages are very liable to become clogged with soot; and, even before they are so clogged as to intercept the passage of the smoke, the transmission of the heat is much impaired, because the interior surfaces of the flues, becoming coated with soot, do not conduct the heat so rapidly, and, in consequence, a great part will still pass out into the chimney. Also, these flues with small passages require a stronger draught in the chimney to make the air pass through the passages, than when chambers are used.

The Holland iron stove, which has a flue proceeding from the top, the fire-place and ash-pit being closed by small iron doors opening into the room, comes next to be considered. It is frequently made of iron plate, and is most commonly called a German stove. Its conveniences are, that it makes a room warm all over, for the chimney being wholly closed, except the flue of the stove, very little air is required to supply that, and therefore not much rushes in at crevices, or at the door when it is opened. Little fuel serves, the heat being nearly all saved; for it radiates almost equally from the four sides, and the bottom and top, into the room, and presently warms the air around it, which, being rarefied, rises to the ceiling, and its place is supplied by the lower air of the room, which flows gradually towards the stove, and is there warmed and rises in its turn, so that there is a continual circulation, till all the air in the room is warmed. The air, too, is gradually changed by the stove-doors being in the room, through which part of it is continually passing, and that makes these stoves more wholesome, or at least more pleasant, than the German stoves. But they have the inconvenience that there is no sight of the fire, which is, in itself, a pleasant thing, nor can any other use be conveniently made of the fire but that of warming the room.

Fire, Greek, a kind of factitious fire, called by the Greeks, who were the inventors and principal users of it, the maritime fire; and which burns with greater violence in water than out of it. It is said to have been composed of naphtha, bitumen, pitch, sulphur, and gum, and was only to be extinguished by vinegar mixed with sand and urine. Leonard da Vinci describes the composition as formed by mixing over the fire, the charcoal of willow, nitre, brandy, resin, sulphur, pitch, and camphor. A woollen cord is then plunged in the mixture, and made into balls, which, when set on fire, are thrown into the enemy's vessels. This fire was employed principally in the wars of the Greeks with their Saracen neighbours; and the Eastern Romans retained the secret for above 400 years; and even at the end of the eleventh century, the Pisans, to whom every science and art were familiar, suffered the effects, without understanding the composition of the Greek fire. It was at length either discovered or stolen by the Mahommedans, and in the holy wars of Syria and Egypt they retorted the invention on the heads of the Christians.

It might be used with equal effect by sea or land, in battles or in sieges. It was either poured from the ramparts in large boilers, or launched in red hot balls of stone and iron, or darted in arrows and javelins, twisted round with flax which had deeply imbibed the inflammable oil: sometimes it was deposited in fire-ships, or most commonly blown through long tubes of copper, planted on the prow of a galley. The modern discoveries respecting combustion have disclosed the whole secret of compositions which burn without access to the atmosphere, by means of oxygen afforded from nitre.

Fire-Lock, in military affairs, the arms of a foot soldier, so called because it produces fire of itself by flint and steel, in contradistinction from a match-lock, which requires a lighted match. Firelocks were formerly three feet eight inches in the barrel, and weighed fourteen pounds, at present the length of the barrel is from three feet three inches to three feet six inches, and the weight of the piece only twelve pounds. They carry a leaden bullet, of which twenty-nine make two pounds, its diameter is ·550 of an inch, and that of the barrel one-fiftieth part of the shot. See Musket.

Fire-Pots, in the military art, small earthen pots, into which is put a charged grenade, and over that powder enough to cover the grenade; the pot is then covered with a piece of parchment, and two pieces of lighted match placed across; this being thrown by a handle of matches where it is designed, it breaks and fires the powder, and burns all that is near it, and likewise fires the powder in the grenade, which ought to have no fuse, that its operations may be the quicker.

Fire-Reeds, reeds used in fire-ships. They are made up in small bundles of about a foot in circumference, cut even at both ends, and tied together in two places. They are distinguished into two kinds, viz. the long and short; the former of which are four feet, and the latter two feet five inches in length. One part of them are singly dipped, i. e. at one end: the rest are

dipped at both ends in a kettle of melted composition. After being immersed about seven or eight inches in this preparation, and then drained, they are sprinkled over with pulverised sulphur upon a tanned hide.

Fire-Ships are generally old vessels filled with combustibles, fitted with grappling irons to hook, and set fire to, the enemies ships in battle, &c. As there is nothing particular in the construction of this ship, except the apparatus by which the fire is instantly conveyed from one part to another, and thence to the enemy, it is sufficient to describe the fire-room, where these combustibles are enclosed, together with the instruments necessary to grapple the ship intended to be destroyed. The fire-room is built between decks, and limited on the after-part by a bulkhead, L, behind the main mast, from which it extends quite forward, as represented in the diagram at the foot of this article. The train enclosed in this apartment is contained in a variety of wooden troughs, D, G, which intersect each other in different parts of the ship's length; being supported at proper distances by cross pieces and stanchions. On each side of the ship are six or seven ports, H, about eighteen inches broad and fifteen inches high; and having their lids to open downward, contrary to the usual method. Against every port is placed an iron chamber, which, at the time of firing the ship, blows out the port-lid, and opens a passage for the flame. The iron chambers are ten inches long and 3·5 in diameter. They are breeched against a piece of wood fixed across the ports, and let into another a little higher. When loaded they are almost filled with corn-powder, and have a wooden tompion well driven into their muzzles. They are primed with a small piece of quick-match thrust through their vents into the powder, with a part of it hanging out. When the ports are blown open by means of the iron chambers, the port-lids either fall downward, or are carried away by the explosion. Immediately under the main and fore shrouds is fixed a wooden funnel M; whose lower end communicates with a fire-barrel, by which the flame passing through the funnel is conducted to the shrouds. Between the funnels, which are likewise called fire-trunks, are two scuttles, or small holes in the upper deck, serving also to let out the flames. Both funnels must be stopped with plugs, and have sail-cloth or canvas nailed close over them, to prevent any accident from above to the combustibles laid below. The ports, funnels, and scuttles, not only communicate the flames to the outside and upper works of the ship and her rigging; but likewise open a passage for the inward air, confined in the fire-room, which is thereby expanded so as to force impetuously through those outlets, and prevent the blowing up of the decks, which must of necessity happen from such a sudden and violent rarefaction of the air as will then be produced. On each side of the bulk head behind is cut a hole L, of sufficient size to admit a trough of the same dimensions as the others. A trough, L, I, whose foremost end communicates with another trough within the fire-room, is laid close to this opening, whence it extends obliquely to a sally port I, cut through the ship's side. The decks and troughs are well covered with melted resin. At the time of the firing either of the leading troughs, the flame is immediately conveyed to the opposite side of the ship, whereby both sides burn together. The spaces N, O, behind the fire-room, represent the cabins of the lieutenant and master, one of which is on the starboard, and the other on the larboard side. The captain's cabin, which is separated from these by a bulk-head, is exhibited also by P. Four of the eight fire-barrels are placed under the four fire-trunks; and the other four between them, two on each side of the fire scuttles, where they are securely cleated to the deck. The longest fire-reeds are put into the fore and aft troughs, and tied down: the shortest reeds are laid in the troughs athwart, and tied down also. The fire-bavins, dipped at one end, are tied fast to the troughs over the reeds, and the curtains are nailed up to the beams, in equal quantities, on each side of the fire-room. The remainder of the reeds are placed in a position nearly upright, at all the angles of every square in the fire-room, and there tied down. If any reeds are left, they are to be put round the fire-barrels, and other vacant places, and there tied fast.

The following instructions are given in the regulations for a fire-ship of 150 tons burden:

The fire-barrels are to be two feet four inches high, and one foot six inches in diameter. Each barrel must have four holes of about six inches square, cut in its sides, with a square piece of canvas nailed over each of them. They are then filled with the carcass-composition, and four plugs, of about one inch diameter and three inches long, and well greased, are thrust into the top, and then left to dry. When dry, these plugs are taken out, and the holes filled with fuse-composition, and quick-match at the top, which goes from one hole to the other; after this, the top is smeared over with mealed powder, mixed up with spirits of wine. When dry again, a sheet or two of brown paper is laid over the top, and then one of the canvas covers, which is made secure by the upper hoop of the barrel.

The composition for dipping reeds, bavins, and curtains, is

	lbs.
Resin	120
Coarse sulphur . . .	90
Swedish pitch . . .	60
Tallow	6
Mealed powder . . .	12

In order to produce an additional external fire, forty-four boxes are filled with the carcass-composition, and distributed on the three masts in the following manner:—One suspended from each of the cat-heads and davits, on each side of the bow; eight slung across the bowsprit; four across each of the out-riggers abaft; two from the grapplings of each of the lower yard-arms; one from the dead-eyes on each side of the three round-tops; and one from the middle of the inside of the main, fore, and mizen shrouds.

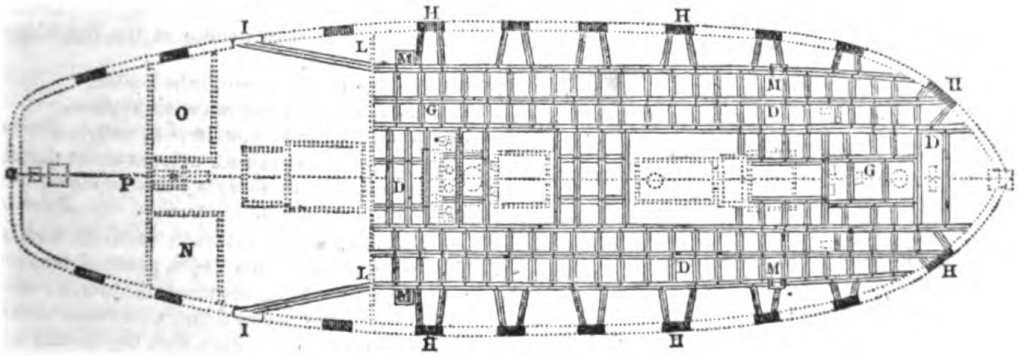
Besides the boxes, there are fire-barrels arranged as follows:—Two half barrels on the forecastle; two abaft the main-deck, and four on the main-deck; two in each round-top, placed against the masts; and four large fire-barrels, under fire-trunks, to convey fire to the curtains on the shrouds. All these fire-barrels and boxes are to be fired by separate leaders of quick-match, or port-fire, in order that any part of the ship may be fired, to cover its approach by the smoke; and the remaining part instantaneously upon quitting the ship. It has been found, by experiment, that two men, with lighted port-fires, can set fire to the whole of the leaders on the deck, bowsprit, cat-heads, out-riggers, &c., in less than a minute; therefore, the risk of trusting to one main leader to the whole may be avoided. The leaders are laid in painted canvas hose, made for the purpose.

The proportion of combustible stores for a fire-ship of 150 tons, is as follows:—

8	Fire-barrels, filled with composition.
12	Iron chambers, to blow open the ports.
250	Bavins, single-dipped.
24	Port-fires.
3½	Priming composition barrels.
1	Quick-match ditto.
48	Dipped curtains.
150	Long reeds, single-dipped.
75	Short reeds, single-dipped.
75	Short reeds, double-dipped.
60	Hand grenades.

When ordered to prime, the captain is to take up all his reeds, one after another, and strow a little composition at the bottom of all the troughs under the reeds, and then tie them gently down again; next to strow composition upon the upper part of the reeds throughout the fire-room; and upon the composition to lay double quick-match upon all the reeds, in all the troughs: the remainder of the composition to be spread over all the fire-room. He is then to cast off all the covers of the fire-barrels, and hang the quick-match loose over their sides, and place leaders of quick-match from the reeds into the barrels, and thence into the vent of the chambers, in such a manner as to be certain of their blowing open the ports, and setting fire to the barrels. The troughs of communication from each door of the fire-room to the sally-ports must be laid with a strong leader of quick-match, four or five times double: also a cross-piece to go from the sally-port, when the ship is fired, to the communication through the trough, laid with leaders of quick-match, that the fire may be communicated on both sides at once. What quick-match is left must be placed so that the fire may be communicated to all parts of the room at once, especially about the ports and fire-barrels. The port-fire used for firing the ship burns about twelve minutes; great care must be taken to have no powder on board when the ship is fired. Sheer-hooks are fitted so as to fasten on the yard-arms of the fire-ship, where they hook the enemy's rigging. The fire-grapplings are either fixed on the yard-arms, or thrown by hand, having a chain to confine the ships together, or fasten those instruments where-ever necessary. Whenever the commanding officer of a fleet displays the signal to prepare for action, the fire-ships fix their sheer-hooks, and dispose their grapplings in readiness. The battle being begun, they proceed immediately to prime, and prepare their fire-works. When they are ready for grappling, they inform the admiral thereof by a particular signal. To avoid being disabled by the enemy's cannon during a general engagement, the fire-ships continue sufficiently distant from their line-of-battle, either to windward or leeward. They cautiously shun the openings or intervals of the line, where they would be directly exposed to the enemy's fire, from which they are covered by lying on the opposite side of their own ships. They are attentively to observe the signals of the admiral or his seconds, in order to put their designs immediately into execution. Although no ship of the line should be previously appointed to protect any fire-ship, except a few of the smallest particularly destined to this service, yet the ship before whom she passes in order to approach the enemy, should escort her thither, and assist her with an armed boat, or whatever succour may be necessary in her situation.

Among the most formidable contrivances ever used, either as a fire-ship or explosion-vessel, is that which was used to destroy the bridge of boats at the siege of Antwerp, in the year 1585; which an author of that period states to have been a ship strongly timbered, containing a vaulted arch of stone or mortar, filled with 200 barrels of gunpowder, over which were placed large stones of all forms, cannon-shot, iron chains, &c., sufficient to destroy a whole city, that were exploded by a secret fusee, contrived so as not to set fire to the charge till the vessel came in contact with the bridges, which it blew to atoms.



Fire-Works. See Pyrotechny. No person whatsoever shall make or sell squibs, rockets, serpents, &c., or cases or moulds for making such squibs; and every such offence shall be adjudged a common nuisance, and persons making or selling squibs shall forfeit £5.

Persons throwing or firing squibs, &c., or suffering them to be thrown or fired from their houses, incur a penalty of 20*s*. Likewise persons throwing, casting, or firing, or aiding or assisting in the throwing, casting, or firing of any squibs, rockets, serpents, or other fire-works, in or into any public street, house, or shop, river, highway, road, or passage, incur the like penalty of 20*s*.; and on non-payment may be committed to the house of correction.

This statute does not take from any person injured, by throwing of squibs, &c., the remedy at common law; for the party may maintain a special action on the case or trespass, &c., for recovery of full damages.

Firing, in military affairs, is used to denote the discharge of all sorts of fire-arms against the enemy. The fire of the infantry is by a regular discharge of their firelocks, by platoons, divisions, &c.; that of the cavalry, with their carbines and pistols; and that of a place besieged, from their artillery.

Defensive fire belongs principally to infantry, when posted on heights which are to be defended by musketry. As soldiers generally present too high, and as fire is of the greatest consequence to troops that are on the defensive, the habitual mode of firing should, therefore, be rather at a low level than a high one.

On these occasions the men are generally drawn up three deep; in which case, the front rank kneeling, being the most efficacious, as being the most razing, should not be dispensed with when it can be safely and usefully employed. The present method of firing by platoons is said to have been invented by Gustavus Adolphus, and first used about 1618: the reason for this method is, that a constant fire may be always kept up. There are three different ways of platoon firing, viz. standing, advancing, and retreating. But, previous to every kind of firing, each regiment or battalion must be told off in grand divisions, subdivisions, and platoons, exclusively of the grenadiers, which form two subdivisions or four platoons of themselves. In firing standing, either by divisions or platoons, the first fire is from the division or platoon on the right; the second fire from the left; the third from the right again, and so on alternately, till the firing comes to the centre platoon, which is generally called the color platoon, and does not fire, remaining as a reserve for the colors. Firing advancing is performed in the same manner, with this addition, that before either division or platoon fires, it advances three paces forward. Firing retreating varies from either of the former methods; for, before either division or platoon fires, if they are marching from the enemy, it must go to the right about; and after firing, to the left about again, and continue the retreat as slowly and orderly as possible. In hedge-firing the men are drawn up two deep, and in that order both ranks are to fire standing. Oblique firing is either to the right and left, or from the right and left to the centre, according to the situation of the object. The Prussians have a particular contrivance for this purpose; if they are to level to the right, the rear ranks of every platoon make two quick but small paces to the left, and the body of each soldier turns one-eighth of a circle, and vice versâ. Parapet-firing depends on the nature of the parapet over which the men are to fire, and also upon that of the attack made to possess it. This method of firing is sometimes performed by single ranks stepping on the banquette and firing; each man instantly handing his arms to the centre rank of the same file, and taking his back in the room of it; and the centre rank giving it to the rear to load, and forwarding the arms of the rear to the front rank; by which means the front rank men can fire six or seven rounds in a minute with exactness. Parapet-firing may also be executed two deep, when the banquette is three feet broad, or in field works, where no banquettes are made. Square-firing is performed by a regiment or body of men drawn up in a hollow square, in which case each front is generally divided into four divisions or firings, and the flanks of the square, being the weakest part, are covered by four platoons of grenadiers. The first fire is from the right division of each face; the second from the left division of each face, &c., and the grenadiers make the last fire. Street-firing is practised in two ways; either by making the division or platoon that has fired to wheel by half-rank to the right and left outwards from the centre, and to march in that order by half divisions down the flanks on each side of the column, and to draw up in the rear, and go on with their priming and loading; or, to make the division or platoon, after firing, to face to the right and left outwards from the centre, and one half rank to follow the other; and, in that order, to march in one centre file down on each side of the columns into the rear, and there draw up as before.

FIRK, *v. a.* Lat. *ferio.* To whip; to beat; to correct; to chastise.

> Besides, it is not only foppish,
> But vile, idolatrous, and popish,
> For one man out of his own skin
> To *firk* and whip another's sin. *Hudibras.*

FI'RKIN, *n. s.* Sax. ꝑeoðeꝛ, the fourth part of a vessel, i. e. of a barrel: Minsheu says, with superabundant erudition, from Lat. *ferendo*, bearing, because it is a little vessel, which easily may be carried! A vessel containing nine gallons.

> You heard of that wonder of the lightning and thunder,
> Which made the lye so much the louder;
> Now list to another, that miracle's brother,
> Which was done with a *firkin* of powder. *Denham.*

> Strutt's servants get such a haunt about that shop, that it will cost us many a *firkin* of strong beer to bring them back again. *Arbuthnot.*

FIRLOT, a dry measure used in Scotland. The oat firlot contains 21¼th pints of that country; the wheat firlot contains about 2211 cubical inches; and the barley firlot, thirty-one standard pints. Hence, it appears, that the Scotch wheat

firlot exceeds the English bushel by thirty-three cubical inches.

FIRM, *adj.*, *v. a.*, & *n. s.* } Fr. *ferme*; Ital. *firma*; Lat. *firmus*, from Gr. ειρμος, linked, or bound, together. Compact; strong; hard; solid: hence, figuratively, constant; fixed; steady; resolute: as a verb, to settle; conform; establish; fix: and, as a substantive, an establishment; or the fixed name of a mercantile house: firmity is strength; solidity; the opposite of infirmity.

FIRM'ITY, *n. s.*
FIRM'LY, *adv.*
FIRM'NESS, *n. s.*

The flakes of his flesh are joined together: they are *firm* in themselves, and they cannot be moved. *Job* xli. 23.

He on his card and compass *firms* his eye,
The masters of his long experiment. *Faerie Queene.*

Of the death of the emperor they advertised Solyman, *firming* those letters with all their hands and seals. *Knolles.*

God caused the wind to blow to dry up the abundant slime and mud of the earth, and make the land more *firm*. *Raleigh.*

We hold *firm* to the works of God, and to the sense which is God's lamp. *Bacon's Natural History.*

Both the easiness and *firmness* of union might be conjectured, for that both people are of the same language. *Hayward.*

The strength and *firmity* of my assent must rise and fall together with the apparent credibility of the object. *Chillingworth.*

Love's artillery then checks
The breastworks of the *firmest* sex. *Cleaveland.*

It on *firm* land
Thaws not, but rather heap and ruin seems
Of ancient pile: all else deep snow and ice. *Milton.*

He straight obeys;
And *firm* believes. *Id. Paradise Lost.*

Thou shalt come of force,
Though thou art *firmlier* fastened than a rock. *Milton.*

That thou should'st my *firmness* doubt
To God, or thee, because we have a foe
May tempt us, I expected not to hear. *Id.*

The muddy and limous matter brought down by the Nilus, settled by degrees into a *firm* land. *Browne's Vulgar Errours.*

Sinking waters, the *firm* land to drain,
Filled the capacious deep, and formed the main. *Roscommon.*

Nor can the' Egyptian patriarch blame my muse,
Which for his *firmness* does his heat excuse. *Id.*

The great encouragement is the assurance of a future reward, the *firm* persuasion whereof is enough to raise us above any thing in this world. *Tillotson.*

There is nothing to be left void in a *firm* building; even the cavities ought to be filled with rubbish. *Dryden.*

The powers, said he,
To you, and yours, and mine, propitious be,
And *firm* our purpose with their augury. *Id.*
'Tis ratified above by every God,
And Jove has *firmed* it with an awful nod. *Id.*
Himself to be the man the fates require;
I *firmly* judge, and what I judge desire. *Id.*

To this abuse, those men are most subject, who most confine their thoughts to any one system, and give themselves up into a *firm* belief of the perfection of any received hypothesis; whereby they come to be persuaded, that the terms of that sect are so suited to the nature of things, that they perfectly correspond with their real existence. *Locke.*

The man that's resolute and just,
Firm to his principles and trust,
Nor hopes nor fears can blind. *Walsh.*

The common people of Lucca are *firmly* persuaded, that one Lucquese can beat five Florentines. *Addison on Italy.*

It would become by degrees of greater consistency and *firmness*, so as to resemble an habitable earth. *Burnet.*

In persons already possessed with notions of religion, the understanding cannot be brought to change them, but by great examination of the truth and *firmness* of the one, and the flaws and weakness of the other. *South's Sermons.*

'Tis meet that noble minds keep ever with their like,
For who so *firm* that cannot be seduced? *Settle.*

How very hard particles, which touch only in a few points, can stick together so *firmly*, without something which causes them to be attracted towards one another, is difficult to conceive. *Newton.*

That body, whose parts are most *firm* in themselves, and are by their peculiar shapes capable of the greatest contacts, is the most *firm*; and that which has parts very small, and capable of the least contact, will be most soft. *Woodward.*

This armed Job with *firmness* and fortitude. *Atterbury.*

O thou, who freest me from my doubtful state,
Long lost and wildered in the maze of fate!
Be present still: oh goddess, in our aid
Proceed, and *firm* those omens thou hast made! *Pope.*

So from dark clouds the playful lightning springs,
Rives the *firm* oak, or prints the Fairy-rings. *Darwin.*

Too *firm* to yield, and far too proud to stoop,
Doomed by his very virtues for a dupe,
He curst those virtues as the cause of ill,
And not the traitors who betrayed him still;
Nor deemed that gifts bestowed on better men
Had left him joy, and means to give again. *Byron.*

FIRM'AMENT, *n. s.* } Fr. *firmament*; Ital. and Span. and Port. *firmamento*; Lat. *firmamentum*, from *firmus*. See FIRM. The sky; the visible heavens; the expanse over our heads.
FIRMAMEN'TAL, *adj.* }

Also, be the erthe devysed in als manye parties, as the *firmament*; and let every partye answere to a degree of the *firmament*. *Sir J. Mandeville*

Even to the heavens their shouting shrill
Doth reach, and all the *firmament* doth fill. *Spenser.*

I am constant as the northern star,
Of whose true, fixt, and resting quality,
There is no fellow in the *firmament*. *Shakspeare.*

The Almighty, whose hieroglyphical characters are the unnumbered stars, sun and moon, written on these large volumes of the *firmament*. *Raleigh.*

The *firmament* expanse of liquid, pure,
Transparent, elemental air, diffused
In circuit, to the uttermost convex
Of this great round. *Milton's Paradise Lost.*

An hollow crystal pyramid he takes,
In *firmamental* waters dipt above. *Dryden.*

The steeds climb up the first ascent with pain;
And when the middle *firmament* they gain,
If downward from the heavens my head I bow,
And see the earth and ocean hang below,
Even I am seized with horror. *Addison's Ovid.*

What an immeasurable space is the *firmament*, wherein a great number of stars are seen with our naked eye, and many more discovered with our glasses! *Derham's Astro-Theology.*

Ye once were justly famed for bringing forth
Undoubted scholarship and genuine worth;
And in the *firmament* of fame still shines
A glory, bright as that of all the signs,
Of poets raised by you, and statesmen, and divines.
Cowper.

FIRMAMENT, in the ancient astronomy, the eighth heaven or sphere; being that wherein the fixed stars were supposed to be placed. It is called the eighth, with respect to the seven heavens or spheres of the planets which it surrounds. It was supposed to have two motions; a diurnal motion, given it by the primum mobile, from east to west, about the poles of the ecliptic; and another opposite motion from west to east; which last it finishes, according to Tycho, in 25,412 years; according to Ptolemy, in 36,000; and according to Copernicus, in 258,000; in which time the fixed stars return to the same precise points wherein they were at the beginning. This period is commonly called Plato's year, or the great year. In various places of Scripture firmament is used for the middle region of the air. Many of the ancients allowed, with the moderns, that the firmament is a fluid matter; though they, who gave it the denomination of firmament, must have taken it for a solid substance.

FIR'MAN, *n. s.* Pers. *phurwana;* Arab. *firmaun.* A mandate, license, or order of Turkish and Asiatic princes. Also written phirman. See our Life of ALI PACHA, vol. i. p. 621.

The king's *phirman* was thus interrupted.
Sir T. Herbert.

FIRMICUS MATERNUS (Julius), a famous writer, who composed in Latin, about A. D. 345, an excellent work in defence of Christianity, entitled De Errore Profanarum Religionum, which is printed with the notes of John Wouver. There are also attributed to him eight books of astronomy, printed by Aldus Manutius in 1501; but this work is by some supposed to have been written by another Julius Firmicus, who lived at the same time.

FIROZEABAD, or FIRUSABAD, a town of Persia, in the Province of Fars, the ruins of which extend seventeen miles: among them are the remains of a fine temple, and of a ditch seven miles in circuit, and in some places sixty-eight paces broad. The modern Firozeabad is an inconsiderable place. Seventy miles from Bushire.

FIROZEH, a town of Hindostan, province of Delhi. Long. 75° 13′ E., lat. 29° 17′ N. As three of the Afghan emperors of Hindostan bore the title of Firoz (the victorious), a number of towns were called after them, of which many are now in ruins.

FIROZKOH, an ancient city of the province of Ghore, in Afghaunistaun, frequently mentioned in oriental history. It was situated to the north of Ghore, and was the summer residence of the sovereigns; in its vicinity was a celebrated turquoise mine.

FIRST, *adj.* & *adv.*
FIRST'BEGOT, *adj.*
FIRST'BEGOTTEN,
FIRST'BORN, *n. s.*
FIRST'CREATED, *adj.*
FIRST'FRUITS, *n. s.*
FIRST'LING.

Saxon ꝼiꞃꞅꞇ, ꝼoꞃꞅꞇ (superlative of ꝼoꞃe) Swed. *forst;* Goth. *first;* Foremost: the ordinal of one; earliest in time; most exalted in place or dignity; excellent; great: as an adverb, before any thing else; often taking *at* before it; earliest: firstling, as an adjective, means first brought forth or born: as a substantive, the first produce.

In the six hundredth and *first* year, in the *first* month, the *first* day of the month, the waters were dried up from off the earth. *Genesis.*

All the *firstling* males that come of thy herd, and of thy flock, thou shalt sanctify unto the Lord thy God. *Deuteronomy.*

Three presidents, of whom Daniel was *first.*
Daniel.

My *first* son,
Where will you go? Take good Cominius
With thee. *Shakspeare. Coriolanus.*

Thy air,
Thou other gold-bound brow, is like the *first.*
—A third is like the former. *Id. Macbeth.*

The flighty purpose works o'erlook,
Unless the deed go with it: from this moment,
The very *firstlings* of my heart shall be
The *firstlings* of my hand. *Id.*

First, metals are more durable than plants; secondly, they are more solid and hard; thirdly, they are wholly subterraneous; whereas plants are part above earth, and part under the earth. *Bacon.*

Although the king loved to employ and advance bishops because, having rich bishopricks, they carried their reward upon themselves; yet he did use to raise them by steps, that he might not lose the profit of the *first-fruits,* which by that course of gradation was multiplied. *Id. Henry VII.*

Man's *first* obedience. *Milton.*

Who *first,* who last
Roused from the slumber. *Id.*

His *first-begot,* we know; and sore have felt,
When his fierce thunder drove us to the deep. *Id.*
Hail, holy light, offspring of heav'n *first-born!* *Id.*

Last, with one midnight stroke, all the *first-born*
Of Egypt must lie dead. *Id. Paradise Lost.*

See, Father, what *first-fruits* on earth have sprung,
From thy implanted grace in man! *Milton.*

A shepherd next,
More meek, came with the *firstlings* of his flock,
Choicest and best. *Id. Paradise Lost.*

First was the world as one great cymbal made,
There jarring winds to infant nature played.
Marvell.

The sea grew white; the rolling waves from far
Like heralds, *first* denounced the wat'ry war.
Dryden.

And all are fools and lovers *first* or last. *Id.*

At *first* the silent venom slid with ease,
And seized her cooler senses by degrees.
Id. Æneid.

The tender *firstlings* of my woolly breed,
Shall on his holy altar often bleed. *Id. Virgil.*

Truth scarce ever yet carried it by vote any where at its *first* appearance; new opinions are always suspected. *Locke.*

The *first-born* has not a sole or peculiar right, by any law of God and Nature; the younger children having an equal title with him. *Id. On Education.*

First with the dogs, and king among the squires.
Spectator.

'Tis little Will, the scourge of France,
No godhead, but the *first* of men. *Prior.*
I find, quoth Mat, reproof is vain!
Who *first* offend, will *first* complain. *Id.*

The blooming hopes of my then very young patron ave been confirmed by most noble *first-fruits*, and his fe is going on towards a plentiful harvest of all ac-umulated virtues. *Id.*

Excepting fish and insects, there are very few or o creatures that can provide for themselves *at first*, ithout the assistance of parents. *Bentley.*

The *firstlings* of the flock are doomed to die. *Pope.*

Jove sent and found, far in a country scene,
ruth, innocence, good-nature, look serene;
rom which ingredients, *first*, the dext'rous boy
icked the demure, the aukward, and the coy. *Swift.*

The nameless He, whose nod is Nature's birth,
nd Nature's shield the shadow of his hand;
er dissolution his suspended smile!
he great *First-Last!* *Young.*

And took his leave of me, promising to discharge ie debt he owed me with the *first* money he should eceive; but I have heard nothing of him since. *Franklin.*

FIRST-BORN. See PRIMOGENITURE. This ord is often used in Scripture in a figurative ense for that which is first, most excellent, ost distinguished in any thing. 'The first-born f the poor' (Isa. xiv. 30.) signifies, the most iserable of all the poor; and in Job (xviii. 13) The first-born of death;' that is, the most ter-ble of all deaths.

FIRST-FRUITS, primitiæ, among the Hebrews, ere oblations of part of the fruits of the har-est, offered to God as an acknowledgment of is sovereign dominion. The first of these uits were offered in the name of the whole ation, being either two loaves of bread, or a eaf of barley, which was threshed in the court f the temple. Every private person was obliged bring his first-fruits to the temple; and these onsisted of wheat, barley, grapes, figs, apricots, lives, and dates. There was another sort of rst-fruits which were paid to God. When read was kneaded in a family, a portion of it as set apart, and given to the priest or Levite ho dwelt in the place: if there was no priest r Levite there, it was cast into the oven, and onsumed by the fire. These offerings made a onsiderable part of the revenues of the Hebrew riesthood.

FIRST-FRUITS are frequently mentioned by ncient Christian writers as one part of the hurch revenue. One of the councils of Car-iage enjoined, that they should consist only of rapes and corn.

FIRST-FRUITS, in the church of England, are ie profits of every spiritual benefice for the first ear, according to the valuation thereof in the ing's books.

FIRST SIGHT ISLAND, one of the Solomon lands, in the South Pacific, first discovered in 769, by M. Surville. There is a small creek n the north coast, and islets and coral banks ound the island. It is uninhabited and covered ith fruit trees. Parrots and many other birds ere seen. Long. 149° 10′ E., lat. 7° 15′ S.

FISC, fiscus, from φισκος, Gr. a great basket, n the civil law, the treasury of a prince or state; or that to which all things due to the public fall. By the civil law, none but a sovereign prince has a right to have a fisc or public treasury. At Rome the goods of condemned persons, if appropriated to the use of the public, were said publicari; if to the support of the emperor, confiscari. See ÆRARIUM.

FI'SCAL, *n. s.* & *adj.* Fr. *fiscal*, from Latin *fiscus*, a treasury. Exchequer; revenue; a revenue officer; relating to the public revenue.

It behoveth the prince to have a vigilant eye on such *fiscal* ministers. *Raleigh.*

War, as it is entertained by diet, so can it not be long maintained by the ordinary *fiscal* and receipt. *Bacon.*

Don Pedro Rodriquez Compomares, *fiscal* of the council of Castille. *Swinburne.*

FISCHER (John Andrew), M. D. of Erfurt, was born in 1667. He graduated at his native university, where he became professor extraordinary in physic, and also of logic, which he relinquished for the professorship of pathology, and the practice of his profession. He died in 1729, and wrote—1. Consilia Medica, 3 vols. 2. Ilias in nuce, seu Medicina Synoptica. 3. Responsa Practica.

FISCHER (John Bernard), a German architect of the last century, was born at Vienna, about 1650, and went to Rome to improve his taste. He erected the famous palace of Schoenbrunn, and the emperor, Joseph I. appointed Fischer his chief architect; creating him baron d'Erlach. His works are thought to display too great a predilection for ornament. The church of St. Charles Borromeo, in the suburbs of Vienna, is his masterpiece. He died in 1724, leaving a work on Historical Architecture, or a collection of ancient buildings, with explanations in French and German, Vienna, 1721, folio.

FISCHER (Emanuel baron de), son of the above, applied himself to the study of mechanics, and assisted in several of the works conducted by his father. He constructed steam-engines for the mines of the Hartz, and other hydraulic machines; and corresponded with Desaguliers and S'Gravesande. He died in 1758.

FISCHER (John Christian), an eminent musician and performer on the hautbois, was born at Fribourg. After visiting several courts, he settled in England, were he was much admired for his skill in playing and composition. He died in 1800.

FISCHER (John Frederic), a celebrated German scholar and editor, was born at Coburg in 1726, and studied in the gymnasium there; proceeding afterwards to the university of Leipsic His first publication was a Dissertation on the Altar of Peace. In 1751 he was chosen co-rector of the school of St. Thomas, Leipsic, of which he subsequently became rector. He died October 11th, 1799. His labors as an author and an editor were very considerable, including Remarks on the Greek Grammai of Weller; editions of the Dictionary of the New Testament by Pasor, the Lexicons of Moeris and Timæus, the works of Anacreon, Theophrastus, the Dialogues of Plato, and several other Greek and Latin authors.

FISCI ADVOCATI, and FISCI PROCURATORES, officers appointed for the management of the

fisc. Among the cases enumerated in the constitutions of the empire, where it was their business to plead, one is against those who have been condemned to pay a fine to the fisc on account of their litigiousness or frivolous appeals.

FISH, *n. s.*, *v. n.* & *v. a.*
FISH'ER,
FISH'ER-BOAT,
FISH'ER-MAN,
FISH'ER-TOWN,
FISH'ERY,
FISH'FUL, *adj.*
FISH'-HOOK, *n. s.*
FISH'IFY, *v. a.*
FISH'LING, *n. s.*
FISH'-KETTLE,
FISH'LIKE, *adj.*
FISH'-MEAL, *n. s.*
FISH'-MONGER,
FISH'-POND,
FISH'-SPEAR,
FISH'-WIFE,
FISH'-WOMAN,
FISH'Y, *adj.*

Sax. fiſc; Teut. *fisch*; Belg. *visch*; Goth. and Danish, *fisk*; French *pêche*; Ital. *pesche*; Latin, *piscis*, from Greek, πιω, πινω, to drink. Ainsworth. An animal that inhabits water; the flesh of fish. As a verb neuter, to be employed in catching fish; to lure. As an active verb, to search water for fish; to search in any way. A fisher-town, is a town inhabited chiefly by fishermen and their families. To fishify is to convert into fish, or the likeness or taste of fish. A fish-meal is a diet of fish, or abstemious diet. A fish-wife and fish-woman, a woman that sells fish. Fishy, consisting or having the qualities of, or inhabited by, fish. The other compounds the extracts explain.

Therfore who of you axith his fadir breed, wher he schal geue him a stoon? or if he axith *fyssche*, whether he schal gyue him a serpent for the *fyssche*?
Wiclif. Luk. xi.

Canst thou fill his skin with barbed irons? or his head with *fish-spears*? Lay thine hand upon him, remember the battle, do no more. *Job* xli. 7, 8.

Lo in this ponde be *fyshe* and frogges both.
Cast in your nette: but be you liefe or lothe,
Hold you content as fortune lyst assyne:
For it is your owne *fyshyng* and not myne.
Sir T. More.

Somer is come, for every spray now springes,
The hart hath hunge his olde head on the pale,
The bucke in brake his winter coate he flynges;
The *fishes* flete with newe repayred scale. *Surry.*

We know that town is but with *fishers* fraught,
Where Theseus governed and where Plato taught.
Sandys.

There also would be planted a good town, having both a good haven and a plentiful *fishing*. *Spenser.*

I heard it of a *fishwife*. *Beaumont and Fletcher.*

He smells like a *fish*, a very ancient and *fishlike* smell. *Shakspeare. Tempest.*

While others *fish* with craft for great opinion,
I with great truth catch mere simplicity. *Id.*

I fight when I cannot chuse, and I eat no *fish*.
Id. King Lear.

The beasts, the *fishes*, and the winged fowls,
Are their male subjects. *Id. Comedy of Errors.*

In our sight the three were taken up,
By *fishermen* of Corinth, as we thought:
At length another seized on us,
And would have reft the *fishers* of their prey,
Had not they been very slow of sail.
Shakspeare.

How fearful
And dizzy 'tis to cast one's eyes so low!
The *fishermen* that walk upon the beach
Appear like mice. *Id. King Lear.*

Here comes Romeo,
—Without his roe, like a dried herring:
O flesh, flesh, how art thou *fishified*!
Shakspeare.

May pure contents
For ever pitch their tents
Upon these downs, these meads, these rocks, these mountains,
And peace still slumber by these purling fountains!
Which we may every year
Find when we come a *fishing* here. *Raleigh.*

It is walled and guarded with the ocean, most commodious for traffick to all parts of the world, and watered with pleasant *fishful*, and navigable rivers.
Camden's Remains.

Others of them, in that time, burned that *fisher-town* Mousehole. *Carew's Survey of Cornwall.*

Thus mean in state, and calm in sprite,
My *fishful* pond is my delight. *Carew.*

I fear to play the *fishmonger*: and yet so large a commodity may not pass in silence. *Id.*

No *fisher* lets down an empty hook, but cloathed with a proper and pleasing bait. *Bp. Hall.*

Lest he should suspect it, draw it from him,
As *fishers* do the bait, to make him follow it.
Denham.

And now the *fish* ignoble fates escape,
Since Venus owed her safety to their shape.
Creech.

Lime in Dorsetshire, a little *fishertown*.
Clarendon.

We mortify ourselves with the diet of *fish*, and think we fare coarsely if we abstain from the flesh of other animals. *Browne.*

Few eyes have escaped the picture of mermaids, that is, according to Horace, a monster with a woman's head above, and *fishy* extremity below. *Id.*

At length two monsters of unequal size,
Hard by the shore, a *fisherman* espies. *Waller.*

Do scales and fins bear price to this excess;
You might have bought the *fishermen* for less.
Dryden.

The surgeon left the *fishmonger* to determine the controversy between him and the pike. *L'Estrange.*

There are *fishes*, that have wings, that are not strangers to the airy region; and there are some birds that are inhabitants of the water, whose blood is as cold as *fishes*; and their flesh is so like in taste, that the scrupulous are allowed them on fish-days.
Locke.

Fish-ponds are no small improvement of watery boggy lands. *Mortimer's Husbandry.*

A sharp point, bended upward and backward, like a *fish-hook*. *Grew's Museum.*

It is probable that the way of embalming amongst the Egyptians was by boiling the body in a long cauldron like a *fish-kettle*, in some kind of liquid balsam. *Id.*

The king went down to a miserable *fisher-boat* that Hales had provided. *Burnet.*

We shall have plenty of mackerel this season; our *fishery* will not be disturbed by privateers.
Addison.

Fish-ponds were made where former forests grew,
And hills were levelled to extend the view. *Prior.*

After the great value the Romans put upon *fishes*, it will not appear incredible that C. Hirrius should sell his *fish-ponds* for quadragies H. S. £32,291 13*s.* 4*d.* *Arbuthnot.*

Thin drink doth overcool their blood, and making many *fish-meals*, they fall into a kind of male green-sickness. *Sharp.*

Oft, as he *fished* her nether realms for wit,
The goddess favoured him, and favours yet.
Pope.

A soldier now he with his coat appears;
A *fisher* now, his trembling angle bears. *Id.*

My absent mates
Bait the barbed steel, and from the *fishy* flood
Appease the' afflictive fierce desire of food. *Id.*

Some have *fished* the very jakes for papers left there by men of wit. *Swift.*

I would not take one of these as my arbitrator in a dispute for so much as a *fish-pond*;—for if he reserved the mud to me, he would be sure to give the water that fed the pool to my adversary. *Burke.*

Meanwhile, I had formerly been extremely fond of *fish*; and, when one of these cod was taken out of the frying-pan, I thought its flavour delicious.
Franklin.

Pope's imitation of Spenser is the description of an alley of *fishwomen*. *Warton.*

Fish, in a ship, a plank or piece of timber, fastened to a ship's mast or yard, to strengthen it; which is done by nailing it on with iron spikes, and winding ropes hard about them.

Fishes, in heraldry, are the emblems of silence and watchfulness; and are borne either upright, imbowed, extended, endorsed respecting each other, surmounting one another, fretted, &c. In blazoning fishes, those borne feeding, should be termed devouring; all fishes borne upright and having fins, should be blazoned hauriant; and those borne transverse the escutcheon, must be termed naiant.

Fishes, in natural history, form the fourth class of animals in the Linnæan system. Their most general or popular division is into fresh and salt water ones. A few species only swim up into the rivers to deposit their spawn; but by far the greatest number keep in the sea, and would soon expire in fresh water. There are about 400 species of fishes (according to Linnæus), of which we know something; but the unknown ones are supposed to be many more; and, as they are thought to lie in great depths of the sea remote from land, it is probable that many species will remain for ever unknown. For the subdivisions, characters, and natural history of this class of animals, see Ichthyology. Linnæus's method of preserving fish for cabinets is to expose them to the air; and, when they acquire such a degree of putrefaction that the skin loses its cohesion to the body of the fish, it may be slid off almost like a glove; the two sides of this skin may then be dried upon paper like a plant, or one of the sides may be filled with plaster of Paris to give the subject a due plumpness. A fish may be prepared, after it has acquired this degree of putrefaction, by making a longitudinal incision on the belly, and carefully dissecting the fleshy part from the skin, which is but slightly attached to it in consequence of the putrescency. The skin is then to be filled with cotton and the antiseptic powder as directed for birds; and to be sewed up where the incision was made. In the posthumous papers of Mr. Hooke, a method is described of gilding live craw-fish, carps, &c., without injuring the fish. The cement for this purpose is prepared, by putting some Burgundy pitch into a new earthen pot, and warming the vessel till it receives so much of the pitch as will stick round it; then strowing some finely powdered amber over the pitch when growing cold, adding a mixture of three pounds of linseed oil and one of oil of turpentine, covering the vessel, and boiling them for an hour over a gentle fire, and grinding the mixture, as it is wanted, with so much pumice stone in fine powder as will reduce it to the consistence of paint. The fish being wiped dry, the mixture is spread upon it; and the gold leaf being then laid on and gently pressed down, the fish may be immediately put into water again, without any danger of the gold coming off, for the matter quickly grows hard in water.

Fish, Gold. See Cyprinus.

Fish (Simon), a lawyer, born in Kent, and who studied at Oxford, removed in 1525 to Gray's Inn, London. Having here acted a part in a play intended to ridicule cardinal Wolsey, he incurred that minister's resentment, and fled to Germany, where he wrote The Supplication of the Beggars, a Satire upon the Romish Clergy, which was answered by Sir Thomas More's Supplication of Souls. Henry VIII., however, was so pleased with the wit of Fish, that he granted him his protection. He died in 1531.

Fish River (Great), a river of Southern Africa, which rises in the Sneuwberg Mountains, and falls into the Indian Sea. Long. 27° 20′ E., lat. 33° 30′ S.

Fish River, a river of West Florida, which runs into Mobile Bay. Long. 87° 50′ W., lat. 30° 30′ N.

FISHACRE, or Fizacre (Richard), a learned Dominican of the thirteenth century, was a native of Devonshire, and educated at Oxford. He was the intimate friend of Robert Bacon, and celebrated for his knowledge in philosophy and divinity. He died in 1248. His works were very numerous.

FISHBORN Creek, a river on the north side of the isle of Wight, which runs into the sea. Long. 1° 4′ W., lat. 50° 44′ N.

FISHER (John), D.D. was born at Beverly in Yorkshire, in 1459, and educated in that place. In 1484 he removed to Michael-house, Cambridge, of which college he was elected master in 1495. Having studied divinity, he took orders; and, becoming eminent as a divine, attracted the notice of Margaret, countess of Richmond, mother of Henry VII., who made him her chaplain and confessor. In 1501 he took the degree of D.D. and was elected chancellor of the university. In 1504 he was consecrated bishop of Rochester; which small bishopric he would never resign, though he was offered both Ely and Lincoln. The founding of the two colleges of Christ Church, and St. John's, in Cambridge, was entirely owing to his influence with the countess of Richmond. On the promulgation of Luther's doctrine, he exerted all his influence against it, and is supposed to have written the famous work for which Henry VIII. obtained the title of Defender of the Faith. But in 1527, opposing his divorce, and denying his supremacy, the implacable tyrant determined, and finally effected, his destruction. In 1534 the parliament found him guilty of

misprision of treason, for concealing certain prophetic speeches of a fanatical impostor, called the holy maid of Kent, relative to the king's death, and condemned him, and five others, in loss of goods and imprisonment, but he was released on paying £300 for the king's use. But on the king's marriage with Anne Boleyn, having refused to take the oath of allegiance, alleging that he was not convinced that the king's first marriage was against the law of God, he was attainted by the parliament of 1534, and committed to the Tower, where he would probably have been suffered to close his life, had not Pope Paul III. created this zealous adherent to his cause a member of the college of cardinals. Henry on hearing that Fisher intended to accept of the dignity, exclaimed in a rage, 'Yea, is he so lusty? well, let the pope send him a hat when he will, he shall wear it on his shoulders, for I will leave him never a head to set it on.' In pursuance of this bloody intention the king sent Rich the solicitor-general, under pretence of consulting the bishop on a case of conscience, but really with a design to draw him into a conversation concerning the supremacy. The honest old bishop spoke his mind without reserve, and an indictment and conviction of high treason was the consequence. He was beheaded on Tower hill on the 22nd June 1535, in the seventy-seventh year of his age. He wrote several treatises against Luther, and other works, which were printed at Wurtzburgh, in 1597, in 1 vol. folio. An interesting picture of the character of this prelate and his times is presented in the following ancient narrative of his execution:—'About nine of the clock, the Lieutenant came againe to the bishop, and, finding him almost ready, said that he was come now for him; 'I will wait upon you straight,' said he, 'as fast as this thin body of mine will give me leave.' Then said he to his man, 'Reach me my furred tippet to put about my neck.' 'O my lord,' said the lieutenant, 'what need you be so careful for your health for this little time, being, as yourself knoweth, not much above an hour?' 'I think no otherwise,' said this blessed father; 'but yet in the mean time I will keep myselfe as well as I can, till the very time of my execution; for I tell you truth, though I have, I thank our Lord, a very good desire and a willing minde to die at this time, and so trust of his infinite mercy and goodnesse he will continue it, yet will I not willingly hinder my health in the mean time, one minute of an houre, but still prolong the same as long as I can, by such reasonable waies and meanes as Almighty God hath provided for me.' With that, taking a little book in his hand, which was a New Testament lying by him, he made a crosse on his forehead, and went out of his prison doore with the lieutenant, being so weak that he was scarce able to go downe staires; wherefore, at the staires foot he was taken up in a chaire between two of the lieutenant's men, and carried to the Tower gate, with a great number of weapons about him, to be delivered to the sheriffs of London for execution. And as they were come to the uttermost precinct of the liberty of the Tower, they rested there with him a space, till such time as one was sent before to know in what readinesse the sheriffs were to receive him; during which space he rose out of his chaire, and standing on his feet leaned his shoulders to the wall, and lifting up his eyes towards heaven, opened his little book in his hand, and said, 'O Lord, this is the last time that ever I shall open this book; let some comfortable place now chance unto me, whereby I thy poore servant may glorifie thee in this my last houre;' and with that looking into the book, the first thing that came to his sight were these words, 'Hæc est autem vita æterna, ut cognoscant te, solum verum Deum, et quem misisti Jesum Christum. Ego te glorificavi super terram, opus consummavi quod dedisti mihi ut faciam: et nunc clarifica tu me, Pater, apud temetipsum claritate quam habui priusquam, &c.;' and with that he shut the book together, and said, 'Here is even learning enough for me to my life's end.' And so the sheriffs being ready for him, he was taken up again among certain of the sheriffs' men, with a new and much greater company of weapons than was before, and carried to the scaffold on the Tower hill, otherwise called East Smithfield, himselfe praying all the way, and recording upon the words which he before had read; and when he was come to the foot of the scaffold, they that carried him offered to help him up the staires; but then said he, 'Nay, masters, seeing I am come so farre, let me alone, and ye shall see me shift for myself well enough;' and so went up the staires without any helpe, so lively, that it was merveile to them that knew before of his debility and weakness. But as he was mounting up the staires, the south-east sun was shining very bright in his face, whereupon he said to himselfe these words, lifting up his hands, 'Accedite ad eum, et illuminamini, et facies vestra non confundetur.' By that time he was upon the scaffold it was about ten of the clock, where the executioner being ready to do his office, kneeled down to him, as the fashion is, and asked him forgivenesse: 'I forgive thee,' said he, 'with all my heart, and I trust thou shalt see me overcome this storm lustily.' Then was his gown and tippet taken from him, and he stood in his doublet and hose in sight of all the people, whereof was no small number assembled to see his execution. There was to be seen a long, lean, and slender body, having on it little other substance besides skin and bones, insomuch, as most of the beholders merveiled to see a living man so farre consumed, for he seemed a very image of death, and as it were death in a man's shape, using a man's voice; and therefore it was thought the king was something cruell to put such a man to death being so neere his end, and to kill that which was dying already, except it were for pity's sake to rid him of his pain. When the innocent and holy man was some time upon the scaffold, he spake to the people in effect as followeth:—'Christian people, I am come hither to die for the faith of Christ's holy Catholique Church; and I thank God hitherto my stomack hath served me very well thereunto, so that yet I have not feared death; wherefore I desire you all to help and

ssist me with your prayers, that at the very oint and instant of death's stroke, I may in at very moment stand steadfast, without faint-g in any one point of the Catholique faith, ee from any fear. And I beseech Almighty od of his infinite goodnesse, to save the king nd his realme, and that it may please him to old his hand over it and send him good coun-el.' These, or like words, he spake with such a heerful countenance, such a stout and constant ourage, and such a reverend gravity, that he ppeared to all men not only void of feare, but so glad of death. Besides this, he uttered his ords so distinctly, and with so loud and cleare voice, that the people were astonished thereat, nd noted it for a miraculous thing, to heare so lain and audible a voice come from so weak nd sickly an old body; for the youngest man that presence, being in good and perfect ealth, could not have spoken to be better heard nd perceived than he was. Then after these w words by him uttered, he kneeled down on oth his knees and said certain prayers, among hich one was the hymn of Te Deum laudamus, the end, and the psalm of In te, Domine, peravi. Then came the executioner and bound handkerchief about his eyes; and so this holy ther, lifting up his hands and heart towards eaven, said a few prayers, which were not long, ut fervent and devout; which being ended, he id his head down on the middle of a little lock, where the executioner being ready with a harp and heavy axe, cut asunder his slender eck at one blow, which bled so abundantly at many wondered to see so much blood issue ut of so slender and lean a body. Lord Herbert says that 'the Pope Paul III. sent him a Cardinal's hat, but unseasonably, his head being off.'

Fisher (John), D.D., a modern English prelate, was born at Hampton in Middlesex in 1748, his father being at that period curate of the village. Becoming afterwards chaplain to bishop Thomas, Mr. Fisher was by him presented to the vicarage of Peterborough, in the grammar-school of which city his eldest of ten sons, the subject of this memoir, received the rudiments of his education. He was afterwards removed to St. Paul's school, and thence proceeded to Peterhouse, Cambridge, in 1766. In 1770 he took his degree of A. B. with considerable credit; and two years afterwards succeeded to a fellowship at St. John's, of which college he also became a tutor. While in this situation prince Czartorinski Poniatowski, and several other distinguished personages, were placed under his care; but it was to his integrity in the election of Dr. Chevalier to the vacant headship of his college, that his future success in life is to be mainly attributed. It induced bishop Hurd to recommend him to George III. in the capacity of tutor to prince Edward, afterwards duke of Kent. In 1787 he married the daughter of Mr. Scrivener of Sibton Abbey, Suffolk, and two years afterwards proceded to his doctor's degree. In 1803 he was raised to the bishopric of Exeter, and was appointed to superintend the education of the late lamented princess Charlotte. In 1809 he was translated to the see of Salisbury. Dr. Fisher died in this see, in 1825, with the character of a most amiable and unostentatious, while active churchman.

FISHERIES.

Fisheries. While the sea surrounds her on very side, and her navy shall continue the bul-wark of Great Britain, the subject of fisheries, nd the encouragement of a hardy race of fish-rmen, must ever be of importance to this ountry. Both have, therefore, from an early eriod attracted the attention, not only of indivi-uals, but of the government. It is said that early half of the known Linnæan species of sh frequent our shores.

We cannot, in this article, attempt more than o furnish the reader with a sketch of the history f our principal established fisheries, i. e. the od, the herring, the pilchard, the mackerel, the almon, and the lobster and oyster fisheries, &c. ll of them articles of food, and of a large home onsumption. For an account of the northern nd southern whale-fishery, see Whale-Fishery.

We, perhaps, should first notice the long-tanding complaint that has been made of our eglect of fish as an article of food. There can e no question that the complaint is just, as pplied to a large portion of the inhabitants f this country. In the inland counties, the aboring classes seldom or never touch it; od is a luxury at the tables of respectable amilies of the middle class; and salmon, once the common food of all ranks while in season, in the northern counties, is universally scarce and dear; and through large portions of the country almost unknown. The only way in which this can be accounted for is, the entire monopoly of fish that has long been concentrated in the hands of the London salesmen. Boats to convey fish fresh to this market, gradually draw off all the regular supplies from the local markets: and the contrivance of packing fish in ice has further aided their absorption in this one direction. In the metropolis the price is always kept up sufficiently high to ensure a supply; when there is any danger of the supply becoming excessive, the old method of the Dutch East India Company, to enhance the price of their spices, i. e. by destroying them, is resorted to; and the tricks and manœuvres of the fishermen, salesmen, and fishmongers, are only exceeded by those of Mark-Lane. In the cities of London and Westminster, to crown this modern absurdity in the supply of a principal article of food, there is also, unfortunately, but one fish-market—the favored Billingsgate! 'The consequence of which is,' as Mr. Barrow has observed, 'that a sort of blockade checks the supply of fish for the metropolis; that large quantities are withheld or destroyed as they approach the market, in order to keep up the

price; and 2,000,000 of people are nearly prohibited from the use of an article of food, which might be applied to the diminishing of the consumption of butchers' meat and wheat-corn, to the great relief of the whole kingdom.'

The 'committee of the fish association' have enumerated four principal impediments to an increased supply and distribution, of which they strongly recommend the removal by all practicable means. The first, which, in fact, produces the rest, is the restriction of the market to Billingsgate; the second is the doubt and hesitation of fishermen in bringing up to this only market so large a quantity of fish as they might procure, under an uncertain demand for it; the third, the difficulty and the increased expense of distribution from their above-mentioned remote market; and the fourth, the uncertainty of the price, and the total ignorance in which the public are kept as to the daily state of the supply.

'The evils of the Billingsgate monopoly,' says the foregoing writer, 'are strongly exemplified in the case of mackerel, which is known to be scarcest in the market when most abundant in the British channel: then, indeed, the mackerel fishery is abandoned by the fishermen for two reasons; the one is, that they would be too cheap; the other, the difficulty of distribution, which is effected by fisherwomen, who attend daily at Billingsgate to purchase the mackerel, and carry them for sale to the different parts of the town: the attendance of these women secures to the fishermen a regular custom for their fish; but this laborious, and not always profitable employment, is abandoned as soon as the common fruit comes into season, the carriers and distributors finding the sale of strawberries, gooseberries, currants, &c., a more pleasant and profitable occupation, with less risk and trouble. All the mackerel which may arrive at this period, beyond the estimated demand of the fishmongers, however fresh and good, is thrown into the Thames. Perhaps, therefore, in the case of this particular fish, a free and unrestricted use of salt might be the means of procuring and preserving a considerable stock of palatable and nutritious food. It is the more surprising that these impediments to a more extended use of fish in the metropolis, so obviously arising out of the chartered privilege of Billingsgate, should so long have been suffered to exist, especially as nothing more is required for the dissolution of this injurious monopoly than the establishment of new markets. The evils of this monopoly are not of recent date. In early times, there appears to have been a regularly established fish-market at Queenhithe. In the first year of Henry III., 1226, the constable of the Tower was ordered to compel the boats, arriving with fish, to proceed to that market; and Edward IV. directed that two out of three vessels, arriving with fish, should proceed to Queenhithe, and the other remain at Billingsgate. At that period, the population of London, and its environs, appears to have been about a twenty-fourth part of its present amount, yet it had then two fish-markets. The market of Queenhithe, however, was suffered to drop; and we hear of no attempt to establish a second, until the middle of the last century, when an act was passed, in the year 1749, 'for making a free market for the sale of fish in the city of Westminster; and for preventing the forestalling and monopolising of fish.' Yet, strange and unaccountable as it may appear, this act was then, and has since remained a dead letter. Westminster, since that time, has increased its population at least three-fold, and is still without a fish-market. The act has never been repealed, and requires only the nomination of new and more efficient commissioners to carry it into effect. If, in the vicinity of all the bridges across the Thames, fish-markets were once established, the fishermen of Deal, Dover, Hastings, Brighton, and other parts of the coasts of Kent and Sussex, would amply supply those markets by land-carriage, with the ordinary kinds of fish, in addition to the more valuable kinds brought up the Thames; and it could not fail to increase the general use of fish in and about London, if, when the Regent's canal shall be opened, two or three fish-markets were established near it for the supply of Islington, Pancras, Paddington, and the whole line of London along the New Road, containing an immense population almost entirely cut off from the use of fish. The only arguments in favor of keeping back the fish, and throwing them overboard, is the frequent westerly wind which prevents the fishing-vessels from proceeding to the market up the Thames; but that excuse is now done away by the numerous steam-vessels, which could easily tow up the fishing-boats.'

With regard, therefore, to the country at large, the demand for fish has, for a great length of time, become too unsteady and unimportant to ensure that regular mercantile supply which the natural abundance of fish all around us, the inexhaustible *natural* supply, would teach us to expect. We are much surprised that spirited individuals in the interior parts of Great Britain are not found to undertake the regular transmission of it from the coasts; to stimulate the demand, and regulate the supply as a matter of trade: but into the vortex of London monopoly this great article of human subsistence has been drawn; and a great length of time, and many mercantile revolutions, may be necessary to recover it from it.

We should, perhaps, add, that the salt duties (lately repealed) largely contributed to the disuse of salt-fish in this country.

Certain it is that the fisheries have not always languished for want of public encouragement. In 1580 a plan was formed for raising £80,000 for establishing 'The British Fishery.' In 1615 the same sum was raised by a joint-stock company. In 1632 a Royal Fishing company was established under the sanction of Charles I.; who, in order to increase the demand, prohibited the importation of foreign fish, directed a supply to be furnished for his fleet, and ordered Lent to be more strictly observed. In 1660 parliament granted a remission of the salt duties, and freed all the materials employed in the fisheries from customs and excise.

The national fishery met with great encouragement under the auspices of Charles II. In

1677 this monarch incorporated the duke of York and others into 'The Company of the Royal Fishery of England;' but their capital was exhausted in the purchase and fitting out of a few busses, built in Holland, and manned with Dutchmen, which were seized by the French. In 1713 it was proposed to raise £180,000 on annuities, for the purpose of establishing a fishing company. In 1749 by the recommendation of George II. in his opening speech to Parliament, and, in consequence of a report of a committee of the house of commons, the sum of £500,000 was subscribed for carrying on the fisheries, under a corporation, by the name of 'The Society of the Free British Fishery,' of which the Prince of Wales was chosen the governor. This society, patronised by men of the first rank, promised fair for a little time, but soon began to languish; nor was the large bounty of 56*s.* a ton, able to prevent its total failure. The attention of parliament was again called to this great national object in 1786, when a new corporation was formed, under the name of 'The British Society for Extending the Fisheries and Improving the Sea Coasts of the Kingdom,' which has continued, with various modifications, to the present time.

Parliament also has been liberal in encouraging the fisheries by bounties. A committee of the house of commons, in 1785, reported that the herring-fishery cost the country little short of £20,000 annually, which, on an average of ten years, was equal to £75 per cent. on the value of all the fish that had been taken by the vessels on which it was paid. But, as Dr. Smith has observed, a tonnage-bounty, proportioned to the burden of the ship, and not to her diligence and success in the fishery, is not the best stimulus to exertion; it was an encouragement for fitting out ships to catch, not the fish, but the bounty; or to induce rash adventurers to engage in concerns which they do not understand. The carelessness of such persons, and the ignorance of those employed by them in curing and packing the fish, not only robbed the public purse, but destroyed the character of the article in the foreign market; where, if saleable at all, it fetched only an inferior price, while the skill and attention of the Dutch secured for their fish that preference to which they were justly entitled. The recent change of the bounty, however, from the tonnage to the quantity and the quality of the fish caught and cured, with the regulations adopted by the acts of 48th and 55th Geo. III. have had the good effect of raising the character, and consequently increasing the demand for British fish in the foreign markets, where the herrings in particular are now held in equal esteem with those of the Dutch. This bounty, granted by the act 48th Geo. III. c. 110, is 2*s.* per barrel on all herrings branded by the proper officers, and 4*s.* a barrel granted by the act 55th Geo. III. c. 94, and is so considerable, that, at present, it amounts to not less than £30,000 a-year.

The following is an official return, for the year ending 5th April, 1818, of the total number of vessels, including their repeated voyages, which have been cleared outwards for the British Herring Fishery, not on the Tonnage Bounty, in the year ended 5th April, 1818; distinguishing the number of men on board, the tonnage, netting, salt, and barrels carried out.

Ves.	Men.	Tonnage.	Netting.	Salt.	Barrels.
Num.	Num.	Tons.	Sq. Yards.	Bushels.	Numb.
884	4049	26,951$\frac{16}{94}$	2,490,660	224,133	125185

The returns for the same year of the total number of vessels which were fitted out in Scotland, for the 'Open Sea Fishery,' under the regulations of the 48th and 55th Geo. III., is as under:–

Ves.	Tonnag.	Men.	Netting.	Herrings.	Premiums Paid.
Num.	Tons.	Num.	Sq. Yards.	Barrels.	£. s. d.
19	464$\frac{68}{94}$	139	191,638½	946½	1308 0 0

North Britain takes the lead in all our domestic fisheries. The whole coast of Scotland may indeed be considered as one continued fishery, distinguished by the names of the Shetland, or northern fishery, that on the east side of the kingdom from the Pentland frith to Berwick, and the western or Hebrides fishery. The principal town on the Shetland Islands is called Lerwic, situated on a narrow channel of the Main-land, called Brassa or Brassey Sound. Hither the Dutch and other foreigners have been accustomed to resort to the fisheries at the appointed seasons, when Lerwic has had all the appearance of a continued market or fair. The eastern fisheries along the shores of Scotland, though less considerable than those on the coasts of Shetland, are also of great national importance. The late war, however, drove our Dutch neighbours from their haunts. In 1819 Mr. Stevenson, the celebrated engineer, thus describes their re-appearance there; and adds so many useful reflections on the subject of the fisheries of Scotland, that we transcribe the principal part of his paper on the subject originally communicated to the Edinburgh Philosophical Journal.

'In the early part of August last (1819), while sailing along the shores of Kincardineshire, about ten miles off Dunottar Castle, the watch upon deck, at midnight, called out 'Lights a-head.' Upon a nearer approach, these lights were found to belong to a small fleet of Dutch fishermen employed in the deep-sea fishing, eash vessel having a lantern at her mast-head. What success these plodding people had met with, our crew had no opportunity of enquiring; but upon arriving the next morning at Fraserburgh, the great fishing station on the coast of Aberdeen, we found that about 120 boats, containing five men each, had commenced the fishing-season here six weeks before, and had that night caught no less than about 1500 barrels of herrings, which, in a general way, when there is a demand for fish, may be valued at £1 sterling

per barrel to the fishermen, and may be regarded as adding to the wealth of the country perhaps not less than £3000. In coasting along between Fraserburgh and the Orkney Islands, another fleet of Dutch fishermen was seen at a distance. The harbour and bay of Wick were crowded with fishing-boats and busses of all descriptions, collected from the Frith of Forth, and southward even as far as Yarmouth and Lowestoffe. The Caithness fishing was said to have been pretty successful, though not equal to what it has been in former years.

'In the Orkney and Shetland Islands, one would naturally look for extensive fishing establishments, both in herrings and what are termed white fish, (cod, ling, and tusk); but it is a curious fact, that while the Dutch have long come from their own coast to these islands to fish herrings, it is only within a very few years that the people of Orkney, chiefly by the spirited and praise-worthy exertions of Samuel Laing, esq., have given any attention to this important source of wealth. It has long been a practice with the great fishmongers of London to send their welled smacks to fish for cod, and to purchase lobsters, around the Orkney islands; and both are carried alive to the London market. This trade has done much good to these islands, and has brought a great deal of money to them; but still it is of a more circumscribed nature, and is less calculated to swell the national wealth, than the herring and white fishery in general.

'Hitherto the industry of the Orcadians has been chiefly directed to farming pursuits; while the Shetlanders have been almost exclusively occupied in the cod, ling, and tusk fishing. It is doubtful, indeed, if, up to this period, there be a single boat belonging to the Shetland Isles, which is completely equipped for the herring fishery. But here, again, another fleet of Dutch doggers was seen collecting in numbers off these islands, which is considered a rich harvest in Holland. So systematically do the Dutch pursue the fishing business upon our coasts, that their fleet of busses is accompanied by an hospital-ship. This vessel we now found at anchor in Lerwick Roads, and were informed that she paid weekly visits to the fleet, to supply medicines, and to receive any of the people falling sick, or meeting with any accident.

'Though Shetland is certainly not so much an agricultural country as Orkney, yet it may be hoped that the encouragement judiciously held out by the Highland Society, for the production of green crops in Shetland, may eventually have the effect of teaching these insular farmers the practicability of providing fodder for their cattle in the spring of the year. For ages past this has been a great desideratum. The command of a month or six weeks fodder, would enable the proprietors of that country to stock many of their fine verdant isles with cattle, and to employ their hardy tenantry more exclusively in the different branches of the fishery.

'It is well known, that, next to the Newfoundland Banks, those of Shetland are the most productive in ling, cod, tusk, and other white fish; and by the recent discovery of a bank, trending many leagues to the south-westward, the British merchants have made a vast accession to their fishing-grounds. In the small picturesque Bay of Scalloway, and in some of the other bays and voes on the western side of the Mainland of Shetland, the fishing upon this new bank (which I humbly presume to term the Regent Fishing Bank, a name at once calculated to mark the period of its discovery, and pay a proper compliment to the prince), has been pursued with great success. Here small sloops, of from fifteen to twenty-five tons burden, and manned with eight persons, have been employed. In the beginning of August they had this summer fished for twelve weeks, generally returning home with their fish once a week. On an average, these vessels had caught 1000 fine cod-fish a-week, of which about 600, in a dried state, go to the ton, and these they would have gladly sold at about £15 per ton. So numerous are the fish upon the Regent Fishing Bank, that a French vessel, belonging, it is believed, to St. Maloes, had sailed with her second cargo of fish this season; and though the fishermen did not mention this under any apprehension, as though there were danger of the fish becoming scarce, yet they seemed to regret the circumstance, on account of their market being thus pre-occupied.

'Here, and at Orkney, we had the pleasure to see many ships arriving from the whale-fishing, and parting with a certain proportion of their crews. To such an extent, indeed, are the crews of the whalers made up from these islands, that it is calculated that not less than £15,000 in cash are annually brought into the islands by this means. With propriety, therefore, may the whale-fishery be regarded as one of the most productive sources of national wealth connected with the British fisheries.

'From the Orkney and Shetland Islands our course was directed to the westward. A considerable salmon-fishing seems to be carried on in the mouths of the rivers of Lord Reay's Country in Sutherlandshire: the fish are carried from this to Aberdeen, and from thence in regular trading smacks to London. We heard little more of any kind of fishing till we reached the Harris Isles. There, and throughout the numerous lochs and fishing stations on the Mainland, in the districts of Gairloch, Applecross, Lochalsh, Glenelg, Moidart, Knoidart, Ardnamurchan, Mull, Lorn, and Kintyre, we understood that there was a general lamentation for the disappearance of herrings, which in former times used to crowd into lochs which they seem now to have in some measure deserted. This the fishermen suppose to be owing to the schools being broken and divided about the Shetland and Orkney Islands; and they remark, that, by some unaccountable change in the habits of the fish, the greater number now take the east coast of Great Britain. This is the more to be regretted, that in Sky, the Lewis, Harris, and Uist Islands, the inhabitants have of late years turned their attention much to the fishing. Indeed this has followed as a matter of necessity, from the general practice of converting the numerous small arable farms, which were perhaps neither very useful to the tenants, nor profitable to the laird, into great sheep-

walks; so that the inhabitants are now more generally assembled upon the coast. The large sums expended in the construction of the Caledonian Canal, have either directly or indirectly become a source of wealth to these people: they have been enabled to furnish themselves with boats and fishing tackle, and for one fishing-boat, which was formerly seen in the Hebrides only twenty years ago, it may be safely affirmed that ten are to be met with now. If the same spirit shall continue to be manifested, in spite of all the objections which have been urged against the salt laws, and the depopulating effects of emigration, the British fisheries in these islands, and along this coast, with a little encouragement will be wonderfully extended, and we shall ere long see the Highlands and islands of Scotland in that state to which they are peculiarly adapted, and in which alone their continued prosperity is to be looked for, viz.—when their valleys, muirs, and mountains are covered with flocks, and the people are found in small villages on the shores.'

Sect. I.—Of the Cod Fishery.

The cod, *gadus morhua* of Linné, peculiar to the Northern Seas, is the most extensive fishery of which Great Britain can boast; and which is well known to have its principal rendezvous on the banks of Newfoundland, and the neighbourhood. It extends itself in a greater or less degree over all the shores of our islands in Europe. See Gadus. It is a gregarious and very voracious fish; and is sometimes found to devour its own species: we need only add here that it is prolific almost beyond belief. Leuwenhoeck counted 9,384,000 eggs in a cod fish of a middling size; Mr. Hanmer 3,686,750 in one which weighed 12,540 grains. The flesh is flaky, white, and firm, exceedingly palatable and wholesome: and held in high estimation in every part of the world. In our seas they begin to spawn in January, and deposit their eggs in rough ground among the rocks. Some continue in roe till the beginning of April. They in general recover quicker after spawning than any other fish; therefore it is common to take some good ones all the summer. When out of season, they are thin-tailed, and much infested with the *lernea asellina*, on the inside of their mouths. The fish of a middling size are most esteemed, and are chosen by their plumpness and roundness, especially near the tail; by the depth of the fulcus or pit behind the head; and by the regular undulated appearance of the sides, as if they were ribbed. The glutinous parts about the head lose their delicate flavor, after having been twenty-four hours out of the water, even in winter, when these and other fish of this genus are in highest season. One mentioned by Mr. Pennant, as the largest that he ever heard of taken on our coasts, weighed seventy-eight pounds, the length was five feet eight inches, and the girth round the shoulders five feet. It was taken at Scarborough in 1755, and was sold for a shilling. But the general weight of these fish in the Yorkshire seas, he says, is from fourteen to forty pounds. The grand bank of Newfoundland is about seventy miles from it, and is 400 miles in length, and 200 in breadth, not including the Jaquet and Green Banks, &c.; the greatest and best part of it lies to the south and east of the island. The depth of water, according to governor Pownall's chart, varies from twenty-four to sixty fathoms. The greatest number, as well as the fattest and bulkiest fish, are to be found where the water is rough, with a sandy ground; on the contrary, they are lean and scarce where the water is still, upon an oozy bottom; and the depth to which they seem mostly attached, is from thirty to forty fathoms. All the immense fishery of these shores is carried on by hook and line only. In spring and summer they use short, and in winter long lines, on account of the cod keeping nearer the bottom in that season, and which (according to the fisherman's phraseology) they always keep bobbing, that is playing backwards and forwards by little and tremulous jerks of the hand and arm, by which means, as in angling, the line and hook are in continual motion; and, feeling the fish the moment he bites, they instantly haul him up. They are, therefore, all caught by the lip or mouth, which saves a great deal of time, as the fisherman is immediately enabled to renew the bait, not having to extricate the hook either from the gorge or stomach; besides, they are all taken alive, without being torn or mangled, a consideration of no small importance. In this manner, on the cold and uncomfortable banks of Newfoundland, each expert fisherman, although he can take but one at a time, will catch from 200 to 300 of their heavy fish in a day.

Almost all the civilised nations of the old world have endeavoured to avail themselves of this inexhaustible source of cod-fish. The Portuguese, the Dutch, and the Spaniards, the first especially, were ever very successful here: but the French, the Jersey and Guernsey islanders, and the Americans, are now the only competitors with Great Britain.

The entire fishery is conducted by vessels of from 100 to 200 tons burden each. They are mostly fitted out from Guernsey, Jersey, Ireland, and ports in the English Channel, as Poole, Dartmouth, &c.; they carry about 35,000 fish each, upon an average; their chief markets are Spain, Portugal, Italy, and the Levant; for the other parts of Europe are commonly provided with those taken in the British Seas, the Dogger, Wale, or Wese Banks, and the North Sea. There are besides these large vessels, at least 2000 small-decked craft, or shallops, from twelve to twenty tons burden, rigged like the luggers in England employed in the fisheries along the shores of Newfoundland, Nova Scotia, and the islands of Cape Breton, a great part of whose hands is taken up on land, in erecting stages, and in curing and drying their fish.

At a period (1801-2) when our exports from this valuable colony did not much exceed one-half of their value two years afterwards, the following was the

OFFICIAL ESTIMATE of the Value of the EXPORTS from NEWFOUNDLAND, i.e. between the 11th of October 1801, and the 10th of October 1802; distinguishing the COUNTRIES to which they were sent, and the REMITTANCES proceeding therefrom to GREAT BRITAIN.

				s.		£	s.	d.			Remitted to the United Kingdom, either directly or through Foreign Europe. £	s.	
Fish	318,396	Quintals to	Foreign Europe at	25	per Quintal	397,995	0	0			397,995	0	
	60,230	——	British Europe	18	——	54,215	18	0			54,215	18	
	67,725	——	West Indies	18	——	60,952	10	0					
	14,784	——	United States	18	——	13,306	12	0					
	461,144												
Oil	2,796	Tons	British Europe, at £	22	10 0 per Ton	62,910	0	0			62,910	0	
Salmon	4,033	Tierces	Various	72	6 6 per Tierce	14,619	12	6	say one half to Gr. Brit.		7,309	16	
Seal Skins	36,000		Great Britain	4	0 0 each	7,200	0	0			7,200	0	
Furs	value		Ditto			1,980	0	0			1,980	0	
			Total value at the shipping price in the Island			613,179	12	6			531,610	14	
			Freight and Insurance.										
Fish	318,396	Quintals to	Foreign Europe, at £	0	3 0 per Quintal	47,579	8	0			47,759	8	£61,874 11s. paid for freight on ships owned and fitted out in Great Britain, cleared out from Newfoundland for British and Foreign Europe, viz.
	60,239	——	British Europe	0	1 6 ——	4,517	18	0			4,517	18	
	67,725	——	West Indies	0	1 6 ——	5,079	7	6					
	14,785	——	United States	0	1 6 ——	739	4	0					
Oil	2,796	Tons	British Europe	5	5 0 per Ton	7,689	0	0			7,689	0	
Salmon	4,033	Tierces	Various	0	10 0 per Tierce	2,016	10	0	say one half to Gr. Brit.		1,008	5	
Seal Skins	36,000		British Europe	0	0 0 say	900	0	0			900	0	
						£681,881	0	6			£593,485	0	Ships 228
			Insurance, say 5 per cent			34,940	10	3			29,674	5	Tons 28,132
			This sum may be assured as the lowest value at market			716,821	10	9			623,159	10	Men 1,775
			Deduct the value of foreign salt, say 12,000 tons at £1 per ton,								12,000	0	

Lowest value of Imports and Remittances from the Newfoundland Fishery to the United Kingdom in the year 1802, £611,159 10

In the year 1805, the number of vessels employed in the American fishery here amounted to about 1500, carrying about 10,000 men, and the quantity of fish caught by them to 800,000 or 900,000 quintals, while the whole produce of the British Newfoundland fishery of that year did not exceed 500,000 quintals; and the number of vessels and men we employed did not amount to one-half of that employed by the Americans! The demand for fish in our West India settlements, upon an average of three years, ending 1807, was 456,221 cwt. 97,486 of which was furnished by the mother country, leaving 358,735 cwt. to be supplied from the American fisheries. Of this quantity, above half was supplied by the United States, using our salt and our fishing banks, and in the three years, only 170,610 cwt. from our Newfoundland fishery, found a market in the West Indies.

The causes assigned for this, in an able pamphlet on the subject of encouraging the Newfoundland fishery, are these:—'The New England fishery, in all its branches, is carried on by shares, each man having a proportion of his own catch, and few or none being hired as servants on wages. By this mode, the fisherman's interest being proportioned to his industry, he is actuated to labor by the most powerful incentive. The American fishermen are remarkable for their activity and enterprise, and not less so for their sobriety and frugality; and, in order to be as independent as possible on the owner of the vessel, each fisherman victuals himself, and the crew take it in turns to manage and cater for the rest. It is hardly necessary to add that men, provisions, and every other article of outfit, are procured upon much better terms in the United States than in Great Britain. But the English fishermen must not only lay in a large stock of provisions out and home at a dear rate, but must also carry out with them a number of persons to assist in the fishery, who, consequently, eat the bread of idleness on the passage out and home; for the laws by which the colony was held were such as almost to forbid residence, and those who did reside had no power of internal legislation; they were restrained from erecting the necessary dwellings for themselves and their servants; they were prohibited from enclosing and cultivating the land, beyond the planting of a few potatoes; and from the importation of provisions from the United States, except only on such conditions as were not calculated to afford the residents much relief. 'From a system,' says the author of the above pamphlet, 'the first object of which is to withhold that principle of internal legislation, which is acknowledged to be indispensable to the good government of every community, which restrains the building of comfortable dwellings in a climate exposed to the most inclement winter, which prohibits the cultivation of the soil for food, and restricts the importation of it from the only market to which the inhabitants have the power to go,—from such a system it is not surprising that the inhabitants of Newfoundland are not able to maintain a competition against the American fishermen.'

In 1812, France having been driven out of her fisheries in this neighbourhood, our ships and men employed here are said to have equalled those of America, amounting to about 1500 vessels carrying ten men each. At this time the Americans were permitted to cure and dry fish on any part of the shore of Newfoundland; but the abuses this gave rise to induced our government, at the conclusion of the late war, to circumscribe their fishery within certain limits, and only to allow them the privilege of curing and drying their fish at certain spots on the shore. That is, the fishermen of the United States are at liberty to take fish, in common with the subjects of his Britannic majesty, on that part of the southern coast of Newfoundland, which extends from Cape Ray to the Rameau Islands, from Cape Ray to the Quirpon Islands, on the shores of the Magdalen Islands, and also on the coasts, bays, harbours, and creeks, from Mount Joly, on the southern coast of Labrador, to and through the strait of Belleisle, and thence northerly indefinitely along the coast; and they are at liberty also, to dry and cure fish in any of the unsettled bays, harbours, and creeks of the southern part of the coast of Newfoundland, and of the coast of Labrador; but so soon as the same, or any portion thereof, shall be settled, they are no longer at liberty to dry and cure fish at such portion, without a previous agreement with the inhabitants or proprietors; and, in consideration of these privileges, the United States renounce, on their part, any liberty heretofore enjoyed or claimed by their subjects, to take, dry, or cure fish, on or within three marine miles of any of the coasts, bays, creeks, or harbours of his Britannic majesty's dominions in America, not included within the above mentioned limits; but may be admitted to such bays and harbours, for the purpose of wooding, watering, or repairing damages only. From its distance from the shores of Newfoundland, the Great Bank is of course free to all the world; but the fishery can only be successfully carried on by a constant and uninterrupted communication with the shore.

During the war with America in 1813, our Newfoundland fishery increased largely: the export of dried cod alone for that year amounted to 946,102 quintals, with a proportionate increase in oil, seal-skins, salmon, &c.; amounting in value to £1,500,000. Since peace has become universal, and the French and Americans have been readmitted, the former are said, by their bounties on all fish caught here, &c., to have taken in this fishery 300,000 quintals of cod in one year (1814). The nature and value of our own exports for this fishery, in that and the following year, will appear from the annexed Table.

In 1814.		In 1815.	
1. Number of fishing ships, European and island bankers, ships from Nova Scotia, &c., the West India and stationary vessels	892	Number of the same description . .	1,036
2. Burden of the above mentioned ships . .	107,998 tons	Of the same . . .	127,582
3. Number of men belonging to them . .	6,966	Number of the same	7,981
4. Number of boats kept by the fishing ships, bye-boat men and inhabitants . .	3,241	Number of the same	3,518
5. Number of men employed in the fishery and trade in ships and boats, and as shoremen	19,295	Number of the same	22,167
6. Quintals of fish caught and cured by the fishing ships, bankers, and boats . .	865,132	The same	866,580
7. Exported to Spain, Portugal, and Italy, British Europe, the West Indies, British America, and the Brasils . . .	947,811	The same	1,180,661
8. Tierces of salmon cured and sent to British and foreign markets	3,425	The same	3,752
9. Tons of train oil made by the fishing ships	4,126	The same	4,298
10. The number of seal-skins taken . .	110,275	The same	121,182
11. Tons of seal oil made	1,263	The same	1,397

The price of cod-fish is here reckoned at per quintal, from 15*s.* to 25*s.*; of salmon, from 65*s.* to 80*s.* the tierce; of train oil, from £26 to £34 the ton, and seal oil generally about £36 the ton. In 1814 the number of passengers that went over from England, Ireland, and Jersey, amounted to 2800; in 1815 they were 6735. In 1815 the population of residents amounted to 55,284 in summer; in winter they are diminished about 10,000.

After the banks of Newfoundland, those near Ireland, the coast of Norway, Orkney, and the Shetland Islands, abound most with cod-fish. Dr. Hibbert gives the following interesting account of the recent discovery of the new bank, mentioned by Mr. Stevenson, in the Edinburgh Philosophical Journal, January, 1820:

'It is, I believe, about ten or twelve years since a few vessels, from six to thirty-five tons burden, and carrying from six to eight hands, first prosecuted a desultory and uncertain fishing for cod off the coasts of Shetland. They seldom went farther to look for fish than the immediate neighbourhood of Foula and Fair Isle; and their success in general was very limited. To some of the vessels thus employed the discovery of the bank is due. The first knowledge of its existence is contended for by three or more parties; but the great probability is, that it was simultaneous, since the same cause, which was the uncommonly fine spring of 1818, caused almost every vessel to seek for fish, at a more than usual distance from the coasts of Shetland, and finding a very abundant supply off the north of Orkney, in the vicinity of the place which attracted Mr. Neill's attention, they fell in with the track of the cod-bank.'

'The cod-bank of Shetland is described by the fishermen as lying from twenty-five to thirty miles west of Foula. That its extent is very great, all who have fished upon it agree. The information politely given me by Mr. Sheriff Duncan of Lerwick, fully corroborates the previous statement I had made on the subject last year. 'The fishing vessels,' says this gentleman, 'spread themselves so widely over the bank, that it seldom happens that more than two or three are in sight of each other at the same time, yet they have never reached its utmost boundary.' I shall, however, communicate what is known of its extent, from the experience of a former season. The bank appears to commence near the cluster of islands bearing the name of Orkney: it is said to lie into the land about sixteen miles. The fishermen refer to the west of Westray as its origin; and thence it is continued in a direction nearly north by west, having been variously entered upon in steering from the east, even as far distant as about twenty miles north-west of Shetland. If this information be correct, it would give to what is known of the extent of the bank, a distance of about 140 miles.

'Respecting the depth of water on the bank, I reported last year, that it was from twenty-eight to forty-seven fathoms: the information recently given me, assigns to it a depth of from forty to fifty fathoms. This discrepance of opinion, which is not of material consequence, probably arises from the difference of observations taken near the origin of the bank at Orkney, or to the west of Foula, where its form becomes more definite. Its breadth has been reported to me as varying from eighteen to forty-five miles; here also I have met with some little difference of opinion, which naturally arises from an indecision respecting the exact depth to which its boundaries or shelving sides may be referred, and which can only be rectified by extensive soundings. The surface of the bank is described as in some places rocky, and in others sandy, and as covered by buckies, mussels, and razor-fish.

'It has been thought that this bank is continuous with a cod-bank near the Faroe Islands, not only from the general direction of the Shetland

Bank, which bears towards that very northerly and remote group of islands, but also from a similarity of character in the fish caught at each place. 'The cod of both Shetland and Faroe have been described to me,' says Dr. H., 'by a gentleman familiar with the fish, as gray-backed, spotted with black, and tinged with a ring, which is of a brownish color, inclining to gray. This continuation, then, the existence of which is very problematical, may perhaps take place, rather by a series of distinct banks in a given direction, than by one that is uninterrupted.

'In connexion with the history of the bank, it may not be uninteresting to enquire if it was really known to those nations who cannot be accused of a supineness in the prosecution of their fisheries, and my enquiries will be principally directed to the Dutch, who for nearly three centuries have been the principal fishers frequenting the coast of Shetland.

'In order to understand the history of the Shetland fishery, we must distinguish between those nations who prosecuted it through the medium of the inhabitants of Shetland, and those who, avoiding such an intercourse, obtained the lucrative object of their visits by an equipment which rendered them independent of the people whose coasts they visited. The merchants who prosecuted the Shetland fishery, through the medium of the natives of the place, were from Hamburgh, Lubeck, Bremen, and Denmark. They occupied booths or shops in the country, and trafficked with the Shetlanders chiefly for ling. This fish is caught in deep water, at a distance of thirty miles from land. For this purpose light six-oared boats are at present employed, eighteen feet in keel, and six in beam, the adventurous crews of which carry each a stretch of lines amounting to 6000 fathoms, with 1200 attached hooks. The German and Danish merchants, who had almost exclusively conducted the Shetland ling-fisheries for nearly two centuries, left these shores in consequence of the bounties granted for the exportation of fish from Great Britain, agreeably to the acts of the years 1705 and 1714. To these visitors succeeded occasional companies of Scotch and English merchants, who were actuated by the new bounty; but eventually the fishery devolved to the Shetland landholders, whose policy it was to parcel out occupations to a number of individuals, involving at the same time, in the conditions of their holdings, the obligation to supply them at a stipulated rate with all the ling they caught during the customary summer season. The fish, when dried, were chiefly exported to the shores of the Mediterranean, and to Ireland.

'The second description of visitors to Shetland, for the purpose of prosecuting the fishery of the place, comprehended, as I stated, that people who, avoiding an intercourse with the natives of the shores which they rifled, obtained the lucrative object of their visits by an independent equipment: I here allude to the Dutch nation. An enquiry into the nature of their visits to Shetland will involve in it the question, whether the cod-bank, first generally made known to this country in the year 1818, was or was not previously resorted to by this reserved nation, who concealed from the rest of the world the fact of its existence, or whether the knowledge of it, if really acquired by us, scarcely became an object of remembrance, owing to our proverbial supineness in every thing relating to the advancement of the British fisheries? The independent system of the Hollanders, and their little communication with the natives of the country, the policy of which is obvious, is alluded to by Brand, in his Tour to Shetland, in the year 1712: 'The Dutch,' he remarks, 'cannot be said so properly to trade with the country, as to fish upon their coasts.' In fact they only purchased fresh victuals from the natives, and a few stockings.

'The Dutch fishery is first particularly noticed by captain Smith, who in 1633, by order of the earl of Pembroke, and the British Fishery Company of London, visited the islands of Shetland. He saw 1500 sail of busses, of eighty tons each, taking herrings on the coast of Shetland, with twenty rafters or ships of war, carrying twenty guns each, as convoys. But the confirmation which he adds to this narrative, relating to a distinct establishment which the Dutch possessed, for the purpose of prosecuting the cod-fishery, is so remarkable, and is so involved in the question of the importance of this new accession to our national resources, that I shall give captain Smith's account in his own words. Besides 1500 sail of herring busses and twenty wafters, 'there was also,' he adds, 'a small fleet of dogger-boats, which were of the burden of sixty ton, which did fish only with hooks and lines for ling and cod. Many of these boats and busses came into several havens or sounds, to fit and trim themselves. One thing was observable, that, within eight or ten days after the dogger-boats went to sea, they came into the sound again so full laden as they could swim. The certain number of dogger-boats I could not learn, but the general report was about 400.' Upon the narrative of captain Smith, I have certain remarks to make. The dogger-boats are stated in very general terms to fish for ling and cod; but which of those fish was the leading object of their pursuit, our early narrator does not on this occasion inform us. It is well known, that the mode of prosecuting the white fishery, inasmuch as it has for its leading object the taking of cod or ling, differs in certain essential points. The ling is sought for in deep water; the cod, on the contrary, is taken in the greatest quantity upon banks or on shoals. For the taking of ling, long lines, baited with many hundred hooks, are allowed to remain in deep water all night. Hence the intent of employing open boats, that may not be driven to a distance from their lines. Cod, on the contrary, is caught by hand-lines, baited with single hooks, which are dropped into the water from the sides and stern of decked vessels.

'It is possible to conceive, that the Dutch, in prosecuting the ling-fishery, by means of their doggers, had recourse to the expedient of a drove sail, which, by restraining the motion of their vessels, prevented them from being driven far from the lines which they had laid. But it may be remarked that, whenever the Dutch fleet of doggers is described, with regard to its particular

object, it is distinctly stated to be intended for the cod-fishery. Thus in Sir Robert Sibbald's description of Shetland, bearing the date of 1711, the following passage occurs: 'But the greatest advantage Shetland hath is from the fishing of herring and cod, which abound so, that great fleets of the Hollanders come here, and begin to take herring upon St. John's day, with their busses. But,' the author adds, 'they at the same time employ hundreds of doggers for taking of cod.' From what has been advanced, I am disposed to believe, that the ancient importance of the Dutch cod-fishery of Shetland has been much underrated, and overlooked, by confounding it with a fishery of a different kind; that of ling being for the most part conducted through the medium of the natives of Shetland.

'The second remark which I have to make upon captain Smith's early narration, refers to the success of the Dutch doggers. It may be observed, that, previous to the cod-bank being found out in the year 1818, the fishery, which was conducted round every part of the Shetland coast, was highly desultory and uncertain; and it rarely happened that vessels of only ten to thirty tons, after being employed a week in fishing, returned to their several harbours, like the Dutch doggers described by Smith, 'so full laden as they could swim.' But captain Smith tells us, that vessels capable of holding a much greater quantity of fish, and amounting to even sixty tons, came into the harbours, after an eight days' cruise, full laden. For the reasons thus given, I am strongly inclined to suspect that the bank was, two centuries ago, well known to the Dutch, and that the knowledge of it was either carefully withheld from this nation in particular, or, which is more probable, regarded by us with such an indifference, that when the Dutch left our shores, owing to the interruption they experienced in our wars with them, it was soon forgotten that such a bank existed. In support of the latter opinion, a gentleman in Shetland last year informed me, that he had a distinct recollection of formerly seeing in an old Dutch chart the notice of a bank to the west of Foula, corresponding to the observations made in the year 1818.

'For nearly a century and a half after captain Smith's visit, we find that the Dutch still continued to prosecute the cod-fishing on the coast of Shetland. In a MS. tour of the late Reverend George Low, in my possession, made through Shetland in the year 1778, it appears that this gentleman was present when Bressay Sound was filled with Dutch busses preparing to set out for the herring-fishery. After describing, in a very particular manner, the arrangements and economy of this fleet, he adds, 'Besides the herring-busses, the Dutch send out many doggers on the cod-fishing. These are going and coming from early spring through the whole summer. Each dogger has ten men and two boys, the half of whom sleep while the other are employed in fishing.'

'One boat alone,' says this writer afterwards, 'which fished nearly the whole season on the bank, or contiguously to it, took 11,000 fish, equal to thirty-nine ton of wet fish, or fifteen ton of dried fish. I was indeed informed, that upon one occasion, a vessel with six hands took, in a single tide or day, 1200 fish. The general result of the fishery, however, of last year, could not fairly represent the productiveness of the bank; since the vessels which constantly resorted thither were comparatively few. Notwithstanding, thirteen vessels, from ten to thirty-five tons burden, and having from six to eight hands each, fished, upon an average of each, twelve tons of dried fish; when, in previous years, the average was three or four tons less. During this year, however, a fair trial of the bank was made. The fishing season commenced in May and terminated in August. The number of vessels on the bank was increased from thirteen to twenty-five, and were of various sizes, from ten to sixty tons burden, and manned with from six to twelve hands each, boys included. The average quantity of cod taken was much greater than that of previous years, being not less than fifteen tons of dried fish for each vessel, when, prior to the year 1818, a sloop often took only six or seven tons, and never at the utmost exceeded in this respect twelve tons. Some vessels, however, this year are understood to have obtained from twenty to twenty-five tons each.

'It is evident, with regard to dried cod,' he contends, 'that the fish prepared in Shetland will ever maintain its pre-eminence over the cod of other places. The Newfoundland fishermen are described as exposing their fish, after it has been salted, on standing flakes, made by a slight wattle, and supported by poles often twenty feet from the ground. But the humidity is not near so well extracted from the fish as when, according to the Shetland method, they are carefully laid out upon dry beaches, the stones of which have been, during winter, exposed to the abrading action of the ocean, and are thus cleared from vegetable and animal matter. I am informed that the fishing season for cod might be successfully prolonged. It regularly commences in May, and ends in August; but Mr. Duncan remarks, that stout vessels might be employed all the year round, as the cod is to be taken at all seasons.'

Sir Thomas Bernard says, 'I bear no personal enmity to the Newfoundland fisheries; but I am persuaded that one domestic fishery upon our own coasts, employing our own people, though only of half their magnitude, would do this country infinitely more real service than they can ever do. They can never provide employment for our own poor; and they are not, exclusively, nurseries for British seamen. So far indeed from their being exclusively so, it is more than doubtful whether their effects are not inimical and injurious to the interests of this country, whilst they are very favorable to those of the American States; especially if it should appear, that a considerable portion of the persons employed in those fisheries, are emigrants from our sister island;—young men in the prime and most valuable part of life; who, instead of supplying our army and navy with sailors and soldiers, fly to a distant quarter of the globe: leaving the helpless and the aged to be provided for at the cost, and by the labor of those who continue at home:—young men, who, at the expira-

on of their three years service, generally settle r life in America.'

Sect. II.—Of the Herring Fishery.

Our chief stations for this fishery are off the ietland and Western Islands, and off the coast Norfolk, in which the Dutch also share. See LUPEA. There are two seasons for it; the first om June to the end of August, and the second autumn, when the fogs become very favorable r this kind of fishing. The Dutch begin their rring fishing on the 24th of June, and employ vast number of vessels in it, called busses, ing between forty-five and sixty tons burden ch, carrying three or four small guns. Before ey go out, they are said to make a verbal agreeent respecting their conduct on the voyage, hich is very honorably observed. The regulaons of the admiralty of Holland are partly folwed by most nations: as, that no fisher shall ast his net within 100 fathoms of another boat; at while the nets are cast, a light shall be kept n the hind part of the vessel: that when a boat by any accident obliged to leave off fishing, e light shall be cast into the sea: that when the reater part of a fleet leaves off fishing, and casts nchor, the rest shall do the same, &c. Mr. Anerson, in his History of Commerce, attributes the Scots a knowledge of great antiquity in the erring fishery. He says that the Netherlanders esorted to these coasts as early as A. D. 836, to urchase salted fish of the natives; but, imposing n strangers, they learned the art, and took up ie trade, which has since proved of such imense emolument to the Dutch. Sir Walter aleigh's observations on that head, extracted om the same author, are extremely worthy the ttention of the curious, and excite reflections on he vast strength resulting from the wisdom of ell-applied industry. In 1603, he remarks, the Dutch sold to different nations as many herrings s amounted to £1,759,000 sterling. In 1615 hey at once sent out 2000 busses, and employed n them 37,000 fishermen. In 1618 they sent ut 3000 ships, with 50,000 men, to take the erringe, and 9000 more ships to transport and ell the fish; which by sea and land employed 150,000 men, besides those first mentioned. All this wealth was gotten on our coasts; while our attention was taken up in a distant whalefishery. The Scottish monarchs for a long time seemed to direct all their attention to the preservation of the salmon-fishery; probably because their subjects were novices in sea affairs. At length James III. endeavoured to stimulate his great men to these patriotic undertakings; for, by an act of his third parliament, he compelled 'certain lords spiritual and temporal, and burghs, to make ships, busses, and boats, with nets and other pertinents for fishing. That the same should be made in each burgh; in number according to the substance of each burgh, and the least of them to be of twenty tons: and that all idle men be compelled by the sheriffs in the country to go on board the same.' Numerous indeed have been the attempts made at different periods to secure this treasure to ourselves, but with little success. In the reign of Geo. II. a very strong effort was made, and bounties allowed for the encouragement of British adventurers: the first was of 30*s.* per ton to every buss of seventy tons and upwards. This bounty was afterwards raised to 50*s.* per ton, to be paid to such adventurers as were entitled to it by claiming it at the places of rendezvous. The busses are from twenty to ninety tons burden, but the best size is eighty. A vessel of eighty tons ought to take ten lasts, or 120 barrels of herrings, to clear expenses, the price of the fish to be admitted to be a guinea a barrel. A ship of this size ought to have eighteen men, and three boats; one of twenty tons should have six men; and every five tons above require an additional hand. To every ton are 280 yards of nets; so a vessel of eighty tons carries 20,000 square yards: each net is twelve yards long, and ten deep; and every boat takes out from twenty to thirty nets, and puts them together so as to form a long train; they are sunk at each end of the train by a stone, which weighs it down to the full extent: the top is supported by buoys, made of sheep's skin, with a hollow stick at the mouth, fastened tight; through this the skin is blown up, and then stopped with a peg, to prevent the escape of the air. Sometimes these buoys are placed at the top of the nets; at other times the nets are suffered to sink deeper, by lengthening the cords fastened to them, every cord being for that purpose ten or twelve fathoms long. But the best fisheries are generally in more shallow water.

Of the herring fishery in the Western Isles the following account is given by Mr. Pennant, in his Voyage to the Hebrides. 'The fishing is always performed in the night, unless by accident. The busses remain at anchor, and send out their boats a little before sun-set; which continue out, in winter and summer, till daylight; often taking up and emptying their nets, which they do ten or twelve times in a night, in case of good success. During winter it is a most dangerous and fatiguing employ, by reason of the greatness and frequency of the gales in these seas, and in such gales are the most successful captures: but, by the Providence of heaven, the fishers are seldom lost; and, what is wonderful, few are visited with illness. They go out well prepared, with a warm great coat, boots, and skin aprons, and a good provision of beef and spirits. The same good fortune attends the busses, which in the tempestuous season, and in the darkest nights, are continually shifting, in these narrow seas, from harbour to harbour. Sometimes eighty barrels of herrings are taken in a night by the boats of a single vessel. It once happened, in Loch Slappan, in Skye, that a buss of eighty tons might have taken 200 barrels in one night, with 10,000 square yards of net; but the master was obliged to desist, for want of a sufficient number of hands to preserve the capture. The herrings are preserved by salting, after the entrails are taken out. This last is an operation performed by the country people, who get three half-pence per barrel for their trouble; and sometimes, even in the winter, can gain fifteen pence a-day. This employs both women and children; but the salting is only entrusted to the crew of the busses. The fish are laid on their backs in the barrels, and layers of salt be-

tween them. The entrails are boiled into an oil; 8000 fish will yield ten gallons, valued at one shilling the gallon. A vessel of eighty tons takes out 144 barrels of salt; a drawback of 2*s.* 8*d.* is allowed for each barrel used by the foreign exportation of the fish; but there is a duty of 1*s.* per barrel for the home consumption, and the same for those sent to Ireland. The barrels are made of oak-staves, chiefly from Virginia; the hoops from several parts of our own island, and are either of oak, birch, hazel, or willow: the last from Holland, liable to a duty. The barrels cost about 3*s.* each; they hold from 500 to 800 fish, according to their sizes, and are made to contain thirty-two gallons. The barrels are inspected by proper officers: a cooper examines if they are good; if faulty, he destroys them, and obliges the maker to stand to the loss. Loch Broom has been celebrated for three or four centuries as the resort of herrings. They generally appear here in July: those that turn into this bay are part of the brigade that detaches itself from the western column of that great army which annually deserts the vast depths of the arctic circle, and come, heaven-directed, to the seats of population, offered as a cheap food to millions, whom wasteful luxury or iron-hearted avarice hath deprived, by enhancing the price of the wonted supports of the poor. The migration of these fish from their northern retreat is regular; their visits to the Western Isles and coasts, certain; but their attachment to one particular loch, extremely precarious. All have their turns: that which swarmed with fish one year, is totally deserted the following; yet the next loch to it may be crowded with the shoals. These changes of place give often full employ to the busses, who are continually shifting their harbour in quest of news respecting these important wanderers. They commonly appear here in July; the latter end of August they go into deep water, and continue there for some time, without any apparent cause: in November they return to the shallows, when a new fishery commences, which continues till January; at that time the herrings become full of roe, and are useless as articles of commerce. Some doubt, whether those herrings that appear in November are not part of a new migration, for they are as fat, and make the same appearance, as those that composed the first. The signs of the arrival of the herrings are flocks of gulls, which catch up the fish while they skim on the surface; and of gannets, which plunge and bring them up from considerable depths. Both these birds are closely attended to by the fishers. Cod-fish, haddocks, and dog-fish, follow the herrings in vast multitudes; these voracious fish keep on the outsides of the columns, and may concur in driving the shoals into bays and creeks. In summer they come into the bays generally with the warmest weather, and with easy gales. During winter, the hard gales from north-west are supposed to assist in forcing them into shelter. East winds are very unfavorable to the fishery.'

The nets being hauled on board, the fishes are taken out, and put into the warbacks, which stand on one side of the vessels. When all the nets are thus unloaded, one fills the gippers baskets. The gippers cut their throats, take out their guts, and fling out the full herrings into one basket, and the shotten into another. One man takes the full basket when they are gipped, and carries them to the rower back, wherein there is salt. One boy rows and stirs them about in the salt, and another takes them, thus rowed, and carries them in baskets to the packers. Four men pack the herrings into one barrel, and lay them, one by one, straight and even; and another man, when the barrel is full, takes it from the packers. It is left to stand a day or more open to settle, that the salt may melt and dissolve to pickle; after which it is filled up, and the cooper completes the work, by heading the casks very tight, and stowing them in the hold. The pickle is to be strong enough to sustain a herring; otherwise the fish decay in it.

Bishop Watson observes, that 'the Dutch have long been famous for preparing a salt for the pickling of herrings, by which they have acquired a superiority in that article of commerce over all other European nations. Their principal secret in this business consists in evaporating the brine made from the solution of bay salt with the gentlest fire, and in mixing with the brine a proper quantity of very sour whey; the acid whey unites itself with the uncombined fixed alkali, and thus prevents it from adhering to the common salt as it crystallises. Any other mild acid might probably answer the same purpose.'—*Chemical Essays*, vol. 2. p. 63.

In the report of the Downs Fishery, the committee, p. 21, observe, 'that the periodical shoals of herrings, in their progress from the North Sea to the Channel, appear in wonderful abundance in their straits, in the early part of October, and remain till the end of November; about which time they proceed gradually to the westward, and are caught off the Isle of Wight till the end of February. Such is the profusion of these fish, while they continue between the Forelands, where they are necessarily condensed by the conformation of the straits, that the quantities taken on this part of the coast, amount to more than double the average catch of our great fishery at Newfoundland, in proportion to the time and number of hands employed in it. The mackerel are also found during their season, in remarkable abundance in these straits, which appear to form the limits of their migration up the channel. In this neighbourhood (Deal) they generally remain from May to July, affording, like the herrings, a rich harvest that seems to invite the industry of the fisherman.'—In p. 26 and 28, they add, that 'Holland has no herrings near her own coast, but takes them on the coast of Britain, from Shetland to the coast of Sussex; commencing at the distance of 250 leagues, and ending at fifty leagues from her own ports.'

The Downs Society was associated in November, 1815, under the patronage of the earl of Liverpool, and is a gratifying example of the effect of spirited associations for the promotion of improvements in our fisheries. The fish which was cured by that society in the preceding year (with a very little, though very valuable in-

struction from Mr. Sievers, a fishing merchant of London) received the first bounty paid under the late act, on that part of the coast. They sent sixty-two barrels of white herrings to Barbadoes, Antigua, Jamaica, and other West India Islands; from whence they received the most favorable and gratifying accounts of the excellence of their fish; which sold at very high prices, a third more than those from either the United States, or British America. See the *Report of the committee of the Downs Society of Fisherman's Friends, 17th August*, 1816.

Since the act of 48th Geo. III., appointing commissioners, separate and distinct from the customs and excise, to superintend the distribution of bounties, and the stationing of officers versed in the trade of the herring fishery, persons who had experimentally and practically followed that fishery as a trade, but who are excluded from all interest or participation in the trade, the herring fishery has become with us, as it was with the Dutch, an object of national concern; the good effects of which are sensibly felt in every part of the coast, where it has regularly been established. By this act, an annual report by the commissioners, of their proceedings, ending the 5th April, is required to be presented to parliament each session: containing the details of the fishery of the preceding year, together with such observations and suggestions as may have occurred, or been communicated to the commissioners, in the interval between the reports. In their report of 1816, they state that they have had their attention turned to different matters calculated to improve the cure of herrings, and to raise the character of the British fishery in foreign parts; that a communication, made to them by a mercantile house of respectability, on the subject of increasing the exportation of herrings to the continent of Europe, had been printed, and distributed among the curers throughout the kingdom; that regulations had been adopted for improving the construction of barrels intended for bounty; that the boats of the fishermen had been properly fitted up for the reception of herrings; that bounty had been refused on all barrels not full of pickle; and that the strictest orders had been given to the officers of the fishery, to apply the official brand in no case, unless both herrings and casks were in every respect such as would do credit to the establishment. In the year 1817 the commissioners point out the great increase that had taken place in the exportation of British herrings to the continent of Europe, in consequence of the communications made to and the regulations adopted by them, as contained in the preceding report; and, in the year 1818, they observe that they had received a memorial on the subject from Hamburgh, signed by a number of herring merchants of that port, bearing testimony to the improvement that had taken place in the quality of British herrings, and pointing out the means of raising their character still higher. This memorial the commissioners likewise caused to be printed, and distributed among the curers, which they accompanied with such additional observations as they conceived to be necessary, and which they state to have produced the most salutary effects. They conclude their statement with the intelligence, that the character of the British fishery is rising both at home and abroad; for that, while the quantity of herrings cured gutted is annually increasing, the quantity cured ungutted is every year diminishing; that great as the amount of fishery had been in the course of that year, the demand had fully kept pace with it; and that, at the end of the season, few herrings remained unsold in the hands of the curers. They further report, that while the exportation to the continent of Europe had nearly equalled that of the preceding year, and the exportation to the West Indies and Ireland had increased, a new market had opened in the East Indies, to which different shipments of herrings had been made, by way of experiment both from Greenock and London: that, from the former of these places, upwards of 1300 firkins were exported to Calcutta, all of which they understood were purchased by Europeans there at 20*s.* to 25*s.* per firkin; and that it was the intention of the exporter, in consequence of this encouragement, to ship a larger quantity next season; so that the commissioners trust, that India will soon become a permanent and valuable market for the consumption of British herrings. The report concludes, ' it is impossible to state, within the compass of this report, the advantages resulting to the community from the prosperity of the herring fishery; but the commissioners think it their duty briefly to mention that the effects thereof are felt in almost every part of the kingdom. The fishermen have, in many cases, been enabled, by the produce of their industry, to replace the small boats formerly used, by new boats of much larger dimensions, and to provide themselves with fishing materials of superior value. The number of boats and of fishermen has been greatly increased; while, by the general introduction of the practice of gutting, a valuable source of employment has been opened to thousands of poor people, who now annually resort to the coast during the continuance of the fishing season, and there earn a decent livelihood in the operations of gutting and packing. New dwelling-houses and buildings, on a superior construction, for the curing and storing of the herrings, are erecting at almost every station along the coast; while the demand for home wood for the manufacture of barrels, affords a source of profit and employment to numbers of people in the most inland parts of the country.'

The progress of the herring-fishery will best be seen by a summary view of the quantities caught, cured for bounty, and exported, from 1815 to 1819.

By the report of 1815, it appears that the quantity cured gutted was 105,372¼ barrels. By that of 1816, it amounted to 135,981 barrels, being an increase in one year's fishery of 30,608¾ barrels. The quantity cured ungutted, in the former period, was 54,767 barrels; in the latter 26,670¾ barrels, being a decrease of 28,096¼ barrels. The total quantity brought under the view of the officers in 1815 was 160,139¼ barrels. In 1816 it was 162,651¾ barrels, being an increase, on the whole, of 2512½ barrels. The quantity

branded for bounty in 1815, was 83,376 barrels. In 1816 it was 116,436, being an increase of 33,060 barrels. The exports, on the whole, in 1815, exceeded those of 1816; but the gutted herrings exported in the latter year exceeded those of the former by 12,606½ barrels.

In the year 1817 the total quantity caught was 192,343½ barrels, being an increase of 29,691¼ barrels. In the same year the quantity branded for bounty was, 140,018½ barrels, being an increase of 23,582½ barrels. The quantity exported in 1817 was 138,628½ barrels, being an increase of 30,940½ barrels.

In the year 1818 the total quantity caught was 227,691 barrels, whereof 204,270¼ were cured gutted, and 23,420¾ ungutted; being an increase in the total quantity of 35,347½ barrels, and of 48,494¼ in the quantity gutted; while there was a decrease in the quantity cured ungutted of 13,146¾ barrels. In this year the quantity found entitled to bounty was 183,089½ being an increase of 43,071 barrels. In the same year, the total quantity exported was 162,339½ barrels, whereof 148,147½ were gutted, and 14,192 ungutted; being an increase in the total quantity of 23,711 barrels, and of 32,667 in the quantity gutted; while there was a decrease in the quantity ungutted of 8956 barrels.

But the report of the year ending the 5th of April, 1819, is still more encouraging than any of the former ones, as will be seen from the following accounts, which exhibit at one view the entire state of the herring fishery at the different stations in Great Britain.

TABLE I.—An Account of the Total Number of Barrels of White Herrings which have been branded for the Bounty of 4*s.* and of 3*s.* 6*d.* per Barrel, in the year ended 5th April, 1819.

STATIONS.	For the bounty of 4s. per Barrel.		For the bounty of 3s. 6d. per Barrel.		Total Herrings branded.	Amount of Bounty.		
	Bung packd.	Repacked.	Bung packd.	Repacked.				
	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.	£	s.	d
Ayr, Irvine, and Saltcoats	2,074	. .	. .	. .	2,074	414	16	0
Campbeltown	2,525	. .	. .	. .	2,525	505	0	0
Fort-William	95	. .	109	. .	204	38	1	6
Glasgow	9,161	2,234	. .	. .	11,395	2,279	0	0
Greenock	7,186½	15,870½	. .	295	23,352	4,663	0	6
Inverary	3,616½	. .	50	. .	3,666½	732	1	0
Loch Broom	1,205½	. .	130	. .	1,335½	263	17	0
—— Carron	1,516	. .	10	. .	1,526	304	19	0
—— Gilphead . . .	1,093	. .	8	. .	1,101	220	0	0
—— Shildag	1,102	. .	. .	. .	1,102	220	8	0
Rothsay	7,910	632	141	. .	8,683	1,733	1	6
Stornoway	1,135	. .	22	. .	1,157	230	17	0
Stranraer	1,503½	. .	. .	. .	1,503½	300	14	0
Tobermory	2,294	. .	. .	. .	2,294	458	16	0
Bristol	. .	193	. .	. .	193	38	12	0
St. Ives	244	147	. .	. .	391	78	4	0
Whitehaven	1,314½	2,152	15	211	3,692½	732	17	0
Anstruther	7,029	332½	. .	. .	7,361½	1,472	6	0
Banff	15,949½	8,226	. .	. .	24,175½	4,835	2	0
Burntisland	10,851	8,713	. .	. .	19,564	3,912	16	0
Cromarty	8,987	1,690	. .	. .	10,677	2,135	8	0
Eyemouth	6,073	7,422	. .	. .	13,495	2,699	0	0
Fraserburgh	10,368	3,197	4	242	13,811	2,756	1	0
Helmsdale	7,969	3,801	. .	. .	11,770	2,354	0	0
Leith	28,983	6,153	. .	. .	35,136	7,027	4	0
Lybster	7,694½	4,866	. .	. .	12,560½	2,512	2	0
Orkney	5,979½	2,182½	. .	. .	8,162	1,632	8	0
Port Gordon	6,927	4,309	. .	. .	11,236	2,247	4	0
Wick	24,761½	9,772	. .	. .	34,533½	6,906	14	0
Dover	. .	34	. .	. .	34	6	16	0
London	. .	359	. .	. .	359	71	16	0
Portsmouth	40	517	. .	. .	557	111	8	0
Yarmouth	395½	. .	. .	. .	395½	79	2	0
Total	185,983	82,802½	489	748	270,022½	53,973	11	6
Year ended 5th April, 1818.	131,123½	50,875	658	433	183,089½	36,590	12	6
Difference, year ended 5th April 1819.	54,859½ Increase.	31,927½ Increase.	169 Decrease.	315 Increase.	86,933 Total inc.	£17,332 Increase.	19	0

TABLE II.—An Account of the Total Number of Barrels of White Herrings, which have been landed from the Fishery, or cured on Shore, in the Year ended 5th April 1819;—in so far as the same has come under the cognizance of the officers of the Fishery.

STATIONS.	Quantity and Description of Herrings.							Grand Total.
	Cured for Bounty.			Cured not for Bounty.				
	Gutted with a knife, and packed within 24 hours after being taken.	Gutted not with a knife, and packed within 24 hours after being taken.	Total for Bounty.	Gutted and packed not within 24 hours after being taken.	Ungutted.	Barrels of Bulk.	Total Barrels not for Bounty.	
	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.		Barrels.	Barrels.
Ayr, Irvine, & Saltcoats	2,806	. .	2,806	20	462	90	572	3,378
Campbeltown	3,543	4	3,547	. .	1,112	768	1,880½	5,427½
Fort-William	153½	139½	293	. .	. .	117½	117½	410½
Glasgow	16,525	137	16,662	63½	610	381½	1,055	17,717
Greenock	24,667	303½	24,970½	31½	124	63½	219	25,189½
Inverary	4,084	55	4,139	10	. .	. .	10	4,149
Loch-Broom	1,383	134	1,517	1	51	185	237	1,754
——Carron	1,764½	38	1,802½	35½	325	. .	360½	2,163
——Gilphead	1,456	11	1,467	. .	64	34	98	1,565
——Shildag	1,667½	. .	1,667½	72	82	. .	154	1,821½
Rothsay	10,020	158	10,178	9	250	149	408	10,586
Stornoway	1,230½	22	1,252½	. .	187	86	273	1,525½
Stranraer	1,712½	. .	1,712½	. .	. .	52	52	1,764½
Tobermory	2,832½	22	2,854½	. .	534	783	1,317	4,171½
Bristol	187	. .	187	. .	157½	. .	157½	344½
Liverpool	. .	. .	. .	. .	134	1,412	1,546	1,546
St. Ives	404	80½	484½	. .	151	1,071½	1,222½	1,707
Whitehaven	3,481	226½	3,707½	. .	916½	64	980½	4,688
Anstruther	6,966	. .	6,966	318	1,424½	329	2,072	9,038
Banff	29,170	. .	29,170	150	50	1,027¼	1,227½	30,397¼
Burntisland	3,348½	. .	3,348½	. .	308	200	508	3,856½
Cromarty	13,953½	. .	13,953½	150	3,660½	. .	3,810½	17,764
Eyemouth	18,181½	. .	18,181½	. .	1,099	420	1,519	19,700½
Fraserburgh	19,482½	700	20,182½	65	2,850½	1,307¾	4,223¼	24,405¾
Helmsdale	21,752½	. .	21,752½	465	153	506	1,124	22,876½
Leith	3,301	. .	3,301	54	909	. .	963	4,264
Lybster	19,628½	. .	19,628½	88	1,015	. .	1,103	20,731½
Orkney	8,714	. .	8,714	62	1,666½	66	1,794½	10,508½
Port Gordon	14,299	. .	14,299	. .	167	117	284	14,583
Wick	61,111½	. .	61,111½	45	3,129	1,709	4,883	65,994½
Dover	34	. .	34	. .	46	54	100	134
London	412½	. .	412½	. .	13	. .	13	425½
Portsmouth	1,139½	. .	1,139½	44	3,720½	129	3,893½	5,033
Yarmouth	611½	. .	611½	. .	. .	428	428	1,039½
Total	300,023	2,031	302,054	1,684	25,372	11,550	38,606	340,660
Year ended 5th April, 1818	. .	. .	203,285¼	985	15,799	7,621¾	24,405¾	227,691
Difference, year ended 5th April, 1819	. .	. .	98,768¾	699	9,573	3,928¼	14,200¼	112,969
			Increase.	Increase.	Increase.	Increase.	Increase.	Increase.

TABLE III.—An Account of the Total Number of Barrels of White Herrings which have been Exported from GREAT BRITAIN, in the year ended 5th. of April, 1819;—in so far as the same have come under the cognizance of the Officers of the Fishery.

STATIONS.	Exported to Ireland.		To other places in Europe.		To places out of Europe.		Total Exported.
	Gutted.	Ungutted.	Gutted.	Ungutted.	Gutted.	Ungutted.	
	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.
Ayr, Irvine, and Saltcoats	165	487	. .	. .	. .	. .	652
Campbeltown	1112	1407	. .	. .	. .	. .	2519
Fort-William	385	60	. .	. .	. .	. .	445
Glasgow	5829	614	100	. .	. .	. .	6543
Greenock	3821½	163	. .	. .	27,642	91	31,717½
Loch-Broom	165	60	. .	. .	. .	. .	225
Loch Shildag	1105	. .	. .	. .	. .	. .	1105
Rothesay	1186	294	. .	. .	. .	. .	1480
Tobermory	3216	1383	. .	. .	. .	. .	4599
Bristol	969	148	. .	. .	4872	186	6175
Liverpool	134	. .	. .	. .	2198	1317	3649
St. Ives	172	. .	. .	. .	. .	. .	172
Whitehaven	655	325	. .	. .	2397	177	3554
Anstruther	2069	470	500	. .	. .	. .	3039
Banff	4031	. .	10,822	. .	. .	. .	14,853
Burntisland	2855	252	5463	. .	. .	. .	8570
Cromarty	2258	665	500	. .	. .	. .	3423
Eyemouth	1770	. .	. .	. .	. .	. .	1770
Fraserburgh	4439	332	3705	. .	611	54	9141
Helmsdale	2062	. .	3580	. .	. .	. .	5642
Leith	9674	1060	22,222	. .	1638	50	34,644
Lybster	465	. .	926	. .	. .	. .	1391
Orkney	3452	1330	. .	. .	800	200	5782
Port Gordon	2600	. .	1035	. .	. .	. .	3635
Wick	17,869	520	3170	. .	. .	. .	21,559
London	4707	. .	310	. .	42,595	277	47,889
Portsmouth	30	2938½	. .	. .	20	. .	2988½
Total	77,195½	12,508½	52,333	. .	82,773	2352	227,162
Year ended 5th April 1818.	44,304½	9082	43,368	528	60,475	4582	162,339½
Difference, year ended the 5th of April 1819	32,891 Increase.	3426½ Increase.	8965 Increase.	528 Decrease.	22,298 Increase.	2230 Decrease.	64,822½ Total Increase.

SECT III.—OF THE PILCHARD AND ANCHOVY FISHERIES.

The pilchard and the anchovy are, in fact, only a distinct species of the genus clupea. Some naturalists consider the former as a variety of the herring. It is, however, much less and thicker than the herring, the nose turns up, the under jaw is shorter than the upper, the dorsal fin is placed exactly in the centre of gravity—for if you take a pilchard by the back it will hang even, which a herring will not—and the scales are firm, and adhere very closely, while those of the herring come off with the least rubbing.

The pilchard swims in large shoals which arrive on the coasts of Bretagne, Cornwall, and Devonshire, from June to September, although they are sometimes caught about Christmas. Men are set on the cliffs of the coasts of Devonshire and Cornwall, whom they call huers, to watch their coming; the purple color of the water in the day, and its shining appearance in the night, giving certain indications of their approach. Then the huers, according to settled and regulated signs, direct the boats and vessels how to manage their seins, and, when their commands are properly given and obeyed, they have been known to take 100,000 pilchards at a draught. It is a common saying of the Cornish fishermen, when talking of the pilchard, that it is the least fish in size, most in number, and greatest in gain. In Scotland they sometimes appear among the herring shoals, but in the Frith of Forth there are no established fisheries for them.

Anchovies are caught in May, June, and July, on the coasts of Catalonia, Provence, &c., when they constantly repair through the straits of Gibraltar into the Mediterranean. See CLUPEA. Collins says, they are also found in plenty on the west coasts of England and Wales. The fishing is chiefly in the night, when, a light being put upon the stern of the fishing-vessels, the anchovies flock round, and are caught in the nets. But it is said to have been found by experience, that anchovies taken thus by fire, are neither so good, so firm, nor so proper for keeping as

ıse which are taken without fire. When the ıery is over, they cut off the heads, take out : gall and guts, and then lay them in barrels, l salt them. The common way of eating an-ɔvies is with oil, vinegar, &c., in order to which ıy are first boned, and the tails, fins, &c., ɔped off. Being put on the fire, they dissolve almost any liquor. They are made into sauce minching them with pepper, &c. Some also ckle anchovies in small earthen pots, made on rpose, of two or three pounds weight, more less, which they cover with plaster to keep them ; better. Anchovies should be chosen small, sh pickled, white on the outside and red thin. They must have a round back; for ɔse which are flat or large are often nothing t sardines.

Sect. IV.—Of the Mackerel Fishery.

The mackerel, see Scomber, is a summer h of passage, found in large shoals, in various ırts of the ocean not far north; but especially ı the French and English coasts. It is about venteen inches in length, and weighs nearly ro pounds. The body long, round, thick, and shy, is beautifully shaped for swimming, and ecomes very small and slender towards the tail, hich is so much forked, that it seems to be most parted into fins. Hanmer found one in ıe month of June containing 546,681 eggs; hen first taken it exhibits a phosphoric light. ıs eyes, when they first appear on our coasts, and uring winter, are covered with a kind of white lm; they are then nearly blind, this, however, ıey cast in the beginning of summer. The fish-ıg is usually in April, May, and June, or July, ccording to the place. They enter the English hannel in April, and proceed up the straits of Dover as the summer advances; so that by June hey are on the coasts of Cornwall, Sussex, Normandy, Picardy, &c. where the fishery is most considerable. They are an excellent food fresh; ınd not to be despised, when well prepared, pickled, and put up in barrels; a method of preserving them chiefly used in Cornwall. They are taken either with a line or nets: the latter is the chief method, and is usually performed in the night. The rules observed in the fishing for mackerel are much the same as those in the fishery of herrings. There are two ways of pickling them: the first is, by opening and gutting them, and filling the belly with salt, crammed in as hard as possible with a stick; which done, they range them in rows, at the bottom of the vessel, strewing salt between the layers. In the second way, they put them immediately into tubs full of brine, made of fresh water and salt; and leave them to steep, till they have imbibed salt enough to make them keep; after which, they are taken out, and barrelled up, taking care to press them close down. Mackerel are not cured or exported as merchandise, except by the Yarmouth and Lowestoft merchants, but are generally consumed at home; especially in London, the sea-ports between the Thames and Yarmouth, east, and the Land's end of Cornwall, west. It is said that this fish was in high esteem with the Romans.

Sect. V.—Of the Lobster Fishery.

Lobsters are taken along the British Channel, and on the coast of Norway, whence they are brought to London for sale; as also in the frith of Edinburgh, and on the coast of Northumberland By 10th & 11th Will. III. c. 24, no lobster is to be taken under eight inches in length, from the peak of the nose to the end of the middle fin of the tail; and by the 9th Geo. II. c. 33, no lobsters are to be taken on the coast of Scotland from the 1st of June to the 1st of September. See Cancer. They are in season from September to June. The shell is black before it is boiled, but afterwards becomes red. During winter, the cock is supposed to be more delicate eating than the hen. They are taken in what fishermen call pots, in shape like a mouse-trap, made either of netting or twiggen work; these, after being baited with garbage, and having a buoy affixed, are made fast to a rope, and thrown to the bottom of the sea, where it may be found to be from six to ten feet deep. On the Yorkshire and Orkney coasts, the fishermen use small nets, with iron hoops, baited with fish guts, or dried dog-fish. London consumes more lobsters than all the rest of the country together. They are sent hither as far as from the Orkneys in chests, which contain 400 or 500 each; and, when 900 or 1000 are thus collected, they are stowed aboard the first smack that is to sail for Queenborough and Billingsgate.

Sect. VI.—Of the Oyster Fishery.

The British oyster (ostrea edulis) a bivalvular testaceous fish, found in all parts of the kingdom, though not the largest, has been said to be the best and most wholesome in the world. They were famous in the days of the Romans, so that, according to Juvenal and Pliny, they were conveyed from the coast of Kent to Rome. Those of Colchester, however, are now thought fully equal to those of Kent. In Scotland they breed in the creeks and bays of the Orkney and Western Islands; but the most considerable fisheries are in the Friths of Forth, near Inchkeith, and Prestonpans, in Musselburgh Bay. Here they obtain the appellation of Pandoors, from being taken close by the doors of the salt pans. Oysters cast their spat, or spawn, in the month of May; when first shed, it has the appearance of candle-grease, and adheres to stones, or any other substance, which the dredgers term cultch;—the spat is covered with a shell in two or three days, and, in the course of three years, it becomes marketable in size. The dredgers make use of a very thick, strong, net, fastened to three spills of iron: this they drag along the bottom of the sea, forcing the oysters into it. In England, many, after being taken in this manner, are carried to other places, and laid in beds, or pits of salt water, to fatten; where they derive a green color, sometimes, and are then found unwholesome. A green color is often artificially given to them in the salt marshes; but we do not consider it as any improvement, as we think white oysters both look, and taste, better than those that are green. The sea star (asterias glacialis) is a most destructive animal in a bed of oysters

The fishing for oysters is permitted from the 1st of September to the last day of April inclusive: or, according to common observation, oysters are in season in all those months which have the letter *r* in their name.

Sect. VII.—Salmon Fishery.

The Report from the Select Committee of the Salmon Fisheries of the United Kingdom, ordered by the house of commons to be printed, the 17th of June 1824, presents so complete an account of the habits of this fish, and the general modes pursued in obtaining it, that we cannot do better in this place than present an abstract of it to the reader.

In the course of the examinations which are here recorded, the committee seem to have been anxious to determine the different species of fish usually found in the salmon rivers, or captured in the nets. This is an object of considerable importance, in every view of the subject before us.

1. *Salmon.*—All the witnesses are of the same opinion with regard to this species; but they differ greatly as to the question, Whether the salmon of one river can be distinguished from those of another by any definite characters. Mr. Halliday has compared them in Ireland, England, and Scotland, many times, and says, 'I cannot make out the distinction of one river's fish from that of another.' Mr. James Bell states, 'I have a little guess; not altogether.' J. Proudfoot considers the Tweed fish as smaller than those of the Tay, and those of the River Isla as smaller than those of the River Tay; but, when asked if upon meeting with an Isla fish and a Tay fish in the frith, he should know the one from the other, he replies 'No; I would not.' On the other side of the question, Mr. James Wilson, in reference to the North and South Esks at Montrose, declares, that 'the species of salmon are quite different in these two rivers;' and adds, 'One is a large coarse scaly fish, and the other is a smaller and a finer fish.' Mr. James Bell states, that the 'Aberdeen fish is quite different from the Tay, different in the scale.' Geo. Little, esq. states, that the 'salmon in the Shannon grow to a large size;' and adds, 'We have three fishings that fall all into one bay in Ireland, the Bush, the Bann, and the Foyle, and we can easily distinguish the fish of all the different rivers when we take them. The salmon in the bush is a long-bodied round salmon, nearly as thick at the head as he is at the middle. The salmon that we kill at the Bann, is what I call a very neat-made fish, very broad at the shoulders, and the back fin tapering away towards the tail, and quite a different shaped fish from the Bush fish. The Foyle is a river that we seldom get any large salmon in.'

A considerable degree of importance seems to be attached to this branch of the enquiry, with the view of determining the question, Whether the fish bred in a particular river always return to their birth-place, and to no other river. Sir Humphry Davy assumes that 'salmon, and salmon-trout, belong, in fact, to the river in which they were spawned,' and that 'each variety of salmon, or salmon-trout affects a particular river, and always returns to it;' p. 145. The other witnesses seem generally to entertain the same opinion. Mr. Little has been told of evidence on this subject, p. 112; but no facts are communicated. Indeed, Mr. Halliday asserts, that 'they do not all come to the same river in which they were bred;' and as a proof of this he states, 'I found the different rivers vary from one year to another; but when one is protected and another unprotected, the unprotected river keeps up its quantity as well as the protected one;' p. 87.

2. *Grilse.*—Sir H. Davy and Mr. John Wilson consider this fish as a young salmon; other witnesses, as Messrs. Little, Johnstone, and Halliday, entertain a different opinion, viewing it as a distinct species. They found this opinion of its claim to rank as a species, on the circumstances of its being found full of milt or of roe, and of its spawning and return to the sea as a kelt or spawned fish. But fish spawn long before they attain maturity, consequently this test is of little value. But other proofs are offered. Mr. Johnstone says, 'The grilse is a much less fish in general; it is much smaller at the tail in proportion, and it has a much more swallow tail, much more forked; it is smaller at the head, sharper at the point of the nose, and generally the grilse is more bright in the scales than the salmon;' p. 38. Mr. Halliday states, 'that a grilse's tail is very much forked, like that of a swallow; a salmon's tail is not forked like that of a grilse, and the chowk fins (pectorals) of a grilse are much more blue in their color than a salmon's; a grilse is much smaller at the head and immediately above the tail than a salmon is: it seems to be a different fish in shape every way; besides, it goes up full of spawn in the end of the year, and does not come down till the spring, when it is a kelt grilse, while the young salmon are coming up the rivers in numbers of at least fifty young salmon for every kelt grilse that returns to the sea:' p. 63. Mr. Little, who entertains a similar opinion to the two preceding witnesses, states, that grilses enter rivers in June, seldom in May, p. 12 (confirmed by Mr. Halliday, p. 53.); and adds, 'We do not find in some rivers the same proportion of grilses to salmon as we do in others; for instance, in our fishing at the Foyle, it consists almost entirely of grilse,' p. 110. When they first appear in the rivers, they are from a pound and a half to three pounds in weight, 'and they increase gradually every week during the time we kill them.' At the end of the season they weigh eight, nine, or ten pounds. He likewise states, 'Our water keepers tell me that they very seldom see a salmon and grilse breeding together, but they have seen it occasionally, but not generally; very seldom;' p. 113. There can be little doubt, that the term grilse is used in general to denote a young salmon, though the same epithet is probably bestowed on a distinct species of the genus salmo, with which it seems to be confounded.

3. *Trout.*—Sir H. Davy considers salmon-peal, sewen, and bull-trout, as constituting one species, the salmo-eriox of Linnæus, the most correct appellation of which is sea-trout. The salmo trutta of Linnæus, however, has been universally regarded by British systematical writers as the

common sea-trout; and the salmo eriox is a very different species. Linnæus employed the term eriox as a trivial name to the S. maculis cinereis, cauda extremo æquali of Artedi, and the gray of Willoughby and Ray. Mr. Johnstone says; 'Although in some friths and rivers, where there are a great many salmon, there are also great numbers of trout; yet in others, where are a great many salmon, there are very few trout;' p. 38. Mr. Halliday states, 'In the Annan I have known us get more sea-trouts in one day, than we shall get in the Tay in a whole year;' p. 64. Mr. Little declares, 'that the sea-trout are not found in all salmon rivers. We do not see any thing like the Spey trout, or like the trout that is caught in the Solway Frith, or like the trout that is caught in the Tweed, in any of our fishings in Ireland. They do not breed, nor are they to be seen there;' p. 111. Sir H. Davy states, that 'the different habits of the salmon and sea-trout are well demonstrated in the Moy, near Ballena in Ireland,' on which there is a large pile near the town, and which, below the fall, is joined by a considerable stream. 'The salmon leap this fall; the sea-trout almost all spawn in the smaller stream, a few miles from the sea;' p. 144. There is some strange blunder here. Mr. Little, the tenant of the fishings on the Moy, says, there are trout, 'but not the trout called the sea-trout;' and with regard to the pile or fall which obstructs the progress of the trout, and over which the salmon leap, he adds, 'They can go over it at tide-time, without leaping; after the tide rises they can go over it;' p. 134. He likewise observes, 'A trout goes very far up the river to spawn. The smaller the fish is, they go the higher up into the little streams to deposit the spawn; but the trout in the Moy are quite a different kind of trout from what we call in Scotland the salmon or sea-trout;' p. 134.

4. *Whitling.*—Sir H. Davy considers this fish as a young salmon, and states, that they are 'without visible ova or spermatic secretion; are found in salmon rivers, a mile or two from the sea, and which return to the sea, without attempting a farther migration;' p. 145. Mr. Little, who knows this fish by different names in different rivers, as hirlings, whitings, or finnocks, declares, 'We never see such a fish in Ireland, in the rivers we are concerned with.' Mr. Halliday states, that 'in Carlisle they call them whitings: in Annan hirlings, and in the North finnocks. I never saw any in the Tay; but I have taken 100 dozen in the Annan at one draught. It is about twelve inches long. The tail of the hirling is straighter than that of the salmon or grilse, and it is quite a short-headed fish; neither does the head of the hirling shoot like that of the salmon when he is going to spawn. The largest I ever saw was about three-quarters of a pound. My reasons for believing that they are not the young salmon, are, that when they go up the rivers, they are as full of spawn for their size as the salmon is; and when they come down in the spring of the year kelts, we are getting the young salmon;' p. 63. Mr. Johnstone agrees with the preceding witnesses, in asserting the ordinary presence of ova and spermatic secretion, and in considering this fish as a distinct species. 'They are called hirlings on the Scotch side of the Solway, whitings on the English side; hirlings, whitings or whitlings at Berwick; whitelings in the Tay; and finnocks in the north of Scotland;' p. 37.

5. *Par.*—Mr. Little is the only witness who is questioned in reference to this fish. 'I have seen them; but I consider them merely a fresh-water fish, or a species of fish by themselves, unconnected with our salmon-fisheries altogether. p. 113.

It is probable that some species of migratory trouts have not been noticed at all. The river fishers are better acquainted with the trouts than the frith fishers.—But we return to the habits of the salmon, as furnishing materials for regulating the legislative enactments of this kingdom.

Before entering upon this branch of the subject it may be proper to state, that the present legal time for beginning the salmon-fishing varies in different rivers, from the 10th December (in the Tay) to the 12th March (in the Solway); and that the fishing-season legally ends, according to the rivers, from the 12th August (Ireland generally) to the 4th December (in the Teign). How far these terms are suitable or improper will presently appear.

In the more important actions of the salmon, viz. migration and spawning, there is a season during which these are executed by the greatest number of individuals, occupying, however, a range of some months. But there are individuals, executing these operations irregularly, at other periods. Mr. Little says, 'There are some rivers in which you will get some good salmon all the year round.' In the spring months few fish enter rivers; they rapidly increase in numbers as the summer advances, and in autumn again they begin to decrease, leaving the winter months, as to the ascending migration, to constitute a dead season.

The condition of rivers in the spring influences the movements of the salmon. J. Proudfoot states, that 'in the spring of the year the fish always occupy the north side of the Tay (i. e. the sunny side of the river). The north side fishing kills far more fish than the south side;' p. 28. Mr. Little states, that in 'the river Shannon the salmon fishery is nearly over by the middle of May,' p. 114; and that he does 'not get many fish in the Foyle of any kind till the end of May;' p. 112. When the great differences existing between different rivers, in the quantity, temperature, and contents of their waters, are duly considered, we need not wonder at the influence these circumstances may exert on the motions of salmon; but, if we make a difference in the close season between one river and another, we must, with equal propriety, establish a similar distinction between the south side and the north side of every river. In rivers, during the early spring months, the fisheries are seldom productive: even lord Gray's fishings on the sunny side of the Tay, according to J. Gillies, 'taking the average from the 10th December till the end of January, will not, one season with another, pay the expenses or little more. There are some very good fishings in the month of February; perhaps in the month of February there will be ten days of those fish-

ings, and scarcely take one fish.' The same witness adds, in reference to the kind of fish taken at those periods in the Tay, 'You will get ten foul fish till the middle of February for one clean one;' p. 139. As the season advances, the salmon appear on the shores, in the estuaries, and enter the rivers in greater numbers. The stakenets, in such places, according to Mr. Halliday, 'are seldom productive but in May, June, and July;' p. 68. 'The fishings fall materially off about the middle of August, and to the end of it;' p. 69, and 84. 'In September they catch almost nothing;' p. 84. These conditions vary much with the season. The salmon are most abundant in dry seasons on the shore, and in estuaries. In rivers, they abound most in wet seasons. J. Proudfoot declares that 'in rainy seasons, in heavy speats, the upper fisheries (in the river) give more fish in proportion when the river is high than when it is little;' p. 26. The fish which enter rivers in the spring and summer months, have roe; but in May, for example, it is very small. As the season advances, the roe and milt are found in a riper state, until the time of spawning; but, in these respects, there are individual differences. Now, since salmon enter rivers months before they be ready for spawning, Do they remain in the river until that period, or do they occasionally return to the sea? On this subject the committee seem to have bestowed considerable attention. The opinions of the witnesses, however, are at variance. In reference to the fish on the shore and in estuaries, Mr. Wilson declares, 'I believe they all go up those rivers; they are upon the shore, and get up the river if they can;' p. 14. Several of the other witnesses give it as their opinion, that salmon, before the spawning season, enter the rivers, and return again to the sea, influenced by very different instincts from those of spawning. The following proofs are offered:—

1. It is asserted that salmon, remaining a short time in fresh-water, become weak, and return to the sea to be recruited.—It is stated by some of the witnesses, that salmon are fattest at a particular season. Mr. Little says, 'In the month of May I consider they are as good and as perfect as at any one season of the year. From the month of May, they are gradually growing worse till they begin to deposit their spawn in the month of November;' p. 114. Mr. Wilson reckons 'salmon is at its best at Midsummer, and falls greatly off after about the middle of July;' p. 12. Mr. Johnstone considers 'May and June as the period of their greatest perfection,' but he adds, 'there may be equal to three months difference between the quality of fish;' p. 56. Mr. Bell, on the other hand, declares 'that the fish is full as good on the 10th December in the Tay as at any other time of the year;' and 'the Tweed fish are good in August; that is their best season;' p. 21. Mr. P. J. Proudfoot says, in reference to the Tay, 'there is a great deal of good fish killed by the time we commence the season' (on 10th December); p. 27. These opinions are of less value than those now to be stated respecting the relative qualities of sea and river fish. Mr. Wilson decidedly declares that there is no difference in the quality of salmon taken at different parts of the same river, or in the tideway, or in the sea adjoining, during the proper season; p. 13. On the other hand, Mr. Johnstone says, 'the salmon caught in the sea, and nearest to the sea, are generally the richest.' When they have been some days in the water, 'they lose their bright color,'—'their firm state; the fish gets longer in proportion to its thickness, and loses its weight.'—'If he is not many days in the water, if he is caught immediately out of the sea, I do not see he can be any worse;' p. 50. 'A few weeks would make him a great deal worse;' p. 53. Mr. Halliday states, that those that had been long in fresh water 'were very much exhausted, quite changed in the color, as if they had hung in a smoky chimney for some time; others were very red in the skin, by having been in the fresh water for some time.' 'When they are in the fresh waters they turn as slippery as an eel;' p. 61. 'The salmon becomes unsound after it has been detained in fresh-water at any season;' p. 79. Mr. Little not only states, 'if he remains any length of time in a fresh river, he becomes worse,' but even limits the period to a week or ten days; p. 126. This supposed deterioration in fresh water, we consider to be visionary, and for this reason,—if it took place, how could the fish suffer under its influence for months, while exerting themselves in ascending to the spawning-ground,—while in the protracted act of spawning,—during their residence in the neighbourhood after parturition,—and in their subsequent descent to the sea?

2. *Salmon remaining in fresh water have their gills covered and eaten by worms, which fall off upon their return to the sea.*—Mr. Johnstone declares. 'They get infested with worms or maggots in the gills if they remain long in the fresh water, which I think would kill them in the end, if they did not go back to the sea to get clear of these worms or maggots;' p. 35. Mr. Halliday says of fish in a bad condition, 'Some of those we took had their gills almost eaten through with maggot worms, by being so long up the river;' p. 61. Mr. Little declares, 'I have seen their gills entirely eaten off them by the worms in fresh water; at least the thin and red parts entirely eat away' (i. e. all their organs of respiration). 'I do not believe they are ever found in that state except in fresh water, and it is necessary for them to leave the fresh water to get clear of the vermin which fasten upon them while there;' p. 108. The worm referred to is the lernæa salmonea of Linnæus, the entomoda salmonea of Lamarck. We still ask the question, If the fresh water be so very exhausting, and the attacks of the maggot so very troublesome and destructive, how can the spawning fish survive during their residence for months in a river? It is to be regretted that the season of the year, and the condition of the fish as to spawning, have not been determined, as, trusting to the declarations of experienced river fishers, we consider that these worms only appear on the kelt fish, or such as have spawned, and which are consequently on their return to the sea.

3. *Salmon are caught in the rivers and estuaries on their way out to sea.*—In proof of this, Mr. Halliday states, 'I fished the Annan for many years; and there is one pool in particular, namely

Sand Pool; although we had fished this pool ite clean of fish before the rain came, yet, enever the rain did come on, we then conued fishing constantly, until the water rose so h that we could not manage it, and we got the mon and grilses coming down the river all the ie into the pool. Some of those we took ning down the water of Annan were what we l moffatmen, a term used for exhausted fish ich had been at the head of the water;' p. 61. it the fish may have come up the water to this ol; or, if they came down with the flood, they y have been kelts,—their gills were infested th maggots. This is the only proof in the rert of the descent of salmon in rivers before awning, and it refers to a length of course from e sea not exceeding a salmon day's journey. ie point in question can only be determined at mon leaps. Do fish ever recross these before ey have become kelts? The proof in the esary and sea is still more defective. Mr. Johne declares 'the fish seldom go against the le;' p. 44. 'They run backwards and forwards th the tide in all directions;' p. 45. Mr. Hallay admits that it is common 'for salmon to b and flow with the reflux of the tide;' p. 91. ith these admissions, the last two witnesses nsider the salmon taken in stake-nets, with an b court for taking fish with the ebb tide, were ch as had been in the river or estuary, and ere leaving it for the sea. But if the salmon ere inactive, the motions of the ebb-tide would rry them into the nets, in the same manner as ie flood-tide carried them past. The fish do not ter rivers until the water is in a state to reive them, and they are in a condition to enter. lence, on the shore and in estuaries, when not clined to migrate, the motions of the tide will ontrol them, and the ebb-nets will, from their ery nature, be most likely to secure them. Even the driest seasons, when the fish were not ntering the river, Mr. Halliday states that the bb-nets were most successful; p. 72. Could hey be other fish than such as passed by with the lood?

If fresh waters be so exhausting to salmon, nd promote the growth of parasitical maggots o rapidly, how comes it to pass that they ever eave the sea, unless for the necessary purposes f spawning? The three witnesses, who consider hat salmon run out of rivers to get rid of the vorms which infest their gills, have a similar ypothesis for explaining their leaving the sea. Mr. Little says, 'It is instinct which induces hem to return to the rivers, and, as I consider, for the purpose of getting rid of a vermin which gets upon them, called sea-lice.' The animal here referred to is the monoculus piscinus of Linnæus, and the caligus curtus (mixed probably with C. productus) of Müller, but usually confounded with the lernæa salmonea of Linnæus, by a blunder of Mr. Pennant. This animal is common to the salmon, whiting, cod, and flounder. The last three do not enter rivers to escape from its attacks. The salmon, when most infected by it, is in the fattest and healthiest condition; but still, in order to have it removed, this fish, in the opinion of these witnesses, enters rivers, where it is certain of being exhausted in a week or ten days, and where it is in danger of having its organs of respiration entirely devoured by the entomoda, or maggot. Another reason assigned by the same witnesses for salmon entering rivers, is searching for food. Of this, however, no proof is offered. But in reference to estuaries, Mr. Halliday has taken a great many salmon, 'with worms passing through them; such worms as are to be seen on the banks;' p. 61. 'I have had thousands of them dissected, when I have seen small sea-fish in their stomachs;' p. 90.

At what season do salmon enter rivers for the purpose of spawning?—We have already seen that the milt and roe make their appearance in a very obvious manner, so early as the month of May; p. 35. Mr. Johnstone states, 'that some are getting full of spawn in July;' p. 56. In August, 'the great proportion of them are getting full of roe and milt; they always get full as they get near spawning;' p. 40. Mr. Wilson states, that 'in August they get considerably advanced with spawn; and in the end of August and beginning of September they get very full of spawn;' p. 12. William Bell, in reference to the Tay, states, that eight or ten days before the fishing-season closes, they are 'very full of roe;' p. 32. J. Proudfoot says, 'I have seen the fish, particularly the female, beginning to get very large by the 25th August;' p. 27. In September and October they are so full of roe and milt as to be unmarketable. Mr. Halliday says, 'Last year some of the fish sent from Montrose before the 10th October were seeded, and condemned in the London market as being unfit for use; and I have seen them frequently take them by the 1st October that I considered were very unwholesome and improper fish to be taken;' p. 83. Even in February and March last year (1824), in the North Esk, 'I caught them upon the spawning-beds in the night-time;' p. 84. Mr. Little declares, in August, September, and October, in general, they get large in the belly, and full of roe and milt; and he adds, that, for the purpose of spawning, 'they begin to ascend in the months of August and September, and continue to the end of the year;' p. 107. In January, February, and even March, some of the fish are unspawned. Mr. Little states, that 'last season my tenant commenced fishing at my fishery in the Nith on the 11th March. He then killed, as I am informed, upwards of 200 salmon, some of them positively not spawned;' p. 116. Fish ready to spawn seem to enter the rivers directly, and in the friths to keep the depth of the stream: hence, neither shore stake-nets nor estuary stake-nets are successful in capturing red fish. Even Mr. Bell, a witness obviously hostile to stake-nets, declares, in reference to the capture of red fish in the estuary, that 'none' are caught, and qualifies his assertion by saying, 'there may be one, accidentally, in a year or two;' p. 23. In ascending the river, Mr. Halliday declares, 'the fish run most in the morning and evening;' p. 86. The general time of spawning, according to all the witnesses, is during the months of November, December, and January; pp. 61. 108: though stragglers may be found in March.

The interruptions which salmon at present experience in ascending rivers for the purpose of spawning, chiefly arise from mill-dams. The walls of these, in many cases, are built in so close a manner, that for months there will not be enough of water to permit any fish to ascend. It is only in very great floods that they can successfully overcome the barrier. Noxious matter from tan-pits, the steeping of flax, and gas-washing, expel salmon from a river; p. 133. 67. In reference to noxious matter, however, Mr. Drummond makes an exception in favor of peat-moss, floated into the Forth from Blair-Drummond: 'I believe it to be troublesome to the nets in fishing; but certainly there is nothing noxious in the nature of moss to the fish;' p. 141.

Fish ready to spawn are sought after by poachers for the sake of the roe. Mr. Little says, 'It is potted. The gentlemen going to fish in the lakes of Cumberland buy it for the purpose of using it as bait in fishing upon these lakes;' p. 119.

With regard to the mode of spawning, it is gratifying to peruse the testimony of eye witnesses. Mr. Halliday thus describes the process:—'When they proceed to the shallow waters, which is generally in the morning, or at twilight in the evening, they play round the ground, two of them together. When they begin to make the furrow, they work up the gravel rather against the stream, as a salmon cannot work with his head down the stream, for the water going into his gills the wrong way drowns him; and, when they have made a furrow, they go a little distance, the one to one side and the other to the other side of the furrow, and throw themselves on their sides when they come together, and, rubbing against each other, they shed their spawn both into the furrow at once.'—'I have seen three pair upon a spawning-bed at a time in the Annan; I have stood and looked at them, both while making the furrow and laying the spawn.'—'They do not lay it all at once. It requires from about eight to twelve days for them to lay their spawn.'—'I have often taken a number of these kelts with the skin rubbed off below the jaws, just between the chowk fins (pectorals), almost the size of a half crown, with rubbing up the gravel, and making the holes for the spawn.'—'The spawning-bed is easily known by the thrown-up gravel; when I took my foot off the hard gravel, and put it on the spawning-bed, it was quite soft;' p. 65. Mr. Little speaks in an equally decided manner. 'I have frequently looked at the salmon spawning.'—'When they begin their bed first, it is like one furrow; they make a furrow in the shallow part or current of the water, where they begin their spawn, and they continue working against the stream, until they have formed a bed of perhaps twelve feet by eight or ten.'—'for one pair of salmon.'—'In the instance I was alluding to, when I saw these salmon first, the bed was very little, but it increased every day. I observed the salmon go very leisurely down the side of the bed, and go just round where they have thrown up the gravel, and come back to the same point next the stream; as soon as they came up to this place, they threw themselves on their sides, and worked one against the other, at the same time rubbing their noses against the gravel, till they came to the other corner of the bed, and then they fell leisurely round until they came to the same place again, at the top of the bed next the stream, where they went through the same process; they continued in this way for many days, working, and, if it so happened that they were frightened, they would run away, and in a little time return to it again.'—'It takes them some considerable time before they get all their spawn deposited; several days; and I have known them, when they have been frightened away, go and leave their spawning-beds, and begin at other places.'—'The bed is covered as they go along.'—'Both assist in it, and while in the act of depositing their spawn.' He adds, that 'the male gets a very long hard bill on his under jaw, which decreases as the spawning season passes;' p. 108. Sir H. Davy asserts (but whether from having seen the operation is not stated), that 'the female fish, in spawning, deposits her eggs slowly on gravel; the male sheds a white seminal liquid upon them; and both fish cover the eggs with gravel. The male is most active in this operation, which hardens the extremity of the mouth, and bends it into the form of a hook;' p. 145.

The quantity of eggs deposited by a single female, has been variously stated by different authors. Mr. Johnstone says, 'I have counted them (eggs in the roe) repeatedly; they are from 18,000 to 20,000 on an average;' p. 36. Mr. Halliday says, 'They are not all exactly of the same number; I have found them of different numbers, from 17,000 to 20,000;' p. 62.

Let us now attend to the character and motions of the spawned fish, or kelts, as they are termed. In this state, says Mr. Wilson, 'when the spawn is just leaving the fish, it is merely just two pieces of skin, just like a cow in calf:' p. 13. Mr. Johnstone, 'By a kelt is meant a fish which has recently spawned; it is very thin; it gets very much discolored; it is very long in comparison with its thickness; the head is very large; the fish is quite out of season; the fish then cuts white in general;' p. 37. When the process of spawning is finished, according to Mr. Halliday, 'they go into a pool to recruit themselves; and, in about a fortnight or three weeks thereafter, the male fish begins to seek his way down the river. The female fish remains longer about the spawning ground; and I have very often found some of the mother fish going down a kelt as late as when the first of the fry began to come down the river.'—'In the end of April and beginning of May, I have taken five at one haul in the river Annan,' p. 62. He says, in February and March, 'immense numbers are caught;' and, 'in the upper parts of the Tay, there must be thousands taken annually,' p. 83. James Gillies has formerly stated the number of foul fish (kelts) in February. He adds, 'You could not commence before the month of March, without taking the foul fish, because the most part of the she fish come down in the month of March from the high lands. You will see them go down in shoals. The he fish always seeks his way down immediately

ter he spawns; but you will scarcely get a she lt early in the season. You will get the she h coming down in the months of March and pril, great numbers of them; and you will arcely get one he fish so late as that month; l the he's are coming down chiefly in the month February,' p. 139.

In the course of their descent to the sea, they perience interruptions from cruives and damkes; but, when arrived at the place where the le meets the river, they seem to pursue the epest part of the channel or stream, and espe all the coble-nets and stake-nets of the tuaries and sea-shore. In reference to the ake-nets capturing kelts, Mr. Bell declares they not, p. 29, Mr. Johnstone says, that 'very few ere ever caught in them.'

The station in the sea to which the kelts rert, yet remains to be discovered. Sir H. Davy ys, 'Salmon do not go far out to sea;' p. 145. ow he has gained this information does not ppear. Not surely from the proprietors of ake-nets on the sea-shore, for salmon seldom ter there, but from May to September;—not rely from cod and haddock fishers, for the it which allures these fish tempts not the lmon. William Bell thinks that the fish that ter rivers from the sea 'come from the north,' 33.; the very place, we may add, whence e older naturalists brought the herrings.

To return to the spawning-bed, we are comelled to record the injuries which it must susin by the present practice of fishing. Mr. lalliday, in reference to the coble-net (for the pawning-beds are remote from the stake-net rounds), as used in the winter and spring, says, We have very strong ropes made of old nets, nd with round circles of heavy rope lashed to e ground-rope of the net to keep it down; metimes we tie stones to it to keep it to the ottom, and sometimes we put two cast-metal inkers. It is generally in the spring that we equire the heaviest weights at the bottom of the oble-nets, on account of the river being heavier r more full of water at that season. If thouands of fish should breed in the river, it would e impossible for spawn to come to perfection, here we are constantly fishing over them all he twenty-four hours with coble-nets.'—'They sually fish the whole fords in the river from op to bottom at pleasure, with ground-ropes railed along them;' p. 65. He has seen this rocess performed on the very places where they use winches and capstans in the Tay; by which means they can add more weight to the ottom if they like.' Though he never examined he river to determine whether the eggs were ctually removed, yet he declares, 'I have seen he under rope of the net level down the spawning-bed;' and he adds, with force, 'You might just as soon have a bed of onions to come to perfection (as a spawning-bed), if a coble-net and rope was dragged over it, tearing up the mould twenty times a-day; I would take my chance of the one as soon as the other;' p. 66.

The period when the spawn evolves the fry, is stated by Mr. Little to be when the natural warmth comes into the water in the month of March; 'and they continue going down from that time until the first of May: sometimes I have observed them going down till the month of June; I have seen some of them in the month of June, but they principally are out of the river early in May. The spawn does not come into life I consider till March;' p. 115. Even with regard to the time of the fish rising from the gravel, he says, 'I have observed, when we have early warm weather the fry come early, and when we have a late spring, it is later before the fry rise from the gravel; of course a great deal depends upon the season, but generally they begin to rise about the beginning of March, and they end about the middle of April in rising from the bed;' p. 109. Mr. Halliday says, 'I think they generally come into life the end of March, or from about the middle of March to the end of it; but I do not think they come all into life exactly at one time, but nearly so. Some of the fry appear to be much larger than others, and I do not see the young fish so plentiful at the sides of the water at the first as after some time;' p. 62. Sir H. Davy says, 'It is stated that the eggs produce young ones in about six weeks,' p. 145.;—an opinion rendered nugatory by viewing in connexion the general period of the spawning and the general period of the appearance of the fry. There is very little satisfactory information respecting the appearance of the fry at the time of their evolution. Mr. Little says, 'I never saw them in that state, but I have often conversed with other water-keepers on the subject, who are placed upon the upper branch of the rivers, and they describe them very much in the same way that Mr. William Scott did when he was examined in the Tay case, that they rise from these gravel-beds like a crop of oats or thick beard of grain, rising up all round the stones in very great numbers. The tail comes up first, and they will come from these beds with a part of the pea about their heads;' p. 109. At such a period, the destruction occasioned by the heavy ground rope of the coble-nets must be truly great.

The progress of the fry from their birth-place to the sea is given in detail by several witnesses, all of whom agree in the particulars. The fry, freed from the spawn, and now termed smouts or smolts, betake themselves to pools, and afterwards proceed, according to circumstances, in myriads along the easy water at the margin of the river, with their heads against the stream, until they reach the frith where the tide ebbs and flows, where like the kelts, which frequently go down at the same time, they retire to the deepest part of the channel, and disappear in the sea. These facts were established upon oath by two competent witnesses in the Tay case, and their evidence is recorded in the Report, p. 92. The flooded state of the river is most favorable for their descent, by supplying depths of water on the shallows or fords. Mr. Little says, 'The Coleraine or Bann is a late fishery; and in the year 1820, in the spring of that year, I considered we lost nearly all the fry; the dry spring did not allow them to come down the small rivers; they were collected into little pools, and the people in the country destroyed them; and, in the end of that season of 1820, the fishing fell off to forty-two tons;' p. 127.

The smouts descend during the months of March, April, May, and June. Mr. Halliday states, 'From the first time that I have observed them, about the end of March or beginning of April, they come down until about the 10th or 12th of May. I have seen them in the middle of May, and as late as June, in a particularly dry season, when the river had not been flooded;' p. 63. Mr. Wilson says, 'I think they commence going down about the end of April, and finish going down about May;' p. 10. James Sime, in his deposition in the Tay case, 'believes that the fry goes down the river in the month of April;' p. 93. Mr. Little declares, that 'they are principally out of the river early in May;' p. 115. Mr. Johnstone says, 'They have generally reached the sea in the month of May. Some reach it in June; a few;' p. 36. While the fry are in the act of descending to the sea, they are exposed to many enemies, of which the following are the most destructive:—

A. *Coble-nets.*—As these engines, according to the present practice, are in active operation during the period of the descent of the fry to the sea, we may expect such statements as the following. Mr. Johnstone says, that smouts cannot pass through the coble-net, 'if there be much dirt in it; and sometimes, particularly when there is a number of them, they get broadside on; in particular when there are salmon in the net, they prevent the fry from going through so easily; and the net is loose and not extended, more especially when near the edge of the water;' p. 40. Mr. Halliday says, 'I have dragged a number of them on shore with the coble-nets.' 'I have dragged them ashore at the Howe's Pool, on the river Annon; in the Bridge Pool at the bridge of Annon, when the boys used to gather them up; and at the Old Mill Pool I have hauled out a good many;' p. 66.

B. *Angling.*—At first sight one might suppose that the angler was an enemy of but feeble destructive powers. But it appears to be otherwise in fact. Mr. Wilson says, 'I have seen from my own window upwards of seventy or eighty people angling within the distance of half a mile on the Tweed;' p. 15. Mr. Halliday declares, 'I have killed above twenty dozen with the rod in one day;' p. 62. Mr. Little says, 'I have killed twenty or thirty dozen of fry, when coming from the school at Annan to Newby, in half an hour, with a rod in an afternoon,' p. 121; and he adds, 'I have known even boys and children go and kill, in the course of an afternoon, twenty, thirty, or forty dozen;' p. 132.

C. *Mill-races.*—Mr. Johnstone says, 'I have seen hundreds of them lying dead at the botom of a mill-race, killed by the wheel.' —'I have seen them in thousands, and tens of thousands, in the water in the mill-leads, seeking to go down, but prevented by the dike across the river, which they could not get over;' p. 40-41. Mr. Halliday states, 'I have seen the miller taking out his creel in the morning at the Newby mill, and taking baskets full out of it; and I have seen great quantities lying dead in the dam behind the mill-wheel in the morning; I have also known the miller to put in a heck in the small side sluice, by which means great quantities are destroyed in the night time, when they set the water of the wheel, through the side-sluice; there have been so many taken on some of the mills on the Annan, that sometimes they have fed their pigs with them;' p. 67. 'The dam-dikes conduct the fry, when coming down the water, into the mill-dam, and when night comes on they do not see, and they seek their way down the dam, and so they go into the miller's heck or basket and are all taken;' p. 67. Mr. Little adds, 'They are very destructive to the fry when they come down the river; they take amazing quantities as the fry go down; in dry seasons, when the waters are little, there is no other way for the fry to get down the little rivers than by going down the mill-lead; in fact, they can take all the fry that there are in the river at those mills. I have seen the water black in these mill-leads with fry, seeking down to the sea. I know they take the fry in Ireland, and cure them like herrings;' p. 118.

D. *Eel-weirs.*—Mr. Little says, 'In Ireland the eel-fishery is very hurtful to the salmon fisheries. The eels are caught by weirs, set in the river for taking the eels going down to the sea; the eel-weirs are made of stake and wicker work, drawn together towards the centre, and the net, which is like a bag, is hung at the centre; the proper season of the eel-fishery is in the months of September, October, and November, when the eels are going down to the sea to spawn; but those who have eel-weirs place their nets in the river at the time the salmon-fry are going down; they do this under the pretence of catching eels, but really to catch the salmon fry, which they catch and salt in some places in great quantities;' p. 118. It has been alleged that stake-nets in estuaries and on the sea-shore are destructive to the salmon fry, and various questions are proposed by the committee, with the view of eliciting the truth. The answers and documents produced, however, demonstrate that there is little foundation for the charge.

In reference to the Tay, Mr. Johnstone declares that he 'never' saw a smout in a stake-net; p. 43. Of the presence of such in stake-nets, Mr. Halliday also says, 'never; and they could not be there without being seen by me; it was impossible;' p. 70. Mr. Little declares, 'A stake-net neither injures the breeding fish, nor does it destroy the spawn of the salmon or the fry; I speak from having attended those nets, and never having seen any salmon-fry in them;' p. 122. Mr. Sime, and Mr. Shepherd, who surveyed the stake-nets on purpose, during the Tay case, never found in any of them any salmon-fry; p. 92—93. They are not even taken by the spirlin-nets, which have a small mesh. In fact, not only are the stake-nets innocent of the charge of catching the fry, but even the coble-net in the estuary can do them no harm, as they are beyond its reach in the deep water. Hence Mr. Sime and Mr. Shepherd, though fishing with a small-meshed net on purpose, both in the eddy water and in the stream, found none after the fry had reached the tide, *ib.*

The period of the return of the fry from the sea, seems not well determined; and, on this interesting subject, the evidence is very imperfect. Mr. Wilson seems to think that, as grilse, 'they return again at the end of June and the com-

nencement of July.'—'Perhaps from the end of une they will average three pounds, and at the nd of July about four or five pounds;' p. 10. Ir. Halliday says, 'I think we do not see them gain from the time they leave the river as ry, until the next year, early in the spring, when they begin to return to the rivers young almon;' p. 87. Mr. Little says, 'I consider hat what we call the fry that go down in the arly part of the season, if they are allowed to go down to the sea, return the same year; and hat we kill them from three to nine or ten pounds weight;' p. 111.

The witnesses seem generally to agree with the prevailing opinion, 'That the salmon fisheries in the kingdom are rapidly decreasing in value, owing to the increasing scarcity of fish.' But the importance which should be attached to this evidence, will be estimated differently according to the judgment of the reader. Mr. Wilson communicates a statement of the number of boxes of fish shipped from the Tweed, or rather for the first thirteen miles from its mouth, from the year 1796 to 1823. In this table we perceive the very great fluctuations of the fisheries, depending on the seasons: the years 1796 and 1815 were as 9·338 to 9·382 boxes; yet 1776 was to 1797 as 9·338 to 12·665 boxes; and 1815 was to 1816 as 9·382 to 11·471. The year 1803 is less than 1819, and 1809 than 1819 or 1821, and but a little higher than 1822 or 1823. The box of salmon previous to 1816 contained six and a half stones of fish; since that period it contains eight and twelve stones. In this table the consumption of the neighbourhood, or what is sent to a distance by carriers and coaches is not noticed. Hence the table is useless as an index of the actual productiveness of the Tweed, though it may serve to illustrate the character of the exports of Berwick. Mr. Bell says that, in all parts of the Tay, the fisheries have decreased, but no statement is produced, p. 20. J. Proudfoot says, 'In 1815, 1816, 1817, and 1818, it was a tolerable fishery, and the year 1819 was rather inferior with me; perhaps it might not be less with some; and since 1820 we have had regular bad years successively.' But in reference to the influence of the seasons in producing these changes, he says, 'for the last two years they have not been so good,' p. 26. In reference to the fishery in 1824, of May, compared with the corresponding period in 1823, he says, 'I believe that this season there are more fish caught in the Tay, as yet, than last season,' p. 33. There is a statement given by Mr. Little, of the relative produce of his Irish fisheries, from the year 1808 to 1823: we shall give a few examples of intervals of ten years. The produce in tons of fish was at the Bann in 1808 and 1818, as 76 to 70; in 1809 to 1819, as 80 to 82; in 1812 to 1822, as 65 to 31; in 1813 to 1823, as 47 to 52. In the Bush fishery 1808 is to 1818, as 16 to 12; 1809 to 1819, as 9 to 12; in 1812 to 1822, as 8 to 8; and in 1813 to 1823, as 7 to 14; in the Foyle, 1808 is to 1818 as 37 to 44; 1809 to 1819 as 36 to 58; 1812 to 1822, as 48 to 57; 1813 to 1823, as 35 to 50.—*Evidence*, p. 106.

The evidence in this Report shows that *poaching* operations are carried on both night and day, occasionally under the very windows of the houses of our nobility, the Castles of Duplin and Kinfauns, and the Palace of Scoon. Where this has been prevented, as it seems to have been done in the Moy at Ballina, Mr. Little declares, 'I consider that they had no protection for some years previous to 1816; by that protection it has risen from six tons to an average of sixty tons in a season;' p. 106. The same witness adds, 'The Dublin market is just as regularly supplied with salmon during the close-season, as it is at any season of the year;' p. 116. How far these facts bear out Sir H. Davy in his assertion, that 'the great northern fisheries, and the Irish fisheries, are much less productive than formerly' (p. 145), the reader must determine. But if we believe the opinion of Mr. Little, in reference to the Solway, to be true, and extend it, as supported by the preceding evidence, to all the other great fisheries, 'I believe I can prove, from the dealers in salmon in the neighbourhood of the Solway Frith, that there were more killed in these nets by poachers, during the winter season of last year, than were killed during the proper season for killing salmon;' then must we conclude that salmon are as abundant as ever, but poachers now enjoy a greater share than formerly, to the injury of the legal fisher.

The *natural foes* of salmon are limited in the evidence to seals and grampuses. In regard to the seals, Mr. Johnstone says, 'I have often counted between fifty and sixty seals that lie a little from my house summer and winter.' That they feed on salmon is ascertained. 'I have seen them chasing, catching, and eating them;' p. 47. Mr. Halliday says, 'I have observed from sixty to eighty seals in one flock, and I have seen three or four flocks within my view at Balmerino;' p. 74. Since the removal of the stake-nets these depredators have increased; p. 47, 75. Mr. Little states, that there are few seals in the Solway (where there are stake-nets), but that they are numerous in Ireland. The grampuses are in all the sea-coasts around Scotland and Ireland. It is indeed probable that, in the United Kingdom Seas, grampuses devour many more salmon than the inhabitants.

Mr. Halliday says, 'Since the lands have been so much drained, the rivers fall in so fast, that fish cannot get up to the higher parts of the river so freely as formerly,' p. 82; and Mr. Little says, 'I consider that the draining of the land in Scotland has been as injurious to the fishings as the liming of it. Formerly the small waters, in consequence of the rains remaining long in the land and in the marshes, were a length of time in rising and falling; now they get up very rapidly, and fall very rapidly. The salmon, when they go up those little rivers to breed, deposit their spawn; and, at a season of the year when the spawn ought to rise from the gravel, it is left dry;' p. 117.

Sect. VIII.—Of the Turbot Fishery.

The Dutch seem to excel both the English and Scotch in the *turbot* fishery; which is chiefly conducted on the *Broadfourteen's* bank, and in the neighbourhood of Heligoland, from the beginning of April to the middle of August. The

mode of taking the fish is this:—At the beginning of the season, the drag-net is used, which, being drawn along the banks, brings up various kinds of flat fish, as soles, plaice, thornbacks, and turbots; but, when the warm weather has driven the fish into deeper water, and upon banks of a rougher surface, where the drag-net is no longer practicable, the fishermen have then recourse to the hook and line. Each line extends from one to nearly three miles in length, and is armed with 600, 700, or 800, hooks, fixed to it at the distance of several yards from each other. To keep these long lines properly stretched, and prevent their being carried away by the tide, lead is used or small anchors. The Dutch are said to supply turbot to the value of £80,000 per annum to the London market.

It having been said that the English salt does not answer for curing fish, so well as that of St. Ube's, St. Martin's, and Oleron; and that foreign salt is generally preferred for that purpose in the West of England; Dr. Henry, of Manchester, examined in 1809 the comparative strength and purity of British and foreign salt, and the result of his investigation has proved, that the quantity of pure muriate of soda contained in the large grained fishery salt of Cheshire, is considerably more than what exists in the celebrated salt of Oleron, which is the strongest of the foreign salts; and that the proportion of sulphate and muriate of magnesia is ten times, and of other impurities in foreign salt, three times as much, as in the Cheshire salt. An account of this analysis was read before the Royal Society, in January 1810, and published at Liverpool, in 1811. Dr. Henry's Table of the result of his experiments is so curious that we here insert it.

Kind of Salt.	One Thousand Parts by Weight consist of							
	Insol. Matter.	Muriate of Magnesia.	Total earthy Muriates.	Sulph. of Lime.	Sulph. of Magnesia.	Total Sulphates.	Total impurities.	Pure Muriate of Soda.
Foreign Bay Salt.								
St. Ube's	9	3	3	23½	4½	28	40	960
St. Martin's . . .	12	3½	3½	19	6	25	40½	959½
Oleron	10	2	2	19	4¼	23¾	35¼	964¼
British Salt from Sea Water.								
Scotch (common) .	4	28	28	15	17½	32½	64½	935½
——— (Sunday) . .	1	11½	11½	12	4½	16½	29	971
Lymington (common	2	11	11	15	35	50	63	937
——— (cat) . .	1	5	5	1	5	6	12	988
Cheshire Salt.								
Crushed Rock . .	10	0 1/16	0¼	6½	—	6½	16¾	983¼
Fishery	1	0¾	1	11¼	—	11¼	13¼	986¾
Common	1	0¾	1	14½	—	14½	16½	983½
Stoved	1	0¾	1	15½	—	15½	17½	982½

Fishing, Right of. It has been held, that where the lord of the manor hath the soil on both sides of the river, it is a good evidence that he hath right of fishing; and it puts the proof upon him who claims liberam piscariam; but, where a river ebbs and flows, and is an arm of the sea, there it is common to all, and he who claims a privilege to himself, must prove it; for if the trespass is brought for fishing there, the defendant may justify, that the place is brachium maris, in quo unusquisque subditus domini regis habet et habere debet liberam piscariam. In the Severn the soil belongs to the owners of the land on each side; and the soil of the river Thames is in the king, but the fishing is common to all. He who is owner of the soil of a private river, hath separata piscaria; and he that hath libera piscaria, hath a property in the fish, and may bring a possessory action for them; but communis piscaria is like the case of all other commons. One that has a close pond, in which there are fish, may call them pisces suos, in an indictment, &c., but he cannot call them bona et catalla, if they be not in trunks. There needs no privilege to make a fish-pond, as there doth in the case of a warren. See Franchise.

Fishing-Fly, a bait used in angling for divers kinds of fish. Of the artificial fly there are reckoned no fewer than twelve sorts, of which the following are the principal:—1. For March, the dun fly, made of dun wool, and the feathers of the partridge's wing; or the body made of black wool, and the feathers of a black drake. 2. For April, the stone-fly: the body made of black wood, dyed yellow under the wings and tail. 3. For the beginning of May, the ruddy fly; made of red wool, and bound about with black silk, with the feathers of a black capon hanging dangling on his sides next his tail. 4. For June, the greenish fly; the body made of black wool, with a yellow list on either side, the wings taken off the wings of a buzzard, bound with black broken hemp. 5. The moorish fly, the body made of duskish wool, and the wings of the blackish mail of a drake. 6. The tawny

fly, good till the middle of June: the body made of tawny wool, and the wings made to stand contrary, one against the other, of the whitish mail of a white drake. 7. For July, the wasp fly; the body made of black wool, cast about with yellow silk, and the wings of drakes' feathers. 8. The steel fly; proper in the middle of July; the body made with greenish wool, cast about with the feathers of a peacock's tail, and the wings made of those of the buzzard. 9. For August, the drake fly; the body made with black wool cast about with black silk; the wings of the mail of a black drake, with a black head. The best rules for fishing with the artificial fly are: To fish in a river somewhat disturbed with rain: or in a cloudy day, when the waters are moved by a gentle breeze; the south wind is best; and if the wind blow high, yet not so but that you may conveniently guard your tackle; the fish will rise in plain deeps; but, if the wind be small, the best angling is in swift streams. Keep as far from the water-side as may be; fish down the stream with the sun at your back, and touch not the water with your line. Always angle in clear rivers, with a small fly and slender wings; but in muddy places, use a larger. When, after rain, the water becomes brownish, use an orange fly; in a clear day, a light colored fly; a dark fly for dark waters, &c. Let the line be twice as long as the rod, unless the river be encumbered with wood. For every sort of fly, have several of the same, differing in color, to suit with the different complexions of several waters and weathers. Let the fly fall first into the water, and not the line, which will scare the fish. In slow rivers, or still places, cast the fly across the river, and let it sink a little in the water, and draw it gently back with the current. Flies for salmon should be made with their wings standing one behind the other, whether two or four. This fish delights in the gaudiest colors that can be; chiefly in the wings, which must be long, as well as the tail.

Fishing-Floats are little appendages to the line, serving to keep the hook and bait suspended at the proper depth, to discover when the fish has hold of them, &c. Of these there are divers kinds; some made of Muscovy duck quills, which are the best for slow waters; but, for strong streams, sound cork, without flaws or holes, bored through with a hot iron, into which is put a quill of exact proportion, is preferable: pare the cork to a pyramidal form, and make it smooth.

Fishing-Frog. See Lophius.

Fishing-Hook, a small instrument made of steel wire, of a bent form, to catch and retain fish. The fishing-hook, in general, ought to be long in the shank, somewhat thick in the circumference, the point even and straight. The bend should be in the shank. For setting the hook on, use strong, but small silk, laying the hair on the inside of your hook; for if it be on the outside, the silk will fret and cut it asunder. There are several sizes of fishing-hooks, some big, some little, and of these some have peculiar names; as, 1. Single hooks. 2. Double hooks, which have two bendings, one contrary to the other. 3. Snappers, or gorgers, which are the hooks to whip the artificial fly upon, or bait with the natural fly. 4. Springers, or spring hooks; a kind of double hooks, with a spring which flies open upon being struck into any fish, and so keeps its mouth open.

Fishing-Line, a line made either of hair twisted, or silk; or the Indian grass. The best colors are the sorrel, white, and gray; the two last for clear waters, the first for muddy ones. The pale watery green color is given artificially, by steeping the hair in a liquor made of alum, soot, and the juice of walnut-leaves, boiled together.

Fishing-Rod, a long slender rod or wand, to which the line is fastened, for angling. Of these there are several sorts; as, 1. A troller, or trolling rod, which has a ring at the end of the rod, for the line to go through when it runs off a reel. 2. A whipper, or whipping rod; a top rod, that is weak in the middle, and top heavy, but all slender and fine. 3. A dropper, which is a strong rod, and very light. 4. A snapper, or snap rod, which is a strong pole, peculiarly used for the pike. 5 A bottom rod; being the same as the dropper, but somewhat more pliable.

Fis'sile, *adj.* } Lat. *fissilis*, *fissura*,
Fissil'ity, *n.s.* } from *findo*, to cleave.
Fis'sure, *n.s.* & *v.a.* } Easy to cleave; fissility is the quality of admitting to be cloven: fissure a cleft made; a narrow chasm or breach.

This crystal is a pellucid *fissile* stone, clear as water or crystal of the rock, and without color; enduring a red heat without losing its transparency, and in a very strong heat calcining without fusion.
Newton's Opticks.

The stone was distinguished into strata or layers; those strata were divided by parallel *fissures*, that were inclosed in the stone.
Woodward's Natural History.

By a fall or blow the skull may be *fissured* or fractured. *Wiseman's Surgery.*

If the bone be much depressed, and the *fissure* considerably large, it is then at your choice, whether you will enlarge that *fissure*, or continue it for the evacuation of the matter, and forbear the use of the trepan: not doubting but a small depression of the bone will either rise, or cast off, by the benefit of nature. *Wiseman.*

The gaping *fissures* to receive the rain.
Thomson.

There is a *fissure* eight or ten feet wide, in a gravel-bed on the eastern side of the hollow and ascending the hill about a mile from Trentham in Staffordshire, leading toward Drayton in Shropshire, which *fissure* is filled up with nodules of iron ore. *Darwin.*

Fissure of a Bone, in surgery, is when it is divided either transversely or longitudinally, not quite through, but cracked after the manner of glass, by any external force. See Surgery.

Fist, *n.s.* & *v.a.* } Sax. fyſt; Goth. *fust*;
Fist'icuffs. } Teut. *faust*; i.e. the hand in a fast or closed state. The hand clenched either to strike or hold: as a verb, to strike or grasp with the fist: fisticuffs are cuffs with the fist.

I commaunde you not
Fortune to trust, and eke full well ye wot,
I haue of her no brydle in my *fist*,
She renneth loose, and turneth where she lyst.
Sir T. More.

And being down, the villain sore did beat
And bruise with clownish *fists* his manly face.
Faerie Queene.

We have been down together in my sleep,
Unbuckling helms, *fisting* each other's throat,
And waked half dead with nothing.
Shakspeare. Coriolanus.

Anger causeth paleness in some; in others trembling, swelling, and bending the *fist*. *Bacon.*

And the same hand into a *fist* may close,
Which instantly a palm expanded shows.
Denham.

She quick and proud, and who did Pas despise,
Up with her *fist*, and took him on the face;
Another time, quoth she, become more wise;
Thus Pas did kiss her hand with little grace.
Sidney.

I saw him spurning and *fisting* her most unmercifully. *Dryden.*

Tyrrheus, the foster-father of the beast,
Then clenched a hatchet in his horny *fist*. *Id.*

She would seize upon John's commons; for which they were sure to go to *fisticuffs*
Arbuthnot John Bull.

My invention and judgment are perpetually at *fisticuffs*, 'till they have quite disabled each other.
Swift.

Naked men belabouring one another with snagged sticks, or dully falling together by the ears at *fisticuffs*. *More.*

FIST'ULA, *n. s.* } Fr. *fistule;* Lat. *fistula.*
FIST'ULOUS, *adj.* } A sinuous ulcer. See below.

That *fistula* which is recent is the easiest of cure: those of a long continuance are accompanied with ulcerations of the gland and caries in the bone.
Wiseman's Surgery.

How these sinuous ulcers become *fistulous*, I have shewn you. *Id.*

FISTULA, in the ancient music, an instrument of the wind kind, resembling our flute or flageolet. The principal wind instruments of the ancients were the tibia and the fistula. Some had holes, some none; some again were single pipes; others a combination of several; witness the syringa of Pan.

FISTULA, in the veterinary art. See VETERINARY ART.

FISTULA, in surgery, a deep narrow ulcer, generally arising from abscesses. It differs from a sinus, in being callous, the latter not. See SURGERY.

FISTULA LACHRYMALIS. A disorder at the canal leading from the eye to the nose, which obstructs the natural progress of the tears, and makes them trickle down the cheek; but this is only the first and mildest stage of the disease: in the next there is matter discharged with the tears from the puncta lachrymalia, and sometimes from an orifice broke through the skin between the nose and the angle of the eye. The last and worst degree of it is, when the matter of one eye, by its long continuance, has not only corroded the neighbouring soft parts, but also affected the subjacent bone.

FISTULARIA, or Tobacco-pipe fish, a genus of fishes belonging to the order of abdominales. Of this genus Linnæus reckons two species. Three are now discovered. The F. tabacaria is generally about a foot in length; the fore part from the nose to half way the body of nearly equal bigness; from whence it grows tapering to the tail, which is forked, and from which issues a slender taper whip, four inches long, of the consistence of whalebone; the mouth narrow, and the whole fish of a brown color. They are sometimes taken on the coasts of Jamaica. They feed on sea-insects, &c., which they drag easily from rocks on account of the peculiar formation of the snout.

FIT, *n. s.* } Sax. ꝼæt, ꝼæc; Swed. *fet;*
FIT'FUL, *adj.* } Belg. *vat*, Ital. *fiata;* as Skinner conjectures from *fight;* 'any fit of a disease being a struggle of nature:' Junius derives it more probably from the Flem. *viit*, frequent; and Gr. φιττα, haste. The paroxysm or crisis of an intermittent disorder; any short return of an intermitting complaint: hence, disorder; distemperature, generally; any recommencement of an action after intermission; an interval: fitful is varied by paroxysms; changeful.

The life did flit away out of her nest,
And all his senses were with deadly *fit* opprest.
Faerie Queene.

For your husband,
He's noble, wise, judicious, and best knows
The *fits* of the season. *Shakspeare. Macbeth.*

The sting of a wasp, a *fit* of the stone, the biting of a mad dog, destroy for the time; the two first, happiness, and the other wisdom itself.
Sir W. Temple.

Sometimes 'tis grateful to the rich to try
A short vicissitude, and *fit* of poverty. *Dryden.*

Men that are habitually wicked may now and then, by *fits* and starts, feel certain motions of repentance.
L'Estrange.

An ambitious man puts it in the power of every malicious tongue to throw him into a *fit* of melancholy. *Addison.*

Thus o'er the dying lamp the' unsteady flame
Hangs quivering on a point, leaps off by *fits*,
And falls again as loth to quit its hold. *Id.*

Religion is not the business of some *fits* only and intervals of our life, to be taken up at certain days and hours, but a system of precepts to be regarded in all our conduct. *Rogers.*

Mrs. Bull was so much enraged, that she fell downright into a *fit*. *Arbuthnot's John Bull.*

Small stones and gravel collect and become very large in the kidneys, in which case a *fit* of the stone in that part is the cure. *Sharp's Surgery.*

All *fits* of pleasure we balance by an equal degree of pain or languor: 'tis like spending this year, part of the next year's revenue. *Swift.*

As his years increased, his *fits* of giddiness and deafness grew more frequent, and his deafness made conversation difficult. *Johnson's Life of Swift.*

FIT. See PAROXYSM.

FIT, *adj. v. a.* & *v. n.* }
FIT'LY, *adv.* }
FIT'MENT, *n. s.* }
FIT'NESS, }
FIT'TER, }
FIT'TINGLY, *adv.* } Sax. ꝼɛȝt; Isl *fit;* Kem. *vitten;* Belgic, *voegt;* Teut. *fuight;* (Sax. fegan, means to adapt. — Thomson) Proper; meet; adapted: right; convenient: as an active verb, to make so; to accommodate or adapt one thing to another; taking *out* and *up* to give intensity to the meaning: as a neuter verb, to be proper or becoming. Fitment is an obsolete word for something adapted to a particular purpose.

Men of valour, *fit* to go out for war and battle
1 *Chron.*

The carpenter marketh it out with a line: he *fitteth* with planes. *Isa.* xliv. 13.

In things the *fitness* whereof is not of itself apparent, nor easy to be made sufficiently manifest unto ..., yet the judgment of antiquity, concurring with ... at which is received, may induce them to think it ... *unfit*. *Hooker.*

She shall be our messenger to this paultry knight. Trust me, I thought on her; she'll *fit* it. *Shakspeare.*

Even so most *fitly*
As you malign our senators. *Id. Coriolanus.*

Duncan is in his grave;
After life's *fitful* fever he sleeps well. *Id. Macbeth.*

Nor time nor place
... id then cohere, and yet you would make both:
... hey've made themselves, and that their *fitness* now
... oes unmake you. *Id.*

Poor beseeming: 'twas a *fitment* for
The purpose I then followed. *Id. Cymbeline.*

Since we have said it were good not to use men of ... mbitious natures, except it be upon necessity, it is ... t we speak in what cases they are so. *Bacon.*

Where a man cannot *fitly* play his own part, if he ... ave not a friend, he may quit the stage. *Id.*

A close behaviour is the *fittest* to receive virtue for ... s constant guest, because there, and there only, it ... an be secure. *Saville.*

To take a latitude,
Sun or stars are *fitliest* viewed
At their brightest; but to conclude
Of longitudes, what other way have we
But to mark when and where the dark eclipses be? *Donne.*

He lends him vain Goliah's sacred sword,
The *fittest* help just fortune could afford. *Cowley.*

Would fate permit
To my desires I might my fortune *fit*;
Troy I would raise. *Denham.*

See how thou could'st judge of *fit* and meet. *Milton.*

We were purposely designed, and *fitly* framed, to ... nderstand and contemplate, to affect and delight in, ... o undertake and pursue most noble and worthy ... hings. *Barrow.*

How evil *fits* it me to have such a son; and how much doth thy kindness upbraid my wickedness. *Sidney.*

It is *fit for* a man to know his own abilities and weaknesses, and not think himself obliged to imitate all that he thinks *fit* to praise. *Boyle.*

I cannot *fitlier* compare marriage than to a lottery; for, in both, he that ventures may succeed, and may miss; and if he draw a prize, he hath a rich return of his venture: but in both lotteries there lie pretty store of blanks for every prize. *Id.*

As much of the stone as was contiguous to the marcasite, *fitted* the marcasite so close as if it had been formerly liquid. *Id.*

The whole of our duty may be expressed most *fitly* by departing from evil. *Tillotson.*

This fury *fit* for her intent she chose,
One who delights in wars and human woes. *Dryden.*

A play, which if you dare but twice *fit out*,
You'll all be slandered and be thought devout. *Id.*

'Tis the great business of life to *fit* ourselves for our end, and no man can live well that hath not death in his eye. *L'Estrange.*

It is a wrong use of my understanding to make it the rule and measure of another man's; a use which it is neither *fit for*, nor capable of. *Locke.*

Sowing the sandy gravelly land in Devonshire and Cornwall with French furze seed, they reckon a great improver of their land, and a *fitter* of it for corn. *Mortimer's Husbandry.*

If our forefathers thought *fit* to be grave and serious, I hope their posterity may laugh without offence. *Addison.*

The English fleet could not be paid and manned, and *fitted out*, unless we encouraged trade and navigation. *Addison's Freeholder.*

An animal, in order to be moveable must be flexible; and therefore is *fitly* made of separate and small solid parts, replete with proper flui is. *Arbuthnot.*

A trussmaker *fitted* the child with a pair of boddice, stiffened on the lame side. *Wiseman's Surgery.*

Nor *fits* it to prolong the feast,
Timeless, indecent, but retire to rest. *Pope's Odyssey.*

Which abstract terms very *fittingly* agree with the notion. *More.*

A man cannot be said to know himself, till he is well acquainted with his proper talents and capacities; knows for what ends he received them; and how they may be most *fitly* applied and improved for those ends. *Mason.*

And thus I,
Still on thy shores, fair Teman! may find room
And food for meditation, nor pass by
Much that may give us pause, if pondered *fittingly*. *Byron.*

FITCH, *n. s.* A corruption of vetch, says Dr. Johnson. A small kind of wild pea.

When he hath made plain the face thereof, doth he not cast abroad the *fitches*? *Isaiah.*

Now is the season
For sowing of *fitches*, of beans, and of peason. *Tusser.*

Fitch, in husbandry, is more generally known by the name of chick-pea. See Cicer. Fitches are cultivated either for feeding cattle, or improving the land. They make a wholesome and nourishing food, whether given in the straw, or threshed out. When sown only to improve the soil, they are ploughed in just as they begin to blossom, by which means a tough stiff clay soil is much enriched.

There are two words in the Hebrew Old Testament, which our translators have rendered by fitches, קצח and כסמת. The first occurs but once, and that in Isa. xxviii. 25. 27, where the connexion proves it to be some kind of seed, but what kind is a subject of dispute. Jerom, Maimonides, R. David, Kimchi, and the rabbin understand it to be the gith, called by the Greeks *μελανθιον*, and by the Latins nigella. It is thus described by Ballester: 'It is a plant commonly met with in gardens, with leaves like those of fennel; the flower blue, which disappearing, the ovary shows itself at the top like that of the poppy, and containing in its membranous cells seeds of a very black color, not unlike those of the leek, but of a very fragrant smell.' The Jewish rabbin mention the seeds as mixed with bread. The other word rendered fitches, is כסמת, which the greatest number of commentators render spelt; but Dr. Geddes, R. David Kimchi, as well as our English translators, consider it to be rye, which is supported by the Arabic translations. Dr. Shaw thinks it may be rice.

FITCHAT, *n. s.* } Fr. *fissau*; Dutch, *fisse*.
Fi'tchew. } A stinking little animal, that robs the hen-roost and warren. Skinner calls him the stinking ferret; but he is much

larger, at least as some provinces distinguish them, in which the polecat is termed a fitchat, and the stinking ferret a stoat. See MUSTELA.

'Tis such another *fitchew*! marry, a perfumed one; What do you mean by this haunting of me?
Shakspeare.

The *fitchat*, the sulimart, and the like creatures, live upon the face and within the bowels of the earth.
Walton's Angler.

FITCHBURGH, a post-town of Massachusetts, in Worcester county, containing 1151 citizens in 1795; forty-two miles north-west of Boston, and 393 from Philadelphia.

FITCHE'E, in heraldry, from old Fr. fiche, i. e. fixed; a term applied to a cross when the lower branch ends in a sharp point. The reason of it Mackenzie supposes to be, that the Christians were wont to carry crosses with them wherever they went; and, when they stopped on their journey at any place, they fixed these portable crosses in the ground for devotion's sake.

FITISH, or FETISH, is the appellation given by the natives of Middle Africa to their idols, or charms, which are of almost endless variety in form and composition. The most common are milk, eggs, and birds; and the partridge is held so sacred, that if the foot of a dead one is known to have touched a dish of meat, no one will taste of it, although ready to die of hunger. They do not, however, regard milk or eggs with equal veneration, for they may be sometimes seen devouring each other's fitishes with the greatest harmony. Their portable fitishes consist of rude imitations of the human form, or of animals, with a piece of looking-glass fixed in the breast; the tusks of the young elephant, filled with a black paste, into which shells are stuck; tigers' claws and teeth; the minute horns of the chevrotten and other animals; sea-shells full of black paste, or even small parcels of party-colored rags, and diminutive flasks, containing consecrated gunpowder. No man takes a drink, without making an oblation to the master fitish, which is frequently an elephant's tooth. He holds it in the left hand, and, after licking its pasted head, squirts a mouthful of liquid over it in a shower; then muttering a few words, he drinks the remainder himself.

FITZHERBERT (Sir Anthony), a learned lawyer in the reign of king Henry VIII., descended of an ancient family, and born at Norbury in Derbyshire. He was made a judge of the court of common pleas in 1523; and distinguished himself by many valuable works. His principal writings are, The Grand Abridgment; The Office and Authority of Justices of Peace; The Office of Sheriffs, Bailiffs of Liberties, Escheators, Constables, Coroners, &c.; Of the Diversity of Courts; Of the Surveying of Lands; and the Book of Husbandry. He died in 1538.

FITZJAMES (James, duke of Berwick), was the natural son of James II., by Mrs. Arabella Churchill, sister to the celebrated duke of Marlborough. He was born at Moulins in 1671, and entered early into the French service. When only fifteen years of age, he was wounded at the siege of Buda. He was sent to Ireland in 1688, and distinguished himself at the siege of Londonderry, and at the battle of the Boyne. His superior merit recommended him to the French court, and he was created marshal of France, knight of the Holy Ghost, duke and peer of France, grandee of Spain, and commander-in-chief of the French armies; in all which stations his behaviour was such, that few equalled, perhaps none surpassed him. He was killed by a cannon-ball at the siege of Philipsburgh in 1738.

FITZSTEPHEN (William), a learned monk of Canterbury, of Norman extraction, born of respectable parents in London, in the twelfth century. Being attached to archbishop Becket, he was present at the time of his murder. And in 1174 he wrote in Latin, The Life of St. Thomas, archbishop and martyr; in which, as Becket was a native of the metropolis, he introduces a description of London, with a detail of the manners and usages of the citizens, which is deservedly considered as a great curiosity, being the earliest professed account of London extant. He died in 1191.

FITZWILLIAM, a township of New Hampshire in Cheshire county; sixteen miles east of the Connecticut.

FIVE, *adj.* / FIVE'-BAR, / FIVE'-BARRED, / FIVE'-FOLD, / FIVE'LEAVED. } Saxon, ꝼif; Goth. *finif*; Belg. *fief*; Teut. *funf*, seemingly corrupted, says Minsheu, from the Lat. *quinque*. A number; four and one; five-bar and five-barred are, having five bars, usually applied to gates. Five-leaved is an epithet of cinquefoil. Drayton calls it 'five-leaf.'

And aftir these dayes Elizabeth his wif conseyvede and hidde hir *fyve* monethis and seyde. *Wiclif.*
And *five* of them were wise, and *five* were foolish.
Matthew.

No person, no incident, but must be of use to carry on the main design: all things else are like six fingers to the hand, when nature, which is superfluous in nothing, can do her work with *five*. *Dryden.*

Five herds, *five* bleating flocks, his pastures filled.
Id.

Our British youth lose their figure by that time they are *five* and twenty. *Addison.*

The flood, flame, swine, the lion, and the snake,
Those *five-fold* monsters modern authors make.
Young.

FIVES, *n. s.* Teut. *feifel*; Fr. *avives*. A disease of horses.

His horse sped with spavins, rayed with the yellows, past cure of the *fives*, and stark spoiled with the staggers. *Shakspeare.*

FIUME, a sea-port of Austria on the Adriatic, at the extremity of the gulf of Juarnero. It consists of the inner and outer town, the latter of which is new and well built. The harbour, though difficult of entrance, is commodious; and large vessels may ride at distance safely at anchor. The exports are corn, tobacco, and wood; the imports rye, sugar, spices, salt, &c. Fiume was in 1813 re-captured from the French, who seized

n 1809, by an Austrian and British force. ny of the inhabitants of the neighbourhood of Hungarian origin. It is five miles W. N. W. Buccari, and thirty-six south east of Trieste. ɔulation 12,000.

'IUMETTO, a mountain of Italy, in the hy of Modena, and late department of Cros- ; near which wells are dug, from 100 to 120 deep, on the surface of whose waters a red- medicinal oil swims, that is skimmed once rtnight.

'IX', *v. a.* & *v. n.* 'IXA'TION, *n. s.* 'IX'EDLY, *adv.* 'IX'EDNESS, *n. s.* 'IX'IDITY, 'IX'ITY, 'IX'TURE, 'IX'URE. Fr. *fixer*; Ital. *ficcare*; Span. *fixar*; Port. *fincar*; Lat. *fixus*; from Gr. πηγω, πηξω, to pitch as a tent. To make fast or firm; place permanently; establish; settle; deprive of motion or volatility; rce: as a neuter verb to settle, opinion or olution; rest; lose volatility: fixation is sta- ty; firmness; settledness: fixidity, coherence parts; a word used by Boyle for what Sir ac Newton calls fixity: fixure is the word d by Shakspeare (not fixture) for position; ble pressure; firmness, although fixture, some- ng affixed, or fastened to a house, appears a y 'legitimate' and useful modern word.

While from the raging sword he vainly flies,
A bow of steel shall *fix* his trembling thighs.
Sandys.

Why are thine eyes *fixt* to the sullen earth,
Gazing at that which seems to dim thy sight?
Shakspeare.

The firm *fixure* of thy foot would give an excellent tion to thy gift. *Id.*

The *fixure* of her eye hath motion in't,
As we were mocked with art.
Id. Winter's Tale.

Frights, changes, horrours,
Divert and crack, rend and deracinate
The unity and married calm of states
Quite from their *fixure*.
Id. Troilus and Cressida.

In the midst of molten lead, when it beginneth to ngeal, make a little dent, and put quicksilver, rapped in a piece of linen, in that hole, and the icksilver will *fix* and run no more, and endure the ammer. *Bacon's Natural History.*

Upon the compound body three things are chiefly be observed; the colour, the fragility or pliantness, nd the volatility or *fixation*, compared with the simple odies. *Bacon.*

To light, created in the first day, God gave no roper place or *fixation*. *Raleigh's History.*

A *fixedness* in religion will not give my conscience ave to consent to innovations. *King Charles.*

Your *fixation* in matters of religion will not be more ecessary for your soul's than your kingdom's peace. *Id.*

Hell heard the' unsufferable noise, hell saw
Heaven running from heaven, and would have fled
Affrighted, but that fate had *fixed* too deep
Her dark foundations, and too fast had bound.
Milton.

Salt dissolved upon a *fixation* returns to its affected ubes. *Glanville.*

Your kindness banishes your fear,
Resolved to *fix* for ever here. *Waller.*

Bodies mingled by the fire are differing as to the *fixidity* and volatility, and yet are so combined by the first operation of the fire, that itself does scarce afterwards separate them. *Boyle.*

One loves *fixed* laws, and the other arbitrary power. *Temple.*

Thus while the Trojan prince employs his eyes,
Fixed on the walls with wonder and surprise.
Dryden.

He made himself their prey,
To' impose on their belief, and Troy betray;
Fixed on his aim, and obstinately bent,
To die undaunted, or to circumvent.
Id. Æneid.

If we would be happy, we must *fix* upon some foundation that can never deceive us. *L'Estrange.*

In most bodies not propagated by seed, it is the colour we must *fix* on, and are most led by. *Locke.*

We pronounce concerning gold, that it is *fixed*. *Id.*

If we pretend that the distinction of species, or sorts, is *fixedly* established by the real and secret constitutions of things. *Id.*

Fixedness, or a power to remain in the fire unconsumed, is an idea that always accompanies our complex idea signified by the word gold. *Id.*

Omnipotency, omnisciency, and infinite goodness, enlarge the spirit while it *fixtly* looks on them. *Burnet.*

And are not the sun and *fixed* stars great earths vehemently hot, whose heat is conserved by the greatness of the bodies, and the mutual action and reaction between them, and the light which they emit, and whose parts are kept from fuming away, not only by their *fixity*, but also by the vast weight and density of the atmospheres incumbent upon them? *Newton's Opticks.*

An universal dissolution of manners began to prevail, and a professed disregard to all *fixed* principles. *Atterbury.*

Fluid or solid comprehend all the middle degrees between extreme *fixedness* and coherency, and the most rapid intestine motion of the particles of bodies. *Bentley.*

They are subject to errors from a narrowness of soul, a *fixation* and confinement of thought to a few objects. *Watts.*

If we take a general view of the world, we shall find that a great deal of virtue, at least outward appearance of it, is not so much from any *fixed* principle as the terror of what the world will say, and the liberty it will take upon the occasions we shall give. *Sterne.*

For the wisest purposes God hath *fixed* the relation between the means and the end; and we are not to expect, either in natural or spiritual things, to obtain the end while we despise the means. *Witherspoon.*

Individuals pass like shadows; but the commonwealth is *fixed* and stable. The difference therefore of to-day and to-morrow, which to private people is immense, to the state is nothing. *Burke.*

Though her eyes shone out, yet the lids were *fixed*,
And the glance that it gave was wild and unmixed
With aught of change, as the eyes may seem
Of the restless who walk in a troubled dream
Byron. Siege of Corinth.

FIXATION, in chemistry, the rendering any volatile substance fixed, so as not to fly off upon being exposed to a great heat. See FIXED BODIES.

FIXED AIR, in the old chemical nomenclature, an invisible and permanently elastic fluid, superior in gravity to the common atmospheric air and most other aerial fluids, exceedingly destructive to animal life; produced in great quantities,

naturally from combustible bodies, and artificially by many chemical processes. Upon its first discovery it was styled gas sylvestre, from its being produced by burning charcoal: from its acrid properties it has obtained the name of aerial acid, and cretaceous acid; from its noxious qualities it has been called mephitic air, or mephitic gas; and, in the new chemical nomenclature, it is now called carbonic acid gas. See AIR, CARBONIC ACID, and CHEMISTRY.

FIZ'GIG, *n. s.* A kind of dart or harpoon with which seamen strike fish.

Can'st thou with *fizgigs* pierce him to the quick,
Or in his skull thy barbed trident stick?
Sandys. Job.

FLAB'BY, *adj.* } Teut. *flabbe* (a fly-flap);
FLAB'ILE. } Ital. *flappo*, *fiappo*; Lat. *flaccus*. Yielding; easily shaken or wafted to and fro.

Paleness, a weak pulse, palpitations of the heart, *flabby* and black flesh, are symptoms of weak fibres.
Arbuthnot.

Pulls out the rags contrived to prop
Her *flabby* dugs, and down they drop. *Swift.*

FLAC'CID, *adj.* } Lat. *flaccidus* (à *flaccus*).
FLACCID'ITY, *n. s.* } Limber; weak; lax.

The bowing and inclining the head is found in the great flower of the sun: the cause I take to be is, that the part against which the sun beateth waxeth more faint and *flaccid* in the stalk, and thereby less able to support the flower. *Bacon.*

They whose muscles are weak or *flaccid*, are unapt to pronounce the letter *r*. *Holder.*

The surgeon ought to vary the diet as he finds the fibres are too *flaccid* and produce funguses, or as they harden and produce callosities. *Arbuthnot.*

There is neither fluxion nor pain, but *flaccidity* joined with insensibility. *Wiseman's Surgery.*

FLACCUS (Caius Valerius), an ancient Latin poet, of whom we have very imperfect accounts remaining. He wrote a poem on the Argonautic expedition; of which, however, he did not live to finish the eighth book, dying at about thirty years of age. John Baptista Pius, an Italian poet, completed the eighth book of the Argonautics; and added two more, from the fourth of Apollonius; which supplement was first added to Aldus's edition in 1523.

FLACOURTIA, in botany, a genus of plants of the monœcia class, and icosandria order. Male CAL. five-parted: COR. none: stamens numerous. Female CAL. many-leaved: COR. none; germ superior; styles five to nine; berry many-celled. Species one; a thorny shrub of Madagascar.

FLAG, *v. n.*, *v. a.* & *n. s.*
FLAG'GINESS, *n. s.*
FLAG'GY, *adj.*
FLAG'-OFFICER,
FLAG'-SHIP,
FLAG'-STAFF.
} Saxon ꝑleoȝ, ꝑleoȝan (to fly); Teut. (Old) *flaggeren*, to be loosened. To hang loose or free; metaphorically to grow dejected; spiritless; feeble; to droop: as a verb active to suffer, to droop or become feeble: as a substantive, the ensign of a ship or regiment; a water plant with a large-bladed leaf: a flag-officer is the commander of a squadron: flag-ship, that in which the commander of a squadron sails: flag-staff, the staff on which the flag is fixed: flaggy is lax; limber; weak, in tension or taste.

She took an ark of bulrushes, and laid it in the *flags* by the river's brink. *Exodus* ii. 3.

Can bulrushes but by the river grow?
Can *flags* there flourish where no waters flow?
Sandys.

He hangs out as many *flags* as he descryeth vessels; square, if ships; if gallies, pendants. *Id.*

His *flaggy* wings, when forth he did display,
Were like two sails, in which the hollow wind
Is gathered full, and worketh speedy way.
Faerie Queene.

These *flags* of France that are advanced here,
Before the eye and prospect of your town,
Have hither marched to your endamagement.
Shakspeare.

The jades
That drag the tragick melancholy night,
Who with their drowsy, slow, and *flagging* wings
Clip dead men's graves. *Id. Henry VI.*

Democracies are less subject to sedition than where there are stirps of nobles: for, if men's eyes are upon the persons, it is for the business sake as fittest, and not for *flags* or pedigree. *Bacon.*

Graft an apple-cion upon the stock of a colewort, and it will bear a great *flaggy* apple. *Id.*

Juice in language is somewhat less than blood: for if the words be but becoming and signifying, and the sense gentle, there is juice: but where that wanteth, the language is thin, *flagging*, poor, starved, scarce covering the bone, and shews like stones in a sack. *Ben Jonson's Discoveries.*

Beds of cotton wool hung up between two trees, not far from the ground; in which, *flagging* down in the middle, men, wives, and children lie together.
Abbot.

Let him be girt
With all the grisly legion that troop
Under the sooty *flag* of Acheron. *Milton.*

The French and Spaniards, when your *flags* appear,
Forget their hatred, and consent to fear. *Waller.*

It keeps those slender and aerial bodies separated and stretched out, which otherwise, by reason of their flexibleness and weight, would *flag* or curl.
Boyle's Spring of the Air.

The interpretation of that article about the *flag*, is a ground at pleasure for opening a war. *Temple.*

In either's *flag* the golden serpents bear,
Erecting crests alike, like volumes rear,
And mingle friendly hissings in the air.
Dryden.

That basking in the sun thy bees may lie,
And resting there, their *flaggy* pinions dry. *Id.*

My *flagging* soul flies under her own pitch,
Like fowl in air too damp, and lags along
As if she were a body in a body:
My senses too are dull and stupified,
Their edge rebated: sure some ill approaches.
Id. Don Sebastian.

The duke, less numerous, but in courage more,
On wings of all the winds to combat flies:
His murdering guns a loud defiance roar,
And bloody crosses on his *flagstaffs* rise. *Dryden.*

His stomach will want victuals at the usual hour, either fretting itself into a troublesome excess, or *flagging* into a downright want of appetite. *Locke.*

Cut *flag* roots, and the roots of other weeds.
Mortimer's Husbandry.

Fame, when it is once at a stand, naturally *flags* and languishes. *Addison's Spectator.*

Her grandfather was a *flag-officer*. *Addison.*

Take heed, my dear, youth flies apace;
As well as Cupid, Time is blind:
Soon must those glories of thy face
The fate of vulgar beauty find:

a thousand loves, that arm thy potent eye,
st drop their quivers, *flag* their wings, and die.
Prior.

If, on sublimer wings of love and praise,
My love above the starry vault I raise,
Lured by some vain conceit of pride or lust,
I *flag*, I drop, and flutter in the dust. *Arbuthnot.*

The pleasures of the town begin to *flag* and grow
guid, giving way daily to cruel inroads from the
een. *Swift.*

Where Revel calls, and Laughter, vainly loud,
lse to the heart, distorts the hollow cheek,
leave the *flagging* spirits doubly weak;
ll o'er the features, which perforce they cheer,
feign the pleasure or conceal the pique. *Byron.*

FLAG, *n. s.* & *v. a.* } Swed. *flake*; Teut. and
FLAG'-BROOM, *n. s.* } Fr. (old) *flache*; Belg.
FLAG'-STONE, } *flach* (flat). See FLAKE.
FLAG'-WORM. } Flag and flag-stone are
species of broad flat stone used for pavements:
flag is to pave with flag-stones: flag-broom
a broom used for sweeping the flags or pave-
ent: flag-worm, a grub commonly found
nder it.

The sides and floors were all *flagged* with excellent
arble. *Sandys.*

There be divers fishes that cast their spawn on
ags or stones. *Walton's Angler.*

He will in the three hot months bite at a *flag-worm*,
r a green gentle. *Id.*

A white stone used for *flagging* floors. *Woodward.*

Flagstone will not split, as slate does, being found
rmed into *flags*, or thin plates, which are no other
han so many strata. *Id. on Fossils.*

Part of two *flags* striated, but deeper on one side
han the other. *Id.*

FLAG, in the army, a small banner of distinc-
ion, stuck in the baggage-waggon, to distinguish
he baggage of one brigade from another, and of
ne battalion from another; that they may be
marshalled by the waggon-master general accord-
ng to the rank of their brigades, to avoid the con-
fusion that might otherwise arise.

FLAG, in the marine, a certain banner or standard, by which an admiral is distinguished at sea from the inferior ships of his squadron; also the colors by which one nation is distinguished from another. See our plates FLAGS I. and II. In the British navy, flags are either red, white, or blue; and are displayed from the top of the main-mast, fore-mast, or mizen-mast, according to the rank of the admiral. When a flag is displayed from the flag-staff on the main-mast, the officer distinguished thereby is known to be an admiral; when from the fore-mast, a vice admiral; and when from the mizen-mast, a rear admiral. The first flag in Great Britain is the royal standard, which is only to be hoisted when the king or queen is on board the vessel; the second is that of the anchor of hope, which characterises the lord high admiral, or lords commissioners of the admiralty; and the third is the union flag, in which the crosses of St. George and St. Andrew are blended. This last is appropriated to the admiral of the fleet who is the first naval officer under the lord high admiral. The next flag after the union is that of the white squadron, at the main-mast head: and the last, which characterises an admiral, is the blue, at the same mast head. For a vice-admiral, the first flag is the red, the second the white, the third the blue, at the flag-staff on the fore-mast. The same order proceeds with regard to the rear admirals, whose flags are hoisted on the top of the mizen-mast; the lowest flag in our navy is accordingly the blue on the mizen-mast.

All the white flags have a red St. George's cross in them, in order readily to be distinguished from the French white flag with a white cross. Besides the national flag, merchant ships frequently bear on the mizen-masts smaller flags, with the arms of the city where the master ordinarily resides; and sometimes on the fore-mast, with the arms of the place where the person who freights them lives.

When a council of war is held at sea, if it be on board the admiral, they hang a flag on the main-shrouds; if in the vice-admiral, in the fore-shrouds; and if in the rear-admiral, in the mizen-shrouds.

To hang out the white flag, is to ask quarter; or it shows, when a vessel is arrived on a coast, that it has no hostile intention, but come to trade or the like. The red flag is a sign of defiance, in battle.

To strike the flag is to pull it down upon the cap, or to take it in, out of respect, or submission, due from all ships or fleets inferior to those any way justly their superior. To lower or strike the flag in an engagement is a sign of yielding. The way of leading a ship in triumph is to tie the flags to the shrouds, or the gallery, in the hind part of the ship, and let them hang down towards the water, and to tow the vessels by the stern. Livy relates, that this was the way the Romans used those of Carthage.

FLAG-OFFICERS, in the British navy, are—the admiral, vice admiral, and rear admiral of the white, red and blue. See ADMIRAL, FLAG, and FLEET.

FLAG-STONE, a genus of argillaceous earth, of a gray, yellowish, or reddish-white color; not giving fire with steel, nor effervescing with acids. Its specific gravity is from 2600 to 2780. Sometimes it is found compact, and sometimes like the argillaceous grit; in which case its gravity is less. Its general use is for flooring houses, though sometimes it is used for covering them. There are calcareous flag-stones found near Woodstock in England, of a yellowish-white color, and moderately hard, containing a little iron. The specific gravity is 2585.

FLAG. See IRIS.

FLAG, CORN. See GLADIOLUS.

FLAG, SWEET-SCENTED. See ACORUS.

FLAGELET, or } Fr. *flageolet*; Lat. *flati-*
FLAGEOLE'T, *n. s.* } *lis*. A small flute, easily blown.

Play us a lesson on your *flagelet*. *More.*

Where Rhenus strays his vines among,
The egg was laid from which he sprung,
And though by Nature mute,
Or only with a whistle blessed,
Well taught he all the sounds expressed
Of *flagelet* or flute. *Cowper.*

FLAGELETS, FLAGEOLETS, or FLAJEOLETS, a kind of small flute, blown by means of a whistle, and generally made of box or other hard wood, sometimes of ivory. They have six holes and four keys, or sometimes five, besides that at the

bottom, the mouth-piece, and that behind the neck. The ambit of the flageolet, according to the scale exhibited by Mersennus, is two octaves from g sol re ut upwards.

FLAGELLANTES, a sect of fanatics of the thirteenth century, who chastised and disciplined themselves with whips in public. This sect rose in Italy in 1260; its author was one Rainer a hermit; and it was propagated through almost all the countries of Europe. A great number of persons of all ages and sexes made processions, walking two by two with their shoulders bare, which they whipped till the blood ran down, to obtain mercy from God, and appease his indignation against the wickedness of the age. They were then called the devout; and, having established a superior, he was called the general of the devotion. Though the primitive Flagellantes were exemplary in point of morals, yet they were soon joined by a turbulent rabble, who were infected with the most ridiculous and impious opinions, so that the emperors and pontiffs thought proper to put an end to this religious phrensy, by declaring all devout whipping contrary to the divine law, and prejudicial to the soul's eternal interest! However, this sect revived in Germany towards the middle of the fourteenth century, and rambling through many provinces occasioned great disturbances. They held, among other extravagancies, that flagellation was of equal virtue with the sacraments; that the forgiveness of all sins was to be obtained by it from God without the merits of Jesus Christ; that the old law of Christ was soon to be abolished, and that a new law enjoining the baptism of blood to be administered by whipping was to be substituted in its place. They were burnt by the inquisitors in several places; but they appeared again in Thuringia and Lower Saxony in the fifteenth century; and rejected not only the sacraments, but every branch of external worship. Their leader Conrad Schmidt, and many others, were burnt in Germany about A. D. 1414.

A modern flagellation, which frequently takes place at Rome, is thus described by Mr. Hobhouse in his notes to Childe Harold, Canto IV. It is administered in the oratory of the Padre Caravita and in another church at Rome.

'The ceremony takes place at the time of vespers. It is preceded by a short exhortation, during which a bell rings, and whips, that is, strings of knotted whip-cord, are distributed quietly amongst such of the audience as are on their knees in the middle of the nave. Those resting on the benches come to edify by example only. On a second bell, the candles are extinguished, and the former sermon having ceased, a loud voice issues from the altar, which pours forth an exhortation to think of unconfessed, or unrepented, or unforgiven crimes. This continues a sufficient time to allow the kneelers to strip off their upper garments; the tone of the preacher is raised more loudly at every word, and he vehemently exhorts his hearers to recollect that Christ and the martyrs suffered much more than whipping—'Show, then, your penitence—show your sense of Christ's sacrifice—show it with the whip.' The flagellation begins. The darkness, the tumultuous sounds of blows in every direction—'Blessed Virgin Mary, pray for us!' bursting out at intervals—the persuasion that you are surrounded by atrocious culprits and maniacs, who know of an absolution for every crime—the whole situation has the effect of witchery, and so far from exciting a smile fixes you to the spot in a trance of restless horror, prolonged beyond expectation o bearing.

'The scourging continues ten or fifteen minutes, and when it sounds as if dying away, a bell rings, which seems to invigorate the penitents, for the lashes beat about more thickly than before. Another bell rings, and the blows subside. At a third signal the candles are re-lighted, and the minister who has distributed the disciplines, collects them again with the same discretion; for the performers, to do them justice, appear to be too much ashamed of their transgressions to make a show of their penance, so that it is very difficult to say whether even your next neighbour has given himself the lash or not.

'The incredulous or the humourist must not suppose that the darkness favors evasion. There can be no pleasantry in doing that which no one sees, and no merit can be assumed where it is not known who accept the disciplines. The flagellation does certainly take place on the naked skin; and this ferocious superstition, of which antiquity can furnish no example, has, after being once dropt, been revived as a salutary corrective of an age of atheism. The former processions of flagellants have not been yet renewed, but the crowds which frequent the above ceremony leave no doubt that they would be equally well attended.

'Such an innovation may be tolerated, and perhaps applauded, in the days of barbarism, when the beating of themselves was found the only expedient to prevent the Italians from the beating of each other; but the renewal of it at this period must induce us to fear that the gradual progress of reason is the dream of philanthropy, and that a considerable portion of all societies, in times the most civilised as well as the most ignorant, are always ready to adopt the most unnatural belief, and the most revolting practices. It is singular, however, that the humane Pius, and the intelligent Cardinal-secretary, do not perceive the objectionable part of an institution which was prohibited at its first rise by some of the wisest Italian princes, and is now allowed no where but at Rome.' (p. 320—323).

FLAGELLARIA, in botany, a genus of plants of the hexandria class and trigynia order: CAL. six-parted: COR. none; berry superior, one-seeded. Species two: Indian plants, one a creeper, the other a fine flowering shrub.

FLAGELLATION, *n.s.* Fr (old) *flagellation*; from Lat. *flagello*. The use of the scourge.

> By Bridewell all descend,
> As morning prayer and *flagellation* end. *Garth.*

FLAGITIOUS, *adj.* } Lat. *flagitius*, 'be-
FLAGITIOUSNESS, *n.s.* } cause worthy of the lash.'—Ainsworth. Wicked; atrocious; guilty of great crimes.

> First, those *flagitious* times,
> Pregnant with unknown crimes,
> Conspire to violate the nuptial bed.
> *Roscommon*

There's no working upon a *flagitious* and perverse nature by kindness and discipline *L'Estrange.*

No villainy or *flagitious* action was ever yet committed, but, upon a due enquiry into the causes of it, it will be found that a lye was first or last the principal engine to effect it. *South.*

Perjury is a crime of so *flagitious* a nature, we cannot be too careful in avoiding every approach towards it. *Addison.*

But if in noble minds some dregs remain,
Not yet purged off, of spleen and sour disdain,
Discharge that rage on more provoking crimes,
Nor fear a dearth in these *flagitious* times. *Pope.*

FLAG'ON, *n. s.* Fr. *flagon;* Lat. *lagena*, from Gr. λαγηνος, a cup (with the digamma prefixed).—Ainsworth. A drinking cup; a two-quart measure.

A mad rogue! he poured a *flagon* of Rhenish on my head once. *Shakspeare. Hamlet.*

More had sent him by a suitor in Chancery two silver *flagons*. *Bacon's Apophthegms.*

Did they coin pisspots, bowls, and *flagons*
into officers of horse and dragoons? *Hudibras.*

His trusty *flagon*, full of potent juice,
Was hanging by, worn thin with age and use.
Roscommon.

One *flagon* walks the round, that none should think
They either change, or stint him in his drink.
Dryden.

I thirsty stand,
And see the double *flaggon* charge their hand;
See them puff off the froth, and gulp a main,
While with dry tongue I lick my lips in vain.
Gay.

FLA'GRATE, *v. a.* } Lat. *flagro* (to burn), *flagrans;* Fr. (old) *flagrance, flagrant.* Ainsworth derives the Latin verb from Gr. φλεγω (2nd fut. φλαγω), to burn.
FLA'GRANCE, *n. s.*
FLA'GRANCY,
FLA'GRANT, *adj.*
FLA'GRANTLY, *adv.*
FLAGRA'TION, *n. s.*

To burn or injure by fire: flagrance, or flagrancy, means burning; flaring: hence, metaphorically, notoriousness; and notorious or glaring crime: flagrant is ardent; eager; burning with desire; 'flaming into notice;' and hence the flaming color, red: the adjective is only used figuratively: flagration is also burning; state of being on fire.

Lust causeth a *flagrancy* in the eyes, as the sight and the touch are the things desired, and therefore the spirits resort to those parts. *Bacon's Natural History.*

A thing which filleth the mind with comfort and heavenly delight, stirreth up *flagrant* desires and affections, correspondent unto that which the words contain. *Hooker.*

As lovers of chastity and sanctimony, and haters of uncleanness, they bring to him a woman taken in the *flagrance* of her adultery. *Bp. Hall.*

We feared no *flagration*. *Lovelace* (1659).

Typhons destructive and *flagrating* power lying hid in the sun was made more temperate.
Greenhill (1705).

With equal poise let steady justice sway,
And *flagrant* crimes with certain vengeance pay;
But, 'till the proofs are clear, the stroke delay.
Smith.

Their common loves, a lewd abandoned pack,
The beadle's lash still *flagrant* on their back.
Prior.

See Sappho, at her toilet's greasy task,
Then issuing *flagrant* to an evening mask.
So morning insects, that in muck begun,
Shine, buz, and fly-blow in the setting sun.
Pope.

When fraud is great, it furnishes weapons to defend itself, and at worst, if the crimes be so *flagrant* that a man is laid aside out of perfect shame, he retires loaded with the spoils of the nation. *Swift.*

A species of wit *flagrantly* unsuitable. *Warton.*

FLAIL, *n. s.* Sax. ꝑleȝel; Fr. *fleau;* Lat. *flagellum.* 'It is directly the old Fr. *flael*, or *flaiel*,' Todd. The instrument with which grain is beaten out of the ear.

Our soldiers, like the night-owl's lazy flight,
Or like a lazy thrasher with a *flail*,
Fell gently down as if they struck their friends.
Shakspeare. Henry VI.

When in one night, ere glimpse of morn,
His shadowy *flail* hath threshed the corn,
That ten day-labourers could not end. *Milton.*

In this pile shall reign a mighty prince,
Born for a scourge of wit, and *flail* of sense.
Dryden.

The dexterous handling of the *flail*, or the plough, afid being good workmen with these tools, did not hinder Gideon's and Cincinnatus's skill in arms and government. *Locke.*

When in the barn the sounding *flail* I ply,
Where from the sieve the chaff was wont to fly,
The poultry there will seem around to stand,
Waiting upon her charitable hand. *Gay.*

The thresher, Duck, could o'er the queen prevail,
The proverb says, no fence against a *flail*. *Swift.*

FLAILS consist of the following parts: 1. The hand-staff, or piece held in the thresher's hand. 2. The swiple, or that part which strikes out the corn. 3. The caplins, or strong double leather, made fast to the tops of the hand-staff and swiple. 4. The middle band, being the leather thongs, or fish-skin, that ties the caplins together.

FLAKE, *n. s., v. a.,* & *v. n.* } Saxon, ꝑlace;
FLAKY, *adj.* } Gothic, *floka;* Teut. *flac*, from Goth. *fla;* Lat. *floccus*, to divide. A loose piece, or portion; a laminated body, or thing; to flake is to form, or break, into laminæ, or loose portions.

The *flakes* of his tough flesh so firmly bound,
As not to be divorced by a wound. *Sandys.*

And from his wide-devouring oven sent
A *flake* of fire, that, flushing in his beard,
Him all amazed, and almost made affeared.
Faerie Queene.

The silent hour steals on,
And *flaky* darkness breaks within the East.
Shakspeare.

Crimson circles, like red *flakes* in the element, when the weather is hottest. *Sidney.*

The teeth cut away great *flakes* of the metal, till it received the perfect form the teeth would make.
Moxon.

Small drops of a misling rain, descending through a freezing air, do each of them shoot into one of those figured icicles; which, being ruffled by the wind, in their fall are broken, and clustered together into small parcels, which we call *flakes* of snow.
Grew's Cosmologia.

The earth is sometimes covered with snow two or three feet deep, made up only of little *flakes* or pieces of ice. *Burnet.*

Upon throwing in a stone, the water boils for a considerable time, and at the same time are seen little *flakes* of scurf rising up. *Addison.*

Hence, when the snows in winter cease to weep,
And undissolved their *flaky* texture keep,

The banks with ease their humble streams contain,
Which swell in Summer, and those banks disdain.
Blackmore.

From the bleak pole no winds inclement blow,
Mold the round hail, or *flake* the fleecy snow.
Pope's Odyssey.

The trumpet roars, long *flaky* flames expire,
With sparks that seem to set the world on fire.
Pope.

Where twenty ages gather o'er a name,
'Tis as a snow-ball which derives assistance
From every *flake*, and yet rolls on the same,
Even till an iceberg it may chance to grow,
But after all 'tis nothing but cold snow. *Byron.*

FLAKE, in the cod fishery, a sort of scaffold or platform, made of hurdles, and supported by stanchions, used for drying cod-fish in Newfoundland. These flakes are usually placed near the shores of fishing harbours.

FLAKE, in gardening, a sort of carnation, which is of two colors only, and has very large stripes, all of them going quite through the leaves.

FLAKE, WHITE, in painting, lead corroded by the pressing of grapes, or a ceruss prepared by the acid of grapes. It is brought here from Italy; and far surpasses, both with regard to the purity of its whiteness and the certainty of its standing, all the ceruss of white lead made with us. It is used in oil and varnish painting, for all purposes where a very clean white is required. It should be procured in lumps as brought over, and levigated by those who use it; as that which the colormen sell in a prepared state is levigated and mixed up with starch, and often with white-lead.

FLAM, *v. a.* & *n. s.* Goth. *flimma*, to deceive. See FLIM. To delude, in jest, or lightly: a freak; whim; falsehood; pretext.

Hard trifles, anagrams, or eteosticks, or finer *flams*.
Ben Jonson.

A *flam* more senseless than the rog'ry
Of old aruspicy and aug'ry. *Hudibras.*
For so our ignorance was *flammed*. *Id.*

God is not to be *flammed* off with lyes, who knows exactly what thou canst do, and what not. *South.*

'Till these men can prove the things, ordered by our church, to be either intrinsically unlawful or indecent, all pretences or pleas of conscience to the contrary are nothing but cant and cheat, *flam* and delusion. *Id.*

FLAMBEAU, *n. s.* Fr. A lighted torch.

The king seized a *flambeau* with zeal to destroy.
Dryden.

As the attendants carried each of them a *flambeau* in their hands, the sultan, after having ordered all the lights to be put out, gave the word to enter the house, and find out the criminal, and put him to death. *Addison's Guardian.*

FLAMBEAUX are made of several thick wicks, covered with wax, serving to burn at night in the streets, at processions, illuminations, &c. They differ from links, torches, and tapers.—They are made square; sometimes of white wax and sometimes of yellow. They usually consist of four wicks or branches, nearly an inch thick and about three foot long, made of a sort of coarse hempen yarn half twisted. They are made with the ladle much as torches or tapers are; viz. by first pouring the melted wax on the top of the several suspended wicks, and letting it run down to the bottom. This they repeat twice. After each wick has thus got its proper cover of wax, they lay them to dry; then roll them on a table, and so join four of them together by a red-hot iron. When joined they pour on more wax till the flambeau is brought to the size required, which is usually from a pound and a half to three pounds. They then finish their form or outside, with a polishing instrument of wood, by running it along all the angles formed by the union of the branches. Flambeaux were anciently made of wood dried in furnaces or otherwise. Divers kinds of wood were used for this purpose; the most usual was pine. Pliny says that, in his time, they also used oak, elm, and hazel. In the seventh book of the Æneid a flambeau of pine is mentioned; and Servius on that passage remarks, that they also made them of the cornel tree.

FLAMBOROUGH HEAD, a cape on the east coast of Yorkshire, five miles east of Burlington, and 206 from London. It was the Fleamburg of the Saxons; so called from the flames or lights made on it to direct the landing of Ida, who in A. D. 547 joined his countrymen in Britain, with a large reinforcement from Germany, and founded the kingdom of Northumberland. In the time of Edward the Confessor, Flamborough was one of the manors of Harold, earl of the West Saxons, afterwards king of England. On his death William gave it to Hugh Lupus; who bestowed it in perpetual alms on the monastery of Whitby. The cliffs of this cape are of a tremendous height and amazing grandeur. Beneath are several vast caverns; some closed at the end, others pervious, formed with natural arches. In some places the rocks are insulated and of a pyramidal figure, soaring up to a vast height. The bases of most are solid, but in some pierced through and arched. The color of all these rocks is white, from the dung of the innumerable flocks of migratory birds which quite cover the face of them, filling every little projection, every hole that will give them leave to rest. A light-house has been erected at Flamborough Head, the height of which, from the basis to the summit, is eighty-five feet, and from the level of the sea 250 feet. The lantern contains three frames, with seven large lamps and reflectors in each, making in the whole twenty-one. The lights revolve, and the motion is horizontal. One of the lights is red, to distinguish Flamborough lights from all others; and in a clear night they may be seen at the distance of thirty miles. The building is executed in a very superior style; and is of great advantage to navigation, in securing the property of individuals, and in preserving human life from the calamities of shipwreck.

FLAME, *n. s.*, *v. a.*, & *v. n.*, FLAME'-COLORED, FLAME'-EYED, FLAMMA'TION, *n. s.*, FLAMMABIL'ITY, FLAM'MEOUS, *adj.*, FLAMMIF'EROUS, FLAM'Y. Fr. *flamme*; Belg. and Teut. *vlamme*; Swed. and Lat. *flamma*; Arm. and Welsh, *flam*; Gothic, *liom*; Saxon, leom; (*Loge*, or *Loke*, among the Goths was the god of fire, or rather of flame). Blaze; the light emitted

om fire: hence, metaphorically, ardor; passion; articularly the passion of love: to flame is to line as fire, or flame; to burst out into passonate violence; to inflame; excite: flammaon is the act of inflaming, or causing to flame: ammability, the being possible, or likely, to laze out: flammeous, consisting of, or reembling: flammiferous, bringing, or bringing orth flame.

Much was he moved at that rueful sight,
nd *flamed* with zeal of vengeance inwardly,
le asked who had that dame so fouly dight,
r whether his own hand, or whether other wight?
Spenser's Faerie Queene.

Wit is brush-wood, judgment timber; the one gives he greatest *flame*, the other yields the durablest heat; nd both meeting make the best fire.
Sir T. Overbury.

Can you think to blow out the intended fire your ity is ready to *flame* in, with such weak breath as his? *Shakspeare.*

Children play
With fiery *flames*, and covet what is bright;
But, feeling the effects, abhor the light.
Birth of Merlin. Rowley and Shakspeare.

'Tis strong, and it does indifferent well in *flame-colored* stockings. *Shakspeare. Twelfth Night.*

The vital spirits of living creatures are a substance compounded of an airy and *flamy* matter; and though air and flame, being free, will not well mingle, yet bound in by a body they will. *Bacon.*

August shall bear the form of a young man of a fierce and choleric aspect, in a *flame-coloured* garment.
Peacham.

The sullen cave
Where *flame-eyed* Fury means to smite. *Quarles.*
What *flame*, what lightning e'er
So quick an active force did bear! *Cowley.*
My heart's on *flame*, and does like fire
To her aspire. *Id.*
Hell all around
As one great furnace *flamed*. *Milton.*
He fell *flaming* through the ethereal sky
To bottomless perdition. *Id.*

White or crystalline arsenick, being artificial, and sublimed with salt, will not endure *flammation*.
Browne's Vulgar Errours.

This *flammeous* light is not over all the body.
Browne.

In the sulphur of bodies torrified, that is, the oily, fat and unctuous parts, consist the principles of *flammability*. *Id.*

My thoughts imprisoned in my secret woes,
With *flamy* breaths do issue oft in sound. *Sidney.*
Of all our elder plays,
This and Philaster have the loudest fame;
Great are their faults, and glorious is their *flame*:
In both our English genius is exprest,
Lofty and bold, but negligently drest. *Waller.*

Behold it like an ample curtain spread,
Now streaked and glowing with the morning red;
Anon at noon in *flaming* yellow bright,
And chusing sable for the peaceful night. *Prior.*

Is not *flame* a vapour, fume, or exhalation heated red hot, that is, so hot as to shine? For bodies do not flame without emitting a copious fume, and this fume burns in the *flame*. *Newton's Opticks.*

Now gaudy pride corrupts the lavish age,
And the streets *flame* with glaring equipage. *Gay.*

No warning of the approaching *flame*;
Swiftly like sudden death it came
I loved the moment I beheld. *Granville.*

Smit with the love of kindred arts we came,
And met congenial, mingling *flame* with *flame*.
Pope.

A friend exaggerates a man's virtues; an enemy *inflames* his crimes. *Mason.*

You from deep cauldrons and unmeasured caves
Blow *flaming* airs or pour vitrescent waves. *Darwin.*

Flame. Sir Isaac Newton considers flame as only the red-hot vapor of any substance raised from it by fire, and heated to such a degree as to emit light copiously. This definition seems to be accurate, though some allege that it contains an inaccurate comparison. Simple ignition (they argue) never exceeds in intensity of light the body by contact of which it was produced. But flame always consists of volatile inflammable matter in the act of combustion and combination with vital air. Many metallic substances are volatilised by heat, and burn with a flame by the contact of the air in this rare state. Sulphur, phosphorus, and some other bases of acids, exhibit the same phenomenon. But the flames of organised substances are in general produced by the extrication and ascension of inflammable air with more or less charcoal. When circumstances are not favorable to the perfect combustion of these products, a portion of the coal passes through the luminous current unburnt, and forms smoke. It appears to be ascertained, however, that bodies emit flame in proportion to the quantity of vapor that rises from them. Thus wood, coals, &c., which emit a great quantity of vapor, flame violently; while lead, tin, &c., which emit but a small fume, can scarcely be perceived to flame at all. This rule, however, is not to be depended upon in all cases. Some vapors seem to be in their own nature uninflammable, and capable of extinguishing flame; as those of water, the mineral acids, sal ammoniac, arsenic, &c.; while others take fire on the slightest approach of a flaming substance; such as ether, spirit of wine, &c. These last also exhibit a remarkable phenomenon; namely, that they cannot be made to flame without the approach of some substance actually in flames. Thus spirit of wine, poured on a red-hot iron, though instantly dissipated in vapor, will not flame; but, if a burning candle touches its surface, the whole is set in a flame at once. The case is otherwise with oils, especially those of the grosser kind; for their vapors are readily changed into flame by the mere increase of heat, without the approach of any flaming substance. There is, however, no kind of vapor, perhaps, that is incapable of being converted into flame, provided it is exposed to a sufficient degree of heat. Thus the vapor of water, made to pass through burning coal, produces an exceedingly strong and bright flame. It is remarkable that this vapor seems to be more powerful than almost any other in absorbing heat, and detaining it in a latent state. It seems probable that, when smoke is converted into flame, the caloric, or latent heat with which the vapor had combined, or rather that which made an essential part of it, breaks forth, and adds to the quantity of sensible heat already present. This seems probable, from the sudden explosion with which all flames break out. If a vessel full of oil be set over the fire a smoke or vapor begins to arise from it;

which grows gradually thicker, and at last begins to shine in some places very near the surface of the oil, like an electrical light, or sulphur just kindled. At this time the oil is very hot, as well as the steam which issues from it. But this last is continually giving off its sensible heat into the atmosphere; so that, at an inch or two from the surface of the oil, the heat of the steam will not exceed 400° of Fahrenheit; but, if a burning candle be held in the steam for a moment, the whole is immediately converted into flame, with something like an explosion; after which the oil burns quietly until it is all consumed. The flame, as soon as it appears, is not only much hotter than the steam whence it was produced, but even than the oil which lies below it. Whence, then, has this sudden and great increase of heat arisen? It could not be the *sensible* heat of the vapor, for that was greatly inferior; nor could it be communicated from the oil, for that could communicate no more than it had itself. The candle indeed would communicate a quantity of heat to the vapor which touched its flame; but it is impossible that this quantity should extend permanently over a surface perhaps 100 times larger than the flame of the candle, in such a manner as to make every part of that surface equally hot with the flame of the candle itself; for this would be to suppose it to communicate 100 times more heat than really was in it. The heat therefore must have originally resided in the vapor itself: and as, in the freezing of water, its latent heat is extricated and becomes sensible, and the water thereupon loses its fluidity; so, in the accession of vapor, the latent heat breaks forth with a bright flash, and the vapor is then totally decomposed, and converted into soot, ashes, or water, according to the different nature of the substances which produce it, or according to the intensity of the heat. — Several other hypotheses have been offered, to solve the phenomena of burning and flaming bodies. See Chemistry, Combustion, Fire, Heat, Ignition, &c. The colors of flames differ according to the substances from which they are produced. Thus, the flame of sulphur and spirit of wine is blue; the flame of nitre and zinc, of a bright white; that of copper, of a greenish-blue, &c. These varieties afford an opportunity of making a number of agreeable representations in fireworks, which could not be done if the flame produced from every different substance was of the same color. See Pyrotechny.

FLAMEEL, or Flemeal (Bertholet), a celebrated Flemish painter, was born at Liege, in 1614. He improved himself at Rome by copying the best masters; and in 1647 returned to his native place, but afterwards went to Paris and became a professor in the Academy of Painting. He died in 1675. His architectural representations are in fine style.

FLAMEL (Nicholas), a notary and alleged alchemist of Paris, in the fourteenth century, suddenly became possessed of so much wealth as induced a suspicion that he was indebted for it to the philosopher's stone: while others affirmed that he obtained it by extortion from the Jews, when they were exiled. The truth seems to be, that he acquired it by commercial speculations. He at any rate applied it to benevolent purposes, in building extensive hospitals—that of the Quinze Vingt, for instance—and places of worship. He died in 1418. Several books on alchemy have been published with his name. Paul Lucas, a French physician employed by the court, about the commencement of the last century, to collect rare coins and antiquities in the Levant, furnishes an amusing sequel to this man's history. He tells us, in his second voyage, that on the 9th of July, 1705, at Burnus Baschi, near Brussa, in Natolia, he fell in with an Usbec dervise who spoke a variety of languages, and who was not only perfectly well acquainted with the story of Flamel as related above, but who affirmed that both he and his wife were yet alive, having gained over their physician and the curate of S. S. Innocens to report their death, and to bury two logs of wood in their stead. They were now, he added, about 400 years old each, and belonged to a society, consisting in all of seven adepts, who travelled about the world, meeting at some appointed spot every twenty years!

FLA'MEN. Lat. A Roman priest; one that officiated in solemn or sacrificial rites.

> A drear and dying sound
> Affrights the *flamen*. *Milton.*
> Then first the *flamen* tasted living food;
> Next his grim idol smeared with human blood.
> *Pope.*

Flamen, in Roman antiquity, an order of priests, instituted by Romulus or Numa. They were originally only three; viz. the Flamen Dialis, Martialis, and Quirinalis. The last two, though of high authority, were much inferior to the Flamen Dialis. They were all chosen by the people, and consecrated by the pontifex maximus. In latter times several priests of the same order were added to them, but inferior in power. The whole number at last amounted to fifteen: the first three of whom were senators, and called Flamines majores; the other twelve, taken from among the people, being denominated Flamines minores. Some authors tell us the Romans had a flamen for every deity they worshipped. The greater flamines wore the robe edged with purple, like the magistrates; had an ivory chair, and a seat in the senate. They wore a little band of thread about their heads, whence their name is said to be derived, quasi filamines. They also wore a hat or cap, called apex or flammeum.

Flamen dialis was sacred to Jupiter, and a person of the highest consequence and authority in the state. He discharged several religious duties which properly belonged to the kings, and was honored with many eminent privileges beyond all other officers, but was obliged to observe several superstitious restraints. Flamen Martialis was sacred to Mars, and was ordained to inspect the rites of that god. Flamen Quirinalis was sacred to, and superintended the rites of, Quirinus Romulus.

FLAMINGO. See Phoenicopterus.

FLAMINIA Via, the highway from Rome to Arminum, made by Flaminus.

FLAMINACA, the wife of the Flamen Dialis, wore a flame-colored habit, on which was painted

underbolt, and above her head-dress she had en oak boughs, to indicate that she served piter the thunderer, to whom the oak was red.

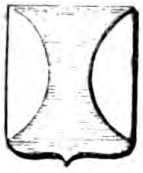
FLAMININUS (Titus), or T. Quinctius minius, a celebrated Roman general, who s consul A. U.C. 554, or A.A.C. 198. He quired much military experience in the war inst Hannibal; and was afterwards sent inst Philip V. of Macedon, whom he totally feated on the confines of Epirus, and made all cris, Phocis, and Thessaly, tributary to Rome. t he not only granted peace to Philip, but oclaimed all Greece free and independent at e Isthmian games. This political step ren- red him very popular among the Greeks, and ved the way to the universal dominion of the omans. He was afterwards sent to Prusias, ng of Bithynia; who had given refuge to Han- bal, and by his address prevailed on the mon- ch to desert that unfortunate general. See RUSIAS II. Flaminius died suddenly.

FLAMINIUS, or FLAMINIO (Mark Anthony), Latin poet in the sixteenth century, of Imola, Italy. The pope had chosen him secretary to e council in 1545; but he refused that em- loyment, as he favored the new opinions, as hey were called, and would not employ his pen n an assembly where he knew these opinions were to be condemned. He wrote notes on the Psalms; paraphrased thirty of them in Latin verse; and wrote letters and poems which are esteemed. He died at Rome in 1550.

FLAMSTED, a town of England, in Hert- fordshire, five miles from St. Alban's and Dun- stable, on the Verlam, anciently called Verlam- stede. The land hereabouts is a clay so thickly mixed with flints, that, after a shower, nothing appears but a heap of stones; yet it bears good corn even in dry summers. Edward VI. when an infant, was brought hither for his health. The bedstead he lay on, which is curiously wrought, is still preserved in the manor house.

FLAMSTEED (John), an eminent English astronomer, born in Derby in 1646. He had early studied civil and ecclesiastical history; but accidentally meeting with John De Sacrobosco's book, De Sphærâ, acquired a turn for astronomy, which he afterwards prosecuted with great vigor. In 1674 he wrote an ephemeris, in which he showed the falsity of astrology; and gave a table of the moon's rising and setting, with the eclipses and appulses of the moon and planets to fixed stars. This fell into the hands of Sir Jonas More; for whom he made a table of the moon's true southings. In 1674 Sir Jonas having informed him that a true account of the tides would be highly acceptable to the king, he composed a small ephemeris for his use; and, when Sir Jonas showed the king and duke of York Flamsteed's telescopes and micrometer, he procured for him a warrant to be king's astro- nomer, with a salary of £100 a-year. His Doc- trine of the Sphere was published in 1681, in a posthumous work of Sir Jonas More, entitled, A New System of the Mathematics. In 1684 he was presented to the living of Burstow, in Surry, which he enjoyed till he died in 1719. His Historia Cœlestis Britannica was published at London in 1725, in 3 vols. He likewise composed the British Catalogue of the fixed stars, which contains twice the number that are in the catalogue of Hevelius (see ASTRONOMY); to each of which he annexed its longitude, lati- tude, right ascension, and distance from the pole, together with the variations of right ascension and declination, while the longitude increases a degree. This catalogue, together with most of his observations, were printed on fine paper at the expense of prince George of Denmark.

FLANCHES, in heraldry. The flanch is composed of an arched line, drawn from the upper angle of the escutcheon to the base point of one side, and so on to the other. Flanches are never borne single, but in couples, and always in the flanks of the shields. See diagram.



FLANDERS, a country of the Netherlands, and now chiefly incorporated in the kingdom of that name, was formerly governed by its own hereditary sovereigns. It was bounded on the north by the United Provinces; on the east by the ci-devant Austrian provinces of Brabant and Hainault; on the south by Hainault and Artois; and on the west and north-west by the German Ocean; extending sixty miles in length, and fifty in breadth. It contained thirty cities, a great number of market towns, 1154 villages, and forty-eight abbeys; besides many colleges, monasteries, &c. The towns are situated so near each other, that the Spaniards who followed Philip II. supposed the whole country to con- stitute but one great city. Since that period it has suffered greatly from the ravages of various wars. The climate is temperate and healthy; the soil very fertile, being watered by many rivers and canals, and producing all kinds of corn, flax, and other vegetables; and the surface per- fectly level, there being not a single hill of any importance in it. The pastures are excellent, and rear great numbers of fine horses, sheep, and black cattle. The Flemings were formerly the principal manufacturers in Europe, and either in- vented or improved several important arts; par- ticularly weaving figured linens, dyeing cloths, painting in oil colors, curing herrings, &c. Silk, cotton, and woollen stuffs, camblets, brocades, linens, laces, and tapestry are still manufactured in great quantities. The laces are also superior. The chief rivers are the Scheldt and the Lys.

Flanders has been divided into three parts; viz. Flemish, French, and Austrian or Imperial Flanders. It has been otherwise divided into French, Austrian, and Dutch Flanders; but, the country being so much exposed to the depreda- tions of ambitious princes and tyrannical states, the limits of these provinces have often varied: nor is it necessary to ascertain them with much precision, now that these distinctions are abo- lished. French Flanders, now forming the French department of the NORTH, we shall treat of under that title, and confine the present account to those provinces of the Netherlands, which still retain the name of East and West Flanders.

East Flanders is divided from West Flanders

by a line running almost due south from Sluys, a small town opposite Flushing. Its capital is Ghent; its computed extent 1080 square miles; its population fully 600,000. The surface in the northern part is level, while to the south it consists of undulating plains. The soil is in general a heavy fertile loam. The climate, though moist, is not unhealthy: the chief productions are corn, pulse, flax, madder, tobacco, fruit; most of these are in great abundance; and the pasturages excellent. The manufactures are also here considerable. This province sends ten deputies to the provincial assembly, and is divided into the four circles of Ghent, Dendermonde, Oudenarde, and Eecloo. No part of it adjoins the sea, Dutch Flanders occupying the bank of the Scheldt; but it enjoys the benefit of water communication by canals, the principal of which lead to Bruges in the west, and to Sas Van Ghent in the north.

West Flanders extends along a considerable tract of coast, in the central part of which is Ostend. This side faces the north; but the western boundary of the province adjoins the French territory. Its extent is nearly 1500 square miles, and its surface in general level, except the sand-hills on the coast. Here also the soil is fertile, and the agriculture excellent. The climate, like that of England, is humid and changeable; the products nearly the same as in East Flanders, and the language Flemish, except along the French frontier, where there is an intermixture of French. The manufactures are very considerable in lace and fine linen; cotton, stuffs, and leather; and there are extensive breweries and distilleries. The exports consist of manufactured articles, corn, pulse, rapeseed, tobacco, butter, oil, cheese, and cattle. This province sends eight deputies to the representative assembly; it is divided into four circles, that of Bruges (the capital), Furnes, Ypres, and Courtray. Ostend is its only harbour of consequence, but the province has several canals, which form a line of communication with France. Population 520,000. Wood is scarce: the common fuel is turf and coal. Both provinces are of the Catholic religion; and each has, in addition to its share in the general representative body, a local public assembly.

FLANK, *n. s.* & *v. a.* } Fr. *flanc*; Teut.
FLANK'ER, *n. s.* & *v. a.* } *flank*, or rather *lank*, according to Wachter, who derives our word from this, with the addition of *f*; Goth. *lang*; Belg. and Swed. *flank*. The side; that part of the side of animals near the hinder thigh: in fortification, that part of the bastion which reaches from the curtain to the face. See FORTIFICATION. To flank, in a military sense is to command or attack an enemy's side, or to secure an army on the side. A flanker is, in fortification, a lateral defence of any kind: to flanker is to defend laterally, to protect or to attack sideways.

Like storms of hail the stones fell down from high,
Cast from the bulwarks, *flankers*, ports, and towers.
Fairfax.

The Turks, discouraged with the loss of their fellows, and sore beaten by the Spaniards out of their *flankers*, were enforced to retire. *Knolles.*

Great ordnance and small shot thundered and showered upon our men from the rampier in front, and from the gallies that lay at sea in *flank*.
Bacon's War with Spain.

Gray was appointed to stand on the left side, in such sort as he might take the *flank* of the enemy.
Hayward.

The belly shall be eminent by shadowing the *flank*.
Peacham.

To right and left the front
Divided, and to either *flank* retired. *Milton.*

With fates averse against their king's command,
Armed on the right, and on the left they stand,
And *flank* the passage. *Dryden's Æneid.*

By the rich scent we found our perfumed prey,
Which *flanked* with rocks did close in covert lay.
Dryden.

He said, and poised in air, the jav'lin sent:
Through Paris' shield the forceful weapon went,
His corselet pierces, and his garment rends,
And glancing downward near his *flank* descends.
Pope.

FLANK, or FLANC, in farriery and horsemanship. The flanks of a horse should be full, and at the top of each a feather. The distance between the last rib and haunch-bone, which is properly the flank, should be short, which they term well coupled, such horses being most hardy, and fit to endure labor A horse is said to have no flank, if the last of the short ribs be at a considerable distance from the haunch-bone; or when his ribs are too much straitened in their compass.

FLANK, in military affairs, the side of a body of men. When a battalion is drawn up three deep, its flank files consist of three men. When four deep, the flank files are termed double files; so that a column formed from any of these alignements will have all its relative flank files, be the depth of formation what it will.

FLANK-COMPANY, a certain number of men drawn up on the right, or left, of a battalion. Thus the grenadiers compose the right, and the light infantry the left flank company; or, when these are detached, the two extreme battalion companies become such. The grenadiers and light infantry are generally called flank companies, whether attached, or not, to their several battalions.

FLANKING-PARTY, a select body of men on foot or on horseback, whose object is to harass the enemy, to get upon his wings, or by any manœuvre to hang upon the flank of an opposing force. In flanking, a great deal depends upon the officer or serjeant; he must be extremely active, and not only attend to the movements of the division from which he is detached, but likewise to his flankers.

FLANK OF A BASTION (flanc d'une bastion, Fr.) in fortification, that part which joins the face to the curtain, comprehended between the angle of the curtain and that of the shoulder. It is the principal defence of the place. Its use is to defend the curtain, the flank, and face of the opposite bastion, as well as the passage of the ditch; and to batter the salient angles of the counterscarp and glacis, whence the besieged generally ruin the flanks with their artillery; for the flanks of a fortification are those parts which the besiegers endeavour most to destroy, in

order to take away the defence of the face of the opposite bastion.

FLAN'NEL, *n s.* Fr. *flanelle;* Swed. *flanell;* Belg. *flanel;* Welsh, *gwlanen* (i. e. woollen). A soft woollen stuff or cloth, for which Wales has been long famous.

I cannot answer the Welch *flannel.*
Shakspeare.

Before her kitchen hearth the nodding dame,
In *flannel* mantle wrapt, enjoys the flame;
Hov'ring upon her feeble knees she bends,
And all around the grateful warmth ascends. *Gay.*

FLANNEL, or FLANEL, a kind of slight, loose, woollen stuff, composed of a woof and warp, and woven on a loom with two treadles, after the manner of baize. Dr. Black assigns as a reason why flannel and other substances of the kind keep our bodies warm, that they compose a rare and spongy mass, the fibres of which touch each other so slightly, that the heat moves slowly through the interstices, which being filled only with air, and that in a stagnant stage, give little assistance in conducting the heat. Count Rumford has enquired farther into the matter, and finds that there is a relation betwixt the power which the substances usually worn as clothing have of absorbing moisture, and that of keeping our bodies warm. Having provided a quantity of each of the substances mentioned below, he exposed them, spread out upon clean China plates, for the space of twenty-four hours, to the warm and dry air of a room which had been heated by a German stove for several months, and during the last six hours had raised the thermometer to 84° of Fahrenheit; after which he weighed equal quantities of the different substances with a very accurate balance. They were then spread out upon a China plate, and removed into a very large uninhabited room upon the second floor, where they were exposed forty-eight hours upon a table in the middle of the room, the air of which was 45°. At the end of this space they were weighed, and then removed into a damp cellar, and placed on a table in the middle of the vault, where the air was at the temperature of 45°, and which by the hygrometer seemed to be fully saturated with moisture. In this situation they were allowed to remain three days and three nights; the vault being all the time hung round with wet linen cloths, to render the air as completely damp as possible. At the end of three days they were weighed, and the weights at the different times were found as in the following table.

1000 parts dried in the hot room of	Weighed on coming out of the cold room,	Weighed on coming out of the vault,
Sheep's wool . .	1084	1163
Beaver's fur . .	1072	1125
Fur of a Russian hare.	1065	1115
Eider down . .	1067	1112
Raw single silk thread.	1057	1107
Ravellings of white taffety	1054	1103
Fine lint . . .	1046	1102
Ravellings of fine linen	1044	1082
Cotton wool . .	1043	1089

On these experiments he observes, that though linen, from the apparent ease with which it receives dampness from the atmosphere, seems to have a much greater attraction for water than any other; yet it would appear from what is related above, that those bodies which receive water in its unelastic form with the greatest ease, or are most easily wet, are not those which in all cases attract the moisture of the atmosphere with the greatest avidity. 'Perhaps the apparent dampness of linen to the touch, arises more from the ease with which that substance parts with the water it contains, than from the quantity of water it actually holds: in the same manner as a body appears hot to the touch, in consequence of its parting freely with its heat; while another body which is really at the same temperature, but which withholds its heat with greater obstinacy, affects the sense of feeling much less violently. It is well known that woollen clothes, such as flannels, &c., worn near the skin, greatly promote insensible perspiration. May not this arise principally from the strong attraction which subsists between wool and the watery vapor which is continually issuing from the human body? That it does not depend entirely on the warmth of that covering, is clear; for the same degree of warmth produced by wearing more clothing of a different kind, does not produce the same effect. The perspiration of the human body being absorbed by a covering of flannel, it is immediately distributed through the whole thickness of that substance, and by that means exposed, by a very large surface to be carried off by the atmosphere; and the loss of this watery vapor, which the flannel sustains on the one side by evaporation, being immediately restored from the other, in consequence of the strong attraction between the flannel and this vapor, the pores of the skin are disencumbered, and they are continually surrounded by a dry and salubrious atmosphere.' Our author expresses his surprise, that the custom of wearing flannel next the skin should not have prevailed more universally. He is confident it would prevent a number of diseases; and he thinks there is no greater luxury than the comfortable sensation which arises from wearing it, especially after one is a little accustomed to it. 'It is a mistaken notion' says he, 'that it is too warm a clothing for summer. I have worn it in the hottest climates, and at all seasons of the year; and never found the least inconvenience from it. It is the warm bath of a perspiration confined by a linen shirt, wet with sweat, which renders the summer heats of southern climates so insupportable; but flannel promotes perspiration, and favors its evaporation; and evaporation, as is well known, produces positive cold.' It has been observed that new flannel, after some time wearing, acquires the property of shining in the dark, but loses it on being washed.

FLAP, *n. s., v. a.* & *v. n.* }
FLAP'DRAGON, *n. s.* & *v. a.* }
FLAP'-EARED, *adj.* }
FLAP'-JACK, *n. s.* }
FLAP'MOUTHED, *adj* }
FLAP'PER, *n. s.* } Teut. *flabbe;* Belg. *flap;* Dan. and Swed. *lap, lappe.* See FLABBY. Any thing pendulous, or hanging loose: hence the motion of that which hangs loose; a disease in horses. To flap is to strike with something light or loose; to move with a flap-like-noise of motion. As a verb neuter, to ply

the wings with a noise; to fall with flaps or broad pendulous parts. Flap-dragon is a curious synonyme of snap-dragon; a play at catching raisins out of burning spirits: hence to flap-dragon is to devour eagerly. A flap-jack is a provincial name for a pan-cake. A flapper, a remonstrancer, as if with a flap or slight stroke of the hand.

But to make an end of the ship, to see how the sea *flapdragoned* it. *Shakspeare. Winter's Tale.*

He plays at quoits well, and eats conger and fennel, and drinks candles' ends for *flapdragons*, and rides the wild mare with the boys. *Shakspeare.*

A whoreson, beetle-headed, *flapeared* knave. *Id.*

We'll have moreover puddings and *flap-jacks*, and thou shalt be welcome. *Id. Pericles.*

Another *flap-mouthed* mourner.
Id. Venus and Adonis.

There is a peculiar provision for the windpipe, that is, a cartilaginous *flap* upon the opening of the larinx, which hath an open cavity for the admission of the air. *Browne.*

The dire *flapping* on the shield of Turnus, and fluttering about his head, disheartened him in the duel. *Dryden's Æneid.*

A hare, hard put to it by an eagle, took sanctuary in a ditch with a beetle: the eagle *flapt* off the former, and devoured the other. *L'Estrange.*

Tis common for a duck to run *flapping* and fluttering away, as if maimed, to carry people from her young. *Id.*

With fruitless toil
Flap filmy pinions oft, to extricate
Their feet in liquid shackles bound. *Philips.*
Forbidding airs might thin the place;
The slightest *flap* a fly can chase. *Gay.*

When suffocating mists obscure the morn,
Let thy worst wig, long used to storms, be worn;
This knows the powdered footman, and with care
Beneath his *flapping* hat secures his hair. *Id.*

Some surgeons make a crucial incision, upon the supposition that the wound will more easily heal by turning down the *flaps*. *Sharp.*

Three times, all in the dead of night,
A bell was heard to ring;
And shrieking at her window thrice
The raven *flapped* his wing. *Tickel.*

Yet let me *flap* this bug with gilded wings,
This painted child of dirt, that stinks and stings.
Pope.

I write to you by way of *flapper*, to put you in mind, &c. *Chesterfield.*

When a horse has the *flaps*, you may perceive his lips swelled on both sides of his mouth; and that which is in the blisters is like the white of an egg: cut some slashes with a knife, and rub it once with salt, and it will cure. *Farrier's Dictionary.*

FLARE, *v. n.* From Dutch *flederen*, to flutter, (Skinner): Lat. *flagro*: to glitter with transient or unsteady light or splendor.

She shall be loose enrobed,
With ribbands pendant *flaring* 'bout her head.
Shakspeare.

Doctrine and life, colours and light, in one
When they combine and mingle, bring
A strong regard and awe; but speech alone
Doth vanish like a *flaring* thing,
And in the ear, not conscience, ring. *Herbert.*

When the sun begins to fling
His *flaring* beams, me, goddess, bring
To arched walks of twilight groves. *Milton.*

I cannot stay
Flaring in sunshine all the day. *Prior.*

FLASH, *n. s.*, *v. n.* & *v. a.* } Belg. *vlengie*
FLASH'ILY, *adv.* } (a flash); Goth.
FLASH'Y. } *loga* (see FLAME):

Skinner says from *blaze*; but Minsheu suggests the Gr. φλοξ, flame, as the origin of this word, and Dr. Johnson adopts that etymology. Mr. Todd's conjecture that it must be connected with *flas* (Icel.) 'tumbling down from a high place,' as where it means a body of water driven with violence, appears quite superfluous: water flashes, or is made to flash when its surface is driven into a thousand luminous planes that reflect the light. A sudden, transitory blaze or gleam of light: any short transient state of things. Dr. Johnson says, 'a body of water driven by violence;' but supplies no instance of this application of the word, and we find none: as a verb neuter, to flash means to glitter with a transient blaze or gleam of light; to burst out into violence or into sallies of wit, or bright thought: as a verb active, to dash water into motion, and thus cause the light to flash from it; to adorn or dress up in a showy manner: hence flashy is glittering; empty; showy; without substance; insipid.

With his raging arms he rudely *flashed*
The waves about, and all his armour swept,
That all the blood and filth away was washed.
Faerie Queene.

When the cross blue lightning seemed to open
The breast of heaven, I did present myself
Even in the aim and very *flash* of it. *Shakspeare.*

Where be your gibes now? your gambols? your songs? your *flashes* of merriment, that were wont to set the table in a roar? *Id.*

By day and night he wrongs me; every hour
He *flashes* into one gross crime or other,
That sets us all at odds. *Id. King Lear.*

We see a *flash* of a piece is seen sooner than the noise is heard. *Bacon's Natural History.*

The tastes that most offend in fruits, herbs and roots, are bitter, harsh, sour, waterish, or *flashy*. *Id.*

The Persians and Macedonians had it for a *flash*.
Bacon.

If the sea-water be *flashed* with a stick or oar, the same casteth a shining colour, and the drops resemble sparkles of fire. *Carew.*

Flashy wits cannot fathom the whole extent of a large discourse. *Digby on the Soul, Dedication.*

When they list, their lean and *flashy* songs
Grate on their scrannel pipes of wretched straw.
Milton.

The proper objects of common mirth and sportful divertisement are mean and petty matters; any thing at best is by playing therewith made such: great things are thereby diminished and debased; especially sacred things—when they become the subjects of *flashy* wit, or the entertainments of frothy merriment.
Barrow.

One with a *flash* begins, and ends in smoak;
The other cut of smoak brings glorious light.
Roscommon.

This salt powdered, and put into a crucible, was, by the injection of well kindled charcoal, made to *flash* divers times, almost like melted nitre. *Boyle.*

And as Ægeon, when with heaven he strove,
Defyed the forky lightning from afar,
At fifty mouths his flaming breath expires,
And *flash* for *flash* returns, and fires for fires.
Dryden.

his mean conceit, this darling mystery,
ich thou think'st nothing, friend! thou shalt not buy;
will I change for all the *flashy* wit. *Id.*

Vicked men prefer the light *flashes* of a wanton th, which for a while suspend reflection, and hide sinner from himself, to such discourses as awaken science. *Rogers.*

They *flash* out sometimes into an irregular greats of thought. *Felton on the Classicks.*

Are we carried down by the torrent of vanity and ? Will a *flash* of wit or a brilliant fancy make us use a profane expression? If so, we shall soon ne to relish it when thus seasoned, and use it ourves. *Mason.*

To read froth and trifles all our life, is the way ways to retain a *flashy* and juvenile turn; and only contemplate our first (which is generally our worst). *Id.*

Red rockets rise, loud cracks are heard on high,
ıd showers of stars rush headlong from the sky,
ırst, as in silver lines they hiss along,
ıd the quick *flash* unfolds the gazing throng.
Darwin.

Were I to compare Milton's genius with Tasso's, I ould say, that the sublime of the latter is *flashy* and ictuating, while that of the former diffuses an unirm, steady, and vigorous blaze; Milton is more ajestic, Tasso more dazzling. *Beattie.*

FLASK, *n. s.* } Sax. ꝑlaxa; Goth. Swed.
FLAS'KET. } and Arab. *flaska*; Teut. *flasche*;)an. *flaske*; Welsh *flasg*; Span. *flasco*; French *'asque*, *flasquet*; Ital. *fiasco*, perhaps from the ir. (barb.) φλασωη. A flat bottle, basket, or rinking vessel; a powder-horn; a vessel in vhich viands are served up.

Powder in a skilless soldier's *flask*
Is set on fire. *Shakspeare.*

Then for the Bourdeaux you may freely ask;
But the Champaigne is to each man his *flask*.
King.

Another placed
The silver stands with golden *flaskets* graced.
Pope.

FLAT, *adj.*, *n. s.*, *v. a.* & *v. n.*
FLAT'LONG, *adj.*
FLAT'LY, *adv.*
FLAT'NESS,
FLAT'TEN, *v. a.* & *v. n.*
FLAT'TISH,
FLAT'WISE.
} Goth. & Swed. *flat*; Danish *flode*; Teuton. Belg. and Fr. *plat*; all of Gr. πλατυς (broad) perhaps. Level; horizontal; smooth; low; even with the ground; prostrate: metaphorically, and in works of art, wanting character or relief; depressed; wanting spirits; insipid; tasteless; dull; unqualified; absolute: as a substantive, a level or extended plane; a shore or low ground; the side of a sword or sabre; depression of thought or language: to flat, is to make or grow flat; level; vapid, or depressed; better expressed, both in the active and neuter sense, by to flatten: flatlong is with the flat side downwards, as is flatwise: flattish, somewhat or inclining to be, flat.

It is a *flat* wrong to punish the thought or purpose of any before it be enacted; for true justice punisheth nothing but the evil act or wicked word. *Spenser.*

The wood-born people fall before her *flat*,
And worship her as goddess of the wood.
Id. Faerie Queene.

He, like a puling cuckold, would drink up
The lees and dregs of a *flat* tamed piece.
Shakspeare.

Thou, all-shaking thunder,
Strike *flat* the thick rotundity o' the world.
Id.

Now pile your dust upon the quick and dead,
'Till of this *flat* a mountain you have made,
T' o'ertop old Pelion, or the skyish head
Of blue Olympus. *Id. Hamlet.*

You start away,
And lend no ear unto my purposes;
Those prisoners you shall keep:
———I will, that's *flat*. *Id. Henry IV.*

I should not see the sandy hour-glass run,
But I should think of shallows and of *flats*.
Shakspeare.

What a blow was there given!
—An it had fallen *flatlong*. *Id. Tempest.*

The emperor of Russia was my father;
Oh, that he were alive, and here beholding
His daughter's trial! that he did but see
The *flatness* of my misery! *Id. Winter's Tale.*

The difficulty is very great to bring them in or out through so many *flats* and sands, if wind and weather be not very favourable. *Raleigh's Essays.*

In the dawning of the next day we might plainly discern it was a land *flat* to our sight, and full of boscage. *Bacon.*

Because the air receiveth great tincture from the earth, expose flesh or fish, both upon a stake of wood some height above the earth, and upon the *flat* of the earth. *Id.*

Short speeches fly abroad like darts, and are thought to be shot out of secret intentions; but as for large discourses, they are *flat* things, and not so much noted. *Id.*

If you stop the holes of a hawk's bell, it will make no ring, but a *flat* noise or rattle. *Id.*

The ancients say, if you take two twigs of several fruit-trees, and *flat* them on the sides, and bind them close, and set them in the ground, they will come up in one stock. *Id.*

Take two saucers, and strike the edge of the one against the bottom of the other within a pail of water, and you shall find the sound groweth more *flat*, even while part of the saucer is above the water; but that *flatness* of sound is joined with a harshness. *Id.*

An orange, lemon, and apple, wrapt in a linen cloth, being buried for a fortnight four feet deep within the earth, though in a moist place and rainy time, were become a little harder than they were; otherwise fresh in their colour, but their juice somewhat *flatted*. *Id. Natural History.*

It comes near an artificial miracle to make divers distinct eminences appear a *flat* by force of shadows, and yet the shadows themselves not to appear. *Wotton's Architecture.*

Nor are constant forms of prayer more likely to *flat* and hinder the spirit of prayer and devotion, than unpremeditated and confused variety to distract and lose it. *King Charles.*

Frailty gets pardon by submissiveness,
But he that boasts, shuts that out of his story,
He makes *flat* war with God, and doth defy,
With his mere clod of earth, the spacious sky.
Herbert.

Thereupon they *flatly* disavouch
To yield him more obedience, or support.
Daniel.

With horrid shapes she does her sons expose,
Distends their swelling lips, and *flats* their nose.
Creech.

In them is plainest taught, and easiest learnt,
What makes a nation happy, and keeps it so,
What ruins kingdoms, and lays cities *flat*. *Milton.*

Taste so divine! that what of sweet before
Hath touched my sense, *flat* seems to this and harsh.
Milton.

The way is ready and not long
Beyond a row of myrtles, on a *flat*,
Fast by a mountain. *Milton's Paradise Lost.*

Thus repulsed, our final hope
Is *flat* despair. *Id.*

Having newly left these grammatick *flats* and shallows, where they stuck unreasonably, they are now turmoiled with their unballasted wits in fathomless and unquiet deeps of controversy. *Milton.*

He that *flatly*, against the rules of duty and reason, will swear vainly, what can engage him to speak truly? *Barrow.*

You had broke and robbed his house,
And stole his talismanique louse;
And all his new-found old inventions,
With *flat* felonious intentions. *Hudibras.*

His horse with *flat* tiring taught him that discreet stays make speedy journeys. *Sidney.*

I burnt it the second time, and observed the skin shrink, and the swelling to *flat* yet more than at first. *Temple.*

Some short excursions of a broken vow
He made indeed, but *flat* insipid stuff. *Dryden.*

A darted mandate came
From that great will which moves this mighty frame,
Bid me to thee, my royal charge, repair,
To guard thee from the dæmons of the air;
My flaming sword above 'em to display,
All keen and ground upon the edge of day,
The *flat* to sweep the visions from thy mind,
The edge to cut 'em through that stay behind. *Id.*

Milton's Paradise Lost is admirable; but am I therefore bound to maintain, that there are no *flats* amongst his elevations, when 'tis evident he creeps along sometimes for above an hundred lines together? *Id.*

Here joys that endure for ever, fresh and in vigour, are opposed to satisfactions that are attended with satiety and surfeits, and *flatten* in the very tasting. *L'Estrange.*

The upper end of the windpipe is endued with several cartilages and muscles to contract or dilate it, as we would have our voice *flat* or sharp. *Ray.*

Deadness or *flatness* in cyder is often occasioned by the too free admission of air into the vessel. *Mortimer's Husbandry.*

The miry fields,
Rejoicing in rich mould, most ample fruit
Of beauteous form produce; pleasing to sight,
But to the tongue inelegant and *flat*. *Philips.*

The houses are *flat*-roofed to walk upon, so that every bomb that fell on them would take effect. *Addison on Italy.*

How fast does obscurity, *flatness*, and impertinency, flow in upon our meditations? 'Tis a difficult task to talk to the purpose, and to put life and perspicuity into our discourses. *Collier.*

Its posture in the earth was *flatwise*, and parallel to the site of the stratum in which it was reposited. *Woodward on Fossils.*

These are from three inches over to six or seven, and of a *flattish* shape. *Id.*

Are there then such ravishing charms in a dull unvaried *flat*, to make a sufficient compensation for the chief things of the ancient mountains, and for the precious things of the lasting hills? *Bentley.*

Not any interpreters allow it to be spoken of such as *flatly* deny the being of God; but of them that, believing his existence, seclude him from directing the world. *Id.*

Some of Homer's translators have swelled into fustian, and others sunk into *flatness*. *Pope.*

Flat is a character in music, expressed by a small *b*, of which the effect is lowering the note to which it is affixed, a semitone minor. Flats on keyed instruments are the notes on the left hand of the natural notes, as sharps are on the right hand. There are two ways of using flats, the one accidental, which has no effect beyond the single bar in which it occurs; the other is the flat or flats placed at the clef, which affect all the notes on the same line or space throughout a movement, unless accidentally discharged by a natural, ♮. The placing the flats at the clef is not arbitrary, as the first necessarily is on B, the second on E, the fourth above or fifth below, &c.

For these five flats upon keyed instruments, there are five short keys; flats, however, sometimes occur in C and F, but for these the two long keys are obliged to be used of B and E natural, the two half notes below C and F natural.

Flat, of Dr. Boyce, in some parts of his MS., in the library of the Royal Institution, is = S, or 57 Σ + f + 5 m.

Flat, of Liston, to the notes D, G, B, or C, is = 𝔖, or 47 Σ + f + 4 m; and to the notes E, F, or A, is = 𝔍, or 36 Σ + f + 3 m, the second flat of any note being always the reverse of its first one.

Flat, of Marsh, = 𝔍, or 36 Σ + f + 3 m.

Flat, of Maxwell, = 𝔖, or 47 Σ = f + 3 m.

Flat, of Overend, and Dr. Callcott Mus. Gram. 1st ed. p. 112, = P, or 58 Σ + f + 5 m; this corresponds with perfect fifths. See the theorems below.

Flat, of some writers, = L, or 46 Σ + f + 4 m.

Flat, of regularly tempered scales, is the minor limna of Dr. R. Smith, which, according to Mr. Farey's theorems, Phil. Mag. vol. xxxix, p. 44, is = 58 Σ + f + 5 m—seven times the temperament of the fifth; or, = 38·7519656 Σ + f + 3 m + seven-fourths of the temperament of the third; or, = 32·3228500 Σ + f + 2 m + seven-thirds of the temperament of the sixth.

Flat, double, (♭♭), of Chambers and Overend; sometimes 2 P, or 116 Σ + 2 f + 10 m; at others, P + S, or 105 Σ + 2 f + 9 m.

Flat, double of Liston, is invariably 𝔖 + 𝔣, or 83 Σ + 2 f + 7 m.

Flat-Bottomed Boats are such as are made to sail in shallow water, and to carry a great number of troops, artillery, ammunition, &c. They are constructed with a twelve-pounder bow-chase, and an eighteen-pounder stern-chase; their keel is from ninety to 100 feet, and from twelve to twenty-four feet beam: they have one mast, a large square main-sail, and a jib-sail; are rowed by eighteen or twenty oars, and can carry 400 men each. The gun takes up one bow, and a bridge the other, along which the troops are to march. Those that carry horses have the fore part of the boat made to open when the men are to mount, and ride along a bridge.

FLATA Islands, a cluster of small islands of Scotland, near the south-east of North Uist, and one mile north-east of Rona.

FLATBUSH, a town of New York, capital of

ing's county, Long Island. It contains a ourt-house, a flourishing academy, a Dutch urch, and many elegant houses. On the 27th August, 1776, a bloody battle was fought ear it, between the Americans, under general utnam, and the British and Hessians, under rd Piercy, and generals Clinton and Grant, herein the latter were victorious. Flatbush is leasantly situated on a small bay, five miles outh by east of New York.

FLATMAN (Thomas), an English poet of me repute, born at London about 1633. He udied at the Inner Temple, and became a barster; but having a turn for the fine arts, he folowed his inclination, and acquired reputation oth as a poet and a painter. He published, in 682, a third edition of his poems and songs, edicated to the duke of Ormond; and a satirical omance in prose, on Richard Cromwell, soon fter the Restoration. In his youth he wrote a urious satire against matrimony, beginning,

Like a dog with a bottle tied close to his tail,
Like a Tory in a bog, or a thief in a jail.

He died about 1688.

FLAT'TER, *v. a.* } French, *flatter;* Teut.
FLAT'TERER, *n. s.* } *flechan;* Minsheu says, 'à
FLAT'TERY. } Lat. *flatare*, frequentative, *flare*, to blow': but the word has probably been formed from 'flat,' smooth: in Swed. *flat* is both smooth and indulgent; as in Scot. to *stroke* is also to flatter; and we know that flatterers of all countries are well acquainted with smooth things. To soothe, or please, with praise, false, or true; to gratify with obsequious, or servile compliment.

He *flattereth* himself in his own eyes, until his iniquity be found hateful. *Psalm* xxxvi. 2.

While either partye laboureth to be chiefe, *flattery* shall haue more place than plaine and faithfull aduyse. *Sir T. More.*

His cumbersome fetches are seldom behind:
His fetch is to *flatter*, to get what he can;
His purpose once gotten, a pin for thee then.
Tusser.

Alas! what are we kings?
Why do our gods place us above the rest,
To be served, *flattered*, and adored, till we
Believe we hold within our hands your thunder,
And when we come to try the power we have,
There's not a leaf shakes at our threatenings.
Beaumont and Fletcher.

I cannot *flatter* and look fair,
Smile in men's faces, smooth, deceive, and cog,
Duck with French nods, and apish courtesy.
Shakspeare.

When I tell him he hates *flatterers*,
He says he does; being then most *flattered*. *Id.*

Here feel we but the penalty of Adam,
The season's difference; as the icy fang,
And churlish chiding of the winter's wind;
Which when it bites and blows upon my body,
Ev'n 'till I shrink with cold, I smile and say
This is no *flattery*. *Id. As You Like It.*

A *flatterer* is compared to an ape, who, because she cannot defend the house like a dog, labour as an ox, or bear burdens as a horse, doth therefore yet play tricks, and provoke laughter. *Raleigh.*

Some praises proceed merely of *flattery*; and if he be an ordinary *flatterer*, he will have certain common attributes, which may serve every man: if he be a cunning *flatterer*, he will follow the arch *flatterer*, which is a man's self. But if he be an impudent *flatterer*, look wherein a man is conscious to himself that he is most defective, and is most out of countenance in himself, that will the *flatterer* entitle him to perforce. *Bacon.*

He, always vacant, always amiable,
Hopes thee, of *flattering* gales
Unmindful. *Milton.*

A consort of voices supporting themselves by their different parts makes a harmony, pleasingly fills the ears and *flatters* them. *Dryden's Dufresnoy.*

If we from wealth to poverty descend,
Want gives to know the *flatterer* from the friend.
Dryden.

Minds, by nature great, are conscious of their greatness,
And hold it mean to borrow aught from *flattery*.
Rowe.

After treating her like a goddess, the husband uses her like a woman; what is still worse, the most abject *flatterers* degenerate into the greatest tyrants.
Addison's Guardian.

I scorn to *flatter* you or any man. *Newton.*

Faction embroils the world, and every tongue,
Is moved by *flattery*, or with scandal hung. *Gay.*

Averse alike to *flatter* or offend. *Pope.*

The publick should know this: yet whoever goes about to inform them, shall be censured for a *flatterer*. *Swift.*

Such is the encouragement given to *flattery* in the present times, that it is made to sit in the parlour, while honesty is turned out of doors. *Flattery* is never so agreeable as to our blind side: commend a fool for his wit, or a knave for his honesty, and they will receive you into their bosom. *Fielding.*

Flattered crimes of a licentious age
Provoke our censure. *Young.*

See how they beg an alms of *flattery!*
They languish, O! support them with a lye. *Id.*

Of all wild beasts preserve me from a tyrant, and of all tame, a *flatterer*. *Johnson.*

Flattery corrupts both the receiver and the giver, and adulation is not of more service to the people than to kings. *Burke.*

I never framed a wish, or formed a plan,
That *flattered* me with hopes of earthly bliss,
But there I laid the scene. *Cowper.*

FLAT'ULENT, *adj.* } Old Fr. *flatulent;*
FLAT'ULENCY, *n. s.* } Ital. and Span. *flatu-*
FLATUOS'ITY, } *lento;* Lat. *flatulentus,*
FLAT'UOUS, *adj.* } *flatus*, a puff, or blast, of
FLA'TUS, *n. s.* } wind. Windy; turgid with air; hence, metaphorically, empty; vain; unmeaning: flatuosity, from the Fr. *flatuosité* is synonymous with flatulency: flatus is used both in the latter sense, for a puff, or breeze of wind; and, medically, for wind gathered in any of the cavities of the body.

Rhubarb in the stomach, in a small quantity, doth digest and overcome, being not *flatuous* nor loathsome; and so sendeth it to the mesentery veins, and, being opening, it helpeth down urine. *Bacon.*

The cause is *flatuosity*; for wind stirred, moveth to expel; and all purges have in them a raw spirit of wind, which is the principal cause of tension in the stomach and belly. *Id.*

You make the soul a mere *flatus*.
Clarke to Dodwell.

How many of these *flatulent* writers have sunk in their reputation, after seven or eight editions of their works. *Dryden.*

Flatulent tumours are such as easily yield to the pressure of the finger, but readily return, by their elasticity, to a tumid state again. *Quincy.*

Pease are mild and demulcent; but, being full of aerial particles, are *flatulent* when dissolved by digestion. *Arbuthnot.*

Vegetable substances contain a great deal of air, which expands itself, producing all the disorders of *flatulency*. *Id.*

To talk of knowledge from those few indistinct representations which are made to our grosser faculties, is a *flatulent* vanity. *Glanville's Scepsis.*

FLAVEL (John), a celebrated nonconformist divine, was educated at University College, Oxford; and became minister of Deptford, and afterwards of Dartmouth in Devonshire, where he resided the greater part of his life. Though he was generally respected at Dartmouth, yet, in 1685, several of the aldermen of that town, attended by the rabble, carried about a ridiculous effigy of him, to which were affixed the bill of exclusion and the covenant. He, therefore, thought it prudent to withdraw from the town. He died in 1691 aged sixty-one; after his death, his works, consisting of many pieces of practical divinity, were printed in 2 vols. folio. Among these, the most famous are, 1. Navigation Spiritualised; 2. Divine Conduct, or the Mysteries of Providence; and, 3. Husbandry Spiritualised; of all which there have been many editions.

FLAUNT, *n. s.* & *v. n.* Goth. *flugant*, flowing or fluttering (proudly). To flutter, to make a fluttering or pert show or appearance. A flaunt is any thing loosely worn; ostentatious display.

Let dainty wits cry on the sisters nine,
That, bravely masked, their fancies may be told,
Or Pindar's apes, *flaunt* they in phrases fine,
Enamelling with py'd flowers their thoughts of gold.
Sir P. Sidney.

How would he look to see his work so noble,
Wildly bound up, what would he say! or how
Should I in these my borrowed *flaunts* behold
The sternness of his presence! *Shakspeare.*

With ivy canopy'd, and interwove
With *flaunting* honeysuckle. *Milton.*

These courtiers of applause deny themselves things convenient to *flaunt* it out, being frequently enough fain to immolate their own desires to their vanity. *Boyle.*

Here, attired beyond our purse, we go,
For useless ornament and *flaunting* show:
We take on trust, in purple robes to shine,
And poor, are yet ambitious to be fine. *Dryden.*

You sot, you loiter about ale-houses, or *flaunt* about the streets in your new-gilt chariot, never minding me nor your numerous family. *Arbuthnot.*

Fortune in men has some small difference made;
One *flaunts* in rags, one flutters in brocade. *Pope.*

FLA'VOR, or FLA'VOUR, *n. s.* FLA'VOROUS, *adj.* FLA'VORED } French *flair* (scent); Welsh *flare* (an unpleasant smell); Lat. *flo*, *flare*; Greek, φλαω, to blow. Taste; pleasant or unpleasant savor; power of pleasing the taste; odor; fragrance.

Myrtle, orange, and the blushing rose,
With bending heaps, so nigh their bloom disclose,
Each seems to smell the *flavour* which the other blows.
Dryden.

Sweet grapes degenerate there, and fruits declined
From their first *flavourous* taste renounce their kind.
Id.

They have a certain *flavour*, at their first appearance, from several accidental circumstances, which they may lose if not taken early.
Addison's Spectator.

And *flavoured* Chian wines. *Dyer.*

FLAW, *n. s.* & *v. a.* FLAW'LESS, *adj.* FLAW'Y. } Sax. flοh; Gothic *flah*, from *fla*, to divide; and thus the Icel. *flagan*, to divide, gives *flag* the divided portion, see FLAG (a stone). Mr. H. Tooke considers flοh as the past participle of flean, to flay. A breach; crack; defect; hence, its causes, a sudden blast or blow; a tumult, or commotion (literally and figuratively); and its consequences, a fragment; piece separated or broken off: in conformity with the Gothic usage we write to flaw; for to break; crack; damage with fissures or by violence.

Oh, that that earth, which kept the world in awe,
Should patch a wall, to expel the Winter's *flaw*.
Shakspeare. Hamlet.

And this fell tempest shall not cease to rage,
Until the golden circuit on my head
Do calm the fury of this madbrained *flaw*.
Shakspeare.

This heart shall break into a thousand *flaws*
Or ere I weep. *Shakspeare. King Lear.*

But his *flawed* heart,
Alack, too weak the conflict to support,
'Twixt two extremes of passion, joy and grief,
Burst smilingly. *Id.*

Oh these *flaws* and starts,
Impostors to true fear, would become
A woman's story at a Winter's fire.
Id. Macbeth.

France hath *flawed* the league, and hath attached
Our merchants' goods. *Id. Henry VIII.*

Wool, new-shorn, being laid casually upon a vessel of verjuice after some time had drunk up a great part of the verjuice, though the vessel were whole, without any *flaw*, and had not the bung-hole open.
Bacon's Natural History.

As a huge fish, laid
Near to the cold weed-gathering shore, is with a north *flaw* fraid,
Shoots back; so, sent against the ground,
Was foiled Eurialus. *Chapman's Iliad.*

Bursting their brazen dungeon, armed with ice,
And snow, and hail, and stormy gust, and *flaw*,
Boreas, and Cæcias, and Argestes loud,
And Thrascias, rend the woods, and seas upturn.
Milton.

And laid her dowery out in law,
To null her jointure with a *flaw*. *Hudibras.*

We found it exceeding difficult to keep out the air from getting in at any imperceptible hole or *flaw*.
Boyle.

A star of the first magnitude, which the more high, more vast, and more *flawless*, shines only bright enough to make itself conspicuous. *Id.*

The cup was *flawed* with such a multitude of little cracks, that it looks like a white, not like a crystalline cup. *Id.*

The brazen cauldrons with the frosts are *flawed*,
The garment stiff with ice, at hearths is thawed.
Dryden.

The fort's revolted to the emperor,
The gates are opened, the portcullis drawn,
And deluges of armies from the town
Came pouring in: I heard the mighty *flaw*;
When first it broke, the crowding ensigns saw
Which choaked the passage. *Id. Aurengzebe.*

Traditions were a proof alone,
Could we be certain such they were, so known:
But since some *flaws* in long descents may be,
They make not truth, but probability. *Dryden.*
So many *flaws* had this vow in its first conception.
Atterbury.

Their judgment has found a *flaw* in what the generality of mankind admires. *Addison's Spectator.*

He that would keep his house in repair, must attend every little breach or *flaw*, and supply it immediately, else time alone will bring all to ruin. *Swift.*

Whether the nymph shall break Diana's law,
Or some frail China-jar receive a *flaw*. *Pope.*

An adversary, on the contrary, makes a stricter search into us, discovers every *flaw* and imperfection in our tempers. *Mason.*

FLAWN. Sax. flena; Fr. *flan*, i. e. flowing. A custard or cheesecake; a soft or flowing kind of pudding.

Fill oven full of *flawns*; Ginny pass not for sleep,
To-morrow thy father his wake-day will keep.
Tusser.

FLAX, *n. s.* / FLAX'-COMB, / FLAX'-DRESSER, / FLAX'EN, *adj.* / FLAX Y. } Sax. flеax, flex; Goth. *fleaks*; Teut. *flachs*; Belg. *vlasch*. Quære from the Goth. *floa*; Sax. flowan, to flow, from its fibrous texture. The plant from which linen is made; the fibres of that plant prepared for the spinner: flax-comb is the instrument whereby it is cleansed: and flax-dresser he who cleanses or prepares it: flaxen, and flaxy, made of, flowing like, or being of the color of, flax.

The four colours signify four virtues. The *flaxy* having whiteness appertains to temperance. *Sandys.*

I'll fetch some *flax*, and whites of eggs,
T' apply to's bleeding face.
Shakspeare. King Lear.

Then on the rock a scanty measure place
Of vital *flax*, and turn the wheel apace,
And turning sung. *Dryden's Ovid.*

I bought a fine *flaxen* long wig. *Addison.*

The best materials for making ligatures are the *flaxen* threads that shoemakers use. *Sharp's Surgery.*

The matron, at her nightly task,
With pensive labour draws the *flaxen* thread.
Thomson's Winter.

Five sister-nymphs with dewy fingers twine
The beamy *flax*, and stretch the fibre-line;
Quick eddying threads from rapid spindles reel,
Or whirl with beating foot the dizzy wheel. *Darwin.*

FLAX, the linum usitatissimum of Linné, has been cultivated in this country, and in most civilised countries, from time immemorial, both for its fibre in making thread, and for its seed, occasionally, as yielding a serviceable oil. The common flax has scarcely any varieties worth remarking. The blue or lead-colored is mentioned by Marshall as being cultivated in Yorkshire; and professor Thaer mentions a finer and coarser variety; he also, as well as some other writers, has tried the *linum perenne*, but the fibre is coarser, though strong, and with difficulty detached.

Flax, for fine lawn and cambric, is recommended to be sown on a rich light soil, previously well prepared by ploughing and made level like a garden. As the soil cannot be too rich, it ought to have at least double the quantity of seed commonly sown by farmers; and, when sown in dry weather, the ground should be immediately rolled. The lint should be carefully weeded when about three inches high; after which forked sticks are to be stuck in the ground, so as to receive poles from ten to fifteen feet long, six or seven inches above the lint. Each row of poles should be three or four feet asunder, so as to support a layer of brush-wood, laid as thick and level as possible. The brush-wood may be of any sort except oak, which tinges the lint; but none of the branches must be left sticking higher than eighteen or twenty inches above the lint. The brush-wood, when the flax springs up, catches it by the middle, and prevents it from lying down and rotting; infallible consequences of sowing thick upon rich ground. It also keeps it straight, moist, and soft at the roots; and, by keeping it warm and shaded from the sun, greatly promotes its length. It must be pulled as soon as the seed is fully formed, before the lint turns yellow; and thus, instead of that coarse hardness, which flax has when let stand till fully ripe, it acquires a fine silky property. It must be pulled above the brush-wood, and every handful laid upon it as soon as possible: in fine weather it may be left four or five hours in that manner; after which it should be conveyed to a shade near a barn, where it may be spread for four or five days, always putting it in the barn at night, or on the appearance of rain. When in the barn, every precaution must be used to prevent it from heating; and if it happen to get rain or wet, in the course of these operations, which must be continued till it is perfectly dry, it should be allowed to dry in the open air; for, if put under cover when wet, it is apt to turn black, which must be carefully guarded against, as this is a principal cause of those bars so much complained of by bleachers. In all these operations, the roots should be kept as even as possible; and if any coarse lint be discovered it should be separated from the rest. As it is a principal object to preserve the lint entire, or unbroken, the bolls are beat off with a round mall or beetle. When it is intended to water it immediately, it is next tied up in bundles about as large as a man may grasp in his two hands. The pit ought to be dug three or four months before it is used, about five feet deep and seven or eight broad, the length according to the quantity of flax to be watered. The water should be soft, and free of any metallic ore; and no flood or foul water should be allowed to enter the pit; but a small stripe of clear water should always run in and off from it while the lint is in it. Along the sides of the pit, hooks of this form ⊐ must be driven in at about five feet distance, so as to hold a long pole under the surface of the water; after which the lint must be made up into bundles, laying the sheaves head to head, and making each to overlap the other about one-third. When they are thus built, till the bundle is about four feet or four feet and a half high, it is then tied in the middle and at each root end, wrapped in straw and put into the water, with the thin or broad side undermost. The lint being thus put into the water in distinct bundles, so as they may be easily taken out, cross poles are put in with their ends under the long ones in each side of the pit, so as to keep the lint three or four inches under water, but without any of it touching the ground.

The soils generally most proper for flax, besides the alluvial kinds, are deep and friable loams, and such as contain a large proportion of vegetable matter in their composition. Strong clays do not answer well, nor soils of a gravelly or dry sandy nature. But, whatever be the kind of soil, it ought neither to be in too poor nor too rich a condition; because, in the latter case, the flax is apt to grow too luxuriant, and to produce a coarse sort; and, in the former case, the plant, from growing weakly, affords only a small produce. If there be water at a small depth below the surface of the ground, it is thought by some still better, as is the case in Zealand, which is remarkable for the fineness of its flax, and where the soil is deep and rather stiff, with water almost every where, at the depth of a foot and a half or two feet underneath it. It is said to be owing to the want of this advantage, that the other provinces of Holland do not succeed equally well in the culture of this useful plant; not but that fine flax is also raised on high lands, if they have been well tilled and manured, and if the seasons are not very dry. It is remarked, in the letters of the Dublin Agricultural Society, that moist stiff soils yield much larger quantities of flax, and far better seed, than can be obtained from light lands; and that the seed secured from the former may, with proper care, be rendered full as good as any that is imported from Riga or Zealand. M. du Hamel, however, thinks that strong land can hardly yield such fine flax as that which grows on lighter ground.

Mr. Donaldson observes, that flax is sown after all sorts of crops, but is found to succeed best on lands lately broken up from grass. And that in Scotland, the most skilful cultivators of flax generally prefer lands from which only one crop of grain has been taken, after having been several years in pasture. When such lands have been limed or marled, immediately before being laid down to grass, the crop of flax seldom or never misgives, unless the season prove remarkably adverse to it. It succeeds in general much better after green crops, than those of the grain kind.

The land, in order to render it fit for the growth of this sort of crop, requires to be rendered perfectly fine and mellow, by being repeatedly ploughed over, and broken down by severe harrowings. When grass land is to be broken up for this crop, it should be done in the autumn, and left exposed to the influence of the atmosphere until the early part of the following year, when it should be well pulverised and broken down by heavy harrowing; then, in the course of a week or two, ploughed again, in which state it may remain till the period of putting in the seed, when another light harrowing should be given, and the ploughing performed afterwards by a very light furrow. But in cases where the crop is sown after grain, or other crops that have the property of keeping the land clean from weeds, the first ploughing need not be given till January, when it may remain in that situation until it becomes pretty dry in the early spring, being then well reduced by good harrowing and rolling; and, after continuing in that state about a fortnight, the seed may either be immediately put in, or another light ploughing and harrowing be first given.

With regard to the choice of seed, the same writer states, that that which is of a bright brownish color, oily to the feel, and at the same time weighty, is considered the best. Linseed, imported from various countries, is employed. That brought from Holland is, however, in the highest estimation, as it not only ripens sooner than any other that is imported, but also produces greater crops, and flax of that quality which best suits the chief manufactures of this country. American seed produces in common fine flax; but neither the quantity of flax, nor of the pods, provincially the 'bolls,' which contain the seeds, is so large as the produce from Dutch linseed. The Riga seed yields a very coarse sort of flax, but a greater quantity of seeds than any other. It is common in some parts of Scotland to sow seeds saved from the crop the preceding year, especially when the crop was raised from seed imported from Holland. The success of this practice is found to depend greatly on changing the seed from one sort of soil to another of an opposite nature; but the saving in the expense of purchasing that sort of seed, in place of what is newly imported from Holland, is so inconsiderable, and the risk of the crop misgiving so much greater in the one case than in the other, that it is supposed those only who are ignoraut of the consequences, or who are compelled from necessity, are chargeable with this act of ill-judged parsimony in the business.

In Ireland the cultivators of flax prefer the American seed for the lighter and more elevated and exposed lands; but the Baltic or Dutch for those which are of a heavier quality. The seed of home produce is often sown for white flax in Yorkshire; but the Baltic sort is mostly preferred where seed is the object; which, for the ensuing year, and one or two afterwards, is found to answer as well as white flax. But it is highly probable that, if that which has been collected from the perfectly ripened seed of our own growth be made use of, it will be equally productive in both the flaxy substance and the quantity of seed, and the former be equally valuable for all the purposes of the manufacturer.

Proportion of Seed.—In respect to the quantity of seed used, it varies in different places according to the circumstances of the soil, the method of sowing, and the uses to which the crop is to be applied; but from two bushels, to two bushels and a half, the English statute acre, is the ordinary allowance. In determining the proper quantity necessary for the acre, it is requisite to pay great attention to the condition of the land. When the land is rich and fertile, and the season so favorable that it can be got thoroughly pulverised, if too much seed is sown the crop is in great danger of lodging; and when that happens, particularly before the pods are formed, the flax proves inconsiderable in quantity, and very inferior in quality. When cultivated in the drill mode, at narrow distances, a much less quantity will be sufficient than in other cases; and where the intervals are large, scarcely one-half the quantity is required. When the crops are intended for seed, in whatever

anner the sowing is performed, much less will necessary, than where flax is the main object the grower.

The *time of sowing* it must depend much upon e soil and situation; but the ordinary season sowing flax-seed is from the middle of March the middle or end of April; but the last week March, and the first ten days of April, are eemed the best times; and accordingly within ese periods the greatest quantity of flax-seed is wn in this country. In the county of York, here this sort of crop is grown on land broken from grass, the seed is commonly sown before e second week in April, where it can possibly done; while, on such lands as have been in a evious state of tillage, the sowing is frequently ferred a week or ten days longer. Wherever can be safely practised, early sowing has the vantage of getting the flax plants to cover the rface of the land well, before they can run uch risk of injury from the rising of weeds, or e parching effects of heat. In some of the uthern counties of Europe, however, the husndmen who raise flax, sow part of their seed September and October; so that the plants hich spring from thence remain of course in e ground all the winter; and this may be a dicious practice in those places, because plants hich have not covered the earth well before the mmer heats come on are apt to be parched r the heat and drought which usually prevail that season. They sow linseed again also in e spring; but the latter does not yield so large crop; the flax, however, which it produces is ore esteemed, because it is finer than that wn in autumn. M. du Hamel seems indeed think, that the autumnal sowing yields the st seed; but however that may be, in places here the winter is apt to be severe, and where e flax, which is but a tender plant, would in ourse be in danger of being destroyed during at season, almost all the flax is sown about the d of March, or in the beginning of April, as ready stated.

The land which is intended for flax crops ould be brought to an exceeding fine tilth, in e way directed above, before the seed is put . When pasture lands are broken up, in order their being sown with flax, they must be well rought during several months, before they will e fit for producing such crops, in the manner st described. To defray the expense of this ulture, some other crops may be got off the nd in the mean time, especially of such plants s do not occupy it long, and particularly of hose which are remarkably benefited by frequent stirring of the earth whilst they grow; uch as beans, peas, turnips, &c., because these epeated stirrings render the mould fine and oose, and help to kill the weeds, which would therwise do great damage to the flax. It is asserted, that the Livonians, when they clear woodands, burn the wood upon them, then plough hem, and in this state prefer them to any other ind of soil for flax crops. If the land which is ntended for flax be stiff, great care should be aken not to work it when it is wet, for fear of kneading it; but it is often an excellent plan to work it deeply before winter, when dry, laying it up in very high ridges, in order that the winter frosts may the more effectually moulder and loosen its parts. In the month of February, where the land is not too wet, some very rotten dung should be laid on, and immediately covered over with the mould. The seed should afterwards, at the proper season, be sown, and harrowed in with a light or bush harrow, so as not to bury it too deep. As this, when young, is a very tender plant, and is more easily injured and checked in its progress by weeds than any other that is usually cultivated in the field, it is indispensably necessary that the danger of injury in this way should be well guarded against, in order to save future trouble and expense.

Where the principal object of the grower is flax, the most general method of putting in the crops is that of sowing them broadcast over the surface of the land. In performing the business, much care is necessary that the seed be dispersed as evenly as possible over the ground, to prevent the plants rising in an unequal or tufty manner. It should be afterwards covered in by regular harrowing, once or twice in a place, with a light common or bush-harrow, as just noticed, not covering it in too deep. But, where the seed constitutes the chief intention of the cultivator, it is contended by some that the drill mode is preferable, as requiring much less seed in sowing, and affording a much better and more abundant produce. Besides, the smoothness and weight of the seed render it extremely proper for being drilled; and the crops can be kept clean with greater facility.

In this method, the distances of the rows or drills should vary according to the circumstances of the soil, and the manner in which the crops are to be kept clean. Where the hand-hoe is to be chiefly depended upon, narrow distances may be proper, as ten or twelve inches; but, where the work is to be principally executed by the horse-hoe or cultivator, larger intervals may be more suitable, as those of eighteen or twenty inches. Slight harrowing and rolling are sometimes afterwards necessary, especially the latter, in dry seasons. It has been observed that thick sown flax runs up in height, and produces fine soft flax; but that when sown thin it does not rise to such a height, but spreads out more, sending off a greater number of side branches, which produce a great abundance of seed which is much better filled, more plump and heavy than that which is produced from thick-sown flax crops. Flax crops cultivated in this way are not so liable to be beaten down in bad weather, the stems being stronger and better fortified by the more free admission of sun and air among them; and they are not so much exposed to danger in weeding or cleaning the rows.

Where flax crops are sown in the broadcast method, they are seldom much attended to afterwards: it is, however, highly useful and necessary that they should have one good hand-hoeing, or weeding, as soon as ever the crop is sufficiently up; care being taken not to injure the plants by too much treading amongst them. In the drill manner of sowing, the after-culture of the crops must be regulated by the distance of the rows; but they may in general be cleaned

from weeds, and kept in vigorous growth, by proper implements and horse labor. The ground between the rows is mostly wrought by a proper horse-hoe, cultivator, or small hoe-plough, taking care that none of the mould is thrown against the rows; to prevent which, the intervals may be hoed with a triangular harrow, having a proper number of iron tines in it, and guided by two handles fixed behind. By these handles the tines are made to go deeper or shallower at pleasure; and if the intervals are cultivated with this instrument, beginning before the earth is become stale, and while the weeds are small, the land may be kept very clean, and in fine tilth, at much less expense than hand-hoeing: for one horse is sufficient for this work. A great deal may be done in a day; and by a frequent repetition of the hoeing, especially when the earth is dry, the weeds may be so effectually kept down as never to rise to any height. But the rows must be weeded by hand. With some it has been a custom to sow, with their linseed, either annual or perennial grass-seeds, when they intend to lay the land down for pasture after the crop is taken off. But as grass plants grow but weakly under the flax, it is a practice by no means to be recommended. No other sort of crop should, however, be ever grown with this, as much injury may be done by it. Flax is sometimes damaged by insects, when it it about three or four inches high. These, it is said, may be destroyed by a slight strewing of soot, ashes, &c., over the crop. At all events, this dressing will give vigor to the flax though it may not kill the insects. If any weeds appear afterwards among the flax, as is almost always the case, they must be thoroughly rooted out: and, that the flax may be as little damaged as possible in the doing of this, the weeders should work as carefully as possible. The finest flax is most liable to be laid, particularly in countries subject to storms. To guard against this accident, some people run across their flax-fields slender poles fixed to stakes: but a better method is to run small ropes across the field, both lengthwise and breadthwise, where necessary; for these being fastened where they intersect one another, and supported by stakes at due distances, form a kind of network, which is proof against almost every accident that can happen from tempestuous weather. These practices are, however, both troublesome and expensive, and are seldom or ever necessary where the crops have not been sown too thick on the ground.

When the crop grows so short and branchy, as to appear more valuable for seed than flax, it ought not to be pulled before it be thoroughly ripe; but if it grows long and not branchy, the seed should be disregarded, and all the attention given to the flax. In the last case it ought to be pulled after the bloom has fallen, when the stalk begins to turn yellow, and before the leaves fall, and the bolls turn hard and sharp-pointed. When the stalk is small, and carries few bolls, the flax is fine; but the stalk of coarse flax is gross, rank, branchy, and carries many bolls. When the flax has fallen, and lies, such as lies ought to be immediately pulled, whether it has grown enough or not, as otherwise it will grow unequally, so that some parts are ready for pulling before other parts; only what is ready should be pulled, and the rest should be suffered to stand till ready. The flax-raiser ought to be at pains to pull, and keep by itself, each different kind of lint which he finds in his field; what is both long and fine, by itself; what is both long and coarse, by itself; what is both short and fine, by itself; what is both short and coarse, by itself; and in like manner every other kind by itself that is of the same size and quality. If the different kinds be not thus kept separate, the flax must be much damaged in the watering and the other succeeding operations. What is commonly called under-growth may be neglected as useless. Few persons that have seen pulled flax, are ignorant of the method of laying it in handfuls across each other; which gives the flax sufficient air, and keeps the handfuls separate and ready for the rippler.

Donaldson observes, that a crop of flax frequently grows short, and runs out a great number of seed-bearing branches. When this is the case, the seeds, not the flax, ought to be the farmer's chief object, and the crop should be allowed to stand till the seeds are in a great measure perfected. But that when the crop thrives, and is likely to become more valuable for the flax than the seeds, it should be pulled soon after the bloom drops off, and before the pods turn hard and sharp in the points. When flax is grown for its fibre, Brown considers it the safest course to take it a little early, any thing wanting in quantity, being, in this way, made up by the superiority of quality.

After pulling, if the flax is to be regarded more than the seed, it should lie some hours upon the ground to dry a little, and so gain some firmness, to prevent the skin or harle, which is the flax, from rubbing off in the rippling; an operation which ought by no means to be neglected, as the bolls, if put into the water along with the flax, breed vermin there, and otherwise spoil the water. The bolls also prove very inconvenient in the grassing and breaking. In Lincolnshire and Ireland, they think that rippling hurts the flax; and, therefore, in place of rippling, they strike the bolls against a stone. The handfuls for rippling should not be great, as that endangers the lint in the rippling comb. After rippling, the flax-raiser will perceive that he is able to assort each size and quality of the flax by itself more exactly than he could before.

If the flax be more valuable than the seed, it ought by no means to be *stacked* during winter; for its own natural juice assists it greatly in the watering; whereas, if kept long unwatered, it loses that juice and the harle adheres so much to the boon, that it requires longer time to water, and even the quality of the flax becomes thereby harsher and coarser. Besides, the flax stacked up over year, is in great danger from vermin and other accidents; the water in spring is not so soft and warm as in harvest; and nearly a year is thereby lost of the use of the lint: but if the flax be so short and branchy as to appear most valuable for seed, it ought, after pulling, to be stooked and dried upon the field, as is done with corn; then stacked up for winter, rippled in

spring; and, after sheeling, the seed should be well cleaned from all bad seeds, &c.

With regard to *watering* flax, a running stream wastes the lint, makes it white, and frequently carries it away. Both rivers and lochs water the flax quicker than canals. But all flax ought to be watered in canals, say our northern neighbours, which should be digged in clay ground if possible, as that soil retains the water best; but if a firm retentive soil cannot be got, the bottom or sides of the canal, or both the bottom and sides, may be lined with clay; or instead of lining the sides with clay, which might fall down, a ditch may be dug without the canal, and filled with clay, which will prevent both extraneous water from entering, and the water within from running off. A canal of forty feet long, six broad, and four deep, will generally water the growth of an acre of flax. It ought to be filled with fresh soft water from a river or brook, if possible, two or three weeks before the flax is put in, and exposed all that time to the heat of the sun. The greater way the river or brook has run, the softer, and therefore the better, will the water be. Springs, or short runs from hills, are too cold, unless the water is allowed to stand long in the canal. Water from coal or iron is very bad for flax. A little of the powder of galls, thrown into a glass of water, will immediately discover if it comes from minerals of that kind, by turning it into a dark color, more or less tinged in proportion to the quantity of vitriol it contains. The canal ought not to be under shade; which, besides keeping the sun from softening the water, might make part of the canal cooler than other parts, and so water the flax unequally. The flax-raiser will observe, when the water is brought to a proper heat, that small plants will be rising quickly in it, numbers of small insects and reptiles will be generating there, and bubbles of air rising on the surface. If no such signs appear, the water must not be warm enough, or is otherwise unfit for flax. Moss holes, when neither too deep, nor too shallow, frequently answer well for watering flax, when the water is proper, as before described. The proper season for watering flax is from the end of July to the end of August. The advantage of watering flax as soon as possible after pulling has been already mentioned. The flax being sorted after rippling, as before mentioned, should next be put in beets, never larger than a man can grasp with both his hands, and tied very slack with a band of a few stalks. Dried rushes answer exceedingly well for binding flax, as they do not rot in the water, and may be dried and kept for use again. The beets should be put into the canal slope-ways, or half standing upon end, the root end uppermost. Upon the crop ends, when uppermost, there frequently breed a deal of vermin, destructive of the flax, which is effectually prevented by putting the crop end downwards. The whole flax in the canal ought carefully to be covered from the sun with divots; the grassy side of which should be next the flax, to keep it clean. If it is not thus covered, the sun will discolor the flax, though quite covered with water. If the divots are not weighty enough to keep the flax entirely under water, a few stones may be laid above them. But the flax should not be pressed to the bottom. When the flax is sufficiently watered, it feels soft to the gripe, and the harle parts easily with the boon or show, which last is then become brittle, and looks whitish. When these signs are found, the flax should be taken out of the water, beet after beet; each gently rinsed in the water, to cleanse it of the nastiness which has gathered about it in the canal; and, as the lint is then very tender, and the beet slackly tied, it must be carefully and gently handled. Great care ought to be taken that no part be overdone; and as the coarsest waters soonest, if different kinds be mixed together, a part will be rotted, when the rest is not sufficiently watered. When lint taken out of the canal is not found sufficiently watered, it may be laid in a heap for twelve, eighteen, or twenty-four hours, which will have an effect like more watering; but this operation is nice, and may prove dangerous in unskilful hands. After the flax is taken out of the canal, fresh lint should not be put a second time into it, until the former water be run off, and the canal cleaned and supplied with fresh water. Short heath is the best field for grassing flax; as, when wet, it fastens to the heath, and is thereby prevented from being blown away by the wind. The heath also keeps it a little above the earth, and so exposes it the more equally to the weather. When such heath is not to be got, links or clean old lea ground is the next best. Long grass grounds should be avoided, as the grass growing through the lint frequently spots, tenders, or rots it; and grounds exposed to violent winds should also be avoided. The flax, when taken out of the water, must be spread very thin upon the ground; and, being then very tender, it must be gently handled. The thinner it is spread the better, as it is then the more equally exposed to the weather. But it ought never to be spread during a heavy shower, as that would wash and waste the harle too much, which is then excessively tender, but soon after becomes firm enough to bear the rain, which, with the open air and sunshine, cleans, softens, and purifies the harle to the degree wanted, and makes it blister from the boon. In short, after the flax has got a little firmness by being a few hours spread in dry weather, the more rain and sunshine it gets the better. If there be little danger of high winds carrying off the flax, it will be much the better for being turned about once a-week. If it is not to be turned, it ought to be very thinly spread. The spreading of flax and hemp requires a deal of ground, and enriches it greatly. The skilful flax-raiser spreads his first row of flax at the end of the field opposite to the point whence the most violent wind commonly comes, placing the root ends foremost; he makes the root ends of every other row over-lap the crop ends of the former row three or four inches, and binds down the last row with a rope; by which means the wind does not easily get below the lint to blow it away: and, as the crop ends are seldom so fully watered as the root ends, the aforesaid over-lapping has an effect like giving the crop ends more watering. Experience only can fully teach a person the signs of flax being sufficiently grassed:

then it is of a clearer color than formerly; the harle is blistered up, and easily parts with the boon, which is then become very brittle. The whole should be sufficiently grassed before any of it is lifted; for, if a part be lifted sooner than the rest, that which remains is in great danger from the winds. A dry day ought to be chosen for taking up the flax; and, if there is no appearance of high wind, it should be loosed from the heath or grass, and left loose for some hours, to make it thoroughly dry. As a great quantity of flax can scarcely be all equally watered and grassed, and as the different qualities will best appear at lifting the flax off the grass, therefore at that time each different kind should be gathered together, and kept by itself; that is, all of the same color, length, and quality. The smaller the beets lint is made up in, the better for drying, and the more convenient for stacking, housing, &c., and in making up these beets, as in every other operation upon flax, it is of great consequence that the lint be laid together as it grew, the root ends together, and the crop ends together.

In the Gentleman's Magazine for June, 1787, a method of watering flax is proposed whereby the labor would be shortened; the strength of the flax probably increased; the color rendered much finer; the operation of bleaching rendered safer and less tedious; a very disagreeable nuisance suppressed; the linen manufacture much improved; and the national income increased many thousand pounds a-year. The ingenious author, after pointing out the many inconveniences of the present method of soaking the flax in rivulets, ponds, and stagnant pools, such as the offensive smell and inky tinge arising from it in ponds, the pernicious effects of the noxious infusion, by destroying the fish in rivulets, the hurt done to cattle by preventing them from drinking the water, however thirsty, the danger of bad consequences even to the health of men, from the disagreeable effluvia, &c., proposes to improve as well as shorten the process, by plunging the new flax, after it is rippled, into scalding water, which, in extracting the vegetative sap, would do, in five minutes, more than cold water would do in a fortnight, or perhaps at all. This he illustrates analogically, by the familiar examples of infusing tea, and blanching rough almonds, in scalding water and not in cold water. Boiling water, he thinks, would also clear the new flax from many impurities, which, when not removed till it be spun into yarn, are then removed with difficulty, and loss of substance. Upon the new system, the act of bleaching would begin immediately after rippling; and a little done then might save much of what is generally done after spinning and weaving. To spin dirty flax, with a view of cleaning it afterwards, appears to be the same impropriety as if we were to reserve part of the dressing given to leather till after it is made into a glove. Should the plunging of the flax into the boiling water not suffice to make the boon brittle enough, then the common watering might be added; but in that case probably half the time usually given to this watering would suffice, and the flax might then be laid in clear rivulets, without any apprehension of its infecting the water and poisoning the fish, or of being discolored itself; for the boiling water, into which it had been previously put, would have extracted all the poisonous vegetative sap, which I presume is what chiefly discolors the flax, or kills the fish. On the supposition that the use of boiling water in the preparation of flax may be advantageous, I can recollect at present but one objection against its being generally adopted. Every flax-grower, it may be said, could not be expected to have conveniences for boiling water sufficient for the purpose; the consumption of water would be great; and some additional expense would be incurred. In answer to this, I presume any additional expense would be more than reimbursed by the better marketable price of the flax. In a large cauldron a great deal of flax might be dipt in the same water, and the consumption perhaps would not be more than a quart to each sheaf. Even a large household pot would be capable of containing one sheaf after another; and the whole objection would be obviated were the practice to prevail with us, as in Flanders and Holland, that the flax-grower and the flax-dresser should be two distinct professions. He concludes with recommending to those who are inclined to make experiments, not to be discouraged by the failure of one or two trials. Perhaps the flax, instead of being just plunged into the scalding water, ought to be kept in it five minutes, perhaps a quarter of an hour, perhaps a whole hour. Such boiling, when in this state, might in return save several hours boiling in the article of bleaching. It is not probable that the boiling of the flax with the boon in it would prejudice the harle; for, in the course of its future existence, it is made to be exposed twenty or forty times to this boiling trial; and, if not detrimental in the one case, it is to be presumed it would not be detrimental in the other. Perhaps, after the boiling, it would be proper to pile up the flax in one heap for a whole day, or half a day, to occasion some fermentation: or immediately after the boiling it might be proper to wash it with cold water. The great object, when the flax is pulled, is to get the harle from the boon with as little loss and damage as possible; and if this is accomplished in a more complete manner than usual, considerable labor and expense will be saved in the future manufacturing of the flax. On this account much more would be gained than lost, were the two or three last inches of the roots of the stems to be clipt off, previously to the flax being either watered or boiled. When the flax is watered, care should be taken not to spread it out dry, when there is a hazard of its being exposed in its wet state to frost. This method appears extremely plausible, and certainly merits a fair trial.

Hill and Bundy's machine for breaking flax and hemp, is the latest improvement of this kind. It seems to have been suggested by Mr. Lee as far back as 1810. It is portable, and may be worked in barns or out-houses of any kind; a great part of the work is so light that it may be done by children and infirm persons; and such is the construction and simplicity of the machine, that no previous instruction o practice is required. The woody part is re

ved by a very simple machine; and, by sin gthrough a second machine equally simple, flax may be brought to any degree of fines, equal to the best used for lace or cambric in nce and the Netherlands. The original length the fibre, as well as its strength, remains unpaired; and the difference of the produce is

mmense, being nearly two-thirds; one ton of ix being produced from four tons of stem. he expense of working each ton obtained by is method is only five pounds. The glutinous atter may be removed by soap and water only, hich will bring the flax to such perfect whiteess, that no further bleaching is necessary, even fter the linen is woven; and the whole process f preparing flax may be completed in six ays.

The produce of flax in seed is generally, says Ir. Loudon, from six to eight sometimes, as high s ten or twelve, bushels per acre; and the rice depends, in a great measure, on that of oreign seed imported; as, when sold to oilnakers, it is generally about one-half of that of Dutch seed sold for the purpose of sowing. The rice of home-cultivated linseed is considerably dvanced of late in some of the southern and western counties of the kingdom, in proportion o what it is in those of the northern, owing to he circumstance of its being much used as food or fattening cattle. The average price of the linseed cultivated in the kingdom at large, cannot, it is supposed, be rated higher than from three to four shillings the bushel.

Flax, Carolina. See Polypremum.

Flax, Earth. See Amianthus.

Flax Plant, New Zealand. See Phormium.

Flax, Toad. See Antirrhinum.

Flax-Dressing. For many ages it was the practice to separate the boon or core from the flax, which is the bark of the plant, by hand methods. First, for breaking the boon, the stalks in smal parcels were beaten with a mallet; or, more dexterously, the break was used thus: The flax being held in the left hand across three under teeth, or swords of the break, the upper teeth were with the right hand quickly and often forced down upon the flax, which was artfully shifted and turned with the left hand. Next, for clearing the flax of the broken boon, the workman with his left hand held the flax over the stock, while with his right hand he struck or threshed the flax with the scutcher. These methods of breaking and scutching the flax being slow, and very laborious, a water-mill was invented in Scotland about the year 1750; which, with some late improvements, makes great despatch, and in skilful and careful hands gives satisfaction. It has been generally constructed to break the boon by three dented rollers, placed one above the other. The middle one, being forced quickly round, takes the other two along with it; and one end of the handfuls of the flax being by the workmen directed in between the upper and middle rollers, the flax is immediately drawn in by the rollers; a curved plate of tin behind the rollers directs the flax to return again between the middle and undermost rollers; —and thus the operation is repeated until the boon be sufficiently broken. Great weights of timber or stone, at the end of levers, press the upper and under rollers towards the middle one. The scutching is next carried on by the mill in the following manner:—Four arms, something like the hand-scutchers, project from a perpendicular axle; a box around the axle encloses these projecting scutchers; and this box is divided among the workmen, each having sufficient room to stand and handle his flax, which, through slits in the upper part and sides of the box, they hold in to the stroke of the scutchers; which, moving round horizontally, strike the flax across or at right angles, and so thresh out or clear it of the boon. The breaking of the flax by rollers is scarcely subject to any objection, but that it is dangerous to workmen not sufficiently on their guard, who sometimes allow the rollers to take hold of their fingers, and thereby their whole arm is instantly drawn in: thus many have lost their arms. To avoid this danger, a break, upon the principle of the hand break, has been lately adapted to water machinery, and used in place of rollers. The horizontal stroke of the scutchers was long thought too severe, and wasteful of the flax; but very careful experiments have discovered that the waste complained of must be charged to the unskilfulness or negligence of the workmen, as in good hands the mill carries away nothing but what, if not scutched off, must be taken off in the heckling with more loss both of time and flax. But to obviate this objection of the violence of the horizontal scutchers, an imitation of hand scutching has lately been applied to water. The scutchers then project from an horizontal axle, and move like the arms of a check-reel, striking the flax neither across nor perpendicularly down, but sloping in upon the parcel exactly as the flax is struck by the hand-scutcher. This sloping stroke is got by raising the scutching-stock some inches higher than the centre of the axle; and by raising or lowering the stock, over which the flax is held, or screwing it nearer to or farther from the scutchers, the workman can temper or humor the stroke almost as he pleases. A lint mill, with horizontal scutchers upon a perpendicular axle, requires a house of two stories, the

rollers or break being placed in the ground story, and the scutchers in the loft above; but a mill with vertical scutchers on an horizontal axle, requires but one ground story for all the machinery. Another method of breaking or scutching flax, more expeditious than the old hand methods, and more gentle than water mills, has also been lately invented in Scotland. It is much like the break and scutcher giving the sloping stroke last described, moving by the foot. The treadle is remarkably long, and the scutchers are fixed upon the rim of a fly-wheel. The foot break is also assisted in its motion by a fly. These foot machines are very useful where there are no water-mills, but they are far inferior to the mills in point of expedition.

The next operation that flax undergoes is heckling. The heckle is firmly fixed to a bench before the workman, who strikes the flax upon the teeth of the heckle, and draws it through the teeth. To persons unacquainted with that kind of work this may seem a very simple operation; but, in fact, it requires as much practice to acquire the sleight of heckling well, and without wasting the flax, as any other operation in the whole manufacture of linen. They use coarser and wider-teethed heckles, or finer, according to the quality of the flax; generally putting the flax through two heckles, a coarser one first, and next a finer one. See HECKLING.

Flax for cambric and fine lawn, thread, and lace, is dressed in a manner somewhat different. It is not scutched so thoroughly as common flax; which from the scutch proceeds to the heckle, and from that to the spinner: whereas, this fine flax, after a rough scutching, is scraped and cleansed with a blunt knife upon the workman's knee covered with his leather apron; from the knife it proceeds to the spinner, who, with a brush made for the purpose, straightens and dresses each parcel just before she begins to spin it.

FLAXMAN (—), Esq. R.A. and professor of sculpture in the Royal Academy, was born in 1754, and died at his house in Buckingham Street, Fitzroy Square, London, December 7th, 1826. The particulars of his interesting life we hope to be able to furnish from more authentic documents than have yet (May, 1827), been published, probably in our article SCULPTURE, before this work closes: at present nothing in detail has appeared.

Mr. Flaxman's fame, which on the Continent of Europe stands higher than that of any of our countrymen who have devoted themselves to the fine arts (with the exception, perhaps, of Sir Joshua Reynolds), rests principally on his designs after the Iliad and Odyssey of Homer, Æschylus, Hesiod, and Dante. He is particularly mentioned by the illustrious Augustus Schlegel as 'a bright example among the few men of true genius of whom England at the present day can boast.' The dowager countess Spencer is said to be the patroness to whom the world is indebted for fostering his early genius.

The president of the Royal Academy, at a general assembly of the academicians, held in the month in which this distinguished member of their body died, thus eulogises his memory. 'Mr. Flaxman's genius, in the strictest sense of the words, was original and inventive. His taste led him, in early life, to the study of the noblest relics of antiquity, and a mind, though not then of classical education, of classic bias, urged him to the perusal of the best translations of the Greek philosophers and poets; till it became deeply imbued with those simple and grand sentiments which distinguish the productions of that favored people. When engaged in these mingling studies, the patronage of a lady of high rank, whose taste will now be remembered with her known goodness, gave birth to those unequalled compositions, from Homer and the Greek tragedians, which have so long been the admiration of Europe. These, perhaps, from their accuracy in costume, and the singular fidelity of the union between their characters and subjects, to minds unaccustomed to nice discrimination, may have conveyed the idea of too close an imitation of the Grecian art. Undoubtedly the elements of his style were founded on it; but only on its noblest principles—on its deeper intellectual power—and not on the mere surface of its skill. He was still more the sculptor of sentiment than of form; and whilst the philosopher, the statesman, and the hero, were treated by him with appropriate dignity, not even in Raffaelle himself have the gentler feelings and sorrows of human nature been traced with more touching pathos, than in the various designs and models of this estimable man. The rest of Europe know only the productions of the earlier period of his fame; but those which form the highest efforts of his genius had their origin in nature only, and the sensibility and virtues of his mind. Like the greatest of modern painters, he delighted to trace, from the actions of familiar life, the lines of sentiment and passion; and from the populous haunts, and momentary peacefulness of poverty and want, to form his inimitable groups of children and maternal tenderness; with those noble compositions from Holy Writ, as beneficent in motive as they are novel in design, which open new sources of invention from its simplest texts, and inculcate the duties of our faith. In piety, the minds of Michael Angelo and Flaxman were congenial. I dare not assert their equality in art. The group of 'Michael and the Fallen Angel,' is a near approach to the grandeur of the former; and, sanctified as his memory is by time and glory, it gained no trivial homage in the mind of the English sculptor; whose 'shield of Achilles' his genius only could surpass.'

In sepulchral monuments, we may add, Flaxman particularly excelled; and never, we believe, executed busts, except as portions of them. Westminster Abbey contains his Lord Mansfield; —— College, Oxford, his Sir William Jones, and St. Paul's several other of his most distinguished works.

Mr. Flaxman lived a very retired life, and professed himself a member of the Established Church, but is known to have adopted, with some zeal, the theological sentiments of baron Swedenborg. He married early in life, a lady whom he survived many years; and completed his

studies in Italy, after his marriage. He was a man of warm benevolence and strict integrity.

FLAY, *v. a.* } Sax. flean; Goth. and Swed.
FLAY'ER, *n. s.* } *fla*; Isl. *flaa*; Belg. *vlaen*. See FLAW. This word is evidently of the same origin. To strip off the skin or external covering of any thing.

They *flay* their skin from off them, break their bones, and chop them in pieces. *Micah* iii. 3.

I must have been eaten with wild beasts, or have fallen into the hands of the Spaniards, and been *flayed* alive. *Raleigh.*

Whilst the old Levitical hierarchy continued, it was part of the ministerial office to *flay* the sacrifices. *South.*

Then give command the sacrifice to haste;
Let the *flayed* victims in the plains be cast;
And sacred vows, and mystick song applyed
To grisly Pluto and his gloomy bride.
Pope's Odyssey.

Neither should that odious custom be allowed, of cutting scraws, which is *flaying* off the green surface of the ground, to cover their cabins. *Swift.*

FLEA, *n. s.* & *v. a.* } Sax. flea; Belg. *vloo*;
FLEA'BITE, *n. s.* } Goth. *flo*; Teut. *floh*;
FLEA'BITING, *n. s.* } Scot. *fleach*. A small
FLEA'BITTEN, *adj.* } red insect which sucks the blood of larger animals.

Awake, thou Coke! quod he; God yeve the sorwe,
What aileth thee to slepen by the morwe?
Hast thou had *fleen* al night, or art thou dronke?
Chaucer's Cant. Tales.

While wormwood hath seed, get a handful or twain,
To save against March to make *flea* to refrain:
Where chamber is sweeped, and wormwood is strown,
No *flea* for his life dare abide to be known. *Tusser.*

A valiant *flea*, that dares eat his breakfast on the lip of a lion. *Shakspeare. Henry V.*

Fleas breed principally of straw or mats, where there hath been a little moisture. *Bacon's Natural History.*

A gout, a cholick, a cutting off an arm or leg, or searing the flesh, are but *fleabites* to the pains of the soul. *Harvey.*

Fleabitten synod, an assembly brewed
Of clerks and elders ana, like the rude
Chaos of Presbytery, where laymen guide,
With the tame woolpack clergy by their side.
Cleaveland.

The same expence that breaks one man's back, is not a *fleabiting* to another. *L'Estrange.*

The attendance of a cancer is commonly a breaking out all over the body, like a *fleabiting*. *Wiseman's Surgery.*

FLEA, in entomology. See PULEX.

FLEA'BANE, *n. s.* Flea and bane. A plant. It hath undivided leaves, which, for the most part, are glutinous, and have a strong scent: the cup of the flower is for the most part scaly, and of a cylindrical form: the flower is composed of many florets, which are succeeded by seeds with a downy substance adhering to them.—*Miller.*

FLEA-BANE, in botany. See CONYZA.

FLEA-BITTEN, that color of a horse which is white or gray, spotted all over with dark reddish spots.

FLEAK, *n. s.* Lat. *floccus*. See FLAKE. A small lock, thread, or twist.

The businesses of men depend upon these little long *fleaks* or threads of hemp and flax. *More's Antidote against Atheism.*

FLEAM, *n. s.* Corrupted from φλεβότομον, the instrument used in phlebotomy. An instrument used to bleed cattle. See VETERINARY ART.

FLEAMS, A CASE OF, in farriery, comprehends six sorts of instruments; two hooked ones, called drawers, and used for cleaning wounds; a penknife; a sharp pointed lancet for making incisions; and two fleams, one sharp and the other broad pointed. The last are somewhat like the point of a lancet, fixed in a flat handle, and no longer than is just necessary to open the vein.

FLECHE, LA, a town of Anjou, France, situated in a pleasant valley on the Loir, and surrounded by hills covered with vineyards. The town is clean and well built, and here is an old ruined castle remarkable for its romantic situation, and another of an elegant structure, with a fine mall, used as a public walk: the bank of the river, planted with elms, forms also a promenade. Here was a celebrated public seminary founded and endowed by Henry IV. in 1603, and placed under the direction of Jesuits. It was one of the most extensive of the kind in France; containing formerly no less than 600 youths; but its funds were seized and wasted in the revolution. The central part of the building has been converted into a town-house, and one of the wings into a private boarding establishment. Here is now a Prytaneum or military school founded by Buonaparte, for the education of soldiers' children. Descartes was educated at the college of La Fleche. There are some manufactures of linen, muslin, and serge; and a traffic in wine and corn through the medium of Le Loir, which is navigable all the way to the greater river La Loire. Population about 5000. La Fleche is twenty-two miles north-east of Angers, and twenty-five S. S. W. of Le Mans.

FLECHIER (Esprit), bishop of Nismes, one of the most celebrated preachers of his age, was born at Perne in Avignon, 1632. He was nominated bishop of Lavaur in 1685, and translated to Nismes in 1687; where he founded an academy. His palace was also a kind of academy, where he trained up young orators and authors: He published 1. Cursius Regius, a Latin poem; 2. An History of Theodosius the Great, and Cardinals Ximenes and Commendon. 3. Several Sermons. 4. Miscellaneous Works. 5. Letters, funeral orations, &c. It was this prelate who, on a person of noble descent having sarcastically alluded to his parentage, replied—'Had you been born of such parents as mine, you would never have been any thing but a maker of candles.' He was very superstitious; and some time before his death, having had a dream which he conceived to be a presage of his end, he directed a sculptor to make him a monument. 'Begin upon it immediately, said he, there is no time to be lost,' and soon after died; his life having been perhaps shortened by the influence of this prepossession. He died in 1710.

FLECK, *v. a.* } Goth. *fleik*; Belg. *vleck*;
FLECK'ER, *v. a.* } Germ. *fleck*, a spot.—Skinner. Perhaps it is derived from fleak, or fleke, an old word for a grate, hurdle, or any thing made of parts laid transverse, from the Islandic *flake*.—Johnson. To spot; to streak; to stripe; to dap-

ple; to variegate; to mark with strokes or touches of different colors; to mark with red whelkes.

About the peytrel stood the fome full hie,
He wos of fome as *flecked* as a pie.
Chaucer's Cant. Tales.

Let it not see the dawning *fleck* the skies,
Nor the grey morning from the ocean rise. *Sandys.*

The grey-eyed morn smiles on the frowning night,
Checkering the eastern clouds with streaks of light;
And darkness *fleckered*, like a drunkard, reels
From forth day's path, and Titan's burning wheels.
Shakspeare.

Flecked in her face, and with disordered hair,
Her garments ruffled, and her bosom bare. *Dryden.*

Both *flecked* with white, the true Arcadian strain.
Id.

FLECKEROE, a small island of Norway, near Christiansand. A narrow strait, about four miles in length, runs between this island and the continent and forms an excellent harbour. Long. 8° 18′ E., lat. 58° 4′ N.

FLECKNOE (Richard), an English poet in the reign of Charles II. more remarkable as the object of Dryden's satire than for any works of his own. He is said to have been originally a Jesuit. When Dryden lost the place of poet laureat, on the Revolution, it was conferred on Flecknoe, on which Dryden wrote a satiric poem entitled Mac-Flecknoe; one of the best written satires in our language, and from which Pope seems to have taken the hint for his Dunciad. Flecknoe wrote some plays; but could never get more than one of them acted.

His works, however, are not altogether contemptible. They contain—Heroick Portraits, with other Miscellaneous Pieces, 1660, 8vo. and Sixty-nine enigmatic Characters, all very exactly drawn to the Life, from several persons, humors, and dispositions, Pleasant and Full of Delight, 1665, 12mo.

FLEDGE, *v. a.* & *adj.* Dut. *flederen*, to fly. Full-feathered; able to fly; qualified to leave the nest: to furnish with wings; to supply with feathers.

We did find
The shells of *fledge* souls left behind.
Herbert.

His locks behind,
Illustrious on his shoulders, *fledge* with wings,
Lay waving round. *Milton's Paradise Lost.*

The birds were not as yet *fledged* enough to shift for themselves. *L'Estrange's Fables.*

The speedy growth of birds that are hatched in nests, and fed by the old ones, till they be *fledged* and come almost to full bigness in about a fortnight, seems to me an argument of Providence. *Ray.*

The sandals of celestial mould,
Fledged with ambrosial plumes, and rich with gold,
Surround her feet. *Pope's Odyssey.*

FLEE, *v. n.*, pret. fled. This word is now almost universally written fly, though properly to fly, ꝑleoꝛan, flew, is to move with wings, and flee, ꝑlean, to run away. They are now confounded.—Johnson. Dr. Lowth has noticed that our English Bible, generally so correct, has fallen into this confusion. To run from danger; to have recourse to shelter.

Behold this city is near to *flee* unto.
Genesis xix. 20.

Truth is *fled* far away, and leasing is hard at hand.
Esdras.

I ne wist not what was adversitee,
Til I could *flee* ful high under the sky.
Chaucer. The Squieres Tale.

O noble, O worthy, Petro! glorie of Spaine!
Whom Fortune held so high in majestee,
Wel oughten men thy pitous deth complaine,
Out of thy lond thy brother made thee *flee*;
And, after, at a sege, by sotiltee
Thou were betraied, and lad unto his tent,—
Wher as he with his owen hond slow thee,
Succeeding in thy regne and in thy rent.
Chaucer. The Monkes Tale.

But he wos not so hardy to abide
That bitter stownd, but turning quick aside
His light foot-beast, *fled* fast away for feare.
Spenser.

Macduff is *fled* to England. *Shakspeare.*

Were men so dull they could not see
That Lyce painted; should they *flee*
Like simple birds into a net,
So grossly woven and ill set? *Waller.*

None of us fall into those circumstances of danger, want, or pain, that can have hopes of relief but from God alone; none in all the world to *flee* to but him.
Tillotson.

In vain for life he to the altar *fled*;
Ambition and revenge have certain speed. *Prior.*

FLEECE, *n. s.* & *v. a.* } Sax. ꝑlyꝛ, ꝑleꝛ; Teut.
FLEE'CED, *adj.* } *vlees*; Lat. *vellus*. The
FLEE'CY, *adj.* } wool of one sheep: to clip the fleece off a sheep. To strip, pull, or plunder, as a sheep is robbed of his wool: having fleeces of wool; woolly.

In an isle that called was Colchos,
There was a Ram which that men mighten se—
That had a *Flees* of Golde that shone so bright
That no where was there soche an other sight.
Chaucer. Legende Hypsipyle and Medea.

——therein all the famous history,
Of Jason and Medea was ywrit;
Her mighty charmes, her furious loving fitt;
His goodly conquest of the Golden *Fleece*;
His falsed fayth, and love too lightly flits;
The wond'rous Argo, which in venturous piece
First through the Euxine Seas bore all the flowr of Greece. *Spenser.*

And over all of purest gold was spread
A trayle of yvie in his native hew;
For the rich metal was so coloured,
That wight who did not well avised it vew,
Would surely deem it to bee yvie trew:
Low his lascivious arms adown did creepe,
That themselves dipping in the silver dew
Their *fleecy* flowres they fearfully did steepe,
Which drops of chrystalls seemed for wantones to weep. *Id.*

As when two rams, stirred with ambitious pride,
Fight for the rule of the rich *fleeced* flock,
Their horned fronts so fierce on either side
Do meet, that with the terror of the shock
Astonied both stand senseless as a block.
Faerie Queene

Giving account of the annual increase
Both of their lambs and of their woolly *fleece*.
Hubberd's Tale.

So many days my ewes have been with young,
So many months ere I shall shear the *fleece*.
Shakspeare.

I am shepherd to another man,
And do not shear the *fleeces* that I graze. *Id.*

Sailors have used every night to hang *fleeces* of wool on the sides of their ships, towards the wate

nd they have crushed fresh water out of them in the ornino. *Bacon's Natural History.*

Not all the *fleecy* wealth
That doth enrich these downs is worth a thought
To that my errand. *Milton.*

From eastern point
Of Libra, to the *fleecy* star that bears
Andromeda far off Atlantic seas.
Id. Paradise Lost.

Courts of justice have a small pension, so that they re tempted to take bribes, and to *fleece* the people. *Addison.*

Let her glad valleys smile with wavy corn;
Let *fleecy* flocks her rising hills adorn. *Prior.*

The good shepherd tends his *fleecy* care,
Seeks freshest pasture, and the purest air;
Explores the lost, the wand'ring sheep directs.
Pope.

FLEECE, GOLDEN, in the ancient mythology, was the skin and fleece of the ram upon which Phryxus and Helle are said to have swum over the sea to Colchis; and which, being sacrificed to Jupiter, was hung upon a tree in the grove of Mars, guarded by two brazen-hoofed bulls, and a monstrous dragon that never slept; but was taken and carried off by Jason and the Argonauts. Some authors have endeavoured to show that this fable is an allegorical representation of some real history, particularly of the philosopher's stone. Others have explained it by the profit of the wool trade to Colchis, or the gold which they commonly gathered there with fleeces in the rivers. See ARGONAUTS.

FLEECE, GOLDEN, ORDER OF THE, a military order instituted by Philip the Good, duke of Burgundy, 1427; thus named from a representation of the golden fleece, borne by the knights on their collars. See diagram. The king of Spain,

as duke of Burgundy, is grand master of the order; the number of knights is fixed to thirty-one. It is said to have been instituted on occasion of an immense profit which that prince made by wool; though others will have a chemical mystery couched under it, as that famous one of the ancients, which the adepts pretend to be the secret of the elixir vitæ, written on the skin of a sheep.

FLEER, *v. n.* & *n. s.* } Saxon, flennian, to
FLEER'ER, *n. s.* } trifle; Scot. *fleardan.* Skinner thinks it formed from *leer;* but the Icel. *flyre*, is to joke. To mock; to gibe; to jest with insolence and contempt; to leer.

Encave yourself,
And mark the *fleers*, the gibes, and notable scorns,
That dwell in every region of his face.
Shakspeare.

You speak to Casca, and to such a man
That is no *fleering* tell-tale. *Id. Julius Cæsar.*

Dares the slave
Come hither, covered with an antick face,
To *fleer* and scorn at our solemnity?
Shakspeare.

How popular and courteous; how they grin and *fleer* upon every man they meet! *Burton.*

He shall generally spy such false lines, and such a sly treacherous *fleer* upon the face of deceivers, that he shall be sure to have a cast of their eye to warn him, before they give him a cast of their nature to betray him. *South.*

Do I, like the female tribe,
Think it well to *fleer* and gibe? *Swift.*

FLEET, FLEOT, FLOT, *n. s.* Are all derived from the Sax. fleot (Goth. *flod*), which signifies bay or gulph. A creek; an estuary; an arm of the sea; an inlet of water. A provincial word, after which several streams in this country have been named: derived from Saxon flota; it signifies a company of ships; a navy. The French use *flotte*, and Swed. *flota*, in the same sense.

This said, the whole *fleet* gave it their applause,
And all assume your courage in your cause.
Marvell.

Already were the Belgians on our coast,
Whose *fleet* more mighty every day became
By late success, which they did falsely boast,
And now by first appearing seemed to claim.
Dryden.

They have a very good way in Essex of draining lands that have land-floods or *fleets* running through them, which make a kind of a small creek.
Mortimer's Husbandry.

Our prayers are heard, our master's *fleet* shall go
As far as winds can bear, or waters flow. *Prior.*

The noblest captain in the British *fleet*
Might envy William's lip those kisses sweet.
Gay.

FLEET, *adj.*, *v. n.* & *v. a.* }
FLEET'LY, *adv.* } Island. *fliotur;* Sax flotan. Swift
FLEET'NESS, *n. s.* } of pace; quick; nimble; active; light. To fly swiftly; to vanish; to be in a transient state; to skim the water; to live merrily, or pass time away lightly.

Upon that shore he spied Atin stand;
There by his master left, when late he fared
In Phædria's *fleet* bark. *Faerie Queene.*

Who swelling sails in Caspian sea doth cross,
And in frail wood an Adrian gulph doth *fleet*,
Doth not, I ween, so many evils meet. *Id.*

I take him for the better dog.
——Thou art a fool: if Echo were as *fleet*,
I would esteem him worth a dozen such.
Shakspeare

Many young gentlemen flock to him every day, and *fleet* the time carelessly as they did in the golden age. *Id.*

How all the other passions *fleet* to air,
As doubtful thoughts, and rash embraced despair!
Id.

A wolf, who, hanged for human slaughter,
Even from the gallows did his fell soul *fleet*. *Id.*

O *fleeting* joys
Of Paradise, dear bought with lasting woe!
Milton.

He had in his stables one of the *fleetest* horses in England. *Clarendon.*

His fear was greater than his haste;
For fear, though *fleeter* than the wind,
Believes 'tis always left behind. *Hudibras.*

While I listen to thy voice,
Chloris! I feel my life decay:
That powerful noise
Calls my *fleeting* soul away. *Waller.*

So fierce they drove, their coursers were so *fleet*,
That the turf trembled underneath their feet.
Dryden.

As empty clouds by rising winds are tost,
Their *fleeting* forms scarce sooner found than lost.
Prior.

He told us that the welkin would be clear
When swallows *fleet* soar high and sport in air.
Gay.

Contemplate mortal! on thy *fleeting* years,
See, with black train the funeral pomp appears. *Id.*

Fleet implies, not only a company of ships of war belonging to a prince or state, but also a number of trading ships employed in a particular branch of commerce. His Britannic majesty's fleet is divided into three squadrons, viz. the red, the white, and the blue. When any of the admirals are invested with the command of a squadron or detachment of men of war, the particular ships are distinguished by the colors of their respective squadron: i. e. the ships of the red squadron wear an ensign whose union is displayed on a red field; the ensigns of the white squadron have a white field; and those of the blue squadron a blue field; the union being common to all three. The ships of war, therefore, are occasionally annexed to any of the three squadrons, or shifted from one to another. Of whatsoever number a fleet of ships of war is composed, it is usually divided into three squadrons; and these, if numerous, are again separated into divisions. The admiral, or principal officer, commands the centre; the vice-admiral, or second in command, superintends the van guard; and the operations of the rear are directed by the rear admiral, or the officer next in rank. The disposition of a fleet, while proceeding on a voyage, will in some measure depend on particular circumstances; as the difficulty of the navigation, the necessity of despatch, according to the urgency or importance of the expedition, or the expectation of an enemy in the passage. The most convenient order is probably to range it into three columns, each of which is parallel to a line close hauled, according to the tack on which the line of battle is designed to be formed. This arrangement is more useful than any, because it contains the advantages of every other form, without their inconveniences. The fleet being thus more enclosed will more readily observe the signals, and with greater facility form into the line of battle; a circumstance which should be kept in view in every order of sailing. See Naval Tactics.

Fleet, a noted prison in London, where persons are committed for contempt of the king and his laws, particularly of his courts of justice; or for debt. There are large rules and a warden belonging to the Fleet prison; which had its name from the river or ditch, on the side whereof it stands.

FLE'ETINGDISH, *n. s.* From fleet and dish. A skimming bowl.

FLEETWOOD (Charles), a general of the parliamentary army in the civil wars, was the son of Sir William Fleetwood, knight, ranger of Woodstock park. He early entered the army, commanded a regiment of cavalry in 1644, and afterwards held Bristol for the parliament. Fleetwood at the battle of Worcester bore the rank of lieutenant-general, and becoming allied to the family of the protector, by marrying his daughter, after the decease of her first husband, Ireton, was by him sent as lord deputy to Ireland. On the death of Cromwell he joined in inducing his son, Richard, to abdicate. He died at Stoke Newington shortly after the Restoration.

Fleetwood (William), a learned bishop of an ancient family in Lancashire, born in the Tower of London, 1656; he distinguished himself during king William III's reign, by his Inscriptionum Antiquarum Sylloge, by several sermons preached on public occasions, and by his Essay on Miracles. He was designed by king William to a canonry of Windsor. The grant did not pass the seals before the king's death; but the queen gave it him, and he was installed in 1702. In 1707 he published, without his name, his Chronicon Pretiosum. In 1708 he was nominated by the queen to the see of St. Asaph. The change of the queen's ministry gave him much regret. In 1715 he published a pamphlet entitled, The thirteenth chapter of the Romans vindicated from the abusive senses put upon it. In 1714 he was translated to the bishopric of Ely; and died in 1723, aged sixty-seven. He published several other sermons and tracts, and was a man of exemplary piety.

FLEMINGIANS, or Flandrians, in ecclesiastical history, a sect of Anabaptists, who acquired this name in the sixteenth century, because most of them were natives of Flanders, by way of distinction from the Waterlandians. In consequence of some dissensions among the Flemingians relating to the treatment of excommunicated persons, they were divided into two sects, distinguished by the appellations of Flandrians and Frieslanders, who differed from each other in their manners and discipline. Many of these in process of time came over to the moderate community of the Waterlandians, and those who remained separate are still known by the name of old Flemingians or Flandrians; but they are comparatively few in number. These maintained the opinion of Menno with respect to the incarnation of Christ; alleging that his body was produced by the creating power of the Holy Ghost, and not derived from his mother Mary. See Mennonites.

FLEMING (A), a poet of queen Elizabeth's reign, whose history is little known. He was a voluminous original writer as well as translator. Among his most celebrated original works are A Grove of Graces, supplied with Plentie of Plants, applicable to Pleasure and Profit; the Schoole of Skill; the Footepath to Felicitie; a Swarme of Bees, with their Honie and Honicombs, printed together in 1602, 12mo. The Diamond of Devotion, 12mo. The Cundyt of Comfort, 12mo., and A Memorial of the Almes Deeds of William Lamb, Citizen of London. Fleming translated the Bucolics and Georgics of Virgil, and some of Cicero's Orations, and Ælian's various Histories, into prose; and he was the editor of Holinshed's Chronicle.

FLEMMING, or FLEMMYNGE (Richard), an glish prelate, born at Croston in Yorkshire. received his education at University College, ford, and in 1408 obtained a prebend in York. was for a time a zealous defender of the trines of Wickliffe, but he afterwards became determined opponent of them. In 1442 he s promoted to the bishopric of Lincoln, and n after was sent deputy to the council of nstance, where he greatly distinguished him- f by his eloquence. Upon his return to Eng- d he executed the decree of that assembly, in gging up the bones of Wickliffe, and causing m to be burned. After this he was nominated the pope to the see of York; but, the king re- sing his consent, he was obliged to remain at ncoln. He founded Lincoln College, and died 1431.

FLEMYNG, or FLEMING (Robert), a Scottish resbyterian minister, born at Bathens, in 1630 d educated at St. Andrews. When about the e of twenty-three he obtained a pastoral charge, t at the Restoration went over to the continent, d settled at Rotterdam, where he officiated to e Scottish congregation, and died in 1694. He rote several tracts, but that by which he is best nown is a work entitled The Fulfilling of the criptures.

FLEMYNG, or FLEMING (Robert), son of the bove, was born in Scotland. He studied at eyden and Utrecht, and became minister of an English congregation at the former place, whence e removed to the Scottish church at Amster- lam. Here he resided several years, and after- vards went to London, where he officiated to the Scottish church in Lothbury, and was lecturer t Salter's Hall. He died in 1716. He was he author of several sermons and tracts; but is principal work is entitled Christology, 3 vols. vo.

FLENSBOURG, a sea-port town of Denmark, n the eastern coast of the duchy of Sleswick, s perhaps the most opulent and important place n the duchy. The streets are narrow, and the ouses are constructed in a substantial and du- rable manner. It consists principally of one very long street, the back of which looks towards the harbour, and on that side each house has a garden. On the right is the harbour, filled with vessels, and every way safe and convenient. It is narrow close to the town, but the whole bay, called Flensbourg Wisk, is eighteen miles long, and has a sufficient depth for large vessels, well sheltered from wind by the neighbouring hills.

The trade of this town is carried on principally with Norway, Denmark, and Sweden, and con- sists of brandy, grain, skins, provisions, wines, and stuffs. The wines and stuffs are from France, England, Spain, and America. The inhabitants trade also with Iceland, Greenland, and Finland. The number of commercial houses is from 120 to 130.

In 1797 the number of sailors was 1597. There are no fewer than 200 establishments for manufacturing and distilling brandy, and these serve at the same time to fatten 4000 head of cattle, and as many of swine. The town also con- tains several sugar refineries, forty manufactories of tobacco, and some tanneries. The position of the town, according to trigonometrical observa- tions, is, E. long. 9° 27′ 40″, and N. lat. 54° 47′ 18″.

FLESH, *n. s.* & *v. a.*
FLESH'-BROTH,
FLESH'-COLOR,
FLESH'-DIET,
FLESH'ED, *adj.*
FLESH'-FLY, *n. s.*
FLESH'-HOOK,
FLESH'LESS, *adj.*
FLESH'INESS, *n. s.*
FLESH'LY, *adv.*
FLESH'-MEAT, *n. s.*
FLESH'MENT,
FLESH'MONGER,
FLESH'-POT,
FLESH'-QUAKE,
FLESH'Y, *adv.*

Saxon flerc, flæsc; Icel. and Teut. *fleisch*; Belg. *vleesch*; Swed. *flæsch*; from Goth. *lijk*, MS. *leiki*; Teut. *leich*; Sax. *lic*, a carcass.—Thomson. The muscular part of an animal; animal food; animal nature; near relation: in theology, gross or worldly disposition, gross or literal sense: to flesh is to initiate; harden; glut; from the sportsman's practice of feeding his hawks and dogs with the first game that they take, or training them to pursuit by giving them the flesh of animals: fleshed is fat; well-fed; also initiated; accustomed to: fleshiness, plumpness; fullness of flesh: fleshly, corporeal; animal; human; not celestial or spiritual: fleshment, eagerness arising from partial success: fleshmonger, one who deals in flesh; a pimp: flesh-quake, a tremor of the whole frame: the other compounds seem obvious in their meaning.

For I myself desiride to be departed fro Crist for my britheren that ben my cosyns aftir the *fleisch* that ben men of Israel. *Wiclif. Romayns* ix.

The end of all *flesh* is come before me.
Genesis vi. 13.

Let not our hand be upon him; for he is our *flesh*.
Id.

All that the *flesh-hook* brought up the priest took.
1 *Sam.* ii. 12.

A spirit hath not *flesh* and bones.
Luke xxiv. 39.

They that are in the *flesh* cannot please God.
Romans viii. 8.

Understond ye that both he that selleth and he that byeth thinges spirituel, ben called Simoniactes —be it by entel—be it by procuring or by *fleshly* praier of his frendes—*fleshly* frendes or spiritual frendes—*fleshly* in two manners as by kindrede or other frendes. *Chaucer. The Persones Tale.*

Corrupt manners in living, breed false judgment in doctrine: sin and *fleshliness* bring forth sects and heresies. *Ascham.*

The eternal Lord in *fleshly* shrine
Enwombed was, from wretched Adam's line,
To purge away the guilt of sinful crime.
Faerie Queene.

When strong passions or weak *fleshliness*
Would from the right way seek to draw him wide,
He would, through temperance and steadfastness,
Teach him the weak to strengthen, and the strong suppress. *Spenser.*

Name not religion, for thou lovest the *flesh*.
Shakspeare.

There is another indictment upon thee, for suffering *flesh* to be eaten in thy house, contrary to the law. *Id. Henry IV.*

As if this *flesh*, which walls about our life,
Were brass impregnable. *Id. Richard II.*

Harry from curbed licence plucks
The muzzle of restraint: and the wild dog
Shall *flesh* his tooth on every innocent.
Shakspeare.

The kindred of him that hath been *fleshed* upon us;
And he is bred out of that bloody strain,
That hunted us in our familiar paths. *Id. Henry V.*

I would no more endure
This wooden slavery, than I would suffer
The *flesh-fly* blow my mouth. *Id. Tempest.*

Was the duke a *fleshmonger*, a fool, and a coward, as you then reported him? *Id. Measure for Measure.*

Those fruits that are so *fleshy*, as they cannot make drink by expression, yet may make drink by mixture of water. *Bacon.*

And thou, my soul, which turn'st with curious eye
To view the beams of thine own form divine,
Know, that thou can'st know nothing perfectly,
While thou art clouded with this *flesh* of mine.
Davies.

Very well *fleshed* and excellently fat. *Old Song.*

We say it is a *fleshy* stile when there is much periphrasis and circuit of words, and when with more than enough it grows fat and corpulent.
Ben Jonson.

They may, blood-shaken then,
Feel such a *fleshquake* to possess their powers,
As they shall cry like ours;
In sound of peace or wars,
No harp e'er hit the stars. *Id. New Inn.*

If he takes away the *flesh-pots*, he can also alter the appetite. *Taylor's Rule for Holy Living.*

Nothing resembles death so much as sleep;
Yet then our minds themselves from slumber keep,
When from their *fleshly* bondage they are free.
Denham.

A fair and juicy *fleshiness*. *Milton.*

Much ostentation, vain *fleshly* arm,
And of frail arms, much instrument of war
Before mine eyes thou'st set.
Id Paradise Regained.

Belial, the dissolutest spirit that fell,
The sensualest; and, after Asmodai,
The *fleshliest* incubus. *Id.*

We mortify ourselves with fish; and think we fare coarsely, if we abstain from the *flesh* of other animals.
Browne.

These princes finding them so *fleshed* in cruelty, as not to be reclaimed, secretly undertook the matter alone. *Sidney.*

Of these he murders one; he boils the *flesh*,
And lays the mangled morsels in a dish. *Dryden.*

'Tis then for nought that mother earth provides
The stores of all she shows, and all she hides,
If men with *fleshly* morsels must be fed,
And chaw with bloody teeth the breathing bread.
Id.

Flesh should be forborn as long as he is in coats, or at least till he is two or three years old. *Locke.*

A complication of ideas together makes up the single complex idea which he calls man, whereof white or *flesh-colour* in England is one. *Id.*

The sole of his foot is flat and broad, being very *fleshy*, and covered only with a thick skin; but very fit to travel in sandy places. *Ray.*

It is a wonderful thing in *fleshflies*, that a fly-maggot in five days space after it is hatched, arrives at its full growth and perfect magnitude. *Id.*

Every puny swordsman will think him a good tame quarry to enter and *flesh* himself upon.
Government of the Tongue.

Fasting serves to mortify the *flesh*, and subdue the lusts thereof. *Smalridge's Sermons.*

The most convenient diet is that of *fleshmeats*.
Floyer.

Her leg being emaciated, I advised bathing it with *flesh-broth*, wherein had been decocted emollient herbs.
Wiseman's Surgery.

Acidity in the infant may be cured by a *flesh* diet in the nurse. *Arbuthnot on Aliments.*

In this prodigious plenty of cattle and dearth of human creatures, *fleshmeat* is monstrously dear.
Swift.

And out they spoke for lots of *flesh* and blood,
And who should die to be his fellow's food. *Byron.*

Flesh, in anatomy, a compound substance, consisting of the various softer solids of the animal body, and so denominated in contradistinction to bones.

FLET, participle passive of to fleet. Skimmed; deprived of the cream.

They drink *flet* milk, which they just warm.
Mortimer.

FLETA, the name given to an unknown writer who lived about the end of the reign of Edward II. and beginning of Edward III., and who, being a prisoner in the Fleet, wrote there an excellent treatise on the common law of England.

FLETCHER, *n. s.* From Fr. *fleche*, an arrow. A manufacturer of bows and arrows.

It is commended by our *fletchers* for bows, next unto yew. *Mortimer's Husbandry.*

Fletcher (Andrew), of Salton, a celebrated Scotch political writer, was the son of Sir Robert Fletcher of Salton, and was born in 1653. His father, on his death-bed, left the care of his education to Dr. (afterwards Bp.) Burnet, from whom he early contracted an ardent love of liberty, and an aversion to arbitrary government. Hence he readily took alarm at the despotic measures of Charles II., and being knight of the shire for Lothian, at the time the duke of York was commissioner, he openly opposed the designs of that prince. He also assisted lord viscount Stair in framing the test act. On these accounts he became peculiarly obnoxious to the duke; and was at last obliged to flee to Holland, to avoid prosecution. Being cited before the privy council and justiciary court, and not appearing, he was declared an outlaw, and his estate confiscated. In Holland he was consulted by the earl of Argyle concerning the designs then in agitation; and in 1681 came over to England, with a Mr. Baillie, to concert matters with lord Russel. Mr. Fletcher managed his part of the negociation with so much address, that administration could find no pretext for seizing him: Baillie was, however, condemned to death; and, although offered a pardon on condition of accusing his friend, he persisted in rejecting the proposal with indignation. In 1685 Mr. Fletcher went to the Hague, to promote the opposition to the arbitrary measures of James II.; but it does not appear that he possessed much of the confidence of the party. He, however, joined the duke of Monmouth upon his landing, and received a principal command under him. But the duke was deprived of his services by the following occurrence:—Being sent upon an expedition, and not esteeming times of danger to be times of ceremony, he had seized the horse of the mayor of

Lyme, which stood ready equipped for its master. The mayor, hearing this, ran in a passion to Fletcher, gave him opprobrious language, shook his cane, and attempted to strike him. Fletcher, though rigid in the duties of morality, yet having been accustomed to foreign service both by sea and land, in which he had acquired high ideas of the honor of a soldier and a gentleman, and of the affront of a cane, pulled out his pistol, and shot him dead on the spot. A clamor was on this raised against him among the people of the country: in a body they waited upon the duke with their complaints; and he was forced to dismiss him. The earl of Buchan and some others of his biographers, however, give the following account of the cause of his departure. The earl says 'that when Monmouth was proclaimed king at Taunton, Mr. Fletcher saw his deception, and resolved to proceed no farther in his engagements, which he considered from that moment as treason against the just rights of the nation, and treachery on the part of Monmouth.' It was his misfortune to land in Spain; where he was immediately arrested, and cast into prison, till a vessel should be prepared to carry him a victim in chains to the court of London. But on the morning before the ship could sail he was liberated by some unknown friend, and in disguise he proceeded in safety through Spain. During his exile he maintained an extensive correspondence with the friends of liberty at home, and partly employed himself in making a curious collection of books. He repaired to Hungary, and served several campaigns as a volunteer under the duke of Lorraine with great reputation. At length, understanding that the great design then projecting in Holland (and upon the issue of which he considered the liberties of Britain to depend), had attained a considerable degree of maturity, he hastened thither; where his counsels and address were of eminent service. He came over with the stadtholder; and in zeal, activity, and political skill, proved inferior to none of the leaders in the Revolution. It appears, however, that, while others labored to turn this event to their own emolument and aggrandisement, Fletcher asked nothing. His estate had been forfeited, and his house abandoned to the military; his fortune was greatly shattered, and his family reduced to distress. Nothing was given him in recompense of all his sufferings. On the contrary, he and the duke of Hamilton were distinguished by marks of royal and ministerial dislike. In 1703 he opposed a vote of supply until 'the house should consider what was necessary to secure the religion and liberties of the nation on the death of the queen' (Anne), and carried various limitations of the prerogative, forming part of the 'Act of Security,' rendered nugatory by the Scottish Union, which he vehemently opposed. He died at London in 1716, aged sixty-six. His remains were conveyed to Scotland, and deposited in the family vault at Salton. 'His political principles,' says lord Buchan, 'were too high and refined, and his sentiments were too Roman, or rather, as I may now say, too Gallic, and too much in the odor of philosophical politics, to accept of the privilege granted by James II's act of indemnity, to return to his country and estate, when under the dominion of disguised despotism sanctioned by a venal parliament.' He also possessed a dignity and warmth of temper which would not suffer him to brook an indignity from any rank of men, or in any place. Of this he exhibited a singular proof in the Scotch parliament. The earl of Stair, secretary of state and minister for Scotland, having in the heat of debate used an improper expression in reference to Mr. Fletcher, he seized him by his robe, and insisted upon public and immediate satisfaction, when his lordship was obliged instantly to beg his pardon, in presence of the parliament

Fletcher (Dr. Giles), a political writer of the sixteenth century, was born in Kent, and educated at Eton. In 1569 he took the degree of B.A. at Cambridge. In 1573 that of M.A. and in 1581, that of LL.D. He was sent by queen Elizabeth as a commissioner into Scotland, Germany, and the Netherlands; and in 1588 as ambassador to Russia, to settle a treaty of commerce with the czar Theodore, and revive the trade of the English Russia Company, which the Dutch had encroached on. This he not only accomplished, but, from the observations he made during his embassy, drew up and published on his return, An account of the Russe commonwealth, or Manner of Government by the Russe Emperor, commonly called the Emperor of Moskovia; with the manners and fashions of the people of that country, 1590, 8vo., re-printed in 1643 in 12mo. He was afterwards made secretary to the city of London; master of requests, and treasurer of St. Paul's; and died in 1610.

Fletcher (Dr. Richard), brother to Dr. Giles, was born in Kent, educated and graduated at Cambridge, promoted to be dean of Peterborough, in 1583; bishop of Bristol in 1589; of Worcester in 1592, and of London in 1594. He attended Mary queen of Scots at her execution, in 1587, and importuned her to change her religion. He was twice married, which gave such offence to the virgin queen, that she ordered him to be suspended from his bishopric. He was afterwards restored, but the disgrace is said to have hastened his death. He died suddenly in his chair at London in 1596.

Fletcher (John), son of the preceding, was born in 1576, and rendered himself famous by his dramatic writings, in concert with his friend Francis Beaumont. See Beaumont. He was educated at Cambridge, where he made a great proficiency in his studies. His natural vivacity, for which he was remarkable, soon rendered him a devotee to the Muses; and his fortunate connexion with a genius equal to his own raised him to one of the highest places in the temple of poetical fame. He was born nearly ten years before Mr. Beaumont, and survived him about the same length of time; the plague, which happened in 1625, involving him in its general destruction, in his forty-ninth year.

Fletcher (Phineas), son of Dr. Giles Fletcher, was educated at Eton, whence he was removed to King's College, Cambridge, in 1600. He took orders in 1621, and obtained the living of Helgay in Norfolk, which he retained nearly twenty-nine years. His principal works are the

Purple Island, and Piscatory Eclogues; the former being a description of man, founded upon an allegory in the ninth canto of the second book of the Faerie Queen, and in the Spenserian style. Fletcher also wrote a dramatic piece entitled Sicelides, intended to be performed at Cambridge before king James I., and printed in 1611; and a work in prose entitled De Literatis Antiquæ Britanniæ.

FLETCHER (Abraham), an ingenious mathematician, born at Little Broughton, in Cumberland, in 1714, and bred to his father's business, which was that of a tobacco-pipe maker. He learned to read and write entirely by his own application, after which he taught himself arithmetic, and mathematics, to which he added the study of botany. When about thirty years of age he became schoolmaster, to which profession he added those of astrologer and doctor, by which means he acquired a fortune of £3000. He died in 1793. He drew up a compendium of practical mathematics, under the title of the Universal Measurer, published in 1 vol. 8vo.

FLETCHER, or FLECHIERE (John William de la), a Swiss divine, was born at Nyon, in the Pays de Vaud. He was educated at Geneva, but went into the military service in Portugal, which profession he quitted and became a tutor in the Hill family. In March, 1757, he took orders; and three years afterwards was made vicar of Madeley in Shropshire. In 1770 he took charge of lady Huntingdon's school for educating young men for the ministry, at Trevecca in Wales, but, in consequence of his anti-calvinistic principles, did not long remain. He then labored among the Wesleyan methodists, his attachment to whom exposed him to much annoyance. He died in 1786, leaving behind him a very amiable character, and ten volumes of controversial works against Calvinism.

FLETEWOOD (William), an eminent English lawyer and recorder of London, in the reign of queen Elizabeth. He was very zealous in suppressing mass-houses, and committing popish priests; but once rushing in upon mass at the Portuguese ambassador's house, he was committed to the fleet for breach of privilege, but soon released. He was a good popular speaker, wrote upon government, and was a good antiquarian. His principal works are, 1. Annalium tam regum Edwardi V. Ricardi III. et Henrici VII. quam Henrici VIII. 2. A Table of the reports of Edmund Plowden. 3. The Office of a Justice of Peace. He died about 1593.

FLEVILLEA, in botany, a genus of the hexandria order, and diœcia class of plants. Male CAL. quinquefid: COR. quinquefid: stamina five; the nectarium five converging filaments. Female CAL. quinquefid; there are three styles; fruit an hard trilocular barky apple.

FLEURI (Andrew, Hercules de), bishop of Frejus, preceptor to Louis XV., cardinal and minister of state, was born in 1653, and died in 1743. He was an able negociator; and distinguished himself during his ministry by his probity, and his pacific disposition.

FLEURI, or FLEURY (Claude), one of the best French critics and historians of his age, was born at Paris in 1640. He applied himself to the law, was made advocate for the parliament of Paris, and attended the bar nine years: he then entered into orders, and was made preceptor to the princes of Conti. In 1689 Lewis XIV. made him sub-preceptor to the dukes of Burgundy, Anjou, and Berry: and in 1706 he gave him the priory of Argenteuille. In 1716 he was chosen counsellor to Louis XV. and died in 1723. He was the author of a great number of esteemed French works; the principal of which are, 1. An Ecclesiastical History, in twenty volumes, the last of which ends with the year 1414. 2. The Manners of the Israelites and Christians. 3. Institutions of Ecclesiastical Law. 4. On the Choice and Method of study. 5. The Duties of Masters and Servants, &c.

FLEURUS, a small town of the Netherlands in Hainault, not far from the Sambre. In 1622 a celebrated battle took place here between the Spaniards and Germans; in 1690 between the Germans and French, the latter commanded by Luxemburg; in 1794 (26th June), between the allies and French, the latter commanded by Jourdan; and finally on the 14th June, 1815, a partial but sharp action between the French and Prussians, just previous to the battle of Waterloo. Population 2020. Seven miles north-east of Charleroi.

FLEUR-DE-LIS, in heraldry. By some this flower is called the lily, or flower of the flag, and has only three leaves, by which it differs from the lily of the garden, that having always five; others suppose it to be the top of a sceptre; some the head of the French battle-axe; others the iron of a javelin used by the ancient French. Many of the deceased antiquaries, according to D. Orwade, as well as some of the present day, have thought, and do think, that it was originally meant to represent that flower from which it derives its name. See diagram, *gules*, a fleur-de-lis *argent*; name Digby.

FLEURY, a cross-fleury is differenced from the cross-flory, by its having a line between the ends of the cross and the flowers, which that has not. See diagram. *Azure* a cross fleury, *gules*; name Jamieson.

FLEW. The preterite of fly, not of flee.

> The people *flew* upon the spoil.
> 1 *Samuel* xiv. 32.

> O'er the world of waters Hermes *flew*,
> 'Till now the distant island rose in view.
> *Pope's Odyssey.*

> As years increased her ruddy beauty grew,
> And Patty's fame o'er all the village *flew*. *Gay.*

FLEW, *n. s.* } The large chaps of a deep-
FLEWED, *adj* } mouthed hound. Chapped mouthed.

> My hounds are bred out of the Spartan kind,
> So *flewed*, so sanded, and their heads are hung
> With ears that sweep away the morning dew.
> *Shakspeare.*

FLEXA'NIMOUS, *adj.* Latin *flexanimus*. Having power to change the disposition of the mind.

That *flexanimous* and golden-tongued orator.
Howel.

FLEX'IBLE, *adj.* FLEXIBIL'ITY, *n. s.* FLEX'IBLENESS, *n. s.* FLEX'ILE, *adj.* FLEX'ION, *n. s.* FLEX'UOUS, *adj.* FLEX'URE, *n. s.* Lat. *flexibilis*, a *flecto*, to bend; Fr. *flexible*, *flexibilité*. Bending, not brittle; pliant, not stiff. Metaphorically, ductility of mind; easy of persuasion; manageable; facility; obsequiousness: flexile is pliant, easily bent or turned: flexuous, full of turns or bendings: flexion, the act of bending; the state or habit of bending; hence flexure, the part bent; the joint.

His mighty strength lies in his able loins,
And where the *flexure* of his naval joins.
Sandys.

When splitting winds
Make *flexible* the knees of knotted oaks.
Shakspeare.

Thinkest thou the fiery fever will go out
With titles blown from adulation?
Will give place to *flexure* and low bends?
Id. Henry V.

Take a stock gilly-flower, tie it upon a stick, put them both into a glass full of quicksilver, so that the flower be covered: after four or five days you will find the flower fresh, and the stalk harder and less *flexible* than it was. *Bacon.*

Phocyon was a man of great severity, and no way *flexible* to the will of the people. *Id.*

Of a sinuous pipe that may have some four *flexions*, a trial would be made. *Id. Natural History.*

Resolve rather to err by too much *flexibility* than so much perverseness, by meekness than by self-love.
Hammond.

In regard of the soul, the numerous and crooked narrow cranies, and the restrained *flexuous* rivulets of corporeal things, are all contemptible. *Digby.*

Keep those slender aerial bodies separated and stretched out, which otherwise, by reason of their *flexibleness* and weight, would flag or curl. *Boyle.*

Under whose care soever a child is put to be taught, during the tender and *flexible* years of his life, it should be one who thinks Latin and language the least part of education. *Locke.*

The *flexibleness* of the former part of a man's age, not yet grown up to be headstrong, makes it more governable. *Id.*

Every *flexile* wave
Obeys the blast, the aerial tumult swells.
Thomson.

The goddess ceased,—and calling from afar
The wandering zephyrs, joins them to her car;
Mounts with light bound, and graceful as she bends,
Whirls the long lash, the *flexile* rein extends.
Darwin.

Contrary is the *flexure* of the joints of our arms and legs to that of quadrupeds: our knees bend forward, whereas the same joint of their hind legs bends backward. *Ray.*

FLEX'OR, *n. s.* Lat. The general name of the muscles which act in contracting the joints.

Flatterers, who have the *flexor* muscles so strong that they are always bowing and cringing, might in some measure be corrected by being tied down upon a tree by the back. *Arbuthnot.*

FLICK'ER, *v. a.* Goth. *flygra*, *flokra*; Belg. *fliggeren*; Sax. flicceꝛian. To flutter; to play the wings; have a fluttering motion

And hire to glad he did all his entent;
For whiche her gost, that *flickered* aie alofte,
Into her wofull hert aien it went.
Chaucer. Troilus and Creseide.

The wreath of radiant fire
On *flickering* Phœbus' front.
Shakspeare. King Lear.

'Twas ebbing darkness, past the mid' of night
And Phosphor, on the confines of the light,
Promised the sun, ere day began to spring;
The tuneful lark already stretched her wing,
And *flickering* on her nest made short essays to sing.
Dryden.

At all her stretch her little wings she spread,
And with her feathered arms embraced the dead;
Then *flickering* to his pallid lips, she strove
To print a kiss, the last essay of love. *Id.*

FLIMSY, *adj.* 'Of this word,' says Dr. Johnson, 'I know not any original, and suspect it to have crept into our language from the cant of manufacturers.' It has also been conjectured to come from flame, that is, flamy; showy; easily seen through. But the Sax. lempe; Teut. *limp*, limber; pliant; appears to be the true origin of it. A work or performance is flimsy which has nothing solid in it. Without strength of texture; what is weak, feeble: hence, metaphorically, mean; spiritless.

Proud of a vast extent of *flimsy* lines. *Pope.*

It must be very surprising to one who reads and studies the sacred scriptures with a free, unbiassed mind, to see what elaborate, finespun, *flimsy* glosses men will invent and put upon some texts as the true and genuine sense of them. *Mason.*

O'er his broad neck a wiry net he flung,
Quick as he strode, the tinkling meshes rung;
Fine as the spider's *flimsy* thread he wove
The immortal toil to lime illicit love. *Darwin.*

FLINCH, *v. n.* FLINCHER, *n. s.* Perhaps corrupted from *fling*, or from the Teut. *blencken*, to start back; there is also a Saxon verb flion, to avoid. In Shakspeare it signifies to fail: but its usual application is to shrink from any suffering or undertaking; to withdraw from any pain or danger. He is a flincher who shrinks or fails in any matter.

If I break time, or *flinch* in property
Of what I spoke, unpitied let me die.
Shakspeare.

A child, by a constant course of kindness, may be accustomed to bear very rough usage without *flinching* or complaining. *Locke.*

Every martyr could keep one eye steadily fixed upon immortality, and look death and danger out of countenance with the other; nor did they *flinch* from duty, for fear of martyrdom. *South's Sermons.*

Oh ingratitude, that John Bull, whom I have honoured with my friendship, should *flinch* at last, and pretend that he can disburse no more money.
Arbuthnot's History of John Bull.

'Twas blow for blow, disputing inch by inch,
For one would not retreat, nor t'other *flinch*.
Byron

FLING, *preter.* FLUNG; *part.* FLUNG, or FLONG; *v. a.* & *v. n.* FLINGER, *n. s.* FLUNG, *participle* and *preterite.* Lat. *fligo*, says Skinner; according to others, it is derived from *flying*; so to *fling* is to set *flying*. So says Dr. Johnson. Serenius more probably, that Sax. flenga, to cast or throw away, is the origin of this word. To cast from the

hand; to throw with violence or otherwise, either from the hand, from a machine, or with any violent force or concussion; to move forcibly; to flounce; to wince; to fly into violent and irregular motions. And also in the sense of casting imputation and dishonor upon a person or character. The substantives are metaphorically employed to signify a gibe; a sneer; a contemptuous remark: and a flinger is not merely one who throws, but one who gibes and jeers. The verb is also used in phrases; thus, to fling away; to eject, to dismiss; to fling down, to demolish, to ruin; to fling off, to baffle in the chase, to defeat of a prey; to fling out, to grow unruly, or outrageous.

Cromwell, I charge thee, *fling away* ambition;
By that sin fell the angels. *Shakspeare.*

The matrons *flung* their gloves,
Ladies and maids their scarfs and handkerchiefs
Upon him. *Id. Coriolanus.*

Duncan's horses,
Turned wild in nature, broke their stalls, *flung out*,
Contending 'gainst obedience. *Shakspeare.*

How much unlike that Hector who returned
Clad in Achilles' spoils; when he, among
A thousand ships, like Jove, his lightning *flung*.
Denham.

Millions of spirits for his fault amerced
Of heaven, and from eternal splendours *flung*,
For his revolt yet faithful how they stood
Their glory withered! *Milton's Paradise Lost.*

There eternal summer dwells,
And west-winds with musky wings
About the cedared alleys *fling*
Nard and cassia's balmy smells. *Milton.*

The angry beast
Began to kick, and *fling*, and wince,
As if he had been beside his sense. *Hudibras.*

'Tis fate that *flings* the dice; and as she *flings*,
Of kings makes peasants, and of peasants kings.
Dryden.

A heap of rocks, falling, would expel the waters out of their places with such a violence as to *fling* them among the highest clouds. *Burnet's Theory.*

These men are too well acquainted with the chace to be *flung off* by any false steps or doubles.
Addison's Spectator.

The knight seeing his habitation reduced to so small a compass, ordered all the apartments to be *flung* open. *Id.*

I know thy generous temper:
Fling but the appearance of dishonour on it,
It straight takes fire. *Addison's Cato.*

No little scribbler is of wit so bare,
But has his *fling* at the poor wedded pair.
Addison.

These are so far from raising mountains, that they overturn and *fling down* some of those which were before standing. *Woodward.*

And when up Ludgate-hill huge carts move slow
Far from the straining steeds securely go,
Whose dashing hoofs behind them *fling* the mire,
And mark with muddy blots the gazing squire.
Gay.

Every beam new transient colours *flings*,
Colours that change whene'er they wave their wings. *Pope.*

I, who love to have a *fling*
Both at senate-house and king,
Thought no method more commodious
Than to show their vices odious. *Swift.*

It is not noon—the sun-bow's rays still arch
The torrent with the many hues of heaven,
And roll the sheeted silver's waving column
O'er the crag's headlong perpendicular,
And *fling* its lines of foaming light along,
And to and fro, like the pale courser's tail,
The Giant steed, to be bestrode by Death,
As told in the Apocalypse. *Byron. Manfred.*

FLINDERS (Matthew), a modern and English navigator, of respectable talents, was a native of Lincolnshire, and went to sea in the merchant service. In 1795 he sailed as midshipman with captain Hunter to New Holland, and was promoted in the early part of the year 1801 to the command of an expedition of discovery, consisting of a schooner of 420 tons burden, an astronomer, botanist, draftsman, &c. We should state that lieutenant Flinders had previously distinguished himself by the discovery of Bass's Straits (between New Holland and Van Diemen's land), in conjunction with the person whose name they bear. After surveying the western coast of New Holland, in the summer of 1802, Flinders was obliged to return in August 1803 to Port Jackson, his vessel having been wrecked on a coral reef. The crew and officers however being saved, Mr. Flinders embarked in the Cumberland, a boat of nineteen tons burden, in December, for the purpose of bringing home his papers. On his arrival at the island of Mauritius, notwithstanding he had passports from the French government, he was cruelly detained, together with his books, his most valuable collection of charts of the coasts he had explored, and all his papers. After a captivity of more than three years he was liberated, through the intercession of the Royal Society of London. On his return to England he drew up an account of his researches, published after his death, in 1814, under the title of A Voyage to the Terra Australis, undertaken for the purpose of completing the discovery of that vast country, in 1801, 1802, and 1803; 2 vols. 4to., with a folio atlas.

FLINT, *n. s.* } Sax. flint; Swed. Teut. and
FLIN'TY, *adj.* } Belg. *flint*, from Sax. *ligent*, a fire-stone.—Thomson. A semi-pellucid stone, composed of crystal debased, of a blackish-gray, of one similar and equal substance, free from veins, and naturally invested with a whitish crust. It is sometimes smooth and equal, more frequently rough: its size is various. It is well known to strike fire with steel. It is useful in glass-making. Any thing eminently or proverbially hard. The adjective signifies made of flint; strong; full of stones: metaphorically, hard of heart; cruel; inexorable.

For, certes, fire ne may not come out of nothing, but if it were first in the same thing naturelly; as fire is drawne out of *flintes* with stele.
Chaucer. The Persones Tale.

Your tears, a heart of *flint*
Might tender make. *Spenser.*

Throw my heart
Against the *flint* and hardness of my fault.
Shakspeare.

Tyrant custom
Hath made the *flinty* and steel couch of war
My thrice-driven bed of down. *Id. Othello.*

Searching the window for a *flint*, I found
This paper. *Id. Julius Cæsar.*

Gratitude,
Through *flinty* Tartar's bosom, would peep forth,
And answer thanks. *Shakspeare.*

The gathering up of *flints* in *flinty* ground, and laying them on heaps, is no good husbandry.
Bacon's Nat. History.

There is the same force and the same refreshing virtue in fire kindled by a spark from a *flint*, as if it were kindled by a beam from the sun.
South's Sermons.

To pave thy realm and smooth the broken ways,
Earth from her womb a *flinty* tribute pays. *Gay.*

Juan, who saw the Moor's late minion bleed
As if his veins would pour out his existence,
Stood calling out for bandages and lint
And wished he had been less hasty with his *flint.*
Byron.

FLINT, in natural history, a kind of semi-transparent, or not quite opaque stone; generally of a roundish form, and covered with white crust of a smooth, uniform, shining texture; so hard that they will strike fire with steel; calcinable by fire, after which they become white, friable, and, according to Henckel, heavier than before, and soluble by acids; vitrifiable only by the very violent heat of the largest speculums, such as that of Villette, and not even by the focus of one of Tschirnhausen's lenses, according to an experiment of Neumann. They are found generally in beds of chalk and of sand; but never forming entire strata of rock as jasper does. By long exposure to air and the sun they seem to decay, to lose their lustre, their firmness, and texture, and to be changed to a white calcareous earth or chalk. Hence they are almost always found covered with a white chalky crust. They are also convertible into a calcareous earth by fusion, or vitrification with so much fixed alkali, that they shall resolve into a liquid mass called the liquamen, or oil of flints. And by precipitation from the fixed alkali by means of acids. This genus of stones, or silicious earths, Cronstedt considers as of an intermediate nature between the quartz and jasper; both of which it so nearly resembles that it is difficult to distinguish them. He characterises it thus: 1. It is more uniformly solid and not so much cracked in the mass as quartz, but more pellucid than jasper. 2. It bears the air better than jasper, but worse than quartz. 3. For the purpose of glass-making it is better than jasper, but not quite so good as quartz. 4. Whenever it has had an opportunity of shooting into crystals those of quartz are always found in it; as if the quartz made one of its constituent parts, and had been squeezed out of it. This may be seen in every hollow flint and its clefts, which are always filled up with quartz. 5. It often shows most evident marks of having been originally in a soft and slimy tough state like jelly.—To these properties the following are added by other authors. 6. When broken it is scaly, generally unequal, and cracks into thin lamellæ. 7. In a calcining heat it becomes opaque, white, and milky.

The following is Mr. Kirwan's description of the flint. It is, says that eminent mineralogist, very commonly of a yellowish or bluish-gray cast, often grayish-black. Several of these often meet in the same specimen, either in veins, stripes, clouds, or dots.

Amorphous, interspersed in other stones, or in nodules, or rounded lumps, often perforated, very rarely crystallised, in double triangular pyramids; often also forming the substance of petrifactions, particularly of echinites. Its surface generally uneven and wrinkled, either smooth or rough, often covered with a rind, either calcareous or argillaceous. Its external lustre, 0 or 1. Internal 1. Transparency 2·1, sometimes nearly 3. Fracture conchoidal, seldom imperfectly. Fragments, 3. Hardness from 10 to 11. Specific gravity from 2·58 to 2·63. Heated, it decrepitates, whitens, becomes brittle, and opaque, is infusible at 168°, and is barely softened by pure air; the usual fluxes affect it as they do quartz. The impressions of marine shells, and even of leaves, are frequently found in flints, which leaves no doubt of their having been produced in the moist way, and even that some are of modern formation. According to Mr. Weigleb's analysis, they contain about 0·80 silex, 0·18 argill, and 0·02 calx. Its transitions are into quartz, calcedony, cornelian, and hornstone. It is frequently intimately mixed, not only with quartz or calcedony, but even with calcareous spars and earth. It occurs in primitive, transition, secondary, and alluvial mountains. In the first two, in metalliferous and agate veins. In secondary countries it is found in puddingstone, limestone, chalk, and amygdaloid. In chalk it occurs in great abundance in beds. These seem to have been both formed at the same time. Werner, however, is of opinion, that the tuberose and many other forms have been produced by infiltration.

The method of preparing flints for the nicest operations in the glass trade is this:—choose the hardest flints, such as are black and will resist the file, and will grow white when calcined in the fire. Cleanse these of the white crust that adheres to them; then calcine them in a strong fire, and throw them while red-hot into cold water; wash off the ashes that adhere to them, and powder them in an iron mortar, and sift them through a very fine sieve; pour upon this powder some weak aquafortis, or the phlegm of aquafortis, to dissolve and take up any particles of iron it may have got from the mortar; stir this mixture several times; then let it rest, and in the morning pour off the liquor, and wash the powder several times with hot water, and afterwards dry it for use. You will thus have a powder for making the purest glass as perfectly fine and faultless as if you had used rock crystal itself. The washing off the ferruginous particles with aquafortis is not necessary when the glass intended to be made is to be tinged with iron afterwards; but when meant to be a pure white, this is the method that will secure success.

FLINT, or FLINTSHIRE, a county of North Wales, bounded on the south-east by part of Denbighshire, which, intersecting it in that direction, insolates the hundred of Maylor; on the south-west by a larger portion of the same county; on the north it abuts on the Irish Sea; and on the north-east it is separated from Cheshire by the estuary of the Dee, the ancient Seteia estuarium of Ptolemy. This county is in shape a kind of stripe or slip of land, partially sepa-

rated from a much larger region, to which it previously belonged, and extends nearly thirty-three miles in length, and, on the average, about ten in breadth. It is 115 miles in circuit, and contains a superficial area of 309 square miles, or 197,760 square acres.

When the Romans invaded Britain, the portion of country forming the present county of Flint was comprised in the territory of the Ordovices. This county, or a certain portion of it, was long designated under the appellation of Tegangle, or Teigengle, a term that has been supposed to mean Fair England. After the subjugation of the Ordovices, this district was included among the portion of the island which constituted the region denominated Britania secunda. In the Saxon dynasty, the whole of what constitutes the present county of Flint was brought under the domination of those strangers, immediately after the surrender of Chester to the arms of Egbert. It is now in the province of Canterbury, and included in the two dioceses of St. Asaph and Chester. For the purposes of the administration of justice, it is placed in the circuit visited by the chief justice of Chester and his associate; and, for the sake of shrival and subsidiary order, is divided into five hundreds, one city (St. Asaph), one borough (the county-town of Flint), and three other market-towns (Mold, Caerwis, and Holywell), and comprises twenty-eight parishes. This county gives the title of earl, conjoined with the county palatine of Chester, to the Prince of Wales; that of viscount to the family of Ashburton: Greddington is a newly created barony for the family of Kenyon. Flintshire sends one member to parliament for the county, and one for Flint as the county-town.

In a comparative view, though this cannot be called a mountainous country, yet both as to soil and surface it is considerably diversified. Some of its ridges have rather sharp escarpments; but generally the hills fall in gentle slopes, descending into fertile vales, through which meander several pleasing and useful streams. From the shore of the Dee, the only navigable stream, the land suddenly rises for three or four miles in fine equalities, consisting of an argillaceous soil highly productive in corn and grass. Beyond this, in the vicinity of Halken, a mountainous tract runs for a considerable extent nearly parallel with the river, the upper parts of which present a sterile appearance; but the interior is incalculably rich, abounding in minerals, lead, and calamine, interspersed with immense strata of limestone; and the lower parts are diversified with well wooded dingles, that, coming from the cwms of the hills, open their embouchures to the tide river. The northern part of the county is in general flat, particularly towards the sea; but yields excellent corn and grass. The eastern part has a line of elevation whose escarpment faces the vale of Clwyd, and forms a bold frontier, well known under the denomination of the Clwydian Hill, the insolated summits of which, Moel Arthur, Moel Fenlli, Moel y Famma, are conspicuous at an immense distance. These form a chain of varied elevation, commencing at Prestatyn, on the estuary of the Dee, extending in a direction from north to south as far as the point of Moel yr Accre in the parish of Llanarmon, where, reaching a further county, they terminate in the mountain Cefndu in the parish of Gwyddelwern. No passage is obtainable over their heath clad summits, but by the few bwlchs that are to be climbed for the purpose nearly two-thirds of their height, except one opening near Bodfari, where a road has been formed from Holywell to Denbigh. The soil of these hills is of a commixture of clay and gravel, and the argillaceous is the predominant portion. The substrata of this elevated range principally consist of calcareous substances.

The other rivers of this district, as we have intimated, are not navigable. The Clwyd having risen in Denbighsnire, and watered that county, enters this in the vicinity of Bodfari, and, taking a northerly direction, empties itself into the Irish Sea. The Alun, which land-dives in the vicinity of Mold, has its fountain head in the same county; and, after a singularly curious route through Flintshire, re-enters Denbighshire in its course to form a confluence with the Dee. The Terrig, Wheler, Elwy, &c., form contributary streams which furnish water for the demand of numerous mills, and afford, for the table, a supply of various and delicate fish.

The natural productions of this county are more numerous and valuable than might be expected in a district of so limited an extent. Its mineralogy has long been an interesting subject, and, at a very early period, Flint virtually became a mining county. The mineral line has been briefly pointed out by the accurate Pennant, who divides it into two parts, the highland and the lowland tracts. The former, he observes, commences near Diserth, where the rocky ridge called Dalor-goch impends over the fertile arable champaign lands of the Rhuddlan vale. The course southward runs through the parishes of Cwm, Tremeirchion, and Caerwys. The small valley of Bodfari occasions an interjacent break of continuity; part of the line is again found, passing through Skeifiog and Nannerch; whence, near the town of Mold, it makes a considerable detour through the parish of Northop, and then exhibits its front to those of Halkin, Holywell, Whiteford, Llanasa, Gwaenyscor, and Meliden. The second division is separated from the first by a deep depression of the previously elevated line of country in the vicinity of Rhos Esmor; and numerous coal and other mines are often found in the flat surface, on the western side of the lower portion. With Mold Mountain the land rises again, and the mineral tract takes a southerly course, as previously stated, through the adjacent county of Denbigh. The central and western parts of the former, extending from Dalar-goch to Rhos Esmor, consist of calcareous strata that produce limestone of excellent quality; and, in many instances, approximating to several kinds of foreign marble. On the eastern side of this tract the composite matter begins to alter, trapping, or rather changing into a mixed sort of silicious substance varying as to degrees of purity, denominated chert. Below this, a dark-looking shivery shale, becoming friable when exposed to the atmosphere, commences near Rhos Esmor;

nd so far as these decomposable strata occur in arger or smaller quantities, lead ore is found. mmediately as the shale disappears, freestone xhibits capabilities for quarrying useful stone; nd rich veins of coal lie subjacent, though at a reat depth. The coal strata extend to the marin of the Dee estuary, under whose bed they ip, the grass on the opposite side appearing gain in the peninsulated tract, constituting the undred of Wiral in Cheshire; and further in he same north-easterly direction beyond the Mersey in the county of Lancaster. The sudden changes in the strata are as strikingly observable, particularly near Nennerct, where the ransition is demonstrable at first sight; limetone rocks forming one side of the vale, and edges composed of shivery shale the other opposing declivity. Both the limestone and chert are of unknown depth; because neither the natural fissures, nor the mineral veins that cross them n lines of general but various bearings, have hitherto been fathomed. The minerals of those tracts are lead ores of various kinds, and degrees of estimated value; lapis calaminaris, and another species of zinc that forms in some processes a substitute of calamine, known by the miners under the denomination of black-jack. At one time a green lead ore was discovered in the Halken Mountain, of such an obstinate tenacity as to resist the reductive force of a powerful blast-furnace before it would give out its metal; which amounted to about thirteen hundred weight per ton. The gravel-ore found in what the miners denominate flats, that is, a loose stratum composed of sand and stones, consists of a kind of bolders and tumblers, formed of a mineral rounded and polished on the surface by force of agitating waters. The lumps are of various sizes, from that of a hazel nut to pieces weighing several tons. The quality is nearly similar to the potters' ore. Lapis calaminaris is found in great quantities, particularly on the eastern side of the county. This generally lies in a matrix of limestone or chert. It assumes various colors, viz. yellow, green, red, brown, or black, and is of different degrees of hardness, and much various surface: some is reticulated like corroded bones, and other kinds appear similar to indurated wax. Another species of zinc, pseudo-galena, or black-jack, is obtained in large quantities, and is now ascertained to be a fair substitute for calamine. The appearance is metalline, and the color generally a bluish-gray. Coals, it has been observed, are found in great plenty, and the coal district in this county extends in a south-easterly direction, commencing at Llanasa, through the parishes of Whiteford, Holywell, Flint, and Northop, terminating in Hawarden. The dip of the veins varies considerably, both as to bearing and inclination; it is in general from one yard in four to two in three. The beds are also of different thicknesses, from two feet to five yards, producing coal of several qualities, useful in various branches of manufacture; as well as answerable to the demands for culinary purposes. Canal coal, though not of the first kind, possesses a very desirable quality for lime-burning, and is found in extensive beds. Chert, the petrosilex of Cronstedt, here accompanies the limestone strata in immense masses or rocks that form the matrices of different ores, useful for various purposes, but especially for the manufacturing of porcelain and delft-ware: large quantities are sent to the Staffordshire and Shropshire potteries, where it is also used for comminuting calcined flints. Among other kinds of spars, the curious double reflecting species, the crystallum, vel Spatum islandicum, is not unfrequently found. Petroleum, or rock oil, is often met with in the limestone strata.

At Holywell is a fountain dedicated to St. Winifred, which was formerly believed to be endowed with miraculous medicinal properties, but the celebrity of the well has suffered great abatement of late years. It is chiefly distinguished by its extreme coldness and purity. Part of Flintshire affords good pasturage, together with large harvests of excellent wheat, and other grain, which is principally exported to Liverpool. It is also a considerable breeding county of small black cattle. Formerly the inhabitants reared a vast number of bees, and made a liquor from the honey, called metheglin. It is now not much used. The principal manufactures are of copper and brass, carried on to a large extent near Holywell. Here are made bolts, nails, sheathing for vessels, and plates of all descriptions; as also copper pans of large dimensions, for the evaporation of salt. These works were established in the year 1765, and belong to the mining companies of the island of Anglesea. The other manufactures are of cotton and pottery.

FLINT, in geography, the capital of Flintshire, in North Wales. It is commodiously seated on the river Dee; and though it is but a small place it has a corporation, consisting of a mayor, two bailiffs, and inferior officers. In conjunction with Rhyddlan, Overton, Cærwys, and Cærgœrly, this borough sends one member to parliament. The voters, inhabitants paying scot and lot, are about 1200; the returning officer is the mayor of Flint. It was formerly noted for its castle, where Richard II. took shelter on his arrival from Ireland; and where he was taken prisoner by the duke of Lancaster. This castle stands close to the sea on a rock, which in various parts forms several feet of its foundation. It covers about three quarters of an acre, but is now in ruins. It is 204 miles north-west of London, and twelve miles and a half W. N. W. of Chester.

FLIPP, *n. s.* A cant word. A liquor much used in ships, made by mixing beer with spirits and sugar.

> The tarpawlin and swabber is lolling at Madagascar, with some drunken sunburnt whore, over a can of *flip*. *Dennis.*

FLIP'PANT, *adj.* } A word of no great au-
FLIP'PANTLY, *adv.* } thority, probably derived from flip-flap.—Johnson. From Goth. *pleipan*, nimble. Thomson. It is applied only to speech, and signifies a nimble, flowing, prating, use of the tongue; pert; saucy; petulant.

> Hyde's *flippant* stile there pleasantly curvets,
> Still his sharp wit on states and princes whets;
> So Spain could not escape his laughter's spleen,
> None but himself must choose the king and queen.
> *Marvell.*

An excellent anatomist promised to dissect a woman's tongue, and examine whether there may not be in it certain juices, which render it so wonderfully voluble or *flippant*. *Addison.*

Away with *flippant* epilogues. *Thomson.*

FLIRT, *v. a., v. n.* & *n. s.* } From Sax. ꝼlic-
FLIRTA'TION, *n. s.* } ceꝼian; Gothic *fleira, flygra*, to flutter. Skinner thinks it formed from the sound. To move any instrument backwards and forwards rapidly; putting a lady's face in quick motion; hence it has been applied to the state of the mind and feelings indicated by such movement. Hence a flirt is one who loves to attract notice; who holds out and employs this or any other signal for admiration. It also means a young woman forward and pert. The verb is likewise used in the sense of jeering and gibing.

Scurvy knave, I am none of his *flirt* gills; I am none of his skains mates. *Shakspeare.*

Permit some happier man
To kiss your hand, or *flirt* your fan. *Dorset.*

Several young *flirts* about town had a design to cast us out of the fashionable world. *Addison.*

In unfurling the fan are several little *flirts* and vibrations, as also gradual and deliberate openings. *Id. Spectator.*

When waggish boys the stunted besom ply,
To rid the slabby pavement pass not by
Ere thou hast held their hands; some heedless *flirt*
Will overspread thy calves with spattering dirt. *Gay.*

Before you pass the' imaginary sights,
While the spread fan o'ershades your closing eyes,
Then give one *flirt*, and all the vision flies. *Pope.*

A muslin flounce, made very full, would give a very agreeable *flirtation* air. *Id.*

Dick the scavenger
Flirts from his cart the mud in Walpole's face. *Swift.*

Love had made Catherine make each lover's fortune,
Unlike our own half-chaste Elizabeth,
Whose avarice all disbursements did importune,
If History the grand liar ever saith
The truth; and though Grief her old age might shorten,
Because she put a favourite to death;
Her vile ambiguous method of *flirtation*,
And stinginess, disgrace her sex and station. *Byron.*

FLIT, *v. n.* & *adj.* } Dan. *flitter*; and from
FLIT'TING. } to fleet. To remove; to fly away; to flutter; to rove on the wing; to be fleet or unstable; swift; nimble. In Scotland, a cant term for a clandestine abandonment of one place for another to avoid the payment of rent.

For whan that richesse shineth bright,
Love recovereth ayen his light;
And whan it faileth he wol *flit*,
And as she greveth so greveth it. *Chaucer. Romaunt of the Rose.*

How oft do they [angels] their silver bowers leave,
To come to succour us that succour want!
How oft do they with golden pinions cleave
The *flitting* skyes, like flying pursuivant,
Against fowle feendes to ayd us militant. *Spenser. Faerie Queene.*

His grudging ghost did strive,
With the frail flesh; at last it *flitted* is,
Whither the souls do die of men that live amiss. *Id.*

So hardly he the *flitted* life does win,
Unto her native prison to return. *Id.*

He stopt at once the passage of his wind,
And the free soul to *flitting* air resigned. *Dryden.*

Which fastened, by the foot, the *flitting* bird. *Id. Æneid.*

Fear the just gods, and think of Scylla's fate!
Changed to a bird, and sent to *flit* in air. *Pope.*

He *flitted* to and fro a dancing light,
Which all who saw it followed wrong or right. *Byron.*

FLITCH, *n. s.* Sax. ꝼlicce; Dan. *flycke*; Fr. *fleche, floche*.—Skinner. Icel. *flyche*, probably from *flaka* (Goth. *fla*), to divide. The side of a hog salted and cured.

But heretofore 'twas thought a sumptuous feast,
On birthdays, festivals, or days of state,
A salt dry *flitch* of bacon to prepare;
If they had fresh meat, twas delicious fare. *Dryden's Juvenal.*

He sometimes accompanies the present with a *flitch* of bacon. *Addison.*

While he from out the chimney took
A *flitch* of bacon off the hook,
Cut out large slices to be fryed. *Swift.*

FLITTERMOUSE, *n. s.* *Vespertilio*; from flit and mouse. The bat; the winged mouse.

FLITTING, *n. s.* Sax. ꝼlit, scandal. An offence; a fault; a failure; a desert.

Thou tellest my *flittings*, put my tears into thy bottle. *Psalms.*

FLIX, *n. s.* Corrupted from flax. Down; fur; soft hair.

With his lolled tongue he faintly licks his prey;
His warm breath blows her *flix* up as she lies:
She trembling creeps upon the ground away,
And looks back to him with beseeching eyes. *Dryden.*

FLOAT, *v. n., v. a., n. s.* & *adj.* Sax. ꝼleoat; Fr. *flotter*. See FLEET. To swim on the surface of the water; to be buoyant in any fluid, whether water or air: to cover with water; as to float a meadow: to let water into dock: to render buoyant on its surface, the ships that may be laid up. The noun is applied to any body so contrived or formed as to swim on the water.

The statue of Venus, glorious for to see,
Was naked, *fleeting* in the large see. *Chaucer. Knightes Tale.*

At last far off they many islandes spy,
On every side *floting* the floodes among:
Then said the knight, 'Lo! I the land descry:
Therefore, old Syre! thy course doe thereunto apply.' *Spenser. Faerie Queene.*

When the sea was calm all boats alike
Shewed mastership in *floating*. *Shakspeare.*

The hindrance to stay well is the extreme length of a ship, especially if she be *floaty*, and want sharpness of way forwards. *Raleigh.*

Thus Satan talking to his nearest mate,
With head uplift above the wave, and eyes
That sparkling blazed, his other parts besides
Prone on the flood, extended long and large
Lay *floating* many a rood. *Milton.*

You will find this to be a very choice bait, sometimes casting a little of it into the place where your *float* swims. *Walton.*

What divine monsters, O ye gods, were these
That *float* in air, and fly upon the seas! *Dryden.*

A passage for the weary people make;
With osier *floats* the standing water strow,
Of massy stones make bridges, if it flow. *Id.*

His rosy wreath was dropt not long before,
orn by the tide of wine, and *floating* on the floor.
Dryden.

Floating visions make not deep impressions enough
leave in the mind clear, distinct, lasting ideas.
Locke.

Venice looks, at a distance, like a great town half
oated by a deluge. *Addison on Italy.*

Swift they descend, with wing to wing conjoined,
tretch their broad plumes, and *float* upon the wind.
Pope.

Now smoaks with showers the misty mountain-ground,
nd *floated* fields lie undistinguished round. *Id.*

Descending flames the dusky shrine illume,
Fire the wet wood, the sacred bull consume;
Winged from the sea the gathering mists arise,
And *floating* waters darken all the skies. *Darwin.*

When slowly *floating* down the azure skies
crimson cloud flashed on his startled sight,
Whose skirts gay sparkling with unnumbered dyes,
aunched the long billowy trails of flickery light.
Beattie.

It is a pleasant voyage perhaps to *float*
Like Pyrrho, on a sea of speculation,
But what if carrying sail capsize the boat?
You wise men don't know much of navigation.
Byron.

The *floating* robe around him folding
Slow sweeps he through the columned aisle—
With dread beheld—with gloom beholding
The rites that sanctify the pile.
Byron. The Bride of Abydos.

Float is also used for a quantity of timber bound together with rafters athwart, and put into a river to be conveyed down the stream; and even sometimes to carry burdens down a river.

Float-Boards, boards fixed to water-wheels of under-shot mills, serving to receive the impulse of the stream, whereby the wheel is carried round. See Mill and Wheel. It is no advantage to have too great a number of float-boards; because, when they are all struck by the water in the best manner that it can be brought to come against them, the sum of all the impulses will be but equal to the impulse made against one float-board at right angles, by all the water coming out of the penstock through the opening, so as to take place on the float-board. The best rule in this case is, to have just so many, that each of them may come out of the water as soon as possible, after it has received and acted with its full impulse. As to the length of the float-board, it may be regulated according to the breadth of the mill. See Mill.

Float-Stone, a sub-species of the indivisible quartz of Mohs., or spongiform quartz of Jameson. Color dirty white. In porous, massive, and tuberose forms, and dull internally. Fracture coarse earthy: feebly translucent on the edges. Soft, but its minute particles are as hard as quartz. Rather brittle. Feels meagre and rough, and emits a grating noise when the finger is drawn across it. Specific gravity 0·49 Its constituents are, silica 98, carbonate of lime 2. It occurs in crusting flint, or in imbedded masses in a secondary limestone at St. Ouen near Paris.

FLOCK, *n. s.* & *v. n.* Sax. flocc; Goth. and Teut. *flock*; Dan. *flok*, a multitude, à Gr. λοχος, a troop. A company; usually, a company of birds or beasts; sometimes of men; but especially of sheep, as distinguished from herds, which are of oxen. To gather in crowds, or large numbers

The heathen that had fled out of Judea came to Nicanor by *flocks*. 2 *Mac.* xiv. 14.

A-morwe whan the day began to spring,
Uprose our hoste and wos our aller cok,
And gaderd us togeder in a *flock*,
And forth we riden, a litel more than pas
Unto the watering of Seint Thomas.
Chaucer. Prologue to the Canterbury Tales.

Even all the nation of unfortunate
And fatall birds about them *flocked* were
Such as by nature men abhorre and hate.
Spenser's Faerie Queene.

She that hath a heart of that fine frame,
To pay this debt of love but to a brother,
How will she love when the rich golden shaft
Hath killed the *flock* of all affections else
That live in her. *Shakspeare. Twelfth Night.*

Many young gentlemen *flock* to him every day, and fleet the time carelessly. *Shakspeare.*

Stilpo, when the people *flocked* about him, and that one said, The people come wondering about you as if it were to see some strange beast. No, saith he, it is to see a man which Diogenes sought with his lanthorn at noon-day. *Bacon.*

The world's Great Light his lowly state hath blessed,
And left his Heaven to be a shepherd base:
Thousand sweet songs he to his pipe addressed:
Swift rivers stood, beasts, trees, stones ran apace,
And serpents flew to hear his softest strains;
He fed his *flock* where rolling Jordan reigns;
There took our rags, gave us his robes, and bore our pains. *Fletcher's Purple Island.*

Russet lawns and fallows gray
Where the nibbling *flocks* do stray. *Milton.*

All these, and more, came *flocking*; but with looks
Downcast and damp. *Id. Paradise Lost.*

People do not *flock* to courts so much for their majesties' service, as for making their fortunes.
L'Estrange.

France has a a sheep by her, to shew that the riches of the country consisted chiefly in *flocks* and pasturage.
Addison.

For there is none to covet, all are full.
The lion, and the libbard, and the bear
Graze with the fearless *flocks*; all bask at noon
Together, or all gambol in the shade
Of the same grove, and drink one common stream.
Cowper.

Flock, *n. s.* From *floccus*; Gr. πλοκος. A lock of wool.

A house well-furnished shall be thine to keep,
And, for a *flock* bed, I can shear my sheep. *Dryden.*

FLODDEN, Floddon, or Flowden, a village of England, in Northumberland, on the Till, between the Glen and the Tweed, five miles north of Wooler. Near it the well-known battle of that name was fought, on the 9th September, 1513, between the Scots, under king James IV., and the English under the earl of Surrey. The command of the van was allotted to the earl of Huntley; the earls of Lennox and Argyle commanded the Highlanders under James; and the earls of Crawford and Montrose led the body of reserve. The earl of Surrey gave the command of his van to his son, the lord admiral; his right wing was commanded by his other son, Sir Edward Howard; and his left by Sir Marmaduke Constable. The rear was commanded by the earl himself, lord Dacres, and Sir Edward Stanley. Under those leaders served the flower of all the nobility

and gentry then in England. Lord Hume served under the earls of Crawford and Montrose, and Hepburn earl of Bothwel was in the rear. The first motion of the English army was by the lord admiral, who suddenly wheeled to the right, and seized a pass at Milford, where he planted his artillery so as to command the most sloping part of the ascent where the Scots were drawn up; and it did great execution. The Scots had not foreseen this manœuvre; and it put them into such disorder, that the earl of Huntley found it necessary to attack the lord admiral; which he did with so much fury that he drove him from his post; and the consequence must have been fatal to the English, had not his precipitate retreat been covered by some squadrons of horse under the lord Dacres, which gave the lord admiral an opportunity of rallying and new forming his men. The earl of Surrey now advanced to the front, so that the English army formed one continued line, which galled the Scots with perpetual discharges of their artillery and bows. The Highlanders, as usual, impatient to come to a close fight, and to share in the honor of the day, which they now thought their own, rushed down the declivity with their broad swords, but without order or discipline, and before the rest of the army, particularly the division under lord Hume, advanced to support them. Their impetuosity, however, made a considerable impression upon the main battle of the English; and, the king bringing up the earl of Bothwel's reserve, the battle became general and doubtful: but by this time the lord admiral, having again formed his men, came to the assistance of his father, and charged the division under the earls of Crawford and Montrose, who were marching up to support the Highlanders, among whom the king and his attendants were now fighting on foot; while Stanley, making a circuit round the hill, attacked the Highlanders in the rear. Crawford and Montrose, not being seconded by the Humes, were routed; and thus all that part of the Scottish army which was engaged under their king, was completely surrounded by the division of the English under Surrey, Stanley, and the lord admiral. In this terrible situation, James acted with a coolness not common to his temper. He drew up his men in a circular form, and their valor more than once opened the ranks of the English, or obliged them to stand aloof, and again have recourse to their bows and artillery. The chief of the Scottish nobility made fresh attempts to prevail with James to make his escape while it was practicable; but he obstinately continued the fight. He saw the earls of Montrose, Crawford, Argyle, and Lennox, fall by his side, with the bravest of his men lying dead on the spot; and, darkness now coming on, he himself was killed by an unknown hand. The English were ignorant of the victory they had gained; and had actually retreated from the field of battle, with a design of renewing it next morning. This disaster was evidently owing to the romantic disposition of the king, and to the want of discipline among his soldiers; though some writers have ascribed it to the treachery of lord Hume. Many of James's domestics knew and mourned over his body; and it appeared that he had received two mortal wounds, one through the trunk with an arrow, and the other on the head with a ball. His coat of armour was presented to queen Catharine, who informed her husband, then in France, of the victory over the Scots. The loss on both sides in this engagement is far from being ascertained; though Polydore Virgil, who lived at the time, mentions the loss of the English at 5000, and that of the Scots at 10,000.

FLOG, *v. a.* Lat. *flagrum.* To lash; to whip; to chastise.

The schoolmaster's joy is to *flog.* *Gay.*

FLOOD, *n. s.* & *v. a.* } Saxon, flo'ð; from
FLOOD'GATE. } Sax. flopan, to flow; Goth. and Swed. *flod;* Belg. *vloed;* Fr. *flot.* A body of water; the sea; a river; a deluge; an inundation; flow; flux; as opposed to ebb and reflux: the swelling of a river by rain, or any other cause. In medical science, catamenia. The verb signifies to deluge; to cover with water. Floodgate is an artificial means of admitting, or excluding, water at pleasure: it is placed across a river, or a water-course, for this purpose; used generally, for whatever impedes, or introduces, water, or any other fluid: it is sometimes used in a metaphorical sense.

And whanne he was putt out in the *flood*, the doughtir of Pharao took him up and norischide him into hir a sone. *Wiclif. Dedis.*

His dominion shall be also from the one sea to the other, and from the *flood* unto the world's end. *Psalm* lxxii. 8.

Wherefore, Lord Phœbus, this is my request,
(Do this miracle; or do min herte brest),
That now next at this opposition
Which in the signe shal be of the Leon,
As preyeth hire so gret a *flood* to bring,
That five fadome at the lest, it overspring
The highest rock in Armorike Bretaigne,
And let this *flood* enduren yeres twaine.
Chaucer. The Frankeleines Tale.

Like a great water-*flood* that tombling low,
From the high mountaines, threates to overthrow,
With suddein fury, all the fertile playne,
And the sad husbandman's long hope doth throw
Adowne the streame, and all his vowes make vayne;
Nor bounds, nor banks, his headlong usine may sustayne. *Spenser's Faerie Queene.*

Yet there the steel staid not; but inly bate
Deep in his flesh, and opened wide a red *floodgate.*
Spencer.

You see this confluence; this great *flood* of visiters.
Shakspeare.

When went there by an age, since the great *flood,*
But it was famed with more than with one man?
Id.

What need the bridge much broader than the *flood?*
Id.

By sudden *floods,* and fall of waters,
Buckingham's army is dispersed and scattered.
Id. Richard III.

We seek to know the moving of each sphere,
And the strange cause o' the' ebbs and *floods* of Nile.
Davies.

His youth, and want of experience in maritime service, had somewhat been shrewdly touched, even before the sluices and *floodgates* of popular liberty were yet set open. *Wotton.*

Those that have the good fortune of miscarrying, being delivered, escape by means of their *floods*, velling the humours from their lungs. *Harvey.*

There the companions of his fall, o'erwhelmed
/ith *floods* and whirlwinds of tempestuous fire,
e soon discerns. *Milton.*

Or thence from Niger *flood* unto Atlas mount,
he kingdoms of Almanzor, Fez, and Suz. *Id.*

All dwellings else
flood overwhelmed, and them with all their pomp
)eep under water rolled; sea covered sea,
ea without shore. *Id. Paradise Lost.*

It is commonly opinioned that the earth was thinly nhabited before the *flood*. *Browne.*

As if the opening of her mouth had opened some reat *floodgate* of sorrow, whereof her heart could not ibide the violent issue, she sunk to the ground. *Sidney.*

Thus having said, as by the brook he stood,
He scooped the water from the crystal *flood*. *Dryden.*

Where meadows are *flooded* late in spring, roll them with a large barley-roller. *Mortimer.*

The rain descended for forty days, the cataracts or *floodgates* of heaven being opened. *Burnet.*

I 'scotched, not killed,' the Scotchman in my blood,
And love the land of 'mountain and of *flood*.' *Byron.*

None saw his trickling tears—perchance, if seen,
That useless *flood* of grief had never been:
Nor long they flowed—he dried them to depart
In helpless—hopeless—brokenness of heart.
Id. Corsair.

Flood (Henry), an eminent orator and politician of the eighteenth century, the son of the right honorable Warden Flood, lord chief justice of the King's bench in Ireland, was born in 1732, and educated in Dublin. In 1749, after attending the university of Dublin for three years, he spent two years with much advantage under the tuition of Dr. Markham, afterwards archbishop of York. Besides the acquisition of mathematics and other sciences, he became so complete a master of the Greek, that he read it with as much facility as English. In 1759 and 1761 he was chosen a member of the Irish parliament, and soon rendered himself conspicuous as the great leader of opposition. The first important measure which he attempted was, an explanation of Poyning's law, by a misconstruction of which the privy council had assumed a degree of power so unconstitutional, as to render the Irish parliament a mere cypher. See Poyning's Law. By his repeated efforts, the obnoxious part of that law was repealed. He next introduced a bill for limiting the duration of the Irish parliament, which till then had always continued during the life of the king. This measure, after much opposition, he at last effected, under the administration of lord Townshend, in 1769, when the octennial bill was passed, which first gave Ireland a constitution somewhat resembling the British. In 1775 he was appointed a privy counsellor in both kingdoms, and a vice-treasurer of Ireland; but resigned this office in 1781; upon which his name was struck out of the list of the privy council. In 1782, the British parliament having repealed the act, 6 Geo. I. c. 5, declaring Ireland subordinate to, and dependent on, the imperial crown of Great Britain, Mr. Flood, in two able speeches, insisted, that the simple repeal of this act was no security against similar future claims; and, though he was supported by only three members in the Irish parliament, yet his doctrine was soon after adopted and ratified by the British parliament, who passed an act renouncing the claim for ever. In November, 1783, a violent altercation took place between Mr. Flood and Mr. Grattan, and he was soon after elected a member of the British parliament for Winchester; and in the subsequent one for Seaford, which he continued to represent till its dissolution in 1790; soon after which he died of a pleurisy. His first known production was verses on the death of Frederick prince of Wales; in the Oxford collection, 1751. He also wrote an Ode to Fame; translated the first Pythian Ode of Pindar, printed in 1785; and several orations of Demosthenes, Æschines, and Cicero; still in MS. Several of his speeches are extant; the last of which, delivered March 4th, 1790, on a parliamentary reform, was celebrated by Mr. Fox as containing the most rational scheme ever proposed on the subject. He married Lady Frances Beresford, daughter of the earl of Tyrone, in 1762, but had no issue.

FLOOK, *n. s.* German, *pflug*, a plough. The broad part of an anchor which takes hold of the ground; a flounder, a flat river fish.

FLOOR, *n. s.* & *v. a.* } Sax. flop, flope;
Flooring, *n. s.* } Goth. *flor* (from *fla*, flat; low.—Thomson). Isl. *floar*; Belg. *vloer*; Teut. *flur*; Fr. *fleur*. The bottom of an apartment: Dr. Johnson says, 'the pavement: a pavement is always of stone: the floor of wood or stone'; but see his own extract from Shakspeare: the part on which one treads: a story of a house; a suite of rooms, either the ground, the first, or the second story, &c., they are also denominated floors: to cover the bottom with a floor: a modern cant term among boxers for knocking a man down.

Hewn stone and timber to *floor* the houses.
2 *Chron.* xxxiv.

What haukes sitten on the perche above,
What houndes liggen on the *floor* adoun;
Of all this now I make no mentioun.
Chaucer. The Knightes Tale.

He rent that iron door
Where entered in, his foot could find no *floor*,
But all a deep descent as dark as hell.
Faerie Queene.

His step-mother, making all her gestures counterfeit affliction, lay almost grovelling upon the *floor* of her chamber. *Sidney.*

Look how the *floor* of heaven
Is thick inlaid with patens of bright gold:
There's not the smallest orb which thou beholdest,
But in his motion like an angel sings,
Still quiring to the young eyed cherubims.
Shakspeare.

The ground lay strewed with pikes so thick as a *floor* is usually strewed with rushes. *Hayward.*

He that building stays at one
Floor, or the second, hath erected none. *Jonson.*

The *flooring* is a kind of red plaster made of brick, ground to powder, and afterwards worked into mortar. *Addison.*

Whose spacious barns groan with increasing store,
And whirling flails disjoint the cracking *floor*. *Gay.*

Who fell as rolls an ox o'er in his pasture,
And roared out, as he writhed his native mud in,
Unto his nearest follower or henchman,
'Oh Jack! I'm *floored* by that ere bloody Frenchman.'
Byron.

Floor, in building. Floors are of several sorts; some of earth, some of brick, others of stone, of boards, &c. See Pavement. Carpenters never floor their rooms with boards till the carcase is set up, and also enclosed with walls, lest the weather should injure the flooring. Yet they generally rough-plane their boards for flooring before they begin any thing else about the building, that they may set them by to dry and season, which is done in the most careful manner. The best wood for flooring is the fine yellow deal well seasoned, which when laid will keep its color for a long while; whereas the white sort becomes black by often washing, and looks very bad. The joints of the boards are commonly made plain so as to touch each other only: but when the stuff is not quite dry, and the boards shrink, the water runs through them whenever the floor is washed, and injures the ceiling underneath. For this reason they are made with feather edges, so as to cover each other about half an inch, sometimes they are made with grooves and tenons; and sometimes the joints are made with dove-tails; in which case the lower edge is nailed down and the next drove into it, so that the nails are concealed. The manner of measuring floors is by squares of ten feet on each side, so that taking the length and breadth, and multiplying them together and cutting off two decimals, the content of a floor in square will be given. Thus 18 by 16 gives 288, or 2 square and 88 decimal parts.

Floor of a Ship, strictly taken, is only so much of her bottom as she rests on when a-ground. Such ships as have long, and withal broad floors, lie on the ground with most security and are not apt to heel, or tilt on one side; whereas others, which are narrow in the floor, or, in the sea phrase, craned by the ground, cannot be grounded without danger of being overturned.

Floors, Earthen, are commonly made of loam, and sometimes, especially to make malt on, of lime, and brooksand, and gun-dust, or anvil-dust from the forge. Ox blood and fine clay tempered together, Sir Hugh Plat says, make the finest floors. The manner of making earthen floors for plain country habitations is as follows:—Take two-thirds of lime, and one of coal ashes well sifted, with a small quantity of loam clay; mix the whole together, and temper it well with water, making it up into a heap; let it lie a week or ten days and then temper it over again. After this, heap it up for three or four days, and repeat the tempering very high, till it becomes smooth, yielding, tough, and gluey. The ground being then levelled, lay the floor therewith about two and a half or three inches thick, making it smooth with a trowel: the hotter the season is, the better; and, when it is thoroughly dried, it will make the best floor, especially for malt-houses. Those who would have their floors look better, let them take lime made of rag-stones, well tempered with whites of eggs, covering the floor about half an inch thick with it, before the under flooring is too dry. If this be well done, and thoroughly dried, it will look, when rubbed with a little oil, as transparent as metal or glass. In farmers' houses, floors of this nature are made of stucco, or of plaster of Paris, beaten and sifted, and mixed with other ingredients.

Floor Timbers, in a ship, are those parts of a ship's timbers which are placed immediately across the keel, and upon which the bottom of a ship is framed; to these the upper parts of the timbers are united, being only a continuation of floor timbers upwards.

FLOP, *v. a.* From flap. To clap the wings with noise; to play with any noisy motion of a broad body,

A blackbird was frighted almost to death with a huge *flopping* kite that she saw over her head.
L'Estrange.

FLORA, the reputed goddess of flowers, was, according to Lactantius, originally a lady of pleasure, who, having gained large sums of money by prostitution, made the Roman people her heir, on condition that certain games called Floralia might be annually celebrated on her birth-day. Some time afterwards, however, such a foundation appearing unworthy the majesty of the Roman people, the senate, to ennoble the ceremony, converted Flora into a goddess, whom they supposed to preside over flowers; and so made it a part of religion to render her propitious, that it might be well with their gardens, vineyards, &c. But Vossius, De Idolol. lib. i. c. 12, will not allow the goddess Flora to have been a courtezan, but rather a Sabine deity, and thinks her worship commenced under Romulus. His reason is, that Varro, in his fourth book of the Latin tongue, ranks Flora among the deities to whom Tatius, king of the Sabines, offered up vows before he joined battle with the Romans. And from another passage in Varro it appears, that there were priests of Flora, with sacrifices, &c., as early as the times of Romulus and Numa. The goddess Flora was, according to the poets, the wife of Zephyrus. Her image in the temple of Castor and Pollux was dressed in a close habit, and she held in her hands the flowers of peas and beans.

Flora, among botanists, is used for a catalogue of the plants and trees growing spontaneously in any particular country or district. Thus Flora Scotica, and Flora Suecica, are the titles of works describing the plants growing in Scotland and Sweden.

FLORAC, a town of France, in the department of Lozere, near the Tarn; thirteen miles and a half south of Mende. Long. 18° 0′ E. of Ferro, lat. 44° 19′ N.

Flo'ral, *adj.* | Flo'ret, *n. s.* | Flor'id, *adj.* | Florid'ity, *n. s.* | Flor'idness, *n. s.* | Florif'erous, *adj.* | Flo'rist. — All from Lat. *flos, floris*, à Gr. φλοξ, a flower. Floral is relating to Flora; or flowers: florid (Fr. *fleurette*) a small or imperfect flower: florid, Fr. *floride*; Lat. *floridus*; productive of flowers; covered with flowers; flushed with

; decorated with brilliant colors; embellished; dy; ambitious elegance; particularly applied he ruddy hue of the face: floriferous is protive of flowers: a florist, one who cultivates s skilled in them.

For not icladde in silk wos he,
But all in flours and *flourettes*,
Ipainted all with amourettes.
Chaucer. Romaunt of the Rose.

ur beauty is in colour inferiour to many flowers; , when it is most *florid* and gay, three fits of an e can change it into yellowness and leanness.
Taylor's Rule of Living Holy.

Nor that Nyseian isle
Girt with the river Triton, where old Cham,
Whom Gentiles Ammon call and Lybian Jove,
Hid Amalthea and her *florid* son
Young Bacchus, from his step-dame Rhea's eye.
Milton.

Though a philosopher need not delight readers with *floridness*, yet he may take a care that he disgust m not by flatness. *Boyle.*

The *florid*, elevated, and figurative way, is for the sions; for love and hatred, fear and anger, are otten in the soul, by shewing their objects out of ir true proportion. *Dryden.*

Let one great day,
To celebrate sports and *floral* play,
Be set aside. *Prior.*

There is a *floridity* in the face from the good digesa of the red part of the blood. *Floyer.*

The qualities of blood in a healthy state are to be *id*, when let out of the vessel, the red part conealing strongly and soon. *Arbuthnot.*

How did, pray, the *florid* youth offend,
Whose speech you took, and gave it to a friend?
Pope.

Some botanists or *florists* at the least.
Id. Dunciad.

And while they break
On the charmed eye, the' exulting *florist* marks
With secret pride the wonders of his hand.
Thomson.

But with a heavenly rapture on his face
The good old Khan, who long had ceased to see
Houris, or aught except his *florid* face,
Who grew like cedars round him gloriously.
Byron.

FLORAL GAMES, florales ludi, in antiquity, ere games held in honor of Flora. They ere celebrated with shameful debaucheries. here were several sorts of shows exhibited on ese occasions; Suetonius in Galba, and Voiscus in Carinus, say, that these princes preinted elephants dancing on ropes on these ccasions. They were chiefly held in the nightme, in the Patrician street; some will have it ere was a circus for the purpose on the Collis ortulorum.

FLORALIA, in antiquity, a general name for ne feasts, games and ceremonies, held in honor f the goddess Flora. See FLORA, and FLOAL GAMES.

FLOREAL; Fr. i. e. flowery month, from leurir, to flourish; the eighth month in the rench revolutionary calendar, which began on he 20th of April, and ended on the 19th of May. See CALENDAR.

FLOREF, a town of France, in the department of Sambre and Meuse, late of the Netherands, and duchy of Namur, seated on the Samre, seven miles west of Namur.

FLO'REN, *n. s.* So named, says Camden, because made by Florentines. A gold coin of Edward III., in value six shillings.

This yongest, which that wente to the town,
Ful oft, in herte he rolleth up and down
The beautee of thise *Florens* newe and bright.
Chaucer. The Pardoneres Tale.

FLOREN, or FLORENCE. Every pound weight of standard gold was, by act 18 Edw. III., to be coined into fifty florences, to be current at six shillings each; which made in tale fifteen pounds; or into a proportionate number of half florences or quarter pieces, by indenture of the mint.

FLORENCE, the capital of the grand duchy of Tuscany, and one of the finest cities in Italy, is said to have been first founded by the soldiers of Sylla, and embellished and enlarged by the Roman triumviri. It was destroyed by Totla; and rebuilt by Charlemagne. It is surrounded on all sides but one with high hills, which rise insensibly, and at last join with the Appennines. Towards Pisa there is a vast plain, forty miles in length, so filled with villas and villages that they seem to be a continuation of the suburbs of the city.

This city is divided into two unequal parts by the Arno, over which there are four bridges; one of which, the Della Trinita, is much admired for its elegant lightness of appearance, and is entirely built of white marble. The quays, the buildings on each side, and the bridges, render that part of Florence through which the river runs by far the finest. The handsomest square is the Piazza del Duca, lined with elegant buildings, and adorned with statues. The number of churches is unusually great, even for Italy, and they contain many excellent paintings and statues. In the church of La Sante Crose are the tombs of Michael Angelo, and Machiavel; between which has lately been placed that of Alfieri, the work of Canova. Galileo has likewise an ill-executed monument in this church. The palace of the grand duke, of heavy Tuscan architecture, is said to contain 900 apartments. The cathedral is of great extent and magnificence, its walls being cased, and its interior paved with marble, disposed in part by Michael Angelo. The dome of this building is much admired; as well as the tower adjoining 280 feet in height. The chapel of St. Lorenzo is perhaps the finest and most expensive habitation that ever was reared for the dead; it is encrusted with precious stones, and adorned by the workmanship of the best modern sculptors. Addison remarked that this chapel advanced so very slowly in his time, that it was not impossible but the family of Medici might be extinct before their burial place was finished. This has actually happened, the Medici family is extinct, and the chapel remains still unfinished. The adjoining convent contains the fine library of this family, celebrated for its MSS. The Mediĉean gallery, known throughout the world as one of the finest collections of works of art, is more than 500 feet long, and so stored with busts, statues, and paintings, as perfectly to dazzle the spectator on his first entrance. The crowning boast of this gallery is the celebrated Venus de Medicis, carried off by the French in the late

wars, but restored in 1815: on which alone, says Lord Byron,

> We gaze and turn away, and know not where,
> Dazzled and drunk with beauty.
> Childe Harold, Canto iv. 50.

Lady Morgan thus relates the history of its travels to France and re-establishment here:—

'In the commotions which shook Europe to its centre, Puccini (the Direttorre della Galleria) saw nothing to interest or to fear, but as the changes affected his gallery; and when the grand duke deserted Florence, Puccini, without seeking counsel or asking aid, packed up all the most precious pictures, and taking with him the Venus de Medicis, he freighted an *English* vessel bound from Leghorn to Palermo, with his precious charge. On his arrival, he presented his beauty of Cnidus to the king of Naples (then a fugitive like herself), and claimed and obtained his legitimate protection for the deposed queen of hearts. The king received the beautiful emigrant, en Preux—a tribune only less superb than that of Florence was allotted to her; and Puccini saw his deity receiving the same homage at Palermo as at Paphos: when to the astonishment of all, and to the utter consternation of her own high priest, the goddess deserted her temple for a French frigate, and exchanged her royal protector for the Jacobin Directory of France. The Directory coquetted about her reception; the king of Naples declared he knew nothing of the transaction; and, after a variety of pour parler's on both sides, it appeared that Acton, the minister, an Englishman, and the favorite of queen Caroline of Naples (names alike consecrated to national execration) had presented the Venus de Medicis to the French; and Acton, whatever was the dessous des cartes, declared frankly, that he took the responsibility of the transfer on his own head;—a head that stood responsible for deeds of infinitely deeper consequence than this shameful breach of trust.

'When the restoration occurred, in 1814, the Venus de Medicis was to resume her ancient throne in the tribune, and to be reinstated, like other deposed sovereigns, with the horses of Venice, and the asses of the Annunciata, et ailleurs. In this instance, as in every similar one, an effect was endeavoured to be produced on the people by the 'glorious pomp and circumstance' of her triumphal entry; but it wholly failed in the issue. It was in vain that an escort of cavalry was sent to meet and convoy her to her ancient residence; that she entered the city with colors flying and drums beating—not 300 people assembled to greet her as she passed. The lapse of near a quarter of a century had changed their tastes, and dulled their apprehensions. They wanted statutes, not statues; and the restoration of their ancient commerce, or the continuation of that prosperity they had enjoyed under the more liberal institutions of their ultramontane invaders, would have been a much more welcome result of the re-establishment of their old dynasty, than all the statues that ever filled and adorned the Capitol of ancient, or the Vatican of modern Rome.'

Speaking of the other parts of this gallery this lively writer says, 'The Tuscan school is naturally very rich and very exquisite; some of the prime works of the Hierophants of the art are preserved here. In this precious cabinet is the famous Medusa head of Leonardo da Vinci, the work of his wondrous boy-hood! Old 'Messere Pietro,' his father, an honest notary of Florence, who took great pride in the talents of his son, requested him to paint a buckler for a peasant who dwelt near his own Podere of Vinci. When Leonardo produced his work, the old man fled in horror. This buckler was the Medusa's head, for which the duke Galeas Sforzo of Milan afterwards gave 300 ducats; and which is now deemed one of the most precious treasures of the gallery of Florence. It is a fact, that the venomous reptiles which tress the fine head of the Medusa, owe their terrific vitality to the deep study of the young artist in living specimens. When his shield was finished, his closet was found filled with the noxious productions of marshes and fens, the originals of the serpents, which hiss and dart round the brow of the dying monster, whose last sigh seems to mingle with their pestiferous breath. The contrast to the horrible sublimity of the Medusa is his sweet portrait of Mona Lisa.

'The Adoration of the Kings, by Friar Filippo Leppi, is historically interesting, as preserving portraits of the Medici family! Here too is a fine portrait, by Allori, of Eleonore, the duchess of Cosmo the First, the mother of many murdered children, whose heart breaks under the splendid finery, which Cellini's exquisite taste designed for her. Here, by the same artist, is the portrait of the Syren Bianca Cappella, whose story is a romance, whose death was a tragedy:—and here is the Saint Lucia of Carlo Dolce (whose women always look as if they were painted by angels): a gaping wound in her beautiful neck emits rays of light. The female martyrology of these Italian painters might serve for a gallery of Mahomet's Houris, or the Harem of Charles the Second! Close by each other, hang two famous compositions of Allori and Carradi: the one represents St. Laurence broiling on a gridiron!! the other, St. Theaclea, boiling in a pot. This was

> 'A dainty dish to set before a king.'

'In the adjoining cabinet stands the fine Torso of Ganymede, so exquisitely restored by Cellini; and the splendid bust of Alexander, who, with such a head, might well have believed himself to be the son of Jove.

'The cabinets of Greek, Latin, and Egyptian monuments and inscriptions, that of coins and medals, and that of the Niobe, take days to see and require volumes as well as learning to describe.

'The gallery of the academy, called the Galleria del Mezzo-Giorno, from the lights falling most favorably at that hour of the day, presents a chronological series, beginning with the Greek painters, and the revival of the arts in the time of the Lower Empire, and continuing by Cimabue, Giotto, Perugino, and Raphael, down to the decline of the arts in the latter end of the sixteenth century. This gallery was anciently the hospital-ward for female patients in the old con-

vent; and it is a curious instance of the neglect which falls on fine pictures in such places, that a beautiful fresco of Andrea del Sarto, in chiaroscuro, remains on the walls, where it was long exposed to the fading influence of the sun. It is now covered by an indifferent picture of Raffaello del Garbo, which serves it as a screen. All the galleries of this academy are sufficiently interesting, as containing many noble specimens of the arts, as they existed in the great days of Italian genius. There is also a gallery filled with casts from the antique, admirably executed in plaster of Paris. In the Academia delle Belle Arti is the school of that art so purely Florentine, La Scuola di Lavori in Scagliuola; and the studio, or work-room, of its present amiable and eminent professor, signore Pietro Stoppione.'

The Palazzo Pitti, the principal residence of the count of Tuscany, 'vast and noble as it is,' says lady Morgan, 'and most wonderful as the house of a merchant in the middle ages, is still the most notable for its precious collections of pictures, the chefs-d'œuvre of the Tuscan, Florentine, and Roman school. Here is Michael Angelo's picture of the Three Fates. They are Shakspeare's Weird Sisters. Here glows the divine beauty of Raphael's famous Madonna della Sedia, so known to the world by the countless copies and engravings, the sure proof of its excellence. Here too are some of Salvator Rosa's finest sea-pieces, with those calm skies and waters, and brilliant lights, so contrasted to the force, gloom, and energy of his Catiline conspiracy. Here also is the noble Cleopatra of Guido, that true woman's painter-laureate! and here, in short, are hundreds of pictures, some of supreme merit, and all of interest, by the names attached to them, or the likenesses they preserve. Among the latter is, Titian's superb portrait of cardinal Ippolito de' Medici, the elegant voluptuary and princely virtuoso: Luther playing on the Spinette; his strong marked and somewhat vulgar face turned towards a priest, who accompanies him on the guitar, evidently asking his opinion of a chromatic transition, through which he has just modulated; Luther's wife, who has exchanged her nun's veil for a smart Flemish hat and feather, more lady-like and less hideous than in any other of her pictures, is their 'sole auditress.' Numberless portraits of the ladies of the Medici family, particularly in the latter times, loaded with gold and jewels, simple and commonplace looking-women, such as one meets making up the mass of assemblies, all 'very fine and all alike.' I could not trace among their prim countenances the brilliancy of talent for which the accomplished and unfortunate Isabella was so celebrated, nor the ferocious genius of Catherine, nor the cold dull iniquity of Marie de Medici; yet some of them were handsome.'

The university of Florence was founded in 1438. In 1542 was instituted the Academia Florentina, for making translations from the Greek and Latin classics; the Academia della Crusca was intended to improve and reduce to a standard the Tuscan language; the two were united some time back, and now bear the name of the Florentine Academy. Here are also schools, and an academy of the fine arts, where nearly thirty pupils receive gratuitous instruction. The Georgofili is a royal agricultural society. Of the libraries, the largest is the Magliabechiana of 90,000 volumes; the next the Marcelliana of 40,000. The museum of natural history is extensive and well arranged; there is also a botanic garden. Dante, Machiavel, Guicciardini, Americus Vesputius, and other distinguished characters were born here.

Florence is surrounded by a wall, and defended by two citadels. It has two theatres, and beautiful promenades, as well in the Boboli gardens, as along the banks of the Arno. It is the see of an archbishop, and was a place of great trade from the thirteenth to the fifteenth century; at present its productive industry is confined to a few manufactures, such as satin, taffetas, damask, straw hats, jewellery, and precious stones; the woollen manufactures are adapted only to the common people, among whom are included many Jews, who principally conduct its trade. Population 75,000. Leghorn is its harbour.

Mr. Eustace, in his Classical Tour, thus describes the general appearance of this far-famed city:—

'Florence is seated in a vale, intersected by the Arno, graced by numberless hills, and bordered, at no great distance, by mountains of various forms rising gradually towards the Appennines. The whole vale is one continued grove and garden, where the beauty of the country is enlivened by the animation of the town, and the fertility of the soil redoubled by the industry of its cultivators. White villas gleam through the orchards on every side, and large populous hamlets border the roads and almost line the banks of the river. Such is the scene of comfort and prosperity that surrounds the Tuscan capital (alas! how different now), raised originally by the genius of liberty, and restored by the grand duke Leopold. Happy will it be for the inhabitants if its charms can resist the blasts from hell which have passed the Alps and the Appennines, and now brood in tempest over the Val d'Arno.

'The city itself spreads along the side of the river, which forms one of its greatest ornaments, and contributes not a little to its fame. Its streets are well paved, or rather flagged, wider than usual in southern climates; and its houses in general solid and rather stately. It has several squares, and many churches and palaces, so that its appearance is airy, clean, and sometimes rising towards grandeur. I do not, however, think that the number of great edifices corresponds with the reputation of the city, or with the figure which it has so long made in the annals of modern history; it is, indeed, to be considered, that we came directly from Rome, and that the glories of that capital, when fresh upon the mind, must naturally eclipse the inferior splendor of every other city.'

The cathedral and some other churches, in the edification or restoration of which Michael Angelo bore a part, are next described; then the 'Palazzi, and afterwards the gallery, now,' says

he, 'stripped of its honors.' The delightful environs of Florence next engage Mr. Eustace, ever powerful for description. Amongst these Vallombrosa, the supposed original of Milton's description of Eden, claimed first the traveller's attention. The sketch of this picturesque spot, the account of the abbey, its inhabitants, and their hospitality, is here given with much spirit and precision.

FLORENTIA, in ancient geography, a town of Etruria, on the Arnus, of great note in the wars of Sylla, now called Florenza, or Fiorenza, by the Italians, and Florence by the English. See FLORENCE.

FLORENTIN, or St. Florentin, a town of France in Champagne, situated at the conflux of the Armance and Armançon; it has some cotton manufactures, and 3000 inhabitants. Thirteen miles north-east of Auxerre, and twenty-four south-west of Troyes.

FLORENTINES, the people of Florence. Dr. Moore gives the following account of the amusements of the Florentines. 'Besides the conversazionis, which they have as in other towns of Italy, the nobility meet every day at a house called the casino. This society is much on the same footing with the clubs in London. The members are elected by ballot. They go at any time that is convenient. They play at billiards, cards, and other games, or continue conversing, as they think proper. They are served with tea, coffee, lemonade, ices, or what other refreshments they choose; and each person pays for what he calls for. There is one material difference between this and the English clubs, that women as well as men are members. The company of both sexes behave with more frankness and familiarity to strangers, as well as to each other, than is customary in public assemblies in other parts of Italy.' Dr Moore adds, 'that, at the opera, they pay much more attention to the dancing than to the music, though it is at best mere athletic jumping, compared with the elegant dancing of the French.'

FLORES, one of the Azores, so named from the multitude of flowers found growing spontaneously on it. It is thirty miles long, nine broad, and contains two towns, several villages, and about 1400 inhabitants. It exports wheat and salt pork, and has excellent poultry. Cattle are also numerous, but they are small. Santa Cruz is the capital. Lagena on the east coast is also a thriving town. Long. 30° 55′. W. lat. 39° 34′. N.

FLORIAN (John Peter Claris de), a popular modern French writer, was born at the chateau of that name in Languedoc, in 1755. His father was a gentleman of fortune, who spared no expense on his education; and being related to Voltaire, he obtained for him through that person's interest the rank of page to the duke of Penthievre. The duke soon gave him a commission in the army, but, observing the success of his literary efforts, judiciously confined him to literature, and furnished him with a library. His first production was Galathea, which was followed by the two volumes of his Theatre, the sacred drama of Ruth, and a succession of very successful dramas and novels. Under Robespierre he was arrested and dragged to prison for having affixed to his Numa some verses in praise of the queen, and while in this situation he composed the first book of his Guillaume Tell, and a poem called Ebrahim. On his release he fell into a decline, which terminated his life on the 13th of September 1794.

FLORID STYLE, a style too much enriched with figures and flowers of rhetoric.

FLORIDA, a country of North America, bounded on the north by Georgia, on the east by the Atlantic, on the south by the Gulfs of Mexico and Florida, and on the west by the Mississippi. It was the most southerly province of the British empire in America before the war of independence.

It was first discovered in 1479, by Sebastian Cabot, a Venetian in the English service; whence a right to it was claimed by the kings of England; and it was included with Georgia in the charter granted by Charles II. to Carolina. In 1512 Florida was more fully discovered by Ponce de Leon, an able navigator, but who undertook his voyage from the most absurd motives. The Indians of the Caribbee Islands had among them a tradition, that somewhere on the continent there was a fountain whose waters had the property of restoring youth to all old men who tasted them. The romantic imaginations of the Spaniards were delighted with this idea. Many embarked in voyages to find out this imaginary fountain, who were never afterwards heard of. Their superstitious countrymen never imagined that these people had perished. They concluded that they did not return, only because they had drunk of the immortalising liquor, and had discovered a spot so delightful, that they did not choose to leave it. Ponce de Leon set out with this extravagant view, as well as others, fully persuaded of the existence of a third world, the conquest of which was to immortalise his name. In the attempt to discover this country, he rediscovered Florida; but returned to the place from whence he came, visibly more advanced in years than when he set out. For some time this country was neglected by the Spaniards, and some Frenchmen settled in it. But the new colony being neglected by the ministry, and Philip II. of Spain pretending to be the sole proprietor of America, fitted out a fleet at Cadiz to destroy them. The tyrant's orders were executed with barbarity. The French entrenchments were forced, and most of the people killed. The prisoners were hanged on trees, with this inscription,—'Not as Frenchmen, but as Heretics.' This cruelty was soon after revenged by Dominic de Gourgues, a skilful and intrepid seaman of Gascony, an enemy to the Spaniards, and passionately fond of glory and hazard. He sold his estate, built some ships, and with a select band of bold adventurers embarked for Florida. He drove the Spaniards from all their posts with incredible valor and activity, defeated them in every rencounter—and, by way of retaliation, hung the prisoners on trees with this inscription,—'Not as Spaniards, but as Assassins.' He then blew up the forts he had taken, and returned home. This patriotic and heroic act of justice certainly merited reward, but no

notice whatever was taken of Gourgues by the French government. Florida was conquered in 1539, by the Spaniards under Ferdinand de Soto, not without a great deal of bloodshed, as the natives were very warlike, and made a vigorous resistance. The settlement, however, was not fully established till 1665, when St. Augustine was founded. In 1586 this place was taken and pillaged by Sir Francis Drake. In 1665 it was taken and plundered by Davis, and a body of buccaneers. In 1702 an attempt was made upon it by colonel More, governor of Carolina. He set out with 500 English and 700 Indians, and, having reached St. Augustine, he besieged it for three months; at the end of which, the Spaniards having sent some ships to its relief, he was obliged to retire. In 1740 another attempt was made by general Oglethorpe, but he was forced to raise the siege with loss; and Florida continued in the hands of the Spaniards till 1763, when it was ceded to Great Britain. During the American war it was again reduced by the Spaniards, in 1781, and was guaranteed to the crown of Spain at the peace, in 1783.

The length of this country, following the coast, has been estimated at about 800 miles. Its breadth is various. The broadest part of West Florida is about 130 miles, while the narrow peninsula of East Florida extends from south to north 400 miles. The shape of the country is irregular, and nearly resembles the letter L. It was divided by the British government into East and West Florida.

Florida, West, as designated by Great Britain, is situated between the Mississippi on the west, and the Appalachicola on the east, and is a strip of land running along the Gulf of Mexico for 400 miles. All the west coast of the peninsula of Florida is low, sandy, and lined by a reef. The Gulf of Ponce de Leon (Chatham Bay of the English), is much infested by the accumulation of sand. Cerasecos (Charlotte Harbour of the English), is an extensive inlet with many islands before it, forming several channels, in the deepest of which, named Boca Grande, the depth is fifteen feet. The inlet receives the river Caloosa. Palm Sound, within Palm and Clam Islands, is only navigable by long boats. Espiritu Santo Bay is a considerable gulf with a channel in twenty feet deep. St. Martin's Keys are the southernmost of a chain of islands that line the coast to the river St. Juan. This part of the coast is so shoal, that a canoe can scarcely approach it. The river Apalacha falls into a bay of the same name, at the fort of St. Mark.

The coast from the Apalacha to Pensacola is tolerably fit for cultivation; but from this last place to the Mobile it is sandy and barren, producing only dwarf pines and cedars. The river Apalachicola, or Chattahoche, falls into St. George's Sound, within the island of this name, which is two leagues from the main, and four leagues long, but very narrow. The Bay or lagoon of St. Joseph is enclosed on the south by the curving peninsula of which Cape St. Blaize is the extreme point. St. Rose Island, twenty miles long but very narrow, has plenty of fresh water: its west end forms the east side of the entrance to Pensacola Bay. Santa Maria Galvez, or Pensacola Bay, is a large inlet, entirely landlocked, the entrance two miles wide, with sixteen or twenty-four feet depth, and within thirty to thirty-five feet, according as the water is elevated or depressed by the strength of the winds. Several rivers fall into this inlet, of which the largest is the Shambe, and is navigable for sloops a few miles, and for canoes a considerable distance.

The town of Pensacola, the capital of the province, is on a plain on the west side of the bay, and is defended by a fort on a sand hill, close under which all vessels must pass to the town.

While Florida was an English possession, Pensacola carried on a considerable trade; but, under the restrictive system and indolence of the Spaniards, it fell into insignificance and poverty—the only branch of industry attended to, because it requires little labor, being the rearing of cattle. The sole trade was to New Orleans, and did not occupy above four or five schooners, of ten to twenty-five tons, which kept along shore to the mouth of the Mobile, where they entered the sounds, between the islands and the main, to Lake Pontchartrain: from this lake they entered the river St. John, which communicates by a short canal to New Orleans. The length of this internal navigation is but fifty leagues, and it is usually accomplished in two days, while the outer passage to New Orleans, by the mouths of the Mississippi, is ninety leagues, and from the strong adverse current and prevailing winds from the west is often lengthened to forty days. The climate of Pensacola is so healthy that invalids are sent hither from Louisiana.

The river Alabama, or Mobile, falls into a large gulf, whose entrance is between a long peninsula on the east, and Isle Dauphin on the west. The town of Mobile, at the mouth of the river, is built on the side of a hill.

The coast, west of Mobile Bay, is lined by low sandy islands, covered with cypress trees; their names in succession are,—Isle Dauphin, where the French formed their first settlements, Masseo, Horn, Dog, Vaisseau, from having a harbour for vessels of burden, Cat, &c. Farther west a great number of alluvion islands front the entrance of Lake Pontchartrain and the Bay of St. Esprit. The channels between these islands have in general but ten to twelve feet, and the depth of Lake Pontchartrain decreases annually, so that it is probable a few years will convert it into a marsh, as well as Lakes Maurepas and Borgne, the former communicating with the Mississippi by Iberville River, which is quite dry in summer, its bed being twelve feet above the lowest level of the Mississippi; but in spring, when the river rises, it discharges a part of its waters by the Iberville into Lake Pontchartrain. Biloxi, on the main land within Vaisseaux Island, was one of the first establishments of the French in Louisiana.

Florida, East, is separated from Georgia by the river St. Mary, and includes the peninsula and tract of coast on the gulf of Mexico to the river Apalachicola. The Eastern, or Atlantic Coast, of the peninsula, is lined by islands, forming an interior navigation through lagoons or inlets. The principal rivers on this coast are the St. Juan and Indian, the former rises in a swamp

in the heart of the peninsula, and pursues a northern course in a broad navigable stream, expanding into lakes, of which Lake George is fifteen miles broad, and fifteen to twenty feet deep, with many beautiful islands, covered with orange, palm, and magnolia trees. Near Long Lake, which communicates with the St. Juan by a creek, is a warm mineral spring of great volume; the St. Juan is crossed by a bar at its mouth with fifteen feet. Indian or Hillsborough River runs from north to south parallel to the coast; its mouth is crossed by a bar with but five feet.

St. Augustine, the chief town of East Florida, is on the main opposite the north end of Anastasia Island. It consists of four streets, intersecting each other at right angles; is fortified by bastions, encompassed by a ditch and wall, and defended by the castle of St. John, mounting fifty guns. The entrance to the harbour is crossed by a bar, with only five feet at low water and ten at high. St. Anastasia Island is six leagues long, and affords good building stone, which is not to be had on the main.

From Cape Florida, near the south-east extremity of the peninsula, a great belt of keys and reefs curves round the promontory into the gulf of Mexico, bearing the general name of the Martyrs, or Florida Keys; the numerous channels or inlets between them are only fit for small craft. Almost all these keys are covered with the mangrove, and frequented by turtle; all of them have received names from the English, when in possession of Florida. The only farther notice they deserve is, that on the north end of Old Matacumbe, an islet four miles long and two broad, is a harbour for vessels of seven or eight feet, where fresh water may be procured from a natural well, in a rock four feet deep. On Key Hueso, or West, which is seven miles long, is also a good harbour, with four fathoms at the west end, and at the south-west several wells of tolerable water. The dry tortugas (turtle) are a cluster of keys, forming the western extreme of the Florida Keys. Punta Blanco, or Cape Sable, is the south-west point of the peninsula of Florida, doubling which we enter the gulf of Mexico.

The Floridas abound in vegetable productions of the most luxuriant and rank growth. They are said to produce eight different kinds of oak, white and black walnut, hickory, chestnuts, three kinds of mulberry, four of the magnolia, orange, and fig trees, persimmon and sycamore; as also a vast variety of plums, and other indigenous fruits, such as limes, prunes, peaches, figs, grapes, melons, &c. Olives are also cultivated with success; and St. John's River, and some of the lakes, are bordered with orange groves. The annona, lime, and mahoe, are indigenous, as also many medicinal plants.

West Florida is the most fertile in grain: wheat, oats, barley, rice, peas, buck-wheat, and rye, flourish. The climate is various.

In winter it seldom freezes, nor is the cold ever so severe as to injure the orange tree. In West Florida the mercury seldom falls below 30° of Fahrenheit, and seldom rises above 94° in the shade. The climate towards the west is more temperate. On the eastern coast the trade winds prevail, and cool the air in summer; but in the west the air is refreshed by breezes from the Apalachian Mountains, which are still more cool and temperate. During the summer heavy gales of wind beat against the east side of the peninsula, while the interior is subject to dreadful squalls. Along the gulf storms and hurricanes are common just before and after the autumnal equinox; but thunder and lightning are less frequent and violent than in the neighbouring territory of Georgia, or in the Carolinas. In the forests and deserts are found the panther, wild cat, buffalo, fox, hare, goat, rabbit, otter, racoon, flying squirrel, armadillo, opossum, guano, and several sorts of serpents. Birds are in great variety, and numerous: among others, are found the crane, heron, goose, wild duck, pigeon, partridge, thrush, jay, hawk, maccaw, and a great number of others. The rivers abound in fish, but are at the same time infested with voracious alligators.

From the first of July to the middle of October fevers are prevalent. They are usually preceded by heavy rains, and sultry weather. Those of plethoric habits, and sanguine constitutions, are the most liable to be attacked. Inflammatory fevers, of domestic origin, are rarely experienced. The yellow fever occasionally makes its appearance; but it has always been traced to the islands, particularly to the Havannah. Intermittents are endemical, and often prove tedious; but they commonly yield to the prescriptions of skilful physicians.

In 1810 a revolution took place in West Florida, and agents were despatched to Washington, who had an interview with the American president, for the purpose of being admitted into the confederation of the United States. In the mean time the American government took means for occupying the country, conformable to a claim which they had been urging since the year 1801. In that year they had purchased Louisiana from the French, of which they contended that West Florida formed a part. It was declared by the treaty to be ceded with the same extent that it had in the hands of Spain, and as it had been ceded by Spain to France. The terms of this cession gave rise to a claim on the part of the United States to the country west of the Perdido River; and, to prevent the occupation of this territory by any other power, the government of the union took possession, in 1811, of the principal posts, except the town and fort of Mobile, which was surrendered to their forces in the following year. East Florida, however, remained in the undisturbed possession of the Spanish authorities, with the exception of some revolutionary movements of no long continuance, until the second war between the United States and Great Britain. In 1814 a British expedition having been fitted out from Pensacola against the American territories, General Jackson resolved to take possession of the place. Accordingly, with a small body of regulars and some mounted volunteers, he marched from Mobile, and, after a show of resistance from the Spaniards and British, carried the town. The fort of Barrancas was soon afterwards destroyed

by the British, and general Jackson having no authority to rebuild it, evacuated the place, and returned to Mobile. A similar disregard of the duties of neutrality on the part of the Spanish government, drew upon this province another invasion in 1818. The Seminole Indians, with whom the United States were at war, residing within the limits of Florida, and making their incursions thence without restraint from the Spaniards, it became necessary, for the purpose of chastising them, to cross the territorial line, and subsequently possession was taken by general Jackson of Fort St. Marks and Pensacola. The American troops remained in these posts until November, 1818, when they were restored by the government of the United States to Spain. A negotiation, which had been for a long time pending, for the transfer of the whole province to the United States, was consummated by treaty in 1819; and, after many vexatious delays, the treaty was ratified by Spain in October, 1820, and finally by the United States in the month of February, 1821. Possession was delivered to general Jackson, the commissioner of the United States, in July, 1821, and the province now forms one of the territories of the United States.

FLORIDA, GULF OF, is a common name for the channel between the peninsula of Florida, and the Bahama Isles, north of Cuba.

Through this gulf the celebrated stream, sometimes called the gulf, sometimes the FLORIDA-STREAM, first make sits way to the north-east along the coast of America.

Various attempts have been made to account for this current, and as it is an object of general interest in natural history, though we have noticed it in another place (see AMERICA, Index) we conceive it may gratify our readers to present them with a concise view of its causes from an able paper in the Edinburgh Philosophical Journal, for 1820. 'It is known, that the tides in the ocean are produced by the combined actions of the sun and moon, causing the waters, in general, when their course is not obstructed by continents, islands, &c., to take a westerly direction. The winds in the tropical climates, from nearly the same cause, blow generally the same way. It is also observed by navigators, that when a wind blows for any length of time, in a given direction, the waters of the sea move in the same direction, forming a current, at least at the surface, more or less strong, according to circumstances, setting in that direction. The whole body of the waters of the Atlantic, then, must have a general tendency to move from the coasts of Europe and Africa, towards the shores of America, which must be modified in its effects, according to the different conformations of the coasts and other combining circumstances. If we examine the coast of North America, we shall find, that its direction is nearly that of the meridian, or north and south, at least from about New York to Cape Sable in East Florida. Therefore, the mass of waters coming from the east, will strike it nearly at right angles, which, after high water, will gradually retire into the ocean towards the east, without producing any considerable current along the coast, or any accumulation in a particular place, as it otherwise would have done, if that coast had been more oblique to the direction of the tide, though the Bahama Islands, and shallows, must prove a considerable obstruction to the flood-tide setting directly westerly, near Florida, and will have some tendency to cause it to flow more to the north.

'If we now turn our attention to the northern coast of South America, we shall find that it follows nearly the direction of a parallel of latitude, or east and west, and of course, very oblique to the tide coming from the east; and, therefore, it is natural to suppose, that a current will be produced, setting westward, from Cape St. Roque, along the shores of Guiana, Cumana, Terra Firma, the Musquito Shore., &c, towards Cape Catouche in Yucatan. This, indeed, is verified by observation, for it is found, that the flood-tide combined with a current, runs along these coasts, generally at about the rate of two or three miles an hour. This current setting along the Caribbean Sea, will enter the Gulf of Mexico between Cape Antonio, in Cuba, and Cape Catouche, in Yucatan, and must, of course, raise the waters of that Gulf, to a considerable height above the general level of the ocean. A part of these waters after the time of high water, will fall back into the Caribbean Sea; and there actually has been observed a current off Cape Antonio, setting eastward along the south coast of Cuba. Indeed it has been asserted, by Captain Manderson of the Royal Navy, in his Observations on the Gulf Stream, that the waters about Cape Antonio, 'move sometimes one way, sometimes another, and are sometimes stationary,' which may be expected, according as it is flood-tide, ebb-tide, or high water.

'From what we have already advanced, it is clear that the waters between Cuba and Yucatan, must be higher than those between Cuba and Florida; and, therefore, the mass of waters carried into the Gulf of Mexico, in the manner already mentioned, must flow out between Cuba and East Florida. If we also take into consideration the number of great rivers, and among them the Mississippi, itself like a sea, that falls into the Gulf of Mexico, which is, comparatively speaking, small, their waters must endeavour to extend themselves over a portion of sea greater than that gulf; and since, from the accumulation of water coming from the Caribbean Sea, depending on causes already pointed out, the waters of the Mississippi, and other rivers, falling into the Gulf of Mexico from the west and north, cannot extend themselves over that sea towards the south, they must flow along its northern shore towards the east. That the waters of great rivers do flow to a considerable distance in the ocean, can be easily proved. In Columbus's first voyage to America, he found his vessel in fresh water, at the mouth of the Orinoco, before he discovered land, whence he inferred, he was near some great continent, which alone could produce such a stream. In Macleod's voyage to China, a stream of fresh water was found at a considerable distance from the shores of Java, and the British fleet, which blockaded Toulon, occasionally took in fresh water at the mouth of

the Rhone, at a considerable distance from land. Hence, then, it is clear, that the streams of large rivers flow a considerable way into the ocean. The Mississippi, and other large rivers which fall into the Gulf of Mexico, must therefore, in some direction or other do the same. But since a current of water flows generally into the Gulf of Mexico, between Yucatan and Cuba, the waters of the Mississippi cannot flow out in that direction; they must therefore, with more or less velocity, flow out between Cuba and Florida. This, combining with the superabundant waters of the ocean collected in the Gulf, flowing round between Cuba and Cape Sable in Florida, is, by the north-west shores of Cuba, the Bahama Isles, and banks, turned round the eastern shores of East Florida, and must set northward along the east coast of America, with considerable velocity, constituting what is called the Florida or Gulf Stream. This conclusion is verified by observation; for the waters in the Gulf Stream, in the greater part of its course to the north of the Bahama Islands, are found, by the thermometer, to be warmer than those of the seas immediately bordering on it, whence they must come from a warmer climate, and, when chemically examined, to possess a less degree of saltness, and therefore must consist chiefly of fresh water. Hence, from these two causes, namely, the current formed by the flood-tide setting in between Cuba and Yucatan, and the fresh water from the Mississippi, and other large rivers, falling into the Gulf of Mexico, combined and modified in the manner we have described, and not either of them separately, as has been sometimes affirmed, making its escape northward, along the eastern coast of America, we think, it will evidently appear, is derived the true cause of the Gulf Stream. Hence, too, the circular motion of the waters in the northern Atlantic, and other phenomena, attempted to be established by Humboldt, will receive a satisfactory solution.'

FLORIDA BLANCA (Francis Anthony Monino, count de), a principal minister of Spain in modern times, first distinguished himself as an opponent of the French revolution: his enemies availed themselves of his unpopularity to procure his dismission from the king's service in the beginning of 1792. He was shortly after permitted to retire to his estates in the province of Murcia, and to retain his titles and dignities, but arrested again in July the same year, and committed to the castle of Pampeluna, and again soon released. After several years of seclusion, he was in 1808 chosen president of the cortes, and died in that year November 20th, aged near eighty.

FLORILEGIUM, Florilege, a name the Latins have given to what the Greeks call ανθολογιον, anthology; viz. a collection of choice pieces, containing the finest and brightest things in their kind.

Florilegium, or Anthologia, is particularly used for a breviary, in the eastern church, compiled by Arcadius, for the conveniency of the Greek priests and monks, who cannot carry with them, in their travels and pilgrimages, all the volumes wherein their office is dispersed. It contains the general rubrics, psalter, canticles, the horologium, and the office of the feriæ, &c.

FLO'RIN, *n. s.* Fr. A coin first made by the Florentines. That of Germany is in value 2*s.* 4*d.*; that of Spain 4*s.* 4½*d.*; that of Palermo and Sicily 2*s.* 6*d.*; that of Holland 2*s.*

In the Imperial chamber the proctors have half a *florin* taxed and allowed them for every substantial recess. *Ayliffe.*

Florin is sometimes used for a coin, and sometimes for a money of account. As a coin, it is of different values, according to the different metals, and different countries where it is struck. The gold florins are most of them of a very coarse alloy, some of them not exceeding thirteen or fourteen carats, and none of them seventeen and a half. As a money of account, it is used by the Italian, Dutch, and German merchants and bankers, but admits of different divisions in different places. See Coins.

FLORINIANI, or Florians, a sect of heretics, of the second century, so named from its author Florinus. Philastrius says, that they were the same with the Carpophorians. He adds, that they were also called soldiers, milites, quia de militaribus fuerunt. St. Irenæus calls them Gnostics; St. Epiphanius, Phibionites; and Theodoret, Borborites, on account of the impurities of their lives.

FLORINUS, or Florianus, a heretic of the second century, and a priest of the Roman church, deposed for his errors along with Blastus. He had been a disciple of St. Polycarp, along with Irenæus. He made God the author of evil; or rather asserted, that the things forbidden by God are not evil, but of his own appointing; in which he followed the errors of Valentinus, and joined himself with the Carpocratians.

FLORIS (Francis), an eminent historical painter, born at Antwerp in 1520. He followed the profession of a statuary till twenty years of age; when, preferring painting, he entered the school of Lambert Lombard, whose manner he imitated very perfectly. He afterwards went into Italy, and completed his studies from the most eminent masters. The great progress he had made in historical painting, at his return procured him much employment; and his countrymen complimented him with the title of the Flemish Raphael. He obtained considerable prices for his pictures, and might have rendered himself more worthy of the attention of the great, had he not debased his character by frequent intoxication. He died in 1570, aged fifty.

Floris, or Ende Isle, a considerable island of the Eastern Seas, situated between the 8° and 9° S. lat., and the 120° and 123° of E. long. In length, it is about 200 miles, by thirty-six the average breadth. The interior is mountainous and woody, but near the sea is a fine open country; but this island is little known to Europeans. Over the greater part, the Birma, a kindred language to the Javanese, prevails. At the village of Larantooca in the straits, which separate Floris from Sabraon and Solor, European vessels procure refreshments in exchange for ammunition, cutlery, &c. Formerly sandal wood might be procured here in considerable

quantities. Wax and ambergris are the other exports. The Portuguese never effected a regular settlement here.

FLORUS (Lucius Annæus), a Latin historian of the same family with Seneca and Lucan. He flourished in the reigns of Trajan and Adrian; and wrote an Abridgment of the Roman History, of which there have been many editions. It is composed in a florid and poetical style; and is rather a panegyric on many of the great actions of the Romans, than a faithful and correct recital of their history. He also wrote poetry, and entered the lists against the emperor Adrian, who satirically reproaches him with frequenting places of dissipation.

FLORY, a cross, differs from the potence, by having the flowers at the ends circumflex and turning down. See diagram *azure* (a cross flory), *argent* a chief *gules*—name Henricson.

FLOS'CULOUS, *adj.* Lat. *flosculus*. Composed of flowers; having the nature or form of flowers.

The outward part is a thick and carnous covering, and the second a dry and *flosculous* coat. *Browne.*

FLOS FOEMINEUS, a flower which is furnished with the pointal or female organ of generation, but wants the stamina or male organ. Female flowers may be produced apart from the male, either on the same root or on distinct plants. Birch and mulberry are examples of the first case; willow and poplar of the second.

FLOS MASCULUS, a male flower. By this name, Linnæus and the sexualists distinguish a flower which contains the stamen, or male organ of generation; but not the stigma or female organ. See BOTANY.

FLOTE, *v. a.* } See *To* FLEET. To skim.
FLOT'TEN, *adj.* }

uch cheeses, good Cisley, ye *floted* too nigh. *Tusser.*

FLOT'SON, *n. s.* From flote. Goods that swim without an owner on the sea.

FLOTSON, or FLOTSOM, signifies goods lost by shipwreck; which, with jetson and lagan, are generally given to the lord admiral, when the owners are not known. See JETSON and LAGAN.

FLOUNCE, *v. n.*, *v. a.* & *n. s.* Swed *flunsa*, Dut. *plonsen*, to plunge. To move with violence in the water or mire; to struggle or dash in the water; to move with weight and tumult; hence, metaphorically, to move with passionate agitation. The noun and active verb have a different application; yet the derivation from the neuter is traceable, if not obvious: a flounce is any thing sewed to the garment, and hanging loose so as to swell and shake; and to flounce is thus to deck with flounces.

Six *flouncing* Flanders mares
Are even as good as any two of theirs. *Prior.*

With his broad fins and forky tail he laves
The rising surge, and *flounces* in the waves. *Addison's Ovid.*

When I'm duller than a post,
Nor can the plainest word pronounce,
You neither fume, nor fret, nor *flounce*. *Swift*

She was *flounced* and furbelowed from head to foot; every ribbon was crinkled, and every part of her garments in curl. *Addison.*

They have got into the fashion of *flouncing* the petticoat so very deep, that it looks like an entire coat of lutestring. *Pope.*

Nay, oft in dreams invention we bestow,
To change a *flounce*, or add a furbelow. *Id.*

FLOU'NDER, *n. s.* & *v. n.* Danish *flynder*; Scotch *fluke*. The verb is derived from flounce. The noun is the name of a small flat fish: the verb signifies to struggle with violent and irregular motions; as a horse in the mire. It is figuratively applied to a public speaker, when he plunges from one subject to another without the least order or connexion. Mental and verbal confusion, by which a man exposes himself to contempt.

Like the *flounder*, out of the frying-pan into the fire. *Camden.*

Down goes at once the horseman and the horse;
That courser stumbles on the fallen steed,
And *flound'ring* throws the rider o'er his head. *Dryden.*

He plunged for sense, but found no bottom there;
Then writ and *floundered* on in mere despair. *Pope.*

Flounders will both thrive and breed in any pond. *Mortimer.*

FLOUR, *n. s.* Formerly written FLOWER, which see. The choice part of grain; the fine meal of corn.

The bread I would have in *flower*, so as it might be baked still to serve their necessary want. *Spenser*

I can make my audit up, that all
From me do back receive the *flower* of all,
And leave me but the bran. *Shakspeare.*

But by thy care twelve urns of wine be filled,
Next these in worth, and firm those urns be sealed;
Be twice ten measures of the choicest *flour*
Prepared, e'er yet descends the evening hour. *Pope's Odyssey.*

FLOUR (St.), a town of France, in the department of the Cantal, standing on a perpendicular basalt rock, accessible only on one side. It is full 200 feet above the level of the road, and contains a population of 5300. General Desaix, the favorite companion of Buonaparte, was born here. It is thirty-four miles east of Aurillar and fifty south of Clermont.

FLOUR'ISH, *v. n.*, *v. a.* & *n. s.*, } Lat. *floreo*,
FLOUR'ISHER, *n. s.* } *floresco*, from *flos*, *floris*. See FLORAL. It is equally applied to vigor and to beauty; to strength and to embellishment; to prosperity and its accompaniments; to splendor and ambitious show; to bravery and the parade of it. Something more than the thing itself; an adjunct for the purpose of recommendation and effect: thus it is applied to florid language; to speak with ambitious copiousness and elegance; to boast; to brag; to adorn; to grace; to ornament. It has also other applications: e. g. to describe various figures by intersecting lines; to work figures with a needle; to play in wanton and irregular motions. In music, to play some prelude without any settled rule.

The righteous shall *flourish* like the palm-tree.
Psalm xcii.

Beside his head there sat a fair young man,
Of wondrous beauty and of freshest years,
Whose tender bud to blossom new began,
And *flourish* faire above his equal peares.
Spensers's Faerie Queene.

To bring you thus together, 'tis no sin,
Sith that the justice of your title to him
Doth *flourish* the deceit. *Shakspeare.*

I called thee then vain *flourish* of my fortune
I called thee then poor shadow, painted queen.
Id.

If I could find example
Of thousands, that had struck anointed kings,
And *flourished* after, I'd not do it: but since
Nor brass, nor stone, nor parchment, bears not one,
Let villany itself forswear't. *Id.*

The labours of Hercules, though *flourished* with much fabulous matter; yet notably set forth the consent of all nations and ages in the approbation of the extirpating and debellating giants, monsters and tyrants. *Bacon.*

All that I shall say will be but like bottoms of thread close wound up, which, with a good needle, perhaps may be *flourished* into large works.
Id. War with Spain.

They count him of the green-haired eld, they may,
or in his flower;
For not our greatest *flourisher* can equal him in power.
Chapman.

The Ægyptians of old, and many *flourishing* commonwealths since, have enjoyned labour and exercise to all sorts of men, to be of some vocation and calling, and to give an account of their time, to prevent those grievous mischiefs that come by idleness.
Burton's Anatomy of Melancholy.

And all the powers of hell in full applause
Flourished their snakes, and tossed their flaming brands. *Crashaw.*

The presentation of but what I was,
The *flourish* of his sober youth,
Was the pride of naked truth. *Id.*

We can excuse the duty of our knowledge, if we only bestow the *flourish* of poetry thereon, or those commendatory conceits which popularly set forth the eminence of this creature. *Browne.*

A child with delight looks upon emblems finely drawn and painted, and takes some pleasure in beholding the neat characters and *flourishes* of a bible curiously printed. *Boyle.*

Studious to please the genius of the times,
With periods, points, and tropes he slurs his crimes;
He lards with *flourishes* his long harangue;
'Tis fine, sayest thou; what, to be praised and hang?
Dryden.

He was the patron of my manhood, when I *flourished* in the opinion of the world, though with small advantage to my fortune. *Id.*

Against the post their wicker shields they crush,
Flourish the sword, and at the plastron push.
Id. Juvenal.

Villanies have not the same countenance, when there are great interests, plausible colours, and *flourishes* of wit and rhetorick interposed between the sight and the object. *L'Estrange.*

The so much repeated ornament and *flourish* of their former speeches was commonly the truest word they spoke, though least believed by them.
South's Sermons.

As they are likely to over-*flourish* their own case, so their flattery is hardest to be discovered.
Collier.

Who knows not that the coachman lashing by,
Oft with his *flourish* cuts the heedless eye? *Gay.*

Where'er you tread, the blushing flowers shall rise,
And all things *flourish* where you turn your eyes.
Pope.

People seek for what they call wit, on all subjects, and in all places; not considering that nature loves truth so well, that it hardly ever admits of *flourishing.* Conceit is to nature what paint is to beauty; it is not only needless, but impairs what it would improve. *Id.*

Impetuous spread
The stream and smoaking, *flourished* o'er his head.
Id.

They dilate sometimes, and *flourish* long upon little incidents, and they skip over and but lightly touch the drier part of their theme. *Watts's Logick.*

They were intended only for ludicrous ornaments of nature, like the *flourishes* about a great letter that signify nothing, but are made only to delight the eye.
More against Atheism.

Whilst Cicero acts the part of a rhetorician, he dilates and *flourishes*, and gives example instead of rule.
Baker.

——— Ye toppling crags of ice!
Ye avalanches, whom a breath draws down
In mountainous o'erwhelming, come and crush me!
I hear ye momently, above, beneath,
Crash with a frequent conflict; but ye pass,
And only fall on things which still would live;
On the young *flourishing* forest, or the hut
And hamlet of the harmless villager.
Byron. Manfred.

The gentle Juan *flourished*, though at times
He felt like other plants called sensitive,
Which shrink from touch as monarchs do from rhymes,
Save such as Southey can afford to give. *Byron.*

FLOUT, *v. a., v. n.* & *n. s.* } Dutch *fluyten;*
FLOUT'ER, *n. s.* } Fris. *flouwe.* To mock; to jeer; to insult; to treat with contempt.

Scambling, out-facing, fashion-mongering boys,
That lie, and cog, and *flout*, deprave and slander,
Go antickly, and show outward hideousness.
Shakspeare.

You must *flout* my insufficiency. *Id.*

She railed at her, that she should be so immodest to write to one she knew would *flout* her. *Id.*

The Norweyan banners *flout* the sky,
And fan our people cold. *Id. Macbeth.*

He would ask of those that had been at the other's table, Tell truly, was there never a *flout* or dry blow given? *Bacon.*

Flouting persons for their constancy in devotion, or their strict adherence to a conscientious practice of duty, is most detestable. *Barrow.*

She opened it, and read it out,
With many a smile and leering *flout.*
Hudibras.

Phillida *flouts* me. *Walton's Angler.*

Their doors are barred against a bitter *flout*;
Snarl, if you please; but you shall snarl without.
Dryden.

With talents well endued,
To be scurrilous and rude;
When you pertly raise your snout,
Fleer and gibe, and laugh and *flout.* *Swift.*

FLOW, *v. n., v. a.* & *n. s.* } Sax. ꝑleopan;
FLOW'INGLY, *adv.* } Goth. *floa;* Fr. *fluer;* Lat. *fluo;* Gr. βλυω, or φλυω, connected with ρεω, which signifies literally to flow. Flow is a generic term, and thus differs from stream and gust, which are modes of flowing. The continued running of water either in a large body,

a long but narrow course, is the flowing of water: to flow then is to run in an equable terrupted course. It is opposed to water at as in a lake or pool. It is applied to the g, in opposition to the ebbing of the tide. It phorically signifies, to proceed; to issue; to smoothly: when applied to sentences, either en or written: to composition generally, to nd; to overflow; to be copious; to be full; eluge.

The se eke with his sterne wawes,
Eche daye y*floweth* new againe;
And by the concours of his lawes,
The ebbe y*floweth* in certeine.
Chaucer. Balade.

Thilome I usde (as thou right well doest know)
little flock on westerne downes to keep,
far from whence Sabrinaes streame doth *flow*,
flowrie bankes with silver liquor steepe.
Spenser. Daphnaida.

ll use that tongue I have: if wit *flow* from't,
all do good. *Shakspeare. Winter's Tale.*

his river hath thrice *flowed*, no ebb between.
Shakspeare.

Then shall our names
le in their *flowing* cups freshly remembered.
Id. Henry V.

The dry streets *flowed* with men. *Chapman.*

This discourse of Cyprian, and the flowers of rhetoin it, shew him to have been of a great wit and ing eloquence. *Hakewill on Providence.*

Some, from the diurnal and annual motion of the th, endeavour to solve the *flows* and motions of se seas, illustrating the same by water in a bowl, t rises or falls according to the motion of the vessel.
Browne's Vulgar Errours.

Fountains and ye that warble as ye *flow*
Melodious murmurs, warbling tune his praise.
Milton's Paradise Lost.

Her eyes confused and doubled o'er
With tears, suspended ere they *flow*,
Seem bending upwards to restore
To heaven, whence it came, their woe.
Marvell.

With osier floats the standing water strow;
Of massy stones make bridges, if it *flow*. *Dryden.*

Silent they move, majestically slow,
Like ebbing Nile, or Ganges in his *flow*. *Id.*

Virgil is sweet and *flowing* in his hexameters. *Id.*

Watering hops is scarce practicable, unless you have stream at hand to *flow* the ground.
Mortimer's Husbandry.

Teaching is not a *flow* of words, nor the draining of hourglass; but an effectual procuring that a man now something which he knew not before, or to know better. *South.*

The knowledge drawn from experience is quite of nother kind from that which *flows* from speculation discourse. *Id.*

Did sweeter sounds adorn my *flowing* tongue
han ever man pronounced, or angels sung. *Prior.*

Thus *flow* her hours with constant peace of mind,
'ill age the latest thread of life unwind. *Gay.*

The noble power of suffering bravely is as far above hat of enterprising greatly, as an unblemished conscience and inflexible resolution are above an accidental *flow* of spirits, or a sudden tide of blood.
Pope.

There every eye with slumberous chains she bound,
And dashed the *flowing* goblet to the ground.
Id. Odyssey.

Endless tears *flow* down in streams. *Swift.*

Behold the measure of the promise filled;
See Salem built, the labour of a God!
Bright as a sun the sacred city shines;
All kingdoms and all princes of the earth
Flock to that light; the glory of all lands
Flows into her; unbounded is her joy,
And endless her increase. *Cowper.*

Though no tear
Flowed from his blood-shot eyes, all red with strife,
They honoured such determined scorn of life.
Byron.

FLOW'ER, *n. s.*, *v. n.* & *v. a.* } Goth. *flur*; Fr.
FLOW'ERAGE, *n. s.* } *fleur*; Lat. *flos*,
FLOW'ERET, *n. s.* } *floris*. The part
FLOW'ER-GARDEN, *n. s.* } of a plant which
FLOW'ERINESS, *n. s.* } contains the
FLOW'ERY, *adj.* } seeds. An ornament; an embellishment: the choice, prime, or flourishing part. See FLOUR. The most excellent, or valuable, part of any thing: quintessence; that which is most distinguished for worth or excellence; the mantling on the surface of fermented liquors: floweret the diminutive of flower: the verb is used in all the senses applicable to the noun, and signifies, also, to adorn with fictitious, or imitated, flowers; to bloom; to put forth flowers; to blossom.

Such are reckoned perfect *flowers* which have petala, a stamen, apex, and stylus; and whatever *flower* wants either of these is reckoned imperfect. Perfect *flowers* are divided into simple ones, which are not composed of other smaller, and which usually have but one single style; and compounded, which consist of many flosculi, all making but one *flower*. *Miller.*

And Zephyrus and Flora gentelly
Yave to the *floures*, soft and tenderly,
Hir sote breth, and made him for to spede,
As god and goddesse of the *flourie* mede.
Chaucer. Prologue to the Legende of Good Women.

Venemous thorns that are so sharp and keen,
Sometimes bear *flowers* fair, and fresh of hue.
Poison is put oft time in medicine,
And causeth health in man for to renew. *Wyatt.*

Fresh Spring, the herald of love's mighty king,
In whose cote-armour richly are displayed
All sorts of *flowers*, the which on earth do spring,
In goodly colours gloriously arrayed.
Spenser's Sonnets.

Sometimes her head she fondly would aguise
With gaudy garlands, or fresh *flowerets* dight,
About her neck, or rings of rushes plight.
Faerie Queene.

The shepherds guarded from the sparkling heat
Of blazing air, upon the *flowery* banks,
Where various *flowers* damask the fragrant seat
And all the grove perfume.
Fletcher's Purple Island.

That same dew which sometimes on the buds
Was wont to swell, like round and orient pearls,
Stood now within the pretty *floweret's* eyes,
Like tears that did their own disgrace bewail.
Shakspeare.

He is not the *flower* of courtesy, but, I warrant him as gentle as a lamb. *Id.*

Good men's lives
Expire before the *flowers* in their caps,
Dying or ere they sicken. *Id. Macbeth.*

An extreme clarification doth spread the spirits so smooth that they become dull, and the drink dead, which ought to have a little *flowering*.
Bacon's Natural History.

Flora herself envies to see
Flowers fairer than her own, and durable as she.
Cowley.

Iris there with humid bow,
Waters the odorous banks that blow
Flowers of more mingled hew
Than her purple scarf can shew. *Milton.*

If you can accept of these few observations, which have *flowered* off, and are, as it were, the burnishing of many studious and contemplative years, I here give you them to dispose of. *Id.*

Day's harbinger
Comes dancing from the East, and leads with her
The *flowery* May, who from her green lap throws
The yellow cowslip and the pale primrose. *Id.*

The nomination of persons to those places being so prime and inseparable a *flower* of his crown, he would reserve to himself. *Clarendon.*

Then laughs the childish year with *flowerets* crowned,
And lavishly perfumes the fields around;
But no substantial nourishment receives,
Infirm the stalks, unsolid are the leaves. *Dryden.*

Observing that this manure produced *flowers* in the field, I made my gardener try those shells in my *flower-garden*, and I never saw better carnations or flowers. *Mortimer's Husbandry.*

The French monarchy is exhausted of its bravest subjects: the *flower* of the nation is consumed in its wars. *Addison.*

Alas! young man, your days can ne'er be long:
In *flower* of age you perish for a song. *Pope.*

O'er his fair limbs a *flowery* vest he threw. *Id.*

To her the shady grove, the *flowery* field,
The streams and fountains no delight could yield.
Id.

Beauty
That transitory *flower*: even while it lasts
Palls on the roving sense when held too near,
Or dwelling there too long: by fits it pleases,
And smells at distance best; its sweets familiar
By frequent converse, soon grow dull and cloy you.
Jeffery's Edwin.

If the blossom of the plant be of most importance, we call it a *flower*; such are daisies, tulips, and carnations. *Watts.*

But man, associated and leagued with man
By regal warrant, or self-joined by bond
For interest sake, or swarming into clans
Beneath one head for purposes of war,
Like *flowers* selected from the rest, and bound
And bundled close to fill some crowded vase,
Fades rapidly, and, by compression marred,
Contracts defilement not to be endured. *Cowper.*

Bow their white heads, admire the changing clime,
Shake from their candied trunks the tinkling rime;
With bursting buds their wrinkled barks adorn,
And wed the timorous *floret* to her thorn. *Darwin.*

O Death why arm with cruelty thy power,
And spare the idle weed, yet lop the *flower?*
Beattie.

Of late with cumbersome though pompous show,
Edwin would oft his *flowery* rhyme deface,
Through ardour to adorn. *Id.*

Many and beautiful lay those around,
Like *flowers* of different hue, and clime, and root,
In some exotic garden sometimes found
With cost and care, and warmth induced to shoot.
Byron.

FLOWER, flos, among botanists and gardeners, the most beautiful part of trees and plants containing the organs of generation and fructification. See BOTANY. Flowers designed for medical use, should be plucked when they are moderately blown, and on a clear day before noon; for conserves, roses must be taken in the bud. Flowers were in great request at the entertainments of the ancients, being provided by the master of the feast, and brought in before the second course; or, as some think, at the beginning of the entertainment. They not only adorned their heads, necks, and breasts, with flowers, but often bestrewed the beds whereon they lay, and all parts of the room with them. But the head was chiefly regarded. See GARLAND. Flowers were likewise used in bedecking tombs.

A method of preserving flowers in their natural beauty through the whole year has been much sought after. Some have attempted it by gathering them when dry and not too much opened, and burying them in dry sand; but this, though it preserves their figure well, takes off from the liveliness of their color. 1. Muntingius prefers the following method to all others. Gather the flowers, when they are not yet thoroughly open in the middle of a dry day; put them into a good earthen vessel glazed within; fill the vessel up to the top with them; and when full sprinkle them over with some good French wine, with a little salt in it: then set them in a cellar, tying down the mouth of the pot. After this they may be taken out at pleasure; and, on setting them in the sun, or within reach of the fire, they will open as if growing naturally; and not only the color, but the smell also will be preserved. The flowers of plants are by much the most difficult parts of them to preserve in any tolerable degree of perfection; of which we have instances in all the horti sicci, or collections of dried plants. In these the leaves, stalks, roots, and seeds of the plants appear very well preserved; the strong texture of these parts making them always retain their natural form, and the color in many species naturally remaining. But where these fade, the plant is little worse for use as to the knowing the species by it. But it is very much otherwise in regard to flowers; these are naturally by much the most beautiful parts of the plants to which they belong: but they are so much injured in the common way of drying, that they not only lose, but change their colors one into another, by which means they occasion many errors; and they usually also wither up, so as to lose their very form and natural shape. The primrose and cowslip afford remarkable instances of the change of colors in the flowers of dried specimens: for those of this class of plants easily dry in their natural shape; but they lose their yellow, and, instead of it, acquire a fine green color, much superior to that of the leaves in their most perfect state. The flowers of all the violet kind lose their beautiful blue, and become of a dead white: so that in dried specimens there is no difference between the blue-flowered violet and the white-flowered. 2. Another method of preserving both flowers and fruit found throughout the whole year, is also given by the same author. Take of salt-petre one pound, armenian bole two pounds, clean common sand three pounds; mix all well together; then gather fruit of any kind that is not fully ripe, with the stalk to each; put these in, one by one, into

s-mouthed glass, laying them in good order: ver the top with an oil cloth, and carry them a dry cellar, and set the whole upon a bed ne prepared matter, of two inches thick, in a

Fill up the remainder of the box with the e preparation; and let it be four inches thick ver the top of the glass, and all round its s. Flowers are to be preserved in the same of glasses, and in the same manner; and r may be taken up after a whole year as mp and fair as when they were buried.

FLOWERS, in chemistry, generally imply dry ies reduced into very fine parts, either spon-eously, or by some operation of art; but the n is chiefly applied to volatile solid substances, uced into a kind of fine meal by sublimation. me flowers are nothing else than the bodies mselves, which are sublimed entire, without fering any alteration or decomposition; others some of the constituent parts of the body jected to sublimation.

FLOWERING OF BULBOUS PLANTS IN WATER. at these plants will grow and flower in water ne, without any earth, is evident from daily servation; but it has been generally confined single roots. The elegant appearance that these ake, however, may be greatly increased by using several roots to grow in the same vessel; id that even in a common garden pot. Stop e hole at the bottom of the pot with a cork, id lute it with putty so as no water can get rough; fit a board to the top of the pot, with number of holes, proportioned to its size, ored in it for the bulbs, and as many smaller es to receive sticks for supporting the flowers. ill up the pot with water to the board, and lace tulips, jonquils, narcissuses, and the like lants, in the root upon the holes, so that the ottom of the roots may touch the water: thus hey will all flower early in the season, and be nuch more beautiful than any pot of gathered lowers; and will last many weeks in their full erfection. When the season of flowering is ver, the roots will gradually sink through the oles of the board, and get loose into the water; where, instead of spoiling, they will soon in-crease in size, so that they cannot return through the holes, but will produce several offsets. From this it has been tried to keep the roots under water all the time of their blowing, which has succeeded very well, the flower being stronger and more beautiful than those growing from the ground. In a room properly regulated, as to heat, flowers may thus be kept in blow from before Christmas till March or April. But in this last method, as it is difficult to keep the board under water, a piece of sheet lead (four pounds to the foot) may be substituted for the board, and, besides the piece for the top, it will be necessary to have another plate of lead fitted to the bottom of the pot, with holes for the sticks corresponding with those in the upper plate, so that the sticks being put through both holes will be kept perfectly steady. Each of the leads should have a notch in the edge, for the free ascent and descent of the water. The roots thus kept under water will flower in the most vigorous and beautiful manner. To add to the virtues of the water some have tried the putting in small quantities of nitre, and others have tried earth and sand at the bottom; but the flowers always succeed better without any addition. Instead of earthen pots, some use glass jars with the leads; in which the flowers not only succeed as well, but the progress of the roots is visible, and the supply of water is better managed. Dried bulbs have been found, by repeated experiments, to succeed in this way better than those taken fresh out of the ground; the latter, being full of moisture, are long of imbibing nourishment from their new element, the fibres they struck in the ground rot, and new ones shoot out, before they produce flowers. Narcissuses and hyacinths do well together; as also tulips and jonquils, and crocuses and snow-drops. One species of hyacinth, called *Keyser's jewel*, seldom or never produces seed vessels in the common way flowering in the ground; but it will often produce some pods when blown in water. Ranunculus and anemone roots have been found to shoot up their stalks very well in this way; but the flowers are usually blasted, probably for want of free air. Pinks will flower very well in this manner; and auriculas may, with care, be brought to flower, but not strongly. Roses, jessamines, and honey-suckles, may also be made to flower in this way, and will thrive and send out suckers: the best pieces to plant are suckers cut off about three inches under ground, without any fibres. Some succulent plants may also be raised in this way; for instance, the opuntia or Indian fig. If a fragment of a leaf of this plant be cut and laid by to dry for a month, till it is an absolute skin, as soon as it is put in this manner into water, it begins to plump up, and soon sends out fibrous roots, and produces new leaves as quickly as it would do in the ground. This is the more remarkable in these sorts of plants, because in their natural state in the ground, they cannot bear much water. The growing of plants in water is, however, not peculiar to those with bulbous roots, for others may be thus raised, even from seed. A bean or a pea set in this manner, will grow up to its proper standard, produce pods and ripen seed. Smaller seeds may also be raised, if sown upon a piece of woollen cloth spread on the surface of the water. Though no vegetable transplanted out of the earth into water will thrive kindly, any plant, whether raised from the root or seed in water, may be transplanted to the earth, and will succeed very well. This method of raising plants in the water, would therefore suggest an improvement upon the usual practice in raising some roots in the earth which are subject to rot there; such as anemonies, ranunculuses, and hyacinths. A bulb acidentally dropped upon the ground, will strike out both stronger and more numerous fibres than those planted in the usual way; and from this it would seem to be proper to take out the earth of the bed where the bulbs are designed to stand, to such a depth as they are to be placed under it, when set for flowering. The bulbs should then be set in their places, on the surface of this low ground; to stand there till they have shot out their fibres and their head; after which the earth should be added over them by degrees, till they are covered

as high above the head as in the usual manner of planting them. Thus they would be preserved from the danger of rotting; their fibres would be much stronger, and consequently they would draw more nourishment, and flower better than in the common way. The ordinary method of planting these roots renders them liable to be destroyed by either extreme of a wet or dry season: in the former case, they immediately rot by the superabundant moisture; and, in the latter, they become as dry as a stick and mouldy, so that the first rain that falls afterwards infallibly rots them.

FLO'WER DE LUCE, *n. s.* From Fr. *fleur de lis.* A bulbous iris.

Cropped are the *flower de luces* in your arms:
Of England's coat one half is cut away.
Shakspeare.

The iris is the *flower de luce.* *Peacham.*

FLOWER'INGBUSH, *n. s.* A plant.

FLOWK, *n. s.* Scott. *fluke.* A flounder; the name of a fish. See FLOUNDER.

Amongst these the *flowk*, sole, and plaice, follow the tide up into the fresh waters. *Carew.*

FLOWK'WORT, *n. s.* The name of a plant.

FLOWN, participle of fly. Gone away; puffed; inflated; elate.

For those,
Appointed to sit there, had left their charge,
Flown to the upper world. *Milton's Paradise Lost.*

And when night
Darkens the streets, then wander forth the sons
Of Belial, *flown* with insolence and wine. *Id.*

Where, my deluded sense! was reason *flown*?
Where the high majesty of David's throne?
Prior.

Is this a bridal or a friendly feast?
Or from your deeds I rightly may divine,
Unseemly *flown* with insolence or wine. *Pope.*

FLUC'TUATE, *v. n.* } Lat. *fluctuatus*, part.
FLUC'TUANT, *adj.* } of *fluctuo* from *fluctus*,
FLUCTUA'TION, *n. s.* } a wave. It conveys the idea of strong agitation: it expresses the motion of the waves perpetually heaving backwards and forwards: hence it is applied to whatever is uncertain, or is the subject of sudden vicissitudes. Applied to the mind, it signifies to be irresolute; undetermined.

The Tempter, but with shew of zeal and love
To man, and indignation at his wrong,
New parts puts on, and as to passion moved,
Fluctuates disturbed, yet comely and in act
Raised, as of some great matter to begin.
Milton's Paradise Lost.

Fluctuations are but motions subservient, which winds, storms, shores, shelves, and every interjacency irregulates. *Browne.*

Even the influence of superstition is *fluctuating* and precarious; and the slave whose reason is subdued, will often be delivered by his avarice or pride. *Gibbon.*

It will not hinder it from making a proselyte of a person, that loves *fluctuation* of judgment little enough to be willing to be eased of it by any thing but errour. *Boyle.*

To be longing for this thing to-day, and for that thing to-morrow; to change likings for loathings, and to stand wishing and hankering at a venture, how is it possible for any man to be at rest in this *fluctuant* wandering humour and opinion? *L'Estrange.*

As the greatest part of my estate has hitherto been of an unsteady and volatile nature, either tossed upon seas, or *fluctuating* in funds, it is now fixed and settled in substantial acres and tenements. *Addison.*

The *fluctuating* fields of liquid air,
With all the curious meteors hovering there,
And the wide regions of the land, proclaim
The Power Divine, that raised the mighty frame.
Blackmore.

FLUDD (Robert), the son of Sir Thomas Fludd, was born at Milgate in Kent, in 1574. He was educated at St. John's College, Oxford, where he took his degrees in arts, after which he travelled abroad. He returned to England in 1605, took the degree of M. D. and became fellow of the college of physicians in London. He was a most voluminous writer; doated greatly on the wonders of alchemy; was a zealous brother of the Rosicrucian order; and his books, which are mostly in Latin, are as dark and mysterious in their language as in their matter. He died in 1637.

FLUE, *n. s.* A word of which I know not the etymology, says Dr. Johnson, unless it be derived from flew of fly. Mr. Todd suggests the Fr. *l'ouverte*, an opening: Mr. Thomson, with more probability, the Lat. *flatus;* a puff or blast as its origin. A small pipe or chimney to convey air, heat, or smoke. Soft down or fur, such as may fly in the wind.

FLU'ELLIN, *n. s.* The herb speedwell.

FLU'ENCY, *n. s.* } Lat. *fluens, fluo;* à
FLU'ENT, *adj.* & *n. s.* } Gr. βλνω. The adjec-
FLU'ENTLY, *adv.* } tive is the etymon; and literally signifies flowing, liquid; the motion of water in flux: thus it is also applied to whatever is ready; copious; voluble. The noun signifies the quality of flowing; smoothness; freedom from harshness or asperity; affluence; abundance: but the latter sense is obsolete.

God riches and renown to men imparts,
Even all they wish; and yet their narrow hearts
Cannot so great a *fluency* receive,
But their fruition to a stranger leave. *Sandys.*

Those have some natural dispositions, which have better grace in youth than in age, such as is a *fluent* and luxurious speech. *Bacon.*

It is not malleable; but yet is not *fluent*, but stupified. *Id.*

Motion being a *fluent* thing, and one part of its duration being independent upon another, it doth not follow that because any thing moves this moment, it must do so the next. *Ray on the Creation.*

Confiding in their hands, that sed'lous strive
To cut the outrageous *fluent*; in this distress,
Even in the sight of death. *Philips.*

Fluency of numbers, and most expressive figures for the poet, morals for the serious, and pleasantries for admirers of points of wit. *Garth.*

The common *fluency* of speech in many men, and most women, is owing to a scarcity of matter, and a scarcity of words; for whoever is master of language, and hath a mind full of ideas, will be apt, in speaking, to hesitate upon the choice of both. *Swift.*

FLUID, *adj.* & *n. s.* } Lat. *fluo, fluidus.* See
FLUID'ITY, *n. s.* } FLUENCY. Fr. *fluide,*
FLU'IDNESS, *n. s.* } *fluidité.* That which, from its nature, flows; that quality in bodies which is opposite to solidity and stability; any thing not solid.

Or serve they as a flowery verge to bind
The *fluid* skirts of that same watery cloud,
Lest it again dissolve, and shower the earth?
Milton.

What if we should say that *fluidness* and stability lend so much upon the texture of the parts, that the change of that texture the same parts may be made to constitute either a *fluid* or a dry body, and it permanently too. *Boyle.*

If particles slip easily, and are of a fit size to be rotated by heat, and the heat is big enough to keep them in agitation, the body is *fluid*; and if it be apt to stick to things, it is humid. *Newton.*

Heat promotes *fluidity* very much, by diminishing the tenacity of bodies: it makes many bodies *fluid*, which are not *fluid* in cold, and increases the *fluidity* of viscious liquids; as of oil, balsam, and honey; and thereby decreases their resistance. *Id.*

As when the fig's prest juice, infused in cream,
Curds coagulates the liquid stream,
Hidden the *fluids* fix, the parts combine. *Pope.*

Consider how luxury hath introduced new diseases, and with them, not improbably, altered the whole course of the *fluids*. *Arbuthnot.*

The permanently elastic *fluid* generated in the firing of gunpowder, is calculated by Mr. Robins to be about 244, if the bulk of the powder be one. *Darwin.*

FLUIDS, ELASTIC. See AEROLOGY, AIR, FIXED AIR, GAS, VAPOR, &c.

FLUIDS, LAWS AND PROPERTIES OF. See HYDROSTATICS.

FLUKE-WORM. See FASCIOLA.

FLUMET, a town of France, in the department of Mont Blanc, ci-devant duchy of Savoy, and lordship of Faussigny; seated on the Arly, among the mountains, thirty miles north-east of Chambery, and thirty-one south-east of Geneva.

FLUM'MERY, *n. s.* A kind of food, made by coagulation of wheat-flour or oatmeal.

Milk and *flummery* are very fit for children. *Locke.*

FLUMMERY is thus prepared: steep three large handfuls of finely ground oat-meal, for twenty-four hours, in two quarts of fair water: then pour off the clear water, and put two quarts of fresh water to it: strain it through a fine hair sieve, putting in two spoonfuls of orange-flower water and a spoonful of sugar: boil it till it is as thick as a hasty pudding, stirring it continually while it is boiling, that it may be very smooth.

FLUMS, a town of Switzerland, in the late county of Sargans, on the Mat, five miles west of Sargans.

FLUNG, participle and preterite of fling. Thrown; cast.

Several statues the Romans themselves *flung* into the river, when they would revenge themselves. *Addison on Italy.*

FLUOBORIC ACID. This is a gaseous acid, and may be obtained by heating in a glass retort twelve parts of sulphuric acid with a mixture of one part of fused boracic acid, and two of fluor-spar, reduced to a very fine powder, and it must be received over mercury. Its density is 2·41; it is colorless; its smell is pungent, resembling that of muriatic acid; it cannot be breathed without instant suffocation; it extinguishes combustion; and reddens strongly the tincture of turnsole. It has no manner of action on glass, but attacks vegetable and animal matters with as much force as concentrated sulphuric acid, and appears to operate by the production of water; for, while it carbonises these substances, they may be touched without any risk of burning. Exposed to a high temperature, it is not decomposed; and is condensed by cold without changing its form. When it is put in contact with oxygen, or air, either at a high or low temperature, it experiences no change, except seizing, at ordinary temperatures, the moisture which these gases contain. It may hence be employed with advantage, to show whether or not a gas contains moisture.

No combustible body attacks fluoboric gas, if we except potassium and sodium, which, with the aid of heat, burn in this gas, almost as brilliantly as in oxygen. Boron, and fluate of potash, are the products of this decomposition; the fluoboric gas being a compound of fluorine and boron, the potassium unites to the former, giving rise to the fluoride of potassium, while the boron remains disengaged. Fluoboric gas is very soluble in water. According to Dr. John Davy water combines with 700 times its own volume, or twice its weight, at the ordinary temperature and pressure of the air. Water saturated with this gas is limpid, fuming, and very caustic. By heat, about one-fifth of the absorbed gas may be expelled; but it is impossible to abstract more. It then resembles concentrated sulphuric acid, and boils at a temperature considerably above 212°. It afterwards condenses altogether in striæ, although it contains still a very large quantity of gas. It unites with the bases, forming salts, called fluoborates, none of which have been applied to any use in the arts. See CHEMISTRY.

FLU'OR, *n. s.*, Lat. A fluid state; catamenia.

The particles of fluids, which do not cohere too strongly, and are of such a smallness as renders them most susceptible of those agitations which keep liquors in a *fluor*, are most easily separated and rarefied into vapours. *Newton's Opticks.*

Hence silvery selenite her crystal moulds,
And soft asbestos smooths his silky folds;
His cubic forms phosphoric *fluor* prints,
Or rays in spheres his amethystine tints. *Darwin.*

FLUOR, in physics, signifies properly the state of a body that was before hard or solid, but is reduced by fusion or fire into a state of fluidity.

FLUOR, or FLUOR-SPAR, in mineralogy, a genus of calcareous earth, the eleventh of that class in Kirwan's arrangement, the octohedral fluor of Jameson, and flus of Werner. It is divided into three sub-species, viz. compact fluor, foliated fluor, and earthy or sandy fluor.

1. Compact fluor. Colors, greenish-gray and greenish-white. Dull or feebly glimmering. Massive. Fracture even. Fragments sharp-edged. Harder than calcareous spar, but not so hard as apatite, the eighth of Kirwan's scale for hardness. Brittle, and easily frangible. Specific gravity 3·17. It is found in veins, associated with sparry fluor, at Stolberg in the Hartz.

2. Foliated fluor. Its colors are very numerous, pure, and greenish-white, or yellowish or reddish-white, or gray or bluish-gray, or light or violet-blue, or grass, leek, or olive-green, or dark red verging to purple, or purple inclining to

black, or wine or honey yellow, or yellowish-brown. Many of these occur often in spots, blotches, or veins pervading the mass of one and the same specimen. It is found either amorphous, or crystallised; the most usual of the crystallised forms is that of a perfect cube, the angles or edges rarely truncated or bevelled; these last have sometimes concave planes. The octohedral form is also sometimes met with. Its surface mostly smooth, or frosted over with minute crystals. Lustre 2, 3. Transparency 2, 3, 4. Fracture foliated, generally straight, seldom curved; some parts, however, are found splintery, as if passing into the compact. Fragments tend to the form of triangular or quadrangular pyramids, and present coarse or small-grained, seldom prismatic, distinct concretions.

Hardness 8, being harder than calcareous spar, but not so hard as apatite; very brittle. Specific gravity 3·09 to 3·19; that of the specimen, Leske, O. 1613, is 3·154. Before the blow-pipe it generally decrepitates, gradually loses its color and transparency, and melts, without any flux, into a grayish-white glass. When two fragments are rubbed together, they become luminous in the dark. When gently heated it phosphoresces with a blue and green light; but, by ignition, loses its phosphorescent property. The violet-blue variety, from Nertschinsky, called chlorophane, when placed on glowing coals, does not decrepitate, but soon throws out a green light. It occurs principally in veins that traverse primitive, transition, and sometimes secondary rocks. It has been found only in four places in Scotland; but occurs much more abundantly in England, being found in all the galena veins that traverse the coal formation in Cumberland and Durham: in secondary or floetz limestone in Derbyshire; and it is the most common veinstone in the copper, tin, and lead veins, that traverse granite, clay-slate, &c., in Cornwall and Devonshire. It is also frequent on the continent of Europe.

We need offer no apology for extracting the following account of an experiment, by Dr. Brewster, on the phosphorescence of a specimen of the blue foliated fluor: 'When a thin slice was cut from this specimen, so as to be transparent, it resembled a leaf with veins inclined to the ridge or central line which divided it into two parts. The central line, and several of the veins were colorless; while some of the veins were of a deep amethyst color, and others of a pale amethyst color.'

'Upon placing this slice on a hot iron,' says Dr. Brewster, 'in order to examine its phosphorescence, I was surprised to observe that the phosphorescent matter was arranged in strata or veins, parallel to those of the specimen, and each stratum emitted a phosphoric light peculiar to itself, and differing from that of the other strata either in color or intensity. Some of the veins discharged a purple light; others a yellowish-green light; others a whitish light, and others exhibited no phosphorescence at all. The most singular circumstance, however, was that the different strata of phosphoric light preserved their boundaries sharp and well defined, and were far more minute and numerous than the strata seen by a microscopical examination of the specimen.'

3. Common sand, or earthy fluor. It is of a light gray color and loose consistence; when strewed on an iron plate, heated a little below redness, it diffuses a blue or pale-yellow phosphoric light. According to the experiments of Klaproth and Gmelin, it contains the fluor acid singly, and not the phosphoric. Mr. Pelletier found 100 parts of it to contain thirty-one of silex, twenty-one of calx, 15·5 argil, 28·5 sparry acid, one of phosphoric acid, and one of iron. In an unconnected substance of this sort, different specimens must undoubtedly contain different proportions of ingredients; among these the silex is evidently adventitious, the phosphoric acid being in such small quantity, may be found in some specimens, and not in others. It occurs in veins along with fluor spar at Beeralstone in Devonshire, in Cumberland, in Saxony, and Norway. It has also been found at Kobola Poiana, in the district of Marmaros, in Hungary.

The whole of this genus is nearly insoluble in water. It does not effervesce with any acid, except the concentrated vitriolic acid, and with that but feebly. The nitrous and marine acids, in the common temperature of the atmosphere, are not absolutely inert with respect to it, but scarcely dissolve it without decomposition. It is insoluble in the acetous. In a moderate heat it decrepitates; and, if pulverised, phosphoresces, particularly the blue or purple colored; but, if heated to redness, it will never afterwards phosphoresce. In a heat of 130° of Wedgwood, it melts in clay crucibles, or, but less perfectly, in those of chalk, but on charcoal very imperfectly. By concentrated solar heat, or that given out by pure air, it melts into a button which is generally white and opaque when cold; if that heat be long continued, it becomes less fusible.

FLUORIC Acid, in chemistry, is an acid generally supposed among chemists, to be a compound of an unknown radical fluorine and hydrogen. Such, at least, is the opinion expressed by Dr. Henry, Dr. Thomson, and Sir H. Davy.

Put one part of fluate of lime, i. e. fluor spar, in coarse powder into a leaden or tin retort, and pour upon it two parts of sulphuric acid. Lute the retort to a leaden receiver, containing one part of water, and apply a gentle heat. The fluoric acid gas disengaged will be absorbed by the water, and form liquid fluoric acid, which must be kept in well-closed leaden or tin bottles, or phials coated within with wax or varnish. If the receiver be cooled with ice, and no water put in it, then the condensed acid is an intensely active liquid, first procured by M. Gay Lussac. It has the appearance of sulphuric acid, but is much more volatile, and sends off white fumes when exposed to the moist air. Its specific gravity is only 1·0609. It must be examined with great caution, for when applied to the skin it instantly disorganises it, and produces very painful wounds; and it instantly corrodes and disorganises glass, flints, &c. Its odor resembles muriatic acid, and its action upon all inflammable substances is very feeble, as it does not afford any oxygen to them. With

ammonia, it forms a concrete body, and has no action upon platina, gold, silver, mercury, tin, lead, antimony, cobalt, nickel, or bismuth; but it corrodes iron, arsenic, and manganese. It combines readily with water without depositing any earth, and has an astringent acidulous taste. A candle immersed in it is extinguished without any change in the color of the flame: it combines with ammoniacal gas, forming a white cloud: it dissolves camphor, and is taken up in large quantity by oil of turpentine, to which it communicates an orange color, and a pungent acid odor.

Fluoric acid gas volatilises silicious earth; which may be shown by decomposing fluate of lime in a glass retort, and receiving the gas in a vessel filled with water over mercury. Each bubble of the gas, which passes through the mercury into the water, becomes immediately enveloped in a silicious crust, and leaves, as it ascends to the surface of the water, traces in the form of tubes, which frequently decrease upwards, the bubble diminishing as the water dissolves it.

The gas, when disengaged in the glass retort, dissolves part of the silex of the retort, which it keeps in an aeriform state. On coming into the water, it abandons its caloric, and is converted into fluoric acid, depositing at the same time the silex.

With the view of separating its hydrogen, Sir H. Davy appl ed the power of the great Voltaic batteries of the Royal Institution to the liquid fluoric acid. 'In this case,' says that eminent chemist in his account of his experiments in the Philosophical Transactions, 'gas appeared to be produced from both the negative and positive surfaces; but it was probably only the undecompounded acid rendered gaseous which was evolved at the positive surface; for during the operation the fluid became very hot, and speedily diminished.'—'In the course of these investigations I made several attempts to detach hydrogen from the liquid fluoric acid, by the agency of oxygen and chlorine. It was not decomposed when passed through a platina tube heated red-hot with chlorine, nor by being distilled from salts containing abundance of oxygen, or those containing abundance of chlorine.' By the strict rules of chemical logic, therefore, we ought to regard fluoric acid as a simple body, as there is no evidence of its ever having been decompounded; and nothing but analogy with the other acids has given rise to the assumption of its being a compound.

The marvellous activity of this powerful acid may be inferred from the following remarks of Sir H. Davy, from which also may be estimated, in some measure, the difficulty attending refined investigations on this extraordinary substance.

'I undertook,' continues he, 'the experiment of electrising pure liquid fluoric acid with considerable interest, as it seemed to offer the most probable method of ascertaining its real nature; but considerable difficulties occurred in executing the process. The liquid fluoric acid immediately destroys glass, and all animal and vegetable substances; it acts on all bodies containing metallic oxides; and I know of no substances which are not rapidly dissolved or decomposed by it, except metals, charcoal, phosphorus, sulphur, and certain combinations of chlorine. I attempted to make tubes of sulphur, of muriates of lead, and of copper containing metallic wires, by which it might be electrised, but without success. I succeeded, however, in boring a piece of horn silver in such a manner that I was able to cement a platina wire into it by means of a spirit lamp; and by inverting this in a tray of platina, filled with liquid fluoric acid, I contrived to submit the fluid to the agency of electricity in such a manner, that, in successive experiments, it was possible to collect any elastic fluid that might be produced. Operating in this way with a very weak Voltaic power, and keeping the apparatus cool by a freezing mixture, I ascertained that the platina wire at the positive pole rapidly corroded, and became covered with a chocolate powder; gaseous matter separated at the negative pole, which I could never obtain in sufficient quantities to analyse with accuracy, but it inflamed like hydrogen. No other inflammable matter was produced when the acid was pure.'

The following is Lavoisier's table of the combinations of fluoric acid with the salifiable bases, in the order of affinity.

Names of the bases.	Names of the neutral salts.
Lime	Fluate of lime, or fluor spar.
Barytes	Barytes
Strontites	Strontites.
Magnesia	Magnesia.
Potash	Potash.
Soda	Soda.
Ammoniac	Ammoniac.
Oxide of	
Zinc	Zinc.
Manganese	Manganese.
Iron	Iron.
Lead	Lead.
Tin	Tin.
Cobalt	Cobalt.
Copper	Copper.
Nickel	Nickel.
Arsenic	Arsenic.
Bismuth	Bismuth.
Mercury	Mercury.
Silver	Silver.
Gold	Gold.
Platina	Platina.
and, by the dry way,	
Argil	Fluat of argil.

The native fluate of *lime*, the fluor *spar* already mentioned, is the most common. At the heat 130° of Wedgwood, it enters into fusion in a clay crucible. It is not acted upon by the air, and is insoluble in water. Concentrated sulphuric acid deprives it of the fluoric acid with effervescence, at the common temperature, but heat promotes its action.

The affinity of the fluoric acid for *silex* has already appeared. If the acid solution, obtained by keeping the solution of the acid in glass vessels, be evaporated to dryness, the fluoric acid may be disengaged from the solid salt remaining either by the powerful acids, or by a strong heat;

and, if the solution be kept in a vessel that admits of a slow evaporation, small brilliant crystals, transparent, hard, and apparently of a rhomboidal figure, will form, as Bergman found, on the bottom of the vessel, in the course of two years standing.

Fluate of *potash*, *soda*, *ammonia*, or *magnesia*, may be prepared by saturating their carbonates with fluoric acid. Fluate of *barytes* is precipitated by adding fluoric acid to the nitrate, or muriate of barytes; and fluate of *strontia* is prepared in a similar manner. Fluate of *iron* is obtained by dissolving the red oxide of iron in fluoric acid.

Scheele observed, that the fluor acid united with *alumina* into a salt that could not be crystallised, but assumed a gelatinous form. Fourcroy adds that the solution is always acid, astringent, decomposable and precipitable by all the earthy and alkaline bases.

The only use to which fluoric acid has been applied is engraving on glass. It appears from Beckman that this was first practised by an artist of Nuremberg, in the year 1670, who prepared his etching liquor by digesting together nitrous acid and finely powdered fluor spar for several hours on a warm sand-bath, and then using the clear liquor as aquafortis is employed by the copper-plate engravers. But the knowledge and application of this liquor was confined to a few German artists, till, after the discoveries of Scheele and Priestley, the fluoric acid in a pure state was used by various ingenious artists in England and France. Puymaurin found the liquid acid prepared according to Scheele's process to answer very well for this purpose in warm weather. The gaseous acid however is much more efficacious. To engrave on glass, select a piece of plate glass of the requisite size, cover it with hard engraver's wax, and with a needle or other suitable instrument trace the intended design as in common etching, observing that every stroke passes quite through the wax to the surface of the glass. When the etching is completed, lay the plate with the engraved side downwards on a frame, in a box lined with strong sheet lead or thick tin foil, and place on the bottom of the box a few leaden cups containing a mixture of one part of very fine pulverised fluor spar and two parts of sulphuric acid; then close the lid of the box, and place it on a stove, or in any other convenient situation where it may be exposed to as high a heat as it can bear without risking the melting of the wax: fluoric acid gas will be copiously disengaged, and in a short time (from one hour to three, according to circumstances) the plate will be found sufficiently corroded.

M. Kortum, of Warsaw, having found that some pieces of glass were more easily acted upon than others, tried its effect on various stones. Rock crystal, ruby, sapphire, emerald, oriental garnet, amethyst, chrysolite, aventurine, girasol, a Saxon topaz, a Brasilian topaz burnt, and an opal, being exposed to the fluoric gas at a temperature of 122° F. were not acted upon. Diamond exposed to the vapor on a common German stove for four days, was unaffected. Of polished granite, neither the quartz nor mica appeared to be attacked, but the feldt-spar was rendered opaque and muddy, and covered with a white powder. Chrysoprase, an opal from Hungary, onyx, a cornelian from Persia, agate, chalcedony, green Siberian jasper, and common flint, were etched by it in twenty-four hours; the chrysoprase, nearly half a line deep, the onyx pretty deeply, the opal with the finest and most regular strokes, and all the rest more or less irregularly. The uncovered part of the brown flint had become white, but was still compact: water, alcohol, and other liquids, rendered the whiteness invisible, but, as soon as the flint became dry, it appeared again. The same effect was produced on cornelian and on a dark brown jasper, if the operation of the acid was stopped as soon as it had whitened the part exposed, without destroying its texture. A piece of black flint with efflorescent white spots, and partly covered with the common white crust, being exposed five days to the gas at a heat of about 68° F. was reduced from 103 grains to 91, and rendered white throughout. Some parts of it were rendered friable. White Carrara marble in twenty-four hours, at 77°, lost one-thirtieth of its weight, but the shining surface of its crystallised texture was distinguishable. Black marble was not affected, either in weight or color, and agate was not attacked. Transparent foliated gypsum fell into white powder on its surface in a few hours; but this powder was not soluble in dilute nitric acid,—so that the fluoric acid had not destroyed the combination of its principles; but deprived it of its water of crystallisation. A striated zeolite, weighing 102 grains, was rendered friable on its surface in forty-eight hours, and weighed only eighty-five grains and a half. On being immersed in water, and then dried, it gained two grains and a half, but did not recover its lustre. Barytes of a fibrous texture remained unchanged. A thin plate of Venetian talc, weighing 124 grains, was reduced to eighty-one grains in forty-eight hours, and had fallen into a soft powder, which floated on water. See CHEMISTRY.

FLUO-SILIC ACID. If instead of being distilled in metallic vessels, the mixture of fluor spar and sulphuric acid be distilled in glass vessels, little of the liquid will be obtained; but the glass will be corroded, and a peculiar gas will be produced, which must be collected over mercury. The best mode of procuring this is to mix the fluor spar with pounded glass or quartz; and, in this case, the retort may be preserved from corrosion, and the gas obtained in greater quantities. This gas, which is called silicated fluoric gas, is very heavy; 100 cubic inches of it weigh 110,77 grains. It is about forty-eight times denser than hydrogen, and, when brought into contact with water, instantly deposits a white gelatinous substance, which is hydrate of silica and it produces white fumes when suffered to pass into the atmosphere. It is not affected by any of the common combustibles; but when potassium is strongly heated in it, it takes fire and burns with a deep red light; the gas is absorbed, and a fawn-colored substance is formed, which yields alkali to water with slight effervescence, and contains a combustible body. The washings afford potash, and a salt, from which

strong acid fluid previously described, may eparated by sulphuric acid. It affords, decomposed by solution of ammonia, 61·4 ent. of silica; and hence was at first sup- d by Sir. H. Davy to consist of two prime ortions of acid=2·652, and one of silica= 5, the sum of which numbers may represent quivalent=6·718. One volume of it con- es two volumes of ammonia, and they form ther a peculiar saline substance, decomposed ater. The composition of this salt is easily nciled to the numbers given as representing a and fluoric acid, on the supposition that it ains one prime of ammonia to one of the silicic gas; for 200 cubic inches of ammonia gh 36·2 grains and 100 of the acid gas 110·77. 36·2: 2·13:: 110·77 : 652.

LU'RRY, *n. s.*, Goth. *flokra*. Hurry; vio- commotion; a gust or storm of wind; a y blast.

he boat was overset by a sudden *flurry* from the h. *Swift.*

e lived (not Death, but Juan) in a hurry
raste, and haste, and glare, and gloss, and glitter,
this gay clime of bear-skins, black and furry—
ich (though I hate to say a thing that's better)
eep out sometimes when kings are in a *flurry*,
ough all "the purple and fine linen"—fitter
or Babylon's than Russias' royal harlot,
I neutralize her outward show of scarlet. *Byron.*

'LUSH, *v. n.*, *v.*, *a.*, *adj.*, & *n. s.* Fr. *flus*, or *flux*, . *fluflus*; Dutch, *fluysen*. To flow; to flow h violence; to approach with rapidity: ap- ed to a rapid motion of the blood, from men- or any other excitement, which produces a w in the skin, and a redness in the cheeks; s used of a transient change of color in the e, not of a settled complexion. Thus it is ap- ed to any sudden elation of the mind. The bstantive expresses afflux; sudden impulse; olent flow. The adjective is used as a cant m for affluent; abounding. It sometimes ans fresh; full of vigor.

Ere yet the salt of most unrighteous tears
Had left the *flushing* in her galled eyes,
She married. *Shakspeare. Hamlet.*

He took my father grossly, full of bread,
ith all his crimes broad blown, and *flush* as May;
nd how his audit stands, who knows, save Heaven?
Shakspeare.

If the place but affords
Any store of lucky birds,
As I make 'em to *flush*,
Each owl out of his bush.
Ben Jonson's Owls.

Thus Eve with countenance blithe her story told;
ut in her cheek distemper *flushing* glowed.
Milton's Paradise Lost.

What means that lovely fruit? What means, alas!
hat blood, which *flushes* guilty in your face?
Dryden.

Never had any man such a loss, cries a widower,
n the *flush* of his extravagancies for a dead wife.
L'Estrange.

The pulse of the arteries is not only caused by the ulsation of the heart, driving the blood through them n manner of a wave or *flush*, but by the coats of the rteries themselves. *Ray.*

The pulse of the heart he attributes to an ebullition and sudden expansion of the blood in the ventricles, after the manner of the milk, which, being heated to such a degree, doth suddenly, and all at once, *flush* up and run over the vessel. *Ray.*

It *flushes* violently out of the cock for about a quart, and then stops. *Mortimer's Husbandry.*

The glowing dames of Zama's royal court
Have faces *flushed* with more exalted charms.
Addison's Cato.

Some court, or secret corner seek,
Nor *flush* with shame the passing virgin's cheek.
Gay's Trivia.

As prosperous people, *flushed* with great victories and successes, are rarely known to confine their joys within the bounds of moderation and innocence.
Atterbury's Sermons.

At once, arrayed
In all the colours of the *flushing* year,
The garden glows. *Thomson's Spring.*

It is enough that Fortune found him *flush*
Of youth and vigour, beauty, and those things
Which for an instant clip Enjoyment's strings.
Byron.

FLUSHING, an important sea-port of the island of Walcheren, situated on the north side of the Scheldt, at the mouth of that river. The approach to the harbour is between jetties, and inside the town are two basins, one of which will contain a fleet of men of war; hence the importance of this place to the French, who, in 1795, stipulated for its possession jointly with the Dutch, and afterwards obtained it exclusively. The batteries nearly command the mouth of the Scheldt. This town is a noted resort of English smugglers. It is well built, and was the birth place of De Ruyter. In 1809 it sustained a successful siege from the British army landed in Walcheren, and was not evacuated until the 23rd December, when our troops endeavoured to destroy the inner basins. Buonaparte soon after annexed the island Walcheren to France, and thus it continued until 1814. Population 5700. Old Flushing is a suburb on the west side of the New town.

FLUSHING, a town of America, on a bay in Long Island. Long. 73° 50′ W., lat. 40° 45′ N.

FLUSTER, *v. a.* From to flush. To make hot and rosy with drinking; to make half drunk.

Three lads of Cyprus, noble swelling spirits,
Have I to-night *flustered* with flowing cups,
And they watch too. *Shakspeare. Othello.*

FLUTE, *v. a.* & *n. s.* Fr. *fluste*, *flute*; Ital. *flauto*; Belg. *fluite* (a musical pipe). To cut columns into hollows; a channel or furrow in a pillar; a regular ornamental concave extending from the base to the capital of a column: a wind instrument, with stops for the fingers.

In *floites* made he discordaunce
And in his musike, with mischaunce,
He would seine with notes newe,
That he ne fonde no woman trewe.
Chaucer. Romaunt of the Rose.

Singing he was, or *floyting*, alle the day;
He was as fresshe as is the moneth of May.
Chaucer. Prologue to Cant. Tales.

The oars were silver,
Which to the tune of *flutes* kept stroke.
Shakspeare.

Anon they move
In perfect phalanx to the Dorian mood
Of *flutes* and soft recorders.
Milton's Paradise Lost.

The soft complaining *flute*
In dying notes discovers
The woes of hopeless lovers,
Whose dirge is whispered by the warbling lute.
Dryden.

FLUTE, in music, is the simplest of all musical instruments of the wind kind. It is played on by blowing it with the mouth; and the tones or notes are changed by stopping and opening the holes disposed for that purpose along its side. The ancient fistulæ, or flutes, were made at first of reeds; afterwards of wood, and at length of metal. But how they were blown, whether as our flutes, or hautboys, does not appear.

The flute was of such importance in antiquity, that several female divinities laid claim to the honor of its invention. Of this number the principal was Minerva, or Pallas, the daughter of Jupiter: sometimes called Musica, or the musician, from a statue made by Demetrius, in which, when the serpents of the Gorgon were struck, they resounded like a lute. She is said by Hyginus to have found herself laughed at by Juno and Venus, whenever she played the flute in their presence; and on examining herself in a fountain, which served as a mirror, was convinced that she had been justly derided for the distortion of her countenance, occasioned by swelling her cheeks in the act of blowing the flute. However, a cause more worthy of her wisdom is assigned for her throwing aside the flute, upon seeing Apollo perform on the lyre; for, by having his mouth at liberty, she found that it enabled him to sing during the time he played. The performer upon the ancient flutes played always upon two at the same time, and placed round his mouth a species of bandage, tied behind the head, in order that the cheeks might not protrude, and for the better management of the breath. The right flute had only two holes, and produced low sounds; the left had several holes, and produced higher sounds. When the musicians performed, upon these two flutes of different sounds, it was said the piece was performed 'tibiis imparibus' or 'tibiis dextris et sinistris.' When they performed upon two flutes of the same sound it was said, that the piece was performed 'tibiis paribus dextris,' if upon those of grave sounds; and 'tibiis paribus sinistris' if upon high-sounding flutes.

The present flute was originally called the flute à bec, or beaked flute, from the reed resembling the mouth of a bird. This instrument, at the beginning of the last century, till the works of Corelli came over, was in far more general use as a concert instrument than the violin. Sonatas for two flutes, and a thorough base, violone or theorbo, were innumerable: with solos, duets, and concertos for the same instrument; nor was there a ballad then printed which was not transposed for the flute at the bottom of the page. The concert flutes for which this music was composed were generally F and C. Besides the true concert flute, others of a less size were soon introduced into concerts of violins; in which case the method was to write the flute part in a key correspondent to its pitch. This practice was introduced in 1710, by one Woodcock, a celebrated performer, and William Babell, organist of All-Hallows Church, London. They failed, however, in procuring for the flute a reception into concerts of various instruments; for which reason one Thomas Stanesby, a very curious maker of flutes and of the instruments of the like kind, about 1732, adverting to the scale of Marsennus, in which the lowest note was C, invented what he called the new system; in which, by making the flute of such a size as to be a fifth above concert pitch, the lowest note became C sol fa ut. By this contrivance the necessity of transposing the flute part was taken away; for a flute of this size, adjusted to the system above mentioned, became an octave to the violin. To further this invention of Stanesby, one Lewis Merci, an excellent performer on the flute, published, about 1735, six solos for this instrument, three of which are said to be accommodated to Mr. Stanesby's new system; but the German flute was now become a favorite instrument, and Stanesby's ingenuity failed of its effect. One great objection, indeed, lies against this instrument, which, however, equally affects all perforated pipes; namely, that they are never perfectly in tune, or cannot be made to play all their notes with equal exactness.

Flutes have a compass of nineteen diatonic intervals, viz. from D, first space below the treble clef, to A-sharp (or B-flat), the octave above the first ledger line, including every chromatic interval; but, generally, only to the second octave above the second line, treble clef.

FLUTE, GERMAN, an instrument entirely different from the common flute. It is not, like that, put into the mouth to be played; but the end is stopped with a tompion or plug, and the lower lip is applied to a hole about two inches and a half or three inches distant from the end. This instrument is usually about a foot and a half long; rather bigger at the upper end than the lower; and perforated with holes, besides that for the mouth, the lowest of which is stopped and opened by the little finger's pressing on a brass or sometimes a silver key, like those in hautboys, bassoons, &c. Its sound is exceedingly sweet and agreeable; and serves as a treble in a concert.

FLUTE, or FLUYT, from flotte, a little boat, is a kind of long vessel with flat ribs or floor-timbers, round behind, and swelled in the middle; serving chiefly for the carrying of provisions in fleets or squadrons of ships; though it is often used in merchandise.

FLUTES, or FLUTINGS, in architecture, are perpendicular cavities cut along the shaft of a column or pilaster. They are supposed to have been first introduced in imitation of the plaits of women's robes; and are therefore called by the Latins striges and rugæ. The French call them cannelures, as being excavations; and we, flutes or flutings, as bearing some resemblance to the musical flute. They are chiefly affected in the Ionic order, in which they had their first rise; though they are also used in all the richer orders, as the Corinthian and Composite; but rarely in the Doric, and scarcely ever in the Tuscan.

FLUTTER, *v. n.*, *v. a.* & *n. s.* Sax. flotepan; Fr. *flotter*; Belg. *flodderon*. Is a frequentative

ly, and signifies to take short flights with
it agitation of the wings. The noun is used
express vibration; undulation; quick and
gular motion; hurry; tumult; confusion;
gular position; disorder of mind. The verb,
addition to these applications, signifies to
ve with great show and bustle; to move irre-
arly; to be in a state of uncertainty. Flut-
ng, agitating between hope and fear. To
ve in disorder like a flock of birds sud-
ly roused.

s an eagle stirreth up her nest, *fluttereth* over
young, and spreadeth abroad her wings, so the
d alone did lead him. *Deut.*

And there withall astonce at him let fly
Their *fluttering* arrowes, thicke as flakes of snow.
Spenser. Faerie Queene.

Like an eagle in a dovecoat, I
Fluttered your Volscians in Corioli.
Shakspeare.

Think you've an angel by the wings;
One that gladly will be nigh,
To wait upon each morning sigh;
To *flutter* in the balmy air
Of your well perfumed prayer. *Crashaw.*

The heavenly city very few have a just notion of, or
at pains to seek after; nay, they know not what
is they are seeking; they *flutter* from one object
another, and live at hazard; they have no cer-
n harbour in view, nor direct their course by any
ed star. *Abp. Leighton.*

They fed, and, *fluttering*, by degrees withdrew.
Dryden.

It is impossible that men should certainly dis-
ver the agreement or discernment of ideas, whilst
eir thoughts *flutter* about, or stick only in sounds
doubtful signification. *Locke.*

An infinite number of motions are to be made use
in the *flutter* of a fan: there is the angry *flutter*,
e modest *flutter*, and the timorous *flutter*.
Addison's Spectator.

Esteem we these, my friends! event and chance,
roduced by atoms from their *fluttering* dance!
Prior.

Then (lest some sentry fowl the fraud descry
nd bid his fellows from the danger fly)
lose to the ground in expectation lies
ill in the snare the *fluttering* covey rise.
Gay's Rural Sports.

Ye spirits! to your charge repair;
The *fluttering* fan be Zephyretta's care. *Pope.*

No rag, no scrap of all the beau or wit,
hat once so *fluttered*, and that once so writ. *Id.*

His thoughts are very *fluttering* and wandering, and
annot be fixed attentively to a few ideas successively.
Watts.

Fair crews triumphant, leaning from above,
hall wave their *fluttering* kerchiefs as they move.
Darwin.

What singular emotions fill
Their bosoms who have been induced to roam
With *fluttering* doubts if all be well or ill—
With love for many and with fears for some;
All feelings which o'erleap the years long lost,
And bring our hearts back to their starting-post.
Byron. Don Juan.

FLUVANNA, a county of Virginia, bounded
north by Albemarle, north-east by Louisa, east
by Goochland, west by Amherst, and south by
James River, which divides it from Buckingham.
It is twenty-two miles long, and thirty broad,
and contains about 5000 inhabitants. Columbia
is the chief town.

FLUVANNA, a river of Virginia, which rises in the Blue Mountains, and runs into the Rivanna at Columbia, to form James River.

FLUVIA, a river of Spain in Catalonia, which runs into the Mediterranean at Ampurias. On the 14th June, 1795, there was an engagement on its banks, between the French under general Scherer, and the Spaniards under general Urratia, wherein the latter were defeated, with the loss of above 600 men, though they displayed the utmost bravery, and crossed the river up to the waist in water, to attack the French, who lost only eighty-five men.

FLUVIATIC, *adj.* Lat. *fluviaticus*. Belonging to rivers.

FLUX, *n. s., adj.* & *v. a.* } Lat. *fluxus*; Fr.
FLUXIL'ITY, *n. s.* } *flux*. The act of
FLUX'ION. } flowing; the state of

passing away; any flow or issue of matter. Concourse; confluence; the state of being melted. Fluxion is frequently used as a synonyme of flux; in mathematics it is defined by Harris, 'The arithmetic or analysis of infinitely small variable quantities; or the method of finding an infinitely small quantity, which, being taken an infinite number of times, becomes equal to a quantity given:' as an adjective, flux signifies inconstant; not durable; maintained by a constant succession of parts. Fluxility, capability; possibility, or tendency to liquefaction.

Left and abandoned of his velvet friends;
'Tis right, quoth he; thus misery doth part
The *flux* of company. *Shakspeare. As You Like It.*

The simple and primary motion of fire is *flux*, in a direct line from the centre of the fuel to its circumference. *Digby.*

Whether the heat of the sun in animals whose parts are successive, and in a continual *flux*, can produce a deep and perfect gloss of blackness.
Browne's Vulgar Errours.

Experiments seem to teach, that the supposed aversation of nature to a vacuum is but accidental, or in consequence, partly of the weight and fluidity, or at least *fluxility* of the bodies here below. *Boyle.*

What the stated rate of interest should be, in the constant change of affairs, and *flux* of money, is hard to determine. *Locke.*

Quinces stop *fluxes* of blood. *Arbuthnot.*

By the perpetual *flux* of the liquids, a great part of them is thrown out of the body. *Id.*

The *fluxion* increased, and abscesses were raised.
Wiseman.

A penetration into the abstruse difficulties and depths of modern algebra and *fluxions*, is not worth the labour of those who design the learned professions as the business of life. *Watts.*

Eat eastern spice, secure
From burning *fluxes* and hot calenture. *Halifax.*

FLUX, in hydrography, a regular periodical motion of the sea, happening twice in twenty-four hours; wherein the water is raised and driven violently against the shores. The flux or flow is one of the motions of the tide; the other, whereby the water sinks and retires, is called the reflux or ebb. See TIDE.

FLUX, in medicine, an extraordinary evacuation of some humor. Fluxes are variously denominated according to their seats and the humors voided; as a flux of the belly, uterine flux, hepatic flux, salival flux, &c. The flux of

the belly is of two kinds, viz. the diarrhæa, and the dysentery, or bloody flux. See MEDICINE.

FLUX, in metallurgy, is sometimes used synonymously with fusion. An ore is said to be in liquid flux, when it is completely fused. But the word is most generally used to signify certain saline matters, which facilitate the fusion of ores, and other substances, which are difficultly fusible in assays and reductions of ores. Fixed alkalies, nitre, borax, tartar, and common salt, are the saline matters of which fluxes are generally composed. The word is more particularly applied to mixtures of different proportions of only nitre and tartar; and these fluxes are called by particular names, according to the proportions of these ingredients. Black flux is produced from the mixture of two parts of tartar and one part of nitre detonated together. As the quantity of nitre which enters into the composition of this flux is not sufficient to consume all the inflammable matter of the tartar, the alkali which remains after the detonation contains much black matter, of the nature of coal, and is therefore called black flux. This flux is so prepared, that it shall contain a certain quantity of inflammable matter; for it is thereby capable, not only of facilitating the fusion of metallic earths like the white flux, but also of reviving these metals. From this property it is also called reducing flux; the black flux, therefore, or crude flux, made with such proportions of the ingredients as to be convertible into black flux, ought always to be used when metallic matters are at once to be fused and reduced, or even when destructive metals are to be fused.

The advantage of M. Morveau's reducing flux, seems to depend on its containing no excess of alkali. It is made of eight parts of pulverised glass, one of calcined borax, and half a part of powder of charcoal. Care must be taken to use a glass which contains no lead. The white glasses contain in general a large proportion, and the green bottle glasses are not perhaps entirely free from it.

FLUX, CRUDE, is the mixture of nitre and tartar in any proportions, without detonation. Thus the mixture of equal parts of the two salts used in the preparation of the white flux, or the mixture of one part of nitre and two parts of tartar for the preparation of the black flux, are each of them a crude flux before detonation. It has also been called white flux, from its color; but the name of crude flux is more convenient. Crude flux is detonated and alkalised during the reductions and fusions in which it is employed; and is then changed into white or black flux, according to the proportions of which it is composed. This detonation produces good effects in these fusions and reductions, if the swelling and extravasation of the detonating matters be guarded against. Accordingly crude flux may be employed successfully in many operations; as, in that for procuring the regulus of antimony.

FLUX, WHITE, is made with equal parts of nitre and of tartar detonated together, by which they are alkalised. The residuum of this detonation is an alkali composed of the alkalies of the nitre and of the tartar, both which are absolutely of the same nature. As the proportion of nitre in this mixture is more than is sufficient to consume entirely all the inflammable matter of the tartar, the alkali remaining after the detonation is perfectly white, and is therefore called white flux: and, as this alkali is made very quickly, it is also called extemporaneous alkali. When a small quantity only of white flux is made, some nitre always remains undecomposed, and a little of the inflammable principle of the tartar, which gives a red or even a black color to some part of the flux; but this does not happen when a large quantity of white flux is made; because then the heat is much greater. This small quantity of undecomposed nitre and tartar which remains in white flux is not hurtful in most of the metallic fusions in which this flux is employed: but if the flux be required perfectly pure, it may easily be disengaged from those extraneous matters by a long and strong calcination, without fusion.

FLUXES FOR ASSAYING MINERALS. Under the article BLOW-PIPE, we have described the method of vitrifying any small portion of mineral substance, by which the process of assaying may be very quickly performed. The fluxes recommended by Sir T. Bergman, for this purpose, are the following: 1. The phosphoric acid, or rather the microcosmic salt, which contains that acid partly saturated with mineral, partly with volatile alkali, and loaded besides with much water and a gelatinous fat. This salt, when exposed to the flame, boils and foams violently, with a continual crackling noise, until the water and volatile alkali have flown off; afterwards it is less agitated, sending forth something like black scoriæ arising from the burnt gelatinous part: these, however, are soon dispelled, and exhibit a pellucid sphericle encompassed by a beautiful green cloud, which is occasioned by the deflagration of the phosphorus, arising from the extrication of the acid by the inflammable matter. The clear globule which remains, upon the removal of the flame, continues longer soft than that formed by borax; and therefore is more fit for the addition of the matter to be dissolved. The volatile alkali is expelled by the fire; therefore an excess of acid remains in what is left behind, which readily attracts moisture in a cool place. 2. The mineral alkali, or sal sodæ, when put upon charcoal, melts superficially, penetrates the charcoal with a crackling noise, and then disappears. In the spoon it yields a permanent and pellucid sphericle, as long as it is kept fluid by the blue apex of the flame; but, when the heat is diminished, it becomes opaque, and assumes a milky color. It attacks several earthy matters, particularly those of the silicious kind, but cannot be employed on charcoal. 3. Crystallised borax, exposed to the flame urged by the blow-pipe or charcoal, first becomes opaque, white, and excessively swelled, with various protuberances, or branches proceeding out from it. When the water is expelled, it easily collects itself into a mass, which, when well fused, yields a transparent sphericle, retaining its transparency even after cooling. If calcined borax be employed, the clear sphericle is obtained the sooner. See METALLURGY.

FLUXIONS.

Sect. I.—History of the Method of Fluxions.

1. The doctrine of *fluxions*, by many degrees the most important discovery that has been made in abstract science in modern times, comprehends the analysis of quantities considered as variable. It consists of two principal branches, the first of which shows how the relation may be found between the variation in any quantity and the variation of any function of that quantity; and the second shows how, from the variation in the function, the quantity on which the function depends may be discovered. The former of these is by English mathematicians called the *direct*, and the latter the *inverse method* of fluxions, but by foreigners they have been generally denominated the *differential*, and the *integral calculus*.

2. It is agreed on all hands that either to Sir Isaac Newton, or M. Leibnitz, the honor of discovering this admirable method of investigation belongs. But whether they separately made the discovery, or Leibnitz took advantage of some hints which he *might* have had from a common friend of Newton and himself, and published as his own what he thus obtained, has never been satisfactorily determined. Certain it is that the method came from the hand of Leibnitz both in its form and metaphysics, in a shape exceedingly different from the manner in which it was explained by Newton; and experience has shown that the Leibnitzian form of the calculus is much better adapted to the higher class of investigations than that of Newton.

3. M. Leibnitz unquestionably was the first person that laid the principles of the method before the public. This he did in the Leipsic acts of 1684; where he gave precepts, but without demonstrations, for performing some elementary operations in the method; and there can be no doubt that, long before that period, he was intimately acquainted with its principles.

4. But though Leibnitz was the first that published any thing on the subject, there can be little doubt that Newton had first made the discovery; for he had made use of it prior to 1669 in his Compendium of Analysis and Quadrature of Curves; and there are traces of this method in matters which must have engaged his attention three or four years before that period. In 1687 his *Principia* appeared; the most stupendous achievement of human intellect that the world has ever seen, a work entirely founded on the fluxionary calculus. Till about 1699, it appeared to be generally taken for granted that Newton and Leibnitz had separately and independently made the discovery; but about this period Nicholas Facio de Duillier, a Genoese, retired to England, and, it has been said, conceiving that he had been undervalued by Leibnitz, published a little tract on the curve of swiftest descent; and he took occasion to say, that, for the sake of truth and his own conscience, he was obliged to declare Newton the *first inventor* of the new calculus; and that he left others the task of determining whether Leibnitz the second inventor had borrowed from the English mathematician.

5. Leibnitz, hurt at the remark and the insinuation conveyed in it, answered, however, with great moderation; that he could not believe that M. Facio's remark was made with Newton's approbation; and that he would not enter into any dispute with that great man for whom he had the most profound veneration. That when he published his differential calculus, in 1684, he had been master of it about eight years. He admitted that Newton informed him, about the same time, of his knowing how to draw tangents by a general method which was not impeded by irrational quantities; but, as the information was unaccompanied by any explanation, he could not know whether this method was or was not deduced from the differential calculus; especially as Huygens, who was at that time unacquainted with this calculus, affirmed himself to be in possession of a method of drawing tangents which possessed the same advantages. That the first English work in which he had seen the differential calculus explained was in the preface to Wallis's Algebra, not published till 1693; and that, relying on all circumstances, he appealed entirely to the candor of Newton.

6. Writings succeeded each other at first but slowly; but, as the partizans of each grew more zealous and positive, the controversy grew hotter, till at length, in 1711, M. Leibnitz complained loudly to the Royal Society, of the conduct of Dr. Keil, who had accused him of having published the method of fluxions invented by Newton as his own, merely disguising his piracy by devising other names and characters. The Royal Society accordingly appointed a committee to examine all the writings relative to the question, and in 1712 published these writings with the report of the committee under the title of Commercium epistolicum de Analysi promota. The conclusion of the report is, that Keil had not calumniated Leibnitz. It has been said that in this business Newton did not appear, but left the care of his reputation to his countrymen; but this is a mistake, for in the course of the dispute Newton wrote two very sharp letters against Leibnitz, in which there is evidently some art employed to weaken those strong testimonies of esteem which on previous occasions he had expressed for him, particularly in the celebrated scholia to prop. 7. book 2, of the Principia, in which Newton says, 'In a correspondence in which I was engaged with the very learned geometrician Mr. Leibnitz ten years ago, having informed him that I was acquainted with a method of determining the *maxima and minima*, drawing tangents, and doing other similar things which succeeded equally in rational equations

ar. radical quantities, and having concealed this method by transposing the letters of the words, which signified, *an equation containing any number of flowing quantities being given, to find the fluxions, and inversely;* that celebrated gentleman answered that he had found a similar method; and this which he communicated to me, differed from mine only in the enunciation and rotation.' To this the edition of 1714 adds ' and in the idea of the generation of the quantities.' This shows clearly that Newton at that time believed that the discovery of Leibnitz was independent of his own. In the edition of the Principia which was published in 1726, ten years after the death of Newton, *the above scholium* was omitted. It appears too, that the Royal Society was sensible that in hastening the publication of the documents that made against Leibnitz, without waiting for those which he promised in his defence, it might be accused of partiality, for it declared soon after that it had no intention of passing judgment in the case, but left the world at liberty to discuss it, and give its opinion.

7. On the whole, while we think that the *Commercium Epistolicum* has made it plain that Newton was the first inventor, yet we are bound in candor to state that we do not think that Leibnitz was indebted for what he discovered on the subject to the previous inventions of his illustrious contemporary.

8. The method of fluxions was brought to a considerable degree of perfection by the labors of its inventors, and the Messrs. Bernouilli; but none of the great men of that day perhaps foresaw the improvements which a century would make in this new instrument of investigation, that had just been put into their hands. Maclaurin, Simpson, Lander, Waring, and Emerson, among our own countrymen, have all contributed to the improvement of some parts of the analysis. They were all of the school of Newton. But the lead in improvement has been taken by our continental neighbours of the Leibnitzian school. Euler, D'Alembert, Arbogort, and, above all, La Grange, have immensely extended the bounds of the method.

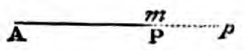
9. At present, among the leading mathematicians of this country, the logarithm of Newton has been generally abandoned for that of Leibnitz; and the labors and the talents of Woodhouse, Herschel, Babbage, Lardner, Airy, and a host of other enthusiastic cultivators of science, induce us to hope that Britain will soon, as in by-gone days, be foremost in the ranks, as well of science as of art.

Sect. II.—Definitions, Principles, and Notation.

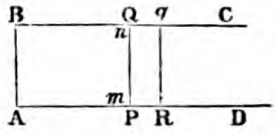
10. In the fluxionary calculus, quantities of all kinds are considered as generated by motion, by means of which they increase or decrease; as a *line* by the motion of a point, a *surface* by the motion of a line, a *solid* by the motion of a surface, and an *angle* by the rotation of one of the lines which contain it; *time* in all cases flowing uniformly: and since, when we consider magnitude only, without regarding position, figure, and other affections, all quantities may be represented by lines, we may conceive whatever can be the subject of computation, as generated by motion.

11. Any variable quantity thus generated is called by English mathematicians a *fluent*, or *flowing quantity*; and by the continental mathematicians an *integral*; and the *rate* of increase or decrease of the variable quantity at any instant, is in this country called the *fluxion*, and on the continent the *differential* of that quantity.

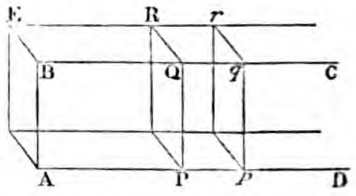
12. To illustrate these definitions, suppose a point m be conceived to move from the position A, and to generate a line AP, by a motion any how regulated; and suppose the celerity of the point m, at any position P, to be such as would, if from thence it should become, or continue uniform, be sufficient to cause the point to pass uniformly over the distance Pp in the time allowed for the fluxion, then will the said line Pp represent the fluxion of the fluent, or flowing line AP, at that position.



13. Again, suppose the right line m n, to move from the position AB, continually parallel to itself, with any continued motion, so as to generate the fluent, or flowing rectangle ABQP, whilst the point m describes the line AP; also let the distance Pp be taken, as before, to represent the fluxion of the line, or base AB, and complete the rectangle PQqp, then, like as Pp is the fluxion of the line AP, so is Pq the fluxion of the flowing parallelogram AQ; for if the line Pp be supposed to be generated with a uniform celerity in a given time, the parallelogram Pq will also be generated with a uniform celerity in the same time.

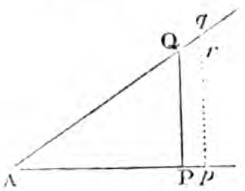


14. In like manner, if the solid AERP be conceived to be generated by the plane PQR, moving from the position AB E, always parallel to itself, along the line AD, and if Pp denote the fluxion of the line AP: Then, like as the rectangle PQqp expresses the fluxion of the flowing rectangle ABQP, so also shall the fluxion of the variable solid, or prism ABERQP, be expressed by the prism PQRrqp. And in both of these last two cases, it appears that the fluxion of the generated rectangle, or prism, is equal to the product of the generating line, or plane, drawn into the fluxion of the line along which it moves.

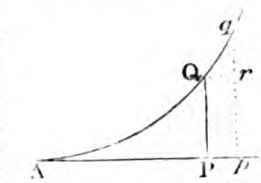


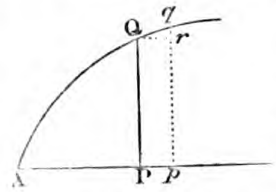
15. Hitherto the generating line or plane has been considered as of a constant, or invariable magnitude; in which case the fluent, or quantity generated, is a rectangle or a prism, the former being described by the motion of a line, and the latter by the motion of a plane. So in like manner are other figures, whether plane or solid,

conceived to be described by the motion of a variable magnitude, whether it be a line or a plane. Thus, let a variable line PQ, fig. 4 and 5, be carried with a parallel motion along the line AP, so that while the point P generates the line AP, the line PQ may generate the curvilinear area APQ, by this means the point Q will generate the curve line AQ. Here, therefore, there are several fluents, or flowing quantities, namely, the abscis, or base AP, the ordinate PQ, the curvilinear area APQ, and the curve line AQ.



16. In order to exhibit the fluxions of these quantities, let Pp, as before, be the fluxion of the base, complete the rectangle PQrp, this rectangle will be the fluxion of the curvilinear area APQ. For if the generating line were supposed to become invariable at the position PQ, it is evident that while the line Pp, was described by the point P with a uniform celerity, the parallelogram Pr would also be generated by the line PQ uniformly, and with the very celerity with which the area APQ was increasing at the position PQ. Next, suppose that the variable line PQ increases uniformly, after leaving the position PQ, with the very degree of celerity of increase it had when in that position; it is evident that the point Q will now describe a straight line Qs, which will be a tangent to the curve at Q; this line will also be generated with a uniform celerity, viz. the very celerity with which the generating point was moving in the curve at the position Q. Hence it appears, that like as Pp is the fluxion of the base, or abscis AP, and Pr the fluxion of the area APQ, so is the line rs the fluxion of the ordinate, or generating line PQ, and Qs the fluxion of the curve line AQ.





17. In the doctrine of fluxions, the initial letters of the alphabet, a, b, c, d, &c., are commonly used to denote constant, or invariable quantities; and the last letters z, x, y, w, &c., to denote variable, or flowing quantities. Thus, the variable line AP, fig. 3, may be represented by x, and the constant line PQ by a; also in fig. 4, the variable abscis AP may be represented by x, the ordinate PQ by y, and the curve line AQ by z.

18. The fluxion of a variable quantity is represented by the same letter, with a point over it. Thus the fluxion of x is represented by $\dot{x}$, the fluxion of y by $\dot{y}$, &c. The continental mathematicians represent the fluxion, or *differential* of any quantity, by prefixing d to the quantity. Thus the fluxion, or differential, of x is represented by dx, that of y by dy, &c. In this article we shall adopt the English notation, as, in the principal works on the application of fluxions that have hitherto been published in this country, it has been employed.

Sect. III.—To find the Fluxion of any Proposed Variable Quantity.

19. The fluxion of x is $\dot{x}$, and that of y is $\dot{y}$, therefore the fluxion of $x+y$ is $\dot{x}+\dot{y}$; and similarly the fluxion of $x-y$ is $\dot{x}-\dot{y}$. To find the fluxion of the product of any two variable quantities as x and y; let x be increased by any small quantity x', and y by y', then the quantities become $x+x'$ and $y+y'$, whose product is $xy+xy'+yx'+x'y'$; which exceeds xy, the product of the two proposed quantities, by $xy'+yx'+x'y'$, the quantity by which, with any assignable values of x' and y', the product of xy is increased. In the same manner if x and y were diminished severally by x' and y', their product would be diminished by $xy'+yx'-x'y'$, a quantity which is equal to the former when x' and y' are indefinitely small, or when for x', y', we substitute their fluxions $\dot{x}$, $\dot{y}$, in which case the fluxion of the product is simply $x\dot{y}+y\dot{x}$. If for xyz we were to substitute wz, we should as above find its fluxion $w\dot{z}+zw = xy\dot{z}+z(x\dot{y}+y\dot{x}) = xy\dot{z}+xz\dot{y}+yz\dot{x}$. Hence the fluxion of the product of any number of variable quantities is obtained by multiplying the fluxion of each by the product of the others, and adding the results together.

20. To find the fluxion of the quotient of two variable quantities, as $\frac{x}{y}$; put $\frac{x}{y}=w$, then $x=wy$, whence, by article 19, $\dot{x}=w\dot{y}+y\dot{w}$, or $\dot{w}=\frac{\dot{x}-w\dot{y}}{y}=\frac{\dot{x}-\frac{x}{y}\cdot\dot{y}}{y}=\frac{y\dot{x}-x\dot{y}}{y^2}$. Hence from the fluxion of the dividend multiplied by the divisor, subtract the fluxion of the divisor multiplied by the dividend, and divide the remainder by the square of the divisor, and the result will be the fluxion of the quotient. By considering the divisor and dividend as the denominator and numerator of a fraction, the fluxion of the fraction may be found in the same manner.

21. To find the fluxion of any power of a variable quantity, as x. Let x be increased by the indefinitely small part $\dot{x}$, then if $x+\dot{x}$ be raised to the nth power, it becomes $x^n + nx^{n-1}\dot{x} + n\cdot\frac{n-1}{2}x^{n-2}\dot{x}^2$, &c.; whence the increase of the nth power arising from an increase of $\dot{x}$ in the root is $nx^{n-1}\dot{x} + n\frac{n-1}{2}x^{n-2}\dot{x}^2$, &c. If $\dot{x}$ had been negative, then the diminution in the nth power, arising from a diminution of $\dot{x}$ in the root, would have been $nx^{n-1}\dot{x} - n\frac{n-1}{2}\dot{x}^2$, &c.; which in the nascent state of $\dot{x}$ would agree with the preceding, that is, when all the terms after the first were zero. Hence, generally, the fluxion of x^n, $nx^{n-1}\dot{x}$. That is, multiply the fluxion of the root by the index of the power, and the product by the next lower power of the root for the fluxion of the proposed power.

22. To find the fluxion of a power of any quantity of which the root is constant, but the exponent variable, as ax. From the common principles of algebra we have

$a^x = 1 + Ax + \frac{A^2 x^2}{1 \cdot 2} + \frac{A^3 x^3}{1 \cdot 2 \cdot 3}$, &c., where $A = a - 1 - \frac{1}{2}(a-1)^2 + \frac{1}{3}(a-1)^3$, &c.

Hence taking the fluxion of each term we have

$(a^x) = A\dot{x} + A^2 x\dot{x} + \frac{A^3 x^2 \dot{x}}{1 \cdot 2} + \frac{A^4 x^3 \dot{x}}{1 \cdot 2 \cdot 3} +$ &c.

$A\dot{x}.\left(1 + Ax + \frac{A^2 x^2}{1 \cdot 2}, \text{&c.}\right) = A\dot{x} \times a^x$.

Now A is the hyperbolic logarithm of a, therefore the fluxion of an exponential quantity, as a^x, is equal to the product of the exponential, by the hyperbolic logarithm of the root.

23. To determine the fluxion of the logarithm of x, a being the base of the system.

Let $u = \log. x$; then $x = a^u$, whence, by article 22, $\dot{x} = x \log. a \times \dot{u}$, or $\dot{u} = \frac{\dot{x}}{x \log. a}$; or the fluxion of a logarithm is equal to the fluxion of the quantity divided by the product of that quantity, and the hyperbolic logarithm of the base of the system.

If $\log. a = 1$, as in hyperbolic logarithms, then the fluxion of $\log. x = \frac{\dot{x}}{x}$.

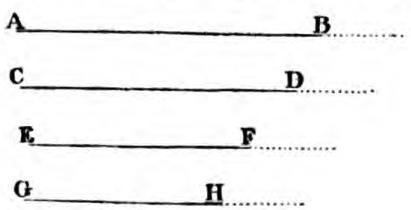
24. To find the fluxion of x^v, the root and the exponent being both variable.

Let $u = x^v$, then $\log. u = v. \log. x$, hence $\frac{\dot{u}}{u} = \dot{v}. \log. x + \frac{\dot{x}v}{x}$, whence $\dot{u} = \dot{v}x^v. \log. x + \dot{x}vx^{v-1}$.

Sect. IV.—Of the Different Orders of Fluxions.

25. If the proportion between the fluxion of a root, and the fluxion of any algebraic quantity in which that root may be involved, be constant, the fluxion of that quantity is also constant; otherwise the fluxion itself will be a variable quantity, and consequently that fluxion will itself have a fluxion, or rate of increase corresponding to its value, at any given instant. This fluxion is called the second fluxion of the original quantity; and this second fluxion may also be still a variable quantity, and consequently have its fluxion, which is called the third fluxion of the proposed magnitude. These orders of fluxions are denominated by the same fluent letter, with a number of points over it corresponding to its order; thus of x, the first fluxion is $\dot{x}$, the second $\ddot{x}$, the third $\dddot{x}$, &c.

26. For the sake of illustration, let AB represent any variable quantity generated by the motion of the point B, and let its rate of increase or diminution be represented by the distance of D from a given point C. Then, if the velocity of B be not uniform, CD will be a variable line; and its rate of increase or decrease will be its fluxion, or the second fluxion of AB. And if the motion of B be such that EF, which by the variations in its length may represent the rate of variation in CD, is also variable; then EF will have its second fluxion GH, which is the third fluxion of AB.



Example.—The fluxion of x^2 is $3x^2\dot{x}$, and the fluxion $3x^2\dot{x}$ is $6x\dot{x}^2 + 3x^2\ddot{x}$, the second fluxion of x^3. The fluxion of this quantity again is $6\dot{x} \times \dot{x}^2 + 6x \times 2\dot{x}\ddot{x} + 6x\dot{x}\ddot{x} + 3x^2\dddot{x} = 6\dot{x}^3 + 18x\dot{x}\ddot{x} + 3x^2\dddot{x}$.

If $\dot{y} = nx^{n-1}\dot{x}$, then $\ddot{y} = n \cdot \overline{n-1}\, x^{n-2}\dot{x}^2 + nx^{n-1}\ddot{x}$; if $\dot{z}^2 = \dot{x}\dot{y}$, then $2\dot{z}\ddot{z} = \dot{x}\ddot{y} + \dot{y}\ddot{x}$, &c.

Sect. V.—Of the Inverse Method of Fluxions, or the Methods of Deducing the Fluents from their Fluxions.

27. Having given in the preceding sections the methods of determining the fluxion of the most usual forms of flowing quantities, we proceed to consider the much more difficult process by which the flowing quantity may be determined from its fluent. There is indeed no method by which the fluent can in all cases be deduced from its fluxion; all that can be done is in general to discover whether the given fluxion agrees, can be made to agree, or to have a known relation to a fluxion, which has been deduced from a known quantity by the direct method, and thence to deduce the fluent of the given fluxion.

Thus we know that the fluxion of x^n is $nx^{n-1}\dot{x}$, and conversely therefore the fluent of $nx^{n-1}\dot{x}$ is x^n. The fluent of x^2y is $2xy\dot{x} + \dot{y}x^2$, therefore the fluent of $2axy\dot{x} + a\dot{y}x^2$ is ax^2y.

28. The principal rules for finding fluents, deduced from the various forms of fluxions investigated in the preceding section, are the following:

29. If there is only one fluxional quantity, and no variable quantity, the fluent is found by merely substituting the flowing quantity for its fluxion. Thus the fluent of $a\dot{x}$ is ax, that of $\sqrt{a^2 + x^2}$ is $\sqrt{a^2 + x^2}$.

30. When any power of a flowing quantity is multiplied by the fluxion of the root, divide by the fluxion of the root; add 1 to the exponent of the power; divide by the exponent so increased, and the quotient will be the fluent of the proposed flowing quantity.

For example, the fluent of $3x^5\dot{x}$ is $\frac{3x^6\dot{x}}{6x} = \frac{1}{2}x^6$, the fluent of $\frac{\dot{x}}{\sqrt{a-x}}$, or of $\dot{x}\overline{a-x}^{-\frac{1}{2}}$ is $\frac{\overline{a-x}^{\frac{1}{2}}\dot{x}}{\frac{1}{2}\dot{x}} = 2\overline{a-x}^{\frac{1}{2}}$

31. When the root under the vinculum is a compound quantity, and the index of the factor without the vinculum increased by 1 is some

multiple of that under the vinculum, put a single variable letter for the compound root, and put its powers and fluxion for those of the same value in the given quantity, and it will then be reduced to a form in which the last rule may be applied.

Example.—Let the given fluxion be $\dot{F} = (a^2 + x^2)^{\frac{3}{2}} x^3 \dot{x}$, where 3, the index of the quantity without the vinculum, increased by 1 makes 4, double the index of x^2 under the vinculum. Put $z = a^2 + x^2$, then $x^2 = z - a^2$; and $2 x \dot{x} = \dot{z}$, whence $x \dot{x} = \frac{\dot{z}}{2}$, and $x^3 x = \frac{x^2 \dot{z}}{2} = \frac{\dot{z}}{2}(z - a^2)$; whence $\dot{F} = \frac{1}{2} z^{\frac{3}{2}} \dot{z} (z - a^2) = \frac{1}{2} z^{\frac{5}{2}} \dot{z} - \frac{1}{2} a^2 z^{\frac{3}{2}} \dot{z}$, the fluent of which is $\frac{1}{7} z^{\frac{7}{2}} - \frac{1}{5} a^2 z^{\frac{5}{2}} = z^{\frac{5}{2}} (\frac{z}{7} - \frac{a^2}{5}) =$ (by substitution and reduction) $\frac{1}{35} \cdot \overline{a^2 + x^2}^{\frac{5}{2}} \cdot \overline{x^2 - \frac{2}{5} a^2}$.

32. When there are several terms involving two or more variable quantities, having the fluxion of each multiplied by the other quantity or quantities, take the fluent of each term as if there were only one variable quantity in it; then, if the fluent of each term be the same, that quantity is the required fluent of the whole.

Example.—Required the fluent of $\dot{x} y z + x \dot{y} z + x y \dot{z}^2$.

The fluent of each term being $x y z$, considering $\dot{x}$ in the first, $\dot{y}$ in the second, and $\dot{z}$ in the third, as the variable quantities, $x y z$ is therefore the required fluent.

33. As the fluxion of $\frac{x}{y}$ is $\frac{\dot{x} y - x \dot{y}}{y^2}$, therefore the fluent of $\frac{\dot{x} y - x \dot{y}}{y^2}$ is $\frac{x}{y}$; similarly the fluent of $\frac{2 x \dot{x} y^2 - 2 y \dot{y} x^2}{y^4}$ is $\frac{x^2}{y^2}$.

34. As the fluxion of hyp. log. x is $\frac{\dot{x}}{x}$ the fluent of $\frac{\dot{x}}{x}$ is the hyp. log of x. In the same manner we find that the fluent of $\frac{\dot{x}}{\sqrt{x^2 \pm a^2}}$ is the hyp. log. of $x + \sqrt{x^2 \pm a^2}$; for the fluxion of $x + \sqrt{x^2 \pm a^2}$ is $\dot{x} + \frac{x \dot{x}}{\sqrt{x^2 \pm a^2}} = \frac{\dot{x}}{\sqrt{x^2 \pm a^2}} \times \sqrt{x^2 \pm a^2} + x)$, which divided by the given quantity, $x + \sqrt{x^2 \pm a^2}$, gives $\frac{\dot{x}}{\sqrt{x^2 \pm a^2}}$.

In the same way may the fluent of $\frac{\dot{x}}{\sqrt{2 a x + x^2}}$ be shown to be equal to the hyp. log. of $a + x + \sqrt{2 a x + x^2}$, the fluent of $\frac{2 a x}{a^2 - x^2}$ to be the hyp. log. of $\frac{a + x}{a - x}$, and the fluent of $\frac{2 a x}{x \sqrt{a^2 \pm x^2}}$ to be the hyp. log. of $\frac{a - \sqrt{a^2 \pm x^2}}{a + \sqrt{a^2 \pm x^2}}$

35. When the fluxion is a rational fraction, its denominator may be decomposed into its factors; and, by means of indeterminate inefficients, the fluxion may be decomposed into others of a simpler form.

For instance, taking $\frac{2 a \dot{x}}{a^2 - x^2} = \dot{u}$, we found in the last article that $u =$ hyp. log. $\frac{a + x}{a - x}$. But $a^2 - x^2 = \overline{a + x} \cdot \overline{a - x}$. Put therefore $\frac{2 a}{a^2 - x^2} = \frac{A}{a + x} + \frac{B}{a - x} = \frac{\overline{A + B} \cdot a - \overline{A - B} a x}{a^2 - x^2}$, then $A + B = 2$ and $A - B = 0$, or $A = 1$ and $B = 1$, whence $\dot{u} = \frac{\dot{x}}{a + x} + \frac{\dot{x}}{a - x}$, and $u =$ hyp. log. $\frac{a + x}{a - x}$.

Again, let $\dot{u} = \frac{\dot{x}}{x^2 - 5 x + 6}$. As $x^2 - 5 x + 6 = \overline{x - 3} \cdot \overline{x - 2}$, assume $\frac{1}{x^2 - 5 x + 6} = \frac{A}{x - 3} + \frac{B}{x - 2} = \frac{\overline{A + B} \cdot x - 2 A + 3 B}{x^2 - 5 x + 6}$; then $A + B = 0$, and $2 A + 3 B = -1$, whence $A = 1$ and $B = -1$, and $\dot{u} = \frac{\dot{x}}{x - 3} - \frac{\dot{x}}{x - 2}$, and consequently $u =$ hyp. log. $\frac{x - 3}{x - 2}$.

36. The fluents of many expressions may be derived from the fluents of others; thus, we have seen above that the fluent of $\frac{\dot{x}}{\sqrt{x^2 + a^2}}$ is the hyp. log. of $x + \sqrt{x^2 + a^2}$, let it be required to find from this the fluent of $\frac{x^2 \dot{x}}{\sqrt{a^2 + x^2}}$. Multiplying both numerator and denominator by x we have $\frac{x^3 \dot{x}}{\sqrt{a^2 x^2 + x^4}}$, and add $\frac{\frac{1}{2} a^2 x \dot{x}}{\sqrt{a^2 x^2 + x^4}}$, and we have $\frac{\frac{1}{2} a^2 x \dot{x} + x^3 \dot{x}}{\sqrt{a^2 x^2 + x^4}}$ whose fluent is $\frac{x}{2} \sqrt{a^2 + x^2}$. From this, if the fluent of $\frac{\frac{1}{2} a^2 x \dot{x}}{\sqrt{a^2 x^2 + x^4}}$, or $\frac{\frac{1}{2} a \dot{x}}{\sqrt{a^2 + x^2}}$ $\frac{1}{2} a^2 \times$ hyp. log. $(x + \sqrt{a^2 + x^2})$ be deducted, the remainder $\frac{x}{2} \sqrt{a^2 + x^2} - \frac{a^2}{2}$ hyp. log. $(x + \sqrt{a^2 + x^2})$ is the required fluent.

37. Sometimes fluents may be found by expanding the terms of their fluxions in a series, when no other method is applicable; and in many instances this method of finding fluents is of the highest importance. An example or two will explain the principles of the method.

Let it be required to find the fluent of $\dot{x} \sqrt{a^2 - x^2}$ by means of series.

$\sqrt{a^2 - x^2}$ expanded into a series by the binomial theorem, or the method of indeterminate co-efficients, is $a - \frac{x^2}{2 a} - \frac{x^4}{8 a^3} - \frac{x^6}{16 a^5} - \frac{5 x^8}{128 a^7}$ &c.; hence $\dot{x} \sqrt{a^2 - x^2} = a \dot{x} - \frac{x^2 \dot{x}}{2 a} - \frac{x^4 \dot{x}}{8 a^3} - \frac{x^6 \dot{x}}{16 a^5}$, &c. Hence by taking the fluent of each term we have the fluent of $\dot{x} \sqrt{a^2 - x^2} =$

$a\,x - \frac{x^3}{6\,a} - \frac{x^5}{40\,a^3} - \frac{x^7}{112\,a^5} - \frac{5\,x^9}{1152\,a^7}$, &c.

Again, let it be required to find the fluent of $\frac{a^2\,\dot{x}}{a^2+x^2}$ by means of series.

$\frac{a^2}{a^2+x^2}$, or $a^2 \cdot \overline{a^2+x^2}^{-1}$ expanded into a series is

$1 - \frac{x^2}{a^2} + \frac{x^4}{a^4} - \frac{x^6}{a^6}$ + &c.; whence $\frac{a^2\,\dot{x}}{a^2+x^2} = \dot{x} - \frac{x^2\,\dot{x}}{a^2} + \frac{x^4\,\dot{x}}{a^4} - \frac{x^6\,\dot{x}}{a^6}$, &c., and consequently the required fluent is $x - \frac{x^3}{3\,a^2} + \frac{x^5}{5\,a^4} - \frac{x^7}{7\,a^6}$, &c.

38. There have been collected by several authors a great many forms of fluxions, with their corresponding fluents. They may often save much labor in finding the fluents of complicated expressions, when a fluent is to be found from a fluxion which either agrees with, or has an assignable relation to, a fluxion on those collections. They serve in this case much the same purpose to the analyst, that logarithmic tables do to the computer. We give the following as the forms which are of most frequent occurrence in practice, and refer for the most extensive collection with which we are acquainted, to a work on the subject by Meyer Hirsch, which has been lately translated into English:—

39. A Table of Fluxions and Fluents.

No.	Fluxions.	Fluents.
1.	$x^{n-1}\,\dot{x}$	$\frac{1}{n}x^n$
2.	$\overline{a \pm x^n}^{m-1}\,x^{n-1}\,\dot{x}$	$\pm \frac{1}{m\,n}\overline{a \pm x^n}^{m}$
3.	$\frac{x^{m\,n-1}\,\dot{x}}{(a \pm x^n)^{m+1}}$	$+ \frac{1}{m\,n\,a} \times \frac{x^{m\,n}}{(a \pm x^n)^m}$
4.	$\frac{(a \pm x^n)^{m-1}\,\dot{x}}{\dot{x}^{m\,n+1}}$	$- \frac{1}{m\,n\,a} \times \frac{(a \pm x^n)^m}{x^{m\,n}}$
5.	$\left(\frac{m\,\dot{x}}{x} + \frac{n\,\dot{y}}{y}\right) x^m\,y^n$	$+ x^m\,y^n$
6.	$\left(\frac{m\,\dot{x}}{x} + \frac{n\,\dot{y}}{y} + \frac{p\,\dot{z}}{z}, \text{ &c.}\right) x^m\,y^n\,z^p$	$x^m\,y^n\,z^p$
7.	$\frac{\dot{x}}{x\,(a \pm x^n)}$	$\frac{1}{n\,a} \cdot \log. \frac{x^n}{a \pm x^n}$
8.	$\frac{x^{n-1}\,\dot{x}}{a - x^{2n}}$	$\frac{1}{2\,n\,\sqrt{a}} \cdot \log. \frac{\sqrt{a} + x^n}{\sqrt{a} - x^n}$
9.	$\frac{x^{n-1}\,\dot{x}}{a + x^{2n}}$	$\frac{1}{n\,\sqrt{a}}$ arc to tan. $\frac{x^n}{\sqrt{a}}$, or $\frac{1}{2\,n\,\sqrt{a}}$ arc to cos. $\frac{a - x^{2n}}{a + x^{2n}}$
10.	$\frac{x^{n-1}\,\dot{x}}{\sqrt{a \pm x^{2n}}}$	$\frac{1}{n} \cdot \log. (x^n + \sqrt{\pm a + x^{2n}})$
11.	$\frac{x^{n-1}}{\sqrt{a - x^{2n}}}$	$\frac{1}{n} \cdot$ arc to sin. $\frac{x^n}{\sqrt{a}}$, or $\frac{1}{2\,n}$ arc to vers. $\frac{2\,x^{2n}}{a}$
12.	$\frac{\dot{x}}{x\,\sqrt{a \pm x^n}}$	$\frac{1}{n\,\sqrt{a}} \log. \frac{\pm\sqrt{a \pm x^n} \pm \sqrt{a}}{\sqrt{a \pm x^n} + \sqrt{a}}$
13.	$\frac{\dot{x}}{x\,\sqrt{x^n - a}}$	$\frac{2}{n\,\sqrt{a}}$ arc to sin. $\frac{\sqrt{x^n}}{\sqrt{a}}$; or $\frac{1}{n\,\sqrt{a}}$ arc to cos. $\frac{2\,a - x^n}{x^n}$
14.	$\dot{x}\,\sqrt{a\,x - x^2}$	$\frac{1}{2}$ cir. seg. to di. or a, and vers. x.
15.	$\frac{\dot{x}}{\pm a \mp b\,x^2}$	$\pm \frac{1}{\sqrt{a\,b}} \cdot \log. \frac{\sqrt{a} + \sqrt{b\,x^2}}{\sqrt{\pm a \mp b\,x^2}}$
16.	$\frac{\dot{x}}{a + b\,x^2}$	$+ \frac{1}{\sqrt{a\,b}} \cdot$ arc to log. $\frac{\sqrt{b\,x^2}}{a}$
17.	$\frac{\dot{x}}{\sqrt{x}\,(\pm a \mp b\,x)}$	$\pm \frac{2}{\sqrt{a\,b}}$ log. $\frac{\sqrt{a} + \sqrt{b\,x}}{\sqrt{\pm a \mp b\,x}}$
18.	$\frac{\dot{x}}{\sqrt{x}\,(a + b\,x)}$	$+ \frac{2}{\sqrt{a\,b}}$ arc to tan. $\sqrt{\frac{b\,x}{a}}$
19.	$\frac{\dot{x}}{\sqrt{b\,x^2 \pm a}}$	$+ \frac{1}{\sqrt{b}} \cdot \log. (\sqrt{b\,x^2} + \sqrt{b\,x^2 \pm a}$

No.	Fluxions.	Fluents.
20.	$\sqrt{\frac{\dot{x}}{a-bx^2}}$	$+\frac{1}{\sqrt{b}}\cdot$ arc to tan. $\sqrt{\frac{bx^2}{a-x^2}}$
21.	$\frac{\dot{x}}{\sqrt{bx^2 \pm ax}}$	$+\frac{2}{\sqrt{b}}\cdot\log.(\sqrt{bx}+\sqrt{bx\pm a}$
22.	$\frac{\dot{x}}{\sqrt{ax-bx^2}}$	$+\frac{2}{\sqrt{b}}$, arc to tan. $\sqrt{\frac{bx}{a-bx}}$
23.	$\frac{\dot{x}}{x\sqrt{a\pm bx}}$	$-\frac{2}{\sqrt{a}}\log.\frac{\sqrt{a}+\sqrt{a\pm bx}}{\sqrt{x}}$
24.	$\frac{\dot{x}}{x\sqrt{bx-a}}$	$+\frac{2}{\sqrt{a}}\cdot$ arc to tan. $\sqrt{\frac{bx-a}{x}}$
25.	$\frac{\dot{x}}{x\sqrt{a\pm bx^2}}$	$\frac{1}{\sqrt{a}}\cdot\log.\frac{\sqrt{a}+\sqrt{a\pm bx^2}}{x}$
26.	$\frac{\dot{x}}{x\sqrt{bx^2-a}}$	$\frac{1}{\sqrt{a}}$, arc to tan. $\sqrt{\frac{bx^2-2}{a}}$
27.	$\frac{x^2\dot{x}}{\pm a\mp bx^2}$	$\mp\frac{x}{b}\pm\frac{\sqrt{a}}{b\sqrt{b}}\cdot\log.\frac{\sqrt{a}+\sqrt{bx^2}}{\sqrt{\mp a\mp bx^2}}$
28.	$\frac{x^2\dot{x}}{a+bx^2}$	$+\frac{x}{b}-\frac{\sqrt{a}}{b\sqrt{b}}$ arc to long. $\sqrt{\frac{bx^2}{a}}$
29.	$\frac{\sqrt{x}\,\dot{x}}{\pm a\mp bx}$	$\mp\frac{2\sqrt{x}}{b}\pm\frac{2\sqrt{a}}{b\sqrt{b}}$, log. $\frac{\sqrt{a}+\sqrt{bx}}{\sqrt{\pm a\mp bx}}$
30.	$\frac{\sqrt{x}\,\dot{x}}{a+bx}$	$+\frac{2\sqrt{x}}{b}-\frac{2\sqrt{a}}{b\sqrt{b}}$, arc to tan. $\sqrt{\frac{bx}{a}}$
31.	$a^{mx}x^n\dot{x}$	$\frac{a^{mx}}{m\cdot\log a}\left(x^n-\frac{nx^{n-1}}{m\log.a}+\frac{n\cdot n-1\,x^{n-2}}{m^2\cdot\log.^2 a}-\frac{n\cdot n-1\cdot n-2\,x^{n-3}}{m^3\log.^3 a}+\&c.\right)$
32.	$x^m\log.^n x\,\dot{x}$	$\frac{x^{m+1}}{m+1}\left(\log.^n x-\frac{n}{m+1}\log.^{n-1}x+\frac{n\cdot n-1}{m+1^2}\log.^{n-2}x-\frac{n\cdot n-1\cdot n-2}{m+1}\log.^{n-3}x+\&c.\right)$
33.	$a^{nx}\dot{x}$	$\frac{a^{nx}}{n\cdot\log.a}$
34.	$\dot{x}\,y^x\log.y+xy^{x-1}\dot{y}$	y^x

On the Correction of Fluents

40. Though, by the rules which have been given for finding fluxions, the fluxion of any fluent may be found, and by a reverse operation the fluent may in most cases be found from the fluxion; yet the fluent so found may often require to be increased or diminished by some constant quantity depending on the nature of the problem under consideration. For example, the fluxion of x^n is $nx^{n-1}\dot{x}$, and the fluxion of $x^n \pm a$ is the same quantity; we cannot therefore affirm without reference to the nature of the problem in which the fluxion $nx^{n-1}\dot{x}$ arises, whether its fluent is x^n or $x^n \pm a$.

The most direct and simple method of finding whether a fluent does or does not require correction, and the amount of that correction, if any, is to see what the variable part of the fluent (the only part given by the preceding rules) differs from the truth in some circumstance of the problem in which its valne is known; and this difference added to, or subtracted from, the variable part, as may be required, will give the fluent truly corrected.

Example 1.—Let $\dot{y} = a^2x\,\dot{x}$, then $y = \frac{a^2x^2}{2}$; where if $y = 0$, then $x = 0$; if therefore x and y are by the conditions of the problem simultaneously $= 0$, the quantity $\frac{a^2x^2}{2}$ is the true fluent.

Example 2.—x and y commencing together, let the true fluent of $\dot{y} = \overline{a+x}^3\cdot\dot{x}$ be required.

By the common rules $y = \frac{\overline{a+x}^4}{4}$, where when $y = o$, $\frac{\overline{a+x}^4}{4} = \frac{a^4}{4}$ which should also

have been o, hence $y = \frac{\overline{a+x}^4}{4} - a^4$ the corrected fluent.

The true fluent of this quantity, however, and many others may be found without correction; in the present case ($\dot{y} = \overline{a+x}^3 \dot{x}$) if $\overline{a+x}^3$ be expanded, we have $\dot{y} = a^3\dot{x} + 3a^2x\dot{x} + 3ax^2\dot{x} + x^3\dot{x}$, whose fluent is $y = a^3x + \frac{3a^2x^2}{2} + ax^3 + \frac{x^4}{4} = \frac{\overline{a+x}^4 - a^4}{4}$ as before.

In the preceding examples x and y are supposed to be equal to nothing at the same time; but in the solution of problems this will often not be the case. Thus, though the sine and the tangent of an arc are nothing, when the arc itself is nothing, yet the secant and the cosine are then equal to the radius. We shall therefore add an example or two, in which when $y = 0$, x is equal to a given quantity a.

Let $\dot{y} = x^2\dot{x}$ be the proposed fluxion, then its fluent is $y = \frac{x^3}{3}$. Here when $y = 0$, $\frac{x^3}{3} = \frac{a^3}{3}$; hence the corrected fluent is $y = \frac{x^3 - a^3}{3}$.

Again, let $\dot{y} = -x^n\dot{x}$, then $y = -\frac{x^{n+1}}{n+1}$; which, corrected, becomes $y = a\frac{a^{n+1} - x^{n+1}}{n+1}$.

Application of Fluxions to the Determination of the Maxima and Minima of Variable Quantities.

41. When a quantity is in its maximum or minimum state, it neither increases or diminishes; therefore if the quantity be represented algebraically, and its fluxion put $= 0$, the resulting equation will give the maximum or minimum value of the quantity.

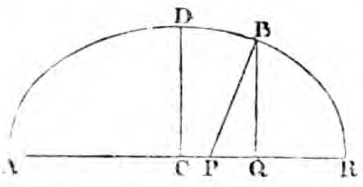
Example 1.—Divide a right line a into two such parts, that their rectangle may be a minimum.

Let $x =$ one of the segments, then $a - x$ is the other, whence $ax - x^2$ is by the hypothesis to be a maximum, and consequently its fluxion, or $a\dot{x} - 2x\dot{x} = 0$, when $x = \frac{a}{2}$, or the given term must be bisected.

Example 2.—What fraction is that whose n^{th} power exceeds its mth power by the greatest possible quantity?

Let $x =$ the required fraction, the $x^n - x^m$ is to be a maximum, or $nx^{n-1} - mx^{m-1}\dot{x} = o$, whence $x = \sqrt[m-n]{\frac{n}{m}}$.

Example 3.—From a given point P, in the transverse axis of an ellipse, to draw PB, the shortest line to the curve:—



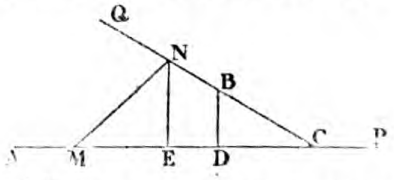
Put $AC = a$, $CD = b$, $AP = p$, $PR = q$, and $PQ = x$, then by conics $QB^2 = \frac{b^2}{a^2}\cdot(pq + qx - px - x^2)$ and $PB^2 = \frac{b^2}{a^2}(pq + qx - px - x^2) + x^2$. Hence, by putting the fluxion $= 0$, and reducing, we get $x = \frac{p-q}{2}\cdot\frac{b^2}{a^2-b^2}$.

Example 4.—To determine the dimensions of a cylindrical vessel, open at the top, that shall contain a given quantity under the least internal superficies.

Let the diameter of its base be x, and its altitude y, and put p for the circumference of a circle, whose diameter is 1, then $px =$ the circumference of the base, $\frac{px^2}{4}$ its area, and pxy the area of the concave superficies of the cylinder. Hence $\frac{px^2y}{4} = c$, the given quantity that the vessel will hold, or $pxy = \frac{4c}{x}$; therefore $\frac{px^2}{4} + \frac{4c}{x}$ is a maximum and consequently $-\frac{4c\dot{x}}{x^2} + \frac{px\dot{x}}{2} = 0$, or $x = 2\sqrt[3]{\frac{c}{p}}$; and as $px^3 = 8c$, and $px^2y = 4c$, $x = 2y$; whence y is also known, and it appears hence too that the diameter of the base must be just double the altitude.

Example 5.—If two bodies move at the same time from two given points A and B, and proceed uniformly with given velocities in given directions AP and BQ; required their positions, when they are nearest to each other.

Let M and N be any two contemporary positions of the bodies, and upon AP let fall the perpendiculars NE and BD: produce QB to meet AP in C, and draw MN. Let the velocity in BQ be to that in AP, as n to m, and let AC, BC, and CD (which are also given) be denoted by a, b, and c, respectively, and put the variable distance $CN = x$. Then we have $b : x :: c :$



$CE = \frac{cx}{b}$; and $n : m :: BN(x-b) : AM = \frac{mx - mb}{n}$; and hence $CM = a + \frac{mb}{n} - \frac{mx}{n} = d - \frac{mx}{n}$ (by substituting d for $a + \frac{mb}{n}$.)

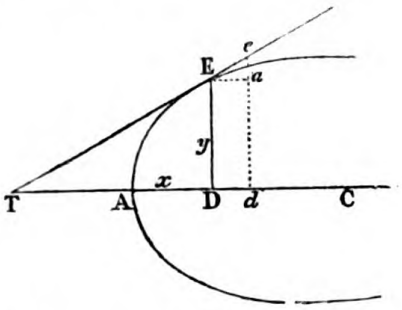
Hence $MN^2 = CM^2 + CN^2 - 2CM\cdot CE = d^2 - \frac{2dmx}{n} + \frac{m^2x^2}{n^2} + x^2 - \frac{2cdx}{b} + \frac{2cmx^2}{nb}$, the fluxion of which put $= 0$, gives $-\frac{2dm\dot{x}}{n} + \frac{2m^2x\dot{x}}{n^2} + 2x\dot{x} - \frac{2cd\dot{x}}{b} + \frac{4cmx\dot{x}}{nb} = 0$;

whence by reduction $x = \frac{nd\cdot mb + nc}{b\cdot m^2 + n^2 + 2mnc}$;

and from this all the other quantities may be determined.

On the Method of Drawing Tangents to Curves.

By this method the tangent and subtangent to a curve are determined when its equation are given, and vice versa.



If A E be a curve, let it be required to draw a tangent T E at any point E. Draw the ordinate D E, and another $d\,a\,e$ indefinitely near to it, meeting the curve, or the tangent produced in e, and draw E a parallel to the axis A D. Then the triangles E a e, and T E D are similar, and therefore $e\,a : a\,E :: E\,D : D\,T$. Or $\dot{y} : \dot{x} :: y : \frac{y\,\dot{x}}{\dot{y}} = D\,T$, the subtangent; x being the abscis A D, and y the ordinate D E.

Example 1.—To draw a tangent to a parabole, whose equation is $a\,x = y^2$.

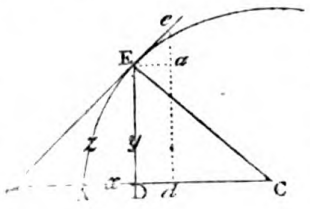
Here $a\,\dot{x} = 2\,y\,\dot{y}$; whence $\frac{y\,\dot{x}}{\dot{y}} = \frac{2\,y^2}{a} = \frac{2\,a\,x}{a} = 2\,x$; or the subtangent is double the corresponding abscis.

Example 2.—Draw a tangent to the cissoid of Diocles, whose equation is $y^2 = \frac{x^3}{a - x}$.

Here $2\,y\,\dot{y} = \frac{3\,a\,x^2\,\dot{x} - 2\,x^3\,\dot{x}}{\overline{a - x}^2}$, and consequently $\frac{y\,\dot{x}}{\dot{y}} = \frac{2\,y^2 \cdot \overline{a - x}^2}{3\,a\,x^2 - 2\,x^3} = \frac{2x^3}{a - x} \cdot \frac{\overline{a - x}^2}{3\,a\,x^2 - 2\,x^3} = \frac{2\,x \cdot \overline{a - x}}{3\,a - 2\,x}$.

To Determine the Lengths of Curves whose Equations are given.

43. In the annexed figure E a, e a, and E e, are simultaneous increments of x, y, and z, or of the abscis A D, the ordinate D E, and the curve A E; and the triangle E a e is (see article 42) similar to T E D; it may therefore be considered as a right-angled triangle. Hence, $\dot{z}^2 = \dot{x}^2 + \dot{y}^2$, or $\dot{z} = \sqrt{\dot{x}^2 + \dot{y}^2}$. Therefore substituting for $\dot{y}$ its value in terms of x, and taking the fluent, the value of z is obtained.



Example 1.—It is required to find the length of the arc of a circle, in terms of its sine, versed sine, tangent, and secant.

Let C in the preceding figure represent the centre of the circle; call the radius A C, r; the versed sine A D, x; the sine D E, y; the tangent T E, t; and the secant T C, s. Then by the property of the circle

$$y^2 = 2\,r\,x - x^2 = \frac{r^2\,t^2}{r^2 + t^2} = \frac{s^2 - r^2}{s^2} \cdot r^2;$$

and by taking the fluxions of these equations, and making proper substitutions in the general fluxional equation, $\dot{z} = \sqrt{\dot{x}^2 + \dot{y}^2}$, we obtain

$$\dot{z} = \frac{r\,\dot{x}}{\sqrt{2\,r\,x - x^2}} = \frac{r\,\dot{y}}{\sqrt{r^2 - y^2}} = \frac{r^2\,\dot{t}}{r^2 + t^2} = \frac{r\,2\,\dot{s}}{s\,\sqrt{s^2 - r^2}}.$$

Any of these quantities may be expanded in a series, and the fluent of each term being taken, a general value of z will be obtained. We shall take as an example $\dot{z} = \frac{r^2\,\dot{t}}{r^2 + t^2}$.

This form of the series, however, is one of very slow convergency, so that a great many terms of it must be collected before a result of sufficient practical accuracy can be obtained.

But it may easily be transformed into series of almost any required degree of convergency. The following are amongst the most useful forms that have yet been discovered; A representing the circumference to radius unity, and α, β, γ, &c., the preceding terms in each series:—

$$\text{1st A} = \begin{cases} \frac{4}{10} \cdot \left(1 + \frac{4}{3 \cdot 10} + \frac{8\,\alpha}{5 \cdot 10} + \frac{12\,\beta}{7 \cdot 10} \right. \\ \left. + \frac{16\,\gamma}{9 \cdot 10} + \&c. \right. \\ + \frac{3}{10} \cdot \left(1 + \frac{2}{3 \cdot 10} + \frac{4\,\alpha}{5 \cdot 10} + \frac{6\,\beta}{7 \cdot 10} \right. \\ \left. + \frac{8\,\gamma}{9 \cdot 10} + \&c. \right. \end{cases}$$

$$\text{2d A} = \begin{cases} \frac{4}{5} \cdot \left(1 + \frac{4}{3 \cdot 10} + \frac{8\,\alpha}{5 \cdot 10} + \frac{12\,\beta}{7 \cdot 10} \right. \\ \left. + \frac{16\,\gamma}{9 \cdot 10} \right. \\ - \frac{7}{50} \cdot \left(1 + \frac{4}{3 \cdot 100} + \frac{8\,\alpha}{5 \cdot 100} + \frac{12\,\beta}{7 \cdot 100} \right. \\ \left. + \frac{16\,\gamma}{9 \cdot 100}. \right. \end{cases}$$

By collecting a sufficient number of terms of any of the three preceding series, we find the circumference of a circle, whose diameter is unity, to be 3·1415926, &c.

Example 2.—Let it be required to determine the length of any parabola, the general equation for curves of that kind being $a^{n-1}\,x = y^n$.

Here $\dot{x} = \frac{n\,y^{n-1}\,\dot{y}}{a^{n-1}}$, $\dot{z} = \sqrt{\dot{x}^2 + \dot{y}^2}$, is therefore $= \sqrt{\dot{y}^2 + \frac{n^2\,y^{2n-2}\,\dot{y}^2}{a^{2n-2}}} = \dot{y} \cdot 1 + \frac{n^2\,y^{2n-2}}{a^{2n-2}}^{\frac{1}{2}}$;

and the fluent of this in a series gives $z = y +$

$$\frac{n^2\,y^{2n-1}}{\overline{2n-1}\cdot 2a^{2n-2}} - \frac{n^4\,y^{4n-3}}{\overline{4n-3}\cdot 8a^{4n-4}} + \frac{n^6\,y^{6n-5}}{\overline{6n-5}\cdot 16a^{6n-6}}, \text{ \&c.}$$

But when $2n-2$ is either unity, or an aliquot part of it, this series will always terminate, and consequently the length of the arc will be accurately obtained from it.

To find the Areas of Curves, whose Equations are given.

44. Adopting the previous notation, it is obvious that $y\dot{x}$ is the fluxion of the area; and y being from the equation known in terms of x, the fluent of this expression is the area of the curve.

Example 1.—Required the area of a parabola, whose equation is $a^m x^n = y^{m+n}$

Here $y = a^{\frac{m+n}{n}} \cdot x^{-\frac{m}{n}}$, whence $y\dot{x} = a^{\frac{m+n}{n}} x^{-\frac{m}{n}}$, whose fluent is $\frac{n\,a^{\frac{m+n}{n}} \cdot x^{\frac{n-m}{n}}}{n-m}$.

Example 2.—Let it be required to find the area of a circle from the equation $y = \sqrt{ax - x^2}$.

Here $y\dot{x} = \dot{x}\sqrt{ax - x^2} = a^{\frac{1}{2}} x^{\frac{1}{2}} \dot{x} \cdot \overline{1 - \frac{x}{a}}^{\frac{1}{2}}$

$$= a^{\frac{1}{2}} x^{\frac{1}{2}} \dot{x} \left\{ 1 - \frac{x}{2a} - \frac{x^2}{8a^2} - \frac{x^3}{16a^3} - \text{\&c.} \right\}$$

$$= \sqrt{a} \cdot \left\{ x^{\frac{1}{2}}\dot{x} - \frac{x^{\frac{3}{2}}\dot{x}}{2a} - \frac{x^{\frac{5}{2}}\dot{x}}{8a^2} - \frac{x^{\frac{7}{2}}\dot{x}}{16a^3}, \text{ \&c.} \right\}$$

whose fluent gives $x\sqrt{ax} \cdot \left\{ \frac{2}{3} - \frac{x}{5a} - \frac{x^2}{28a^2} - \frac{x^3}{72a^3} - \frac{5x^4}{704a^4} -, \text{\&c.} \right\}$ for the area of the semicircle.

To find the Surfaces of Solids.

45. A surface may be conceived to be generated by the circumference of a plane moving forward, and expanding at the same instant; therefore the fluxion of the surface is equal to the fluxion of the curve, in which the expanding circumference moves forward at any instant, multiplied by the periphery of the variable circumference at the same instant; and the fluent of this fluxion is the value of the generated surface.

If c = the circumference of a circle, whose diameter is 1, x the abscissor, y the ordinate, and z the curve in which the expanding circumference moves forward; then $2cy$ = the circumference, and $2cy\dot{z} = 2cy\sqrt{\dot{x}^2 + \dot{y}^2}$ = the fluxion of the surface S, and consequently by taking the fluent, S is obtained.

Example 1.—Let the proposed curve surface be a sphere. In this case $y = \sqrt{ax - x^2}$, whence $\dot{y} = 2\frac{a - 2x}{\sqrt{ax - x^2}}\dot{x} = \frac{a - 2x}{2y}\dot{x}$, and consequently $\dot{y}^2 = \frac{a^2 - 4y^2}{4y^2}\dot{x}^2$; therefore $\sqrt{\dot{x}^2 + \dot{y}^2} = \dot{z} = \frac{a\dot{x}}{2y}$, and $2cy\dot{z} = ac\dot{x}$, whose fluent is acx, the value of the spherical surface. But ac is the circumference of the generating circle; hence the surface of any segment is equal to the circumference of a great circle, multiplied by the versed sine; or height of the segment; and, when this versed sine is the whole diameter, the expression is ca^2, or four times the area of a great circle of the sphere.

Example 2.—Let the proposed curve surface be that of a parabolic conoid.

Here $ax = y^2$, whence $\dot{x} = \frac{2y\dot{y}}{a}$, and therefore $\dot{z} = \sqrt{\dot{x}^2 + \dot{y}^2} = \frac{\dot{y}\sqrt{a^2 + 4y^2}}{a}$, and $2cy\dot{z} = \frac{2cy\dot{y}}{a} \cdot \overline{a^2 + 4y^2}^{\frac{1}{2}}$, the fluent of which corrected is $\frac{c\,\overline{(a^2 + 4y^2)}^{\frac{3}{2}} - a^2)}{6}$.

To find the Solid Contents of Bodies.

46. As a curve surface may be conceived to be generated by the expanding circumference of a plane moving forward, as the solid itself which the surface bounds may be conceived to be generated by the plane itself. Hence, if x, y, and c, represent the same things as they did in art. 44, we have $cy^2\dot{x}$ for the fluxion of the solid, and the fluent of this quantity will be the required solid.

Example 1.—Required the solid content of a cone, whose altitude is a, and base b.

Here $a : b :: x : y = \frac{bx}{a}$, whence $cy^2\dot{x} = \frac{cb^2x^2\dot{x}}{a^2}$, whose fluent is $\frac{cb^2x^3}{3a^2}$; which when $x = a$, becomes $\frac{cb^2a}{3}$, or one-third of a cylinder, having the same base and altitude.

Example 2.—Let the proposed body be a spheroid, the tranverse and conjugate of whose generating ellipse are a and b.

By the nature of the curve (see Conics) $y^2 = \frac{b^2}{a^2} \cdot \overline{ax - x^2}$, whence $cy^2\dot{x} = \frac{cb^2}{a^2} \cdot \overline{ax\dot{x} - x^2\dot{x}}$, whose fluent is $\frac{cb^2}{a^2} \cdot \left(\frac{ax^2}{2} - \frac{x^3}{3}\right)$; which when $x = a$ is $\frac{cab^2}{6}$, the content of the whole spheroid. And if $a = b$, the spheroid becomes a sphere, whose solidity is $\frac{ca^3}{6}$.

Hence a sphere, or a spheroid, is two-thirds of its circumscribing cylinder, for the solidity of the cylinder whose base diameter is b, and altitude a, is $\frac{cab^2}{4}$, of which $\frac{cab^2}{6}$ is evidently two-thirds.

To find the Points of contrary Flexure of Curves from their Equations.

47. It is evident when a curve is concave towards its area, that the fluxion of the ordinate decreases with respect to the fluxion of the absciss; and the contrary when the curve is convex towards its axis; hence, at the point of

contrary fluxion $\frac{\dot{x}}{\dot{y}}$ or $\frac{\dot{y}}{\dot{x}}$ is a constant quantity, and consequently its fluxion is $= 0$. Therefore, if from the given equation the value of $\frac{x}{y}$ or $\frac{\dot{y}}{\dot{x}}$ be found, the fluxion of that value will give an equation, from which the relation of x and y at the point of contrary flexure may be found.

Example 1.—Required the point of inflexion in a curve, whose equation is $a x^2 = a^2 y + x^2 y$.

This equation in fluxions is $2 a x \dot{x} = a^2 \dot{y} + 2 x y \dot{x} + x^2 \dot{y}$, whence $\frac{\dot{x}}{\dot{y}} = \frac{a^2 + x^2}{2 a x - 2 x y}$; the fluxion of which made $= 0$, gives $2 x \dot{x} (a x - x y) = (a^2 + x^2) \cdot (a \dot{x} - x \dot{y} - \dot{x} y)$, and this again gives $\frac{\dot{x}}{\dot{y}} = \frac{a^2 + x^2}{a^2 - x^2} \cdot \frac{x}{a - y}$; which being equated with the former value of $\frac{\dot{x}}{\dot{y}}$, gives $\frac{a^2 + x^2}{a^2 - x^2} \cdot \frac{x}{a - y} = \frac{a^2 + x^2}{2 x} \cdot \frac{1}{a - y}$; whence $x = a \sqrt{\frac{1}{3}}$, and consequently $y = \frac{a x^3}{a^2 + x^2} = \frac{1}{4} a$.

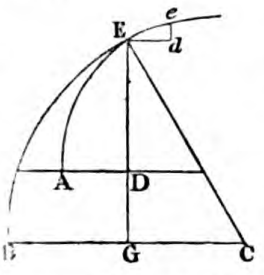
Example 2.—Required the point of contrary flexure in a curve whose equation is $a y^2 = a^2 x + x^3$?

Here $y = \overline{a^2 x + x^3}^{\frac{1}{2}}$ whence $\dot{y} = \frac{\frac{1}{2} a^2 \dot{x} + \frac{3}{2} x^2 \dot{x}}{\sqrt{a}} \cdot \overline{a^2 x + x^3}^{-\frac{1}{2}}$, and $\frac{\dot{y}}{\dot{x}} = \frac{\sqrt{a}}{2 \sqrt{a} \sqrt{a^2 + 3 x^2}}$. The fluction of this put $= 0$, and reduced, gives $x = \frac{a (\sqrt{3} - 1)}{4 \sqrt{12}}$.

To find the Radius of Curvature of Curves.

48. The radius of curvature is that of a circle having the same curvature as that of the curve at any proposed point; the general method of finding the radius of this equicurve circle may be thus explained.

Let A D and D E be the abscis and ordinate to the curve A E, E C the radius of the equicurve circle at E, consequently perpendicular to the curve at E. From C as a centre, with radius C E, describe the circular arc B E*e*; draw C B parallel to A D, and let E D produced, meet B C in G; draw E*d*, and *e d* parallel to E D and A D, to represent the fluxions of A D and D E. Put A D $= x$, E D $= y$, and A E $= z$. Then by similar triangles G C : G E :: $\dot{y}$: $\dot{x}$, or G C $\cdot \dot{x} =$ G E $\cdot \dot{y}$. Whence by fluxing G C $\cdot \ddot{x} +$ G $\cdot$ C $\cdot \dot{x}$ G E $\cdot \ddot{y} +$ G E $\cdot \dot{y}$. But G C $-$ B G, therefore, G C $\cdot \ddot{x} -$ B G $\cdot \dot{x} =$ G E $\cdot \dot{y}$ $+$ G E $\cdot \dot{y}$. Now $\dot{x}$ is the fluxion of B G, as well as of A D, and $\dot{y}$ is the fluxion G E as well as of D E; hence the equation may be put in this form G C $\ddot{x} - \dot{x} \dot{x}$ G E $\ddot{y} - \dot{y} \dot{y}$; or G C $\cdot \ddot{x} -$ G E $\cdot \ddot{y}$ $\dot{x}^2 + \dot{y}^2$ $\dot{z}^3$; and if each of the terms of this equation be respectively multiplied by the equivalent expressions $\frac{\dot{y}}{\text{G C}}$, $\frac{\dot{x}}{\text{G E}}$, $\frac{\dot{z}}{\text{C E}}$, it becomes $\dot{y} \ddot{x} - \dot{x} \ddot{y}$ $\frac{\dot{z}^3}{\text{C E}}$, $\frac{\dot{z}^3}{r}$; whence r $\frac{\dot{z}^3}{\dot{y} \ddot{x} - \dot{x} \ddot{y}}$; a general expression for r in any curve. But as neither x or y may be considered as varying uniformly, or either $\ddot{x}$ or $\ddot{y}$ may be considered as 0, we may have r $\frac{\dot{z}^3}{-\dot{y} \ddot{x}}$ or $= \frac{\dot{z}^3}{-\dot{x} \ddot{y}}$ according as $\dot{y}$ or $\dot{x}$ is considered constant.



Example.—Required the radius of curvature at the joints of an ellipse, at the point corresponding to the abscis and ordinate x and y, the equation of the curve being $a^2 y^2 = c^2 \cdot \overline{a x - x^2}$?

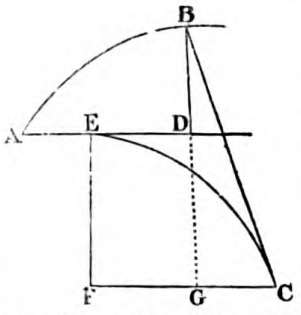
By taking the first and second fluxions of the given equation we have $2 a^2 y \dot{y} = c^2 \dot{x} \cdot \overline{a - 2 x}$, and $2 a^2 \dot{y}^2 + 2 a^2 y \ddot{y} = -2 c^2 \dot{x}^2$, considering $\dot{x}$ as constant; whence $\dot{y} = \frac{c^2 \dot{x} \cdot \overline{a - 2 x}}{2 a^2 y}$, and $-\ddot{y} = \frac{a^2 \dot{y}^2 + c^2 \dot{x}^2}{a^2 y}$; which, by substituting the values of y and $\dot{y}$, become $\dot{y} = \frac{c \dot{x} \cdot a - 2 x}{2 a \sqrt{a x - x^2}}$ and $-\ddot{y} = \frac{a^2 c^2 \dot{x}^2 \cdot \overline{a - 2 x}^2}{4 a^2 \cdot \overline{a x - x^2} \cdot a c \cdot \sqrt{a x - x^2}} + \frac{c \dot{x}^2}{a \sqrt{a x - x^2}} = \frac{c a \dot{x}^2}{4 a x - x^2)^{\frac{3}{2}}}$; hence $\dot{2}$ $(\sqrt{\dot{x}^2 + \dot{y}^2}) = \sqrt{\frac{c^2 \dot{x}^2 \cdot \overline{a - 2 x}^2}{4 a^2 \cdot \overline{a x - x^2}} + \dot{x}^2} = \frac{\dot{x}}{2 a} \sqrt{\frac{c^2 a^2 + \overline{a^2 - c^2} \cdot 4 a x - 4 x^2}{a x - x^2}}$, and r $\left(\frac{\dot{z}^3}{-\dot{x} \ddot{y}}\right) = \frac{(a^2 c^2 + \overline{a^2 - c^2} \cdot 4 a x - 4 x^2)^{\frac{3}{2}}}{2 a^4 c}$, which when a and c are equal becomes as it ought simply $\frac{a}{2}$, the ellipse in that case degenerating into a circle.

To find the Involutes and Evolutes of Curves.

49. If a thread wrapped close round a curve were fastened at one end, and unwound from the other in the plane of the curve, the thread being always kept stretched, the end of the thread in winding off will describe a curve which is called the involute, that from which the thread is unwound being the evolute.

Now it is obvious that the length of the thread wound off will be the radius of curvature of the involute at the instant, and also that it will at that point be perpendicular to the involute; and that the evolute will be the *locus* of the *centres* of the radii of curvature at every point of the curve.

In the annexed figure let A B Z be the involute; A D X its abscis; D B Y its ordidate; B C, r, the radius of curvature at B; E F, r, the absciss of the evolute E C; F C, u, its ordinate; A E, a, a right line given from the relation of the curves. Then from the last article we have $r = \frac{\dot{z}^3}{\dot{y}\ddot{x} - \dot{x}\ddot{y}} = B C = A E + E C$; and by similar triangles $\dot{z} : \dot{x} :: r : G B = \frac{r\dot{x}}{\dot{z}} = \frac{\dot{x}\dot{z}^2}{\dot{y}\ddot{x} - \dot{x}\ddot{y}}$; also $\dot{z} : \dot{y} :: r : G C = \frac{r\dot{y}}{\dot{z}} = \frac{\dot{y}\dot{z}}{\dot{y}\ddot{x} - \dot{x}\ddot{y}}$; whence $E F = G B - D B = \frac{\dot{x}\dot{z}^2}{\dot{y}\ddot{x} - \dot{x}\ddot{y}} - y = v$, and $F C = A D - A E + G C = x - a + \frac{\dot{y}\dot{z}^2}{\dot{y}\ddot{x} - \dot{x}\ddot{y}} = u$, from which equations the absciss and ordinate of the evolute may be found when the involute is a given curve.



Conversely if v and u, and s, be put for E C, then $r = a + s$, and by similar triangles we have the following proportions, viz. $\dot{s} : \dot{v} :: r : \frac{r\dot{v}}{\dot{s}} = \frac{a+s}{\dot{s}} \cdot \dot{v} = G E$, and $\dot{s} : \dot{u} :: r : \frac{r\dot{u}}{\dot{s}} = \frac{a+s}{\dot{s}} \cdot u = G C$; whence $A D = a + u - \frac{a+s}{\dot{s}} u = x$, and $D B = \frac{a+s}{\dot{s}} \dot{v} - v = y$.

On the preceding equations it may be observed that $\dot{s}^2 = \dot{v}^2 + \dot{u}^2$, and $\dot{z}^2 = \dot{x}^2 + \dot{y}^2$, and either x or y may be supposed to flow uniformly, when $\ddot{x}$ or $\ddot{y}$ will in consequence be 0, and the corresponding term in $\dot{y}\ddot{x} - \dot{x}\ddot{y}$ will vanish.

Example.—What is the evolute of the common parabola in which $y = \sqrt{c\,x}$?

Here $\dot{y} = \frac{1}{2}\dot{x}\sqrt{\frac{c}{x}}$, and $\ddot{y} = \frac{-\dot{x}^2}{4x}\sqrt{\frac{c}{x}}$, making $\dot{x}$ constant. Hence $E F = v = \frac{\dot{z}^2}{-\ddot{y}} - y = \frac{\dot{x}^2 + \dot{y}^2}{-\ddot{y}} - y = 4x\sqrt{\frac{x}{c}}$, and $F C = u = x\,a + \frac{\dot{y}\dot{z}^2}{-\dot{x}\ddot{y}} = 3x - \frac{c}{2} - a$, But it may readily be shown from the principles of art. 48, that $a = \frac{c}{2}$; whence $F C = 3x$, and hence by comparing the values of v and u we get $27\,c\,v^2 = 16\,u$, an equation to a semicircular parabola.

To find the Centre of Gravity.

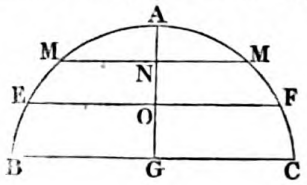
50. The centre of gravity of any body is that point in which, if all the matter in the body were collected, the product of its distance from a given line or a given plane, would be equivalent to the sum of all the products of each individual particle in the body into their respective distances from the same line or plane.

Let therefore p represent the distance of the centre of gravity from the vortex of any variable body, whose variable absciss is x, and corresponding variable section is y, then $p = \frac{\text{fluent } \dot{x}\,y}{\text{fluent } \dot{b}} = \frac{\text{fluent } \dot{x}\,y}{b}$.

If the thing in contemplation is a curve line, then $p = \frac{\text{fluent } x\,\dot{z}}{2} = \text{fluent } \frac{x\sqrt{\dot{x}^2 + \dot{y}^2}}{2}$; if it is a plane, then $p = \frac{\text{fluent } x\,y\,\dot{x}}{\text{fluent } \dot{x}\,y}$; if it is a curve surface, then $p = \frac{\text{fluent of } y\,x\,\dot{z}}{\text{fluent of } y\,\dot{z}}$; if a solid, then $p = \frac{\text{fluent of } y^2\,x\,\dot{x}}{\text{fluent of } y^2\,\dot{x}}$.

Example 1.—Let it be required to find the centre of gravity of B A C, the segment of a circle?

Put $r =$ the radius, $x = A N$, and $y = N M$,



then $y = \sqrt{2\,r\,x - x^2}$, whence the fluent of $y\,x\,\dot{x}$, or of $x\,\dot{x}\,\sqrt{2\,r\,x - x^2}$ is $-\frac{(2\,r\,a - x^2)^{\frac{3}{2}}}{3}$ $r \times$ area A N M, which divided by A N M gives $r - \frac{N M^3}{3 \cdot \text{area A N M}}$ for the distance A O of the centre of gravity from the vortex. When the segment is a semicircle, this expression gives $A O = \frac{r \times 576}{1000}$ nearly.

Example 2.—Required the centre of gravity of the arc B A C. Here fluent $x\,\dot{z} = \text{fluent } \frac{r\,x\,\dot{x}}{\sqrt{2\,r\,a - x^2}} = r$, whence $A O = r - \frac{r \cdot M N}{A M}$

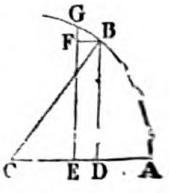
Example 3.—Let it be required to find the centre of gravity of the segment of a sphere?

In this case $\frac{\text{fluent } y^2\,x\,\dot{x}}{\text{fluent } y^2\,\dot{x}} = \frac{\text{fluent } a\,x - x^2\,x\,\dot{x}}{\text{fluent } a\,x - x^2\,\dot{x}} = \frac{x \cdot 4\,a - 3\,x}{6\,a - 4\,x}$.

When the body cannot be divided into two equal and similar parts, the position of two lines must be determined as above whose point of intersection will be the centre of gravity.

To find the Fluxion of sine x and of cosine x.

Let A B be any arc of a circle whose centre is C, draw any two ordinate B D, G E, indefinitely near to each other, and draw B F parallel to A C then in the elementary triangle G B F, similar to G B D, G B will represent the fluxion of



AB, GF that of BD, and BF that of CD, which is diminishing, or its fluxion is negative. Represent the one AB, by x, then CD will be cos. x; BD, sin. x; CB, $\dot{x}$; GF (sin. x)$\cdot$; and BF (cos. x)$\cdot$. Now by similar triangles we have CB : CD :: GB : GF, and CB : BD :: GB : BF. Hence considering CB as unity we have (sin. x)$\cdot$ $= \dot{x}$ cos. x, and (cos. x)$\cdot$ $= -\dot{x} \cdot$ sin. x.

To find the fluxion of tan. x, &c. we have (tan. x)$\cdot$ $= \left(\frac{\text{sin. } x}{\text{cos. } x}\right)\cdot = \frac{(\text{sin. } x)\cdot}{\text{cos. } x} - \frac{(\text{cos. } x)\cdot \text{ sin. } x}{\text{cos.}^2 x}$ $= \frac{\dot{x} \cdot \text{cos. } x}{\text{cos. } x} + \frac{\dot{x} \text{ sin.}^2 x}{\text{cos.}^2 x} = \frac{\dot{x}(\text{cos.}^2 x + \text{sin.}^2 x)}{\text{cos.}^2 x}$ $= \frac{\dot{x}}{\text{cos.}^2 x} = \dot{x} \text{ sect.}^2 x = \dot{x}(1 + \text{tan.}^2 x)$.

Again (cot. x). $=$ (tan. $90 - x$)$\cdot$ $= \frac{-\dot{x}}{\text{cos.}^2 (90 - x} = \frac{-\dot{x}}{\text{sin.}^2 x}$ $-\dot{x} \cdot \text{cosect.}^2 \dot{x}$ $-\dot{x} \cdot \overline{1 + \text{cot.}^2 x}$.

Also (sec. x)$\cdot$ $\frac{1}{\text{cos. } x}\cdot = -\frac{(\text{cos. } x)}{\text{cos.}^2 x} = \frac{\dot{x} \text{ sin. } x}{\text{cos.}^2 x}$ x tan. $x \cdot$ sect. x $\dot{x} \cdot$ sect. $x \cdot \sqrt{\text{sect.}^2 x - 1}$; and (cosect. x)$\cdot$ $\overline{(\text{sect. } 90 - x)\cdot}$ $-\dot{x} \frac{\text{sin. } 90 - x}{\text{cos.}^2 \overline{90 - x}}$ $\frac{-\dot{x} \text{ cos } x}{\text{sin.}^2 x}$ $-\dot{x} \cdot \text{cot. } x \cdot \text{cosect. } x$ $\dot{x} \cdot \text{cosect. } x \sqrt{\text{cosect.}^2 x - 1}$.

INVESTIGATION OF THE DIFFERENTIAL THEOREMS OF MACLAURIN, TAYLOR, AND LAGRANGE.

Let $f(x)$ represent a quantity in which x is in any manner involved, it is proposed to find the value of $f x$ in a series of the ascending powers of x.

Assume $u = f(x) = A + B x + C x^2 + D x^3$, &c. Then by taking the fluxions we have $\dot{u} = B\dot{x} + 2 C x \dot{x} + 3 D x^2 \dot{x} + 4 E x^3 \dot{x} +$, &c., or $\frac{\dot{u}}{\dot{x}} = B + 2 C x + 3 D x^2 + 4 E x$, &c. Fluxing again we have $\frac{\ddot{u}}{\dot{x}} = 2 C \dot{x} + 3 \cdot 2 \cdot D x + 4 \cdot 3 \cdot E \cdot x^2 \dot{x} + 5 \cdot 4 \cdot F x^3 \dot{x}$, &c. or $\frac{\ddot{u}}{\dot{x}^2} = 2 C + 3 \cdot 2 \cdot D x + 4 \cdot 3 \cdot E x^2 + 5 \cdot 4 \cdot F x^3$, &c. Performing a similar operation we have $\frac{\dddot{u}}{\dot{x}^3} = 3 \cdot 2 \cdot D + 4 \cdot 3 \cdot 2 \cdot E \cdot x + 5 \cdot 4 \cdot 3 \cdot F x^2$, the law of continuation being evident.

Let $x = 0$, and the corresponding valves of u, $\frac{\dot{u}}{\dot{x}}$, $\frac{\ddot{u}}{\dot{x}^2}$, &c. be $d c$ noted by U, U_1, U_2, &c.; then we have $A = U$, $B = U_1$, $C = U_2 + \frac{1}{2}$, $D = U_3 \frac{1}{2 \cdot 3}$, &c.

Hence $f(x) = U + U_1 \cdot x + U_2 \cdot \frac{x^2}{2} + U_3 \cdot \frac{x^3}{2 \cdot 3} +$, &c., the theorem of Maclaurin.

Resuming again the equation $u = f(x)$, let this be represented by the general series $A x^a + B x^b + C x^c +$, &c. and let, x become by the variation of $x = x + h$, then $u' = f(x + h) = A (x + h)^a + B (x + h)^b + C (x + h)^c =$

$$A x^a + B x^b + C x^c +$$
$$+ h \left(a A x^{a-1} + b B x^{b-1} + c C x^{c-1} +\right).$$
$$+ \frac{h^2}{1 \cdot 2}\left(a \cdot \overline{a-1} \cdot A^2 x^{a-2} + b \cdot \overline{b-1} \cdot B x^{b-2} +\right).$$
$$+ \frac{h^3}{1 \cdot 2 \cdot 3}\left(a \cdot \overline{a-1} \cdot \overline{a-2} \cdot A \cdot x^{a-3} + b \cdot \overline{b-1} \cdot \overline{b-2} \cdot B x^{b-3} +\right)$$

by the binomial theorem. But $A x^a + B x^b +$ &c. $= f(x) = u$; $a A x^{a-1} + b x B x^{b-1} +$ &c. $= \frac{\dot{u}}{\dot{x}}$; $a \cdot \overline{a-1} \cdot A x^{a-2} + b \cdot \overline{b-1} B \cdot x^{b-2} +$ &c. $= \frac{\ddot{u}}{\dot{x}^2}$, &c. Hence $u' = f(x + h) M u + \frac{\dot{u}}{\dot{x}} h + \frac{\ddot{u}}{\dot{x}^2} \cdot \frac{h^2}{1 \cdot 2} + \frac{\dddot{u}}{\dot{x}^3} \cdot \frac{h^3}{1 \cdot 2 \cdot 3} +$ &c. which is Taylor's Theorem.

If instead of h we put $\dot{x}$, the theorem gives $f(x + \dot{x}) = u + \dot{u} + \frac{\ddot{u}}{1 \cdot 2} + \frac{\dddot{u}}{1 \cdot 2 \cdot 3} + \frac{\ddddot{u}}{1 \cdot 2 \cdot 3 \cdot 4} +$ &c.

Suppose that $y = a + x \cdot \phi y$, that $u = f y = f \cdot (a + x \phi y)$, ϕ and f denoting given combinations, and a independent of x and y, it is proposed to expand u in terms of x.

Since $y = a + x \cdot \phi y = a + x v$, making $\phi y = v$; we have $\frac{\dot{y}}{\dot{x}} = v + \frac{x \dot{v}}{\dot{x}}$; $\frac{\ddot{y}}{\dot{x}^2} = \frac{2 \dot{v}}{\dot{x}} + x \frac{\ddot{v}}{\dot{x}^2}$, $\therefore \frac{\dddot{y}}{\dot{x}^3} = \frac{3 \ddot{v}}{\dot{x}^2} + x \frac{\dddot{v}}{\dot{x}^3}$, &c.

Since v is derivable from y, and y from x, we have $\frac{\dot{v}}{\dot{x}} = \frac{\dot{v}}{\dot{y}} \cdot \frac{\dot{y}}{\dot{x}}$; and hence $\frac{\ddot{v}}{\dot{x}^2} = \frac{\dot{v}}{\dot{y}} \cdot \frac{\ddot{y}}{\dot{x}^2} + \frac{\dot{v}}{\dot{y}} \cdot \frac{\ddot{y}}{\dot{x}^2} = \frac{\ddot{v}}{\dot{y}^2} \cdot \frac{\dot{y}^2}{\dot{x}^2} + \frac{\dot{v}}{\dot{y}} \cdot \frac{\ddot{y}}{\dot{x}^2}$, &c.; $\frac{\dot{y}}{\dot{x}} = v + x \cdot \frac{\dot{v}}{\dot{y}} \cdot \frac{\dot{y}}{\dot{x}}$; $\frac{\ddot{y}}{\dot{x}^2} = 2 \frac{\dot{v}}{\dot{y}} \cdot \frac{\dot{y}}{\dot{x}} + x \frac{\dot{v}}{\dot{y}} \cdot \frac{\ddot{y}}{\dot{x}^2} + x \left(\frac{\dot{y}}{\dot{x}}\right)^2 \frac{\ddot{v}}{\dot{y}^2}$, &c.

Again from $u = f(y)$ taking x as the variable, we have $\frac{\dot{u}}{\dot{x}} = \frac{\dot{u}}{\dot{y}} \cdot \frac{\dot{y}}{\dot{x}}$; $\frac{\ddot{u}}{\dot{x}^2} = \frac{\ddot{u}}{\dot{y}^2} \cdot \frac{\dot{y}^2}{\dot{x}^2} + \frac{\dot{y}}{\dot{x}^2} \cdot \frac{\dot{u}}{\dot{y}}$, &c.

But by Maclaurin's Theorem, investigated above we have $u = U + U_1 x + U_2 \cdot \frac{x^2}{2} + U_3 \cdot \frac{x^3}{2 \cdot 3}$ &c., and $U = f(a)$ when $x = 0$; therefore u, $= \frac{(f a)\cdot}{a} \cdot \phi a$, $U_2 = \frac{(\phi a^2)\cdot}{a} \cdot \frac{(f a)\cdot}{a} + (\phi a)^2 \cdot$

$\frac{(fa)\cdot\cdot}{\dot{a}^2} = \frac{\left\{(\phi a)^2 \cdot \frac{(fa)\cdot}{a}\right\}\cdot}{\dot{a}}$ &c., whence $u =$

$fa + x\phi a \frac{(fa)\cdot}{\dot{a}} + \frac{x^2}{1\cdot 2}\frac{\left\{(\phi a)^2\cdot\frac{(fa)\cdot}{a}\right\}\cdot}{\dot{a}} =$

$\frac{x^3}{1\cdot 2\cdot 3}\frac{\left\{(\phi a)^3\cdot\frac{(fa)\cdot}{a}\right\}\cdot\cdot}{\dot{a}^2}$ = &c., which theorem, when $x = 1$, is the theorem of Lagrange.

As an example of the application of Maclaurin's Theorem, let it be proposed to expand $\log \overline{1+x}$.

$u = l\cdot\overline{1+x}$, $\therefore$ U $= l.(1) = 0$, $\frac{\dot{u}}{\dot{x}} = \frac{1}{1+x}\cdot\cdot$ $U_1 = \frac{1}{1} = 1$.

$\frac{\ddot{u}}{\dot{x}^2} = \frac{1}{1+x^2}$, $\therefore$ $U_2 = -1$; $\frac{\dddot{u}}{\dot{x}^3} = \frac{2}{1+x^3}$, $\therefore$ $U_3 = 2$, &c.

Therefore $l\cdot 1 + x = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4}$ +, &c.

As an example of the use of Taylor's theorem, let it be required to expand the function $n =$ sin. x.

Here $\dot{u} =$ sin. $x + h$; and from $u =$ sin. x, we have $\frac{\dot{u}}{\dot{x}} =$ cos. x, $\frac{\ddot{u}}{\dot{x}^2} = -$ sin. x $\frac{\dddot{u}}{\dot{x}^3} =$ cos. x, $\frac{\ddddot{u}}{\dot{x}^4}$ = sin. x, &c. Hence by substituting in the general formula we have, sin. $\overline{x+h} =$ sin. $+x$ cos. $x\frac{h}{1} -$ sin. $x\frac{h^2}{1\cdot 2} -$ cos. $x\frac{h^3}{1\cdot 2\cdot 3} +$ sin. x $\frac{h^4}{1\cdot 2\cdot 3\cdot 4}$ &c. or sin. $\overline{x+h} =$ sin. $x\left\{1 - \frac{h^2}{2} + \frac{h^4}{1\cdot 2\cdot 3\cdot 4} - \right\} +$ cos. $x\left\{h - \frac{h^3}{1\cdot 2\cdot 3} + \frac{h^5}{1\cdot 2\cdot 3\cdot 4\cdot 5} - \right.$, &c. $\left.\right\}$

Here if $x = 0$, then sin. $x = 0$, and we have then sin $h = h - \frac{h^3}{1\cdot 2\cdot 3} + \frac{h^5}{1\cdot 2\cdot 3\cdot 4\cdot 5} -$ &c. ; or putting x for h, sin. $x = x - \frac{x^3}{1\cdot 2\cdot 3} + \frac{x^5}{1\cdot 2\cdot 3\cdot 4\cdot 5}$ — &c.

As an example of the application of Lagrange's theorem, let it be required to express the eccentric anomaly of a planet, in terms of the ascending powers of the eccentricity of the orbit.

If y denote the eccentric anomaly, not the mean anomaly, and e the eccentricity, then it is well known that $y = nt + e\cdot$ sin. y; which being compared with $u = fy = a + x\phi y$, gives $u = y$, $a = nt$, $x = e$, $\phi y =$ sin. y; therefore $fa = a \quad nt$, $\phi a =$ sin. $a =$ sin. nt; and hence

$\frac{(fa)\cdot}{a\cdot} = \frac{nt}{t\cdot} = n$, $\frac{\left\{(\phi a)^2\cdot\frac{(fa)\cdot}{a\cdot}\right\}}{a\cdot} =$

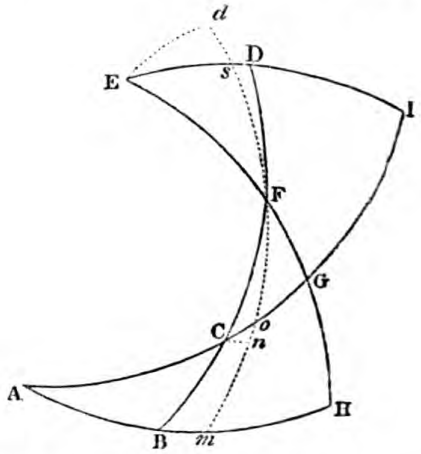
$\frac{en \text{ sin. } nt\cdot\text{cos. } nt\cdot nt\cdot}{nt\cdot} = n^2\cdot$ sin. $2nt$, &c.

By performing in a similar way the successive operations, we finally obtain

$y = nt \times e\cdot$ sin. $nt + \frac{e^2}{1\cdot 2\cdot 2}\cdot 2$ sin. $2nt +$ $\frac{e^3}{1\cdot 2\cdot 3\cdot 22}\cdot(3^2\cdot$ sin. $3nt - 3$ sin. $nt) + \frac{e^4}{1\cdot 2\cdot 3\cdot 4\cdot 23}$ $(4^3\cdot$ sin. $4nt - 4\cdot 2^3\cdot$ sin. $2nt) + \frac{e^5}{1\cdot 2\cdot 3\cdot 4\cdot 5\cdot 24}$ $\left(5^4 \text{ sin. } 5nt - 5\cdot 3^4 \text{ sin. } 3nt + \frac{5\cdot 4}{1\cdot 2}\text{ sin. } nt\right)$ + &c., a series which, from the comparative smallness of e, converges very rapidly.

On the Fluxional Analogies of Spherical Triangles.

53. In the annexed figures let A be the pole of the circle H G F E, F the pole of A B H, E the



pole of C G I, and C the pole of E D I; let the positions of these circles be conceived to be invariable, while another great circle revolves about F; let C n and E d be perpendicular to $m d$, the revolving circle. Then in the right angled triangle A B C, the angle A will be constant, and the other parts variable; B m will be the increment of A B, no the increment of BC, C o the increment of A C, and D s the increment of I D, which measures the angle C.

In the right-angled triangle C G F, the side F G will be constant, and the other parts variable; C o will be the decrement of C G, no the decrement of F G; B m the decrement of the angle C F G; and D s the increment of the angle C.

In the triangle E D F, the hypothenuse E F will be constant, and the other parts variable; $sd = nv$ will be the increment of F D = BC; sD the decrement of E D; and B m the decrement of the angle E F D = C F G.

Now by trigonometry sin. F B : sin. F C :: tan. B m : tan. C′ n or rad. : cos. BC :: B m : C′ n = cos. BC. B m, radius being unity and B m and C′ n small arcs, may be substituted for their tangents.

Again, tan. D I : sin. C I :: tan. C′ n : sin. mno, or tan. LC′ : rad. :: C′ n (cos. BC′ . B m)

$= \frac{\text{cos. BC . B}m}{\text{tan. C}}$.

gain, sin. DI : sin. DC :: sin. Cn : sin. CO

n. LC : rad. :: C'n : C'O $= \frac{\text{cos. BC . B}m.}{\text{sin. LC'}}$

rther, sin. FB : sin. Bm :: sin. FD : sin.
or rad. : Bm :: sin. BC : Ds = sin.
. Bm.

ence calling A, B, C, the angles of a right-
ed spherical triangle (B being the right
e, and A constant) and a, b, c, their opposite
s, we have the following fluxional equations.

$= \frac{\dot{a}\ \text{tan. C}}{\text{cos. } a} = \frac{\dot{b}\ \text{sin. C}}{\text{cos. } a} = \frac{\dot{C}}{\text{sin. } a}$; $\dot{a}$

$\frac{\text{. cos. } a}{\text{tan. C}} = \dot{b}$ cos. C' $= \frac{\dot{C}\ .\ \text{cot. } a}{\text{tan. C'}}$.

$= \frac{\dot{c}\ \text{cos. } a}{\text{sin. C}} = \frac{\dot{a}}{\text{cos. C}} = \frac{\dot{C}\ \text{cot. } a}{\text{sin. C}}$; $\dot{C}$

; sin. $a = \frac{\dot{a}\ \text{tan. C}}{\text{cot. } a.} = \frac{\dot{b}\ \text{sin. C}}{\text{cot. A}}$.

rom the first of these equations we have

$\dot{c}$ :: cos. a : sin. c or. :: $\frac{\text{cos. } b}{\text{cos. } c}$: $\frac{\text{sin. } c}{\text{sin. } b}$ ::

b . sin b : cos. c . sin. c :: sin 2 b : sin. 2 c.

n the right-angled triangle FCG, if FG be
sidered as constant, and the values of $n\,o$,
, and D s, obtained above be substituted in
trigonometrical equations which connect the
es and angles; and call FG c, FC b, and
a, and the opposite angles respectively C,
and A, we shall obtain the following equa-
ns.

$\dot{A} = \frac{\dot{b}\ \text{tan C}}{\text{sin. } b} = \frac{\dot{a}\ \text{sin. C}}{\text{sin. } b} = -\frac{\dot{C}}{\text{cos. } b}$; $\dot{C} =$

$\dot{A}$ cos. $b = -\frac{\dot{b}\ \text{tan. C}}{\text{tan. B}} = -\frac{\dot{a}\ .\ \text{sin. C}}{\text{tan. } b}$.

$\dot{a} = \frac{\dot{A}\ .\ \text{sin. } b}{\text{sin. C}} = \frac{\dot{b}}{\text{cos. C}} = -\frac{\dot{C}\ \text{tan. } b}{\text{sin. C}}$; $\dot{b} =$

$\frac{\text{. sin. } b}{\text{an. C'}} = \dot{a}$ cos C' $= -\frac{\dot{a}\ \text{tan. } b}{\text{tan. C}}$.

Hence $\dot{a}$: $\dot{A}$ :: sin. b : sin. C.

If similar substitutions be made in the equa-
ns connecting the sides and angles of the
angle E D F, we shall have,

$= -\frac{\dot{c}\ .\ \text{cot. } a}{\text{cos. } c} = -\frac{\dot{C}\ \text{cos. } a}{\text{cos. } c} = \frac{\dot{a}}{\text{sin. C}}$; $\dot{c}$

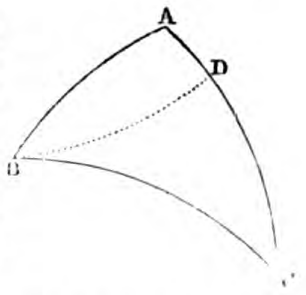
$= -\frac{\dot{A}\ .\ \text{cos. } c}{\text{cot. } a} = -\frac{\dot{a}\ .\ \text{cot. } c}{\text{cos. } a.} = \frac{\dot{C}}{\text{sin } a}$.

$= -\frac{\dot{A}\ .\ \text{cos. C}}{\text{cot. } a} = -\frac{\dot{a}\ .\ \text{cot. } c}{\text{cot. } a} = \dot{C}$ sin. a;

$= \dot{A}$. sin. C $= -\frac{\dot{C}\ .\ \text{cot. A}}{\text{cot. } c} = -\frac{\dot{C}\ .\ \text{cos. } a.}{\text{cot. } c}$

In the oblique-angled spherical triangle A B C,
f the angle A and its adjacent side A B remain
onstant, it is required to find the fluxion of the
ther parts.

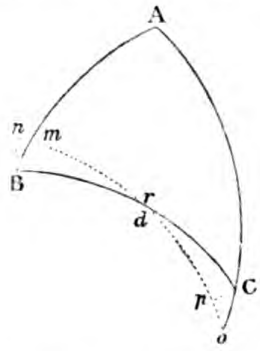
From B, on A C, demit the perpendicular B D, then all the parts of the triangle A B D are constant, and in the right-angled triangle B D C, B D is constant, and the other parts variable.



Hence, from what is done above, we have the following equation.

$\dot{b}$. sin. C $= \dot{B}$. sin a; $\dot{b}$. cos C $= \dot{a}$; $\dot{b}$ sin. C $= \dot{C}$. tan. a; $\dot{a}$. tan. C $= \dot{B}$. sin. a; $\dot{B}$. cos. $a = \dot{C}$, $\dot{C}$. tan. $a = \dot{a}$ tan. C.

In the oblique-angled triangle A B C, if A and B C be constant, it is required to find the fluxions of the other parts.



Let B C change its position into $n\,o$, and let these circles intersect in an indefinitely small angle at r; make $r\,n = r$ B, and r C $= r\,p$; then will $n m$ be the decrement of r B, $p\,o$ the increment of r C, and because $n\,p$ = B C, and $m\,o$ = B C, therefore $m\,o = n\,p$, and consequently $n\,m = o\,p$.

Now, considering the elementary triangles B n m, C p o, as rectilinear, we have $o\,p$ = cos. o, and $m\,n$ = B m . sin. n B m; whence C o : $m\,n$ :: sin. n B m : cos. $p\,o$ C, or A $\dot{C}$: A $\dot{B}$ :: cos. B : cos. C.

By taking the supplemental triangle, and applying the property that has just been deduced we obtain $\dot{B}$: $\dot{C}$ :: cos. AC : cos. AB.

By spherics we have sin. A : sin. a :: sin. C : sin. c.—But (art. 51.) (sin. x)$^{\cdot}$ = $\dot{x}$. cos. x; hence sin. A : sin a :: $\dot{C}$. cos. C : $\dot{c}$. cos. c :: $\dot{B}$ cos. B : $\dot{b}$ cos. b, or $\dot{C}$: c :: sin A . cos. C sin. a . cos. C, and $\dot{B}$: $\dot{b}$ :: sin. A . cos. b : sin. a . cos. B; and as it has been shown above that $\dot{b}$: $\dot{c}$ :: cos. B : cos. C, it follows that $\dot{C}$: $\dot{b}$ :: sin. A cos. C : sin. a cos. B.

We have hence the following equations.

$\dot{b}$. cos. C $= \dot{c}$. cos. B; $\dot{B}$. cos. $c = \dot{C}$. cos. b; $\dot{C}$. sin. a . cos. C $= \dot{c}$ sin. A . cos. c; $\dot{B}$. sin. a . cos. B . $= \dot{b}$ sin $\dot{A}$. cos. b; $\dot{C}$. sin. a . cos. B $= \dot{b}$. sin A . cos. c.

From these we may readily deduce many of the expressions; from the third we obtain $\dot{C}$. tan. $c = \dot{c}$ tan. C.

If two sides, AB and AC, remain constant, the fluxions of the other parts may be determined with equal facility. The following are the principal results.

$\dot{A}$ sin. b . sin. C $=$ $\dot{a}$ $=$ sin c. . sin. B; $\dot{A}$. sin. B $=$ $\dot{a}$ cosect. c; $\dot{A}$. sin. c $=$ $\dot{a}$ cosect. C; $\dot{A}$. cos. C . sin. b $=$ $\dot{B}$. sin. a; $\dot{A}$ sin. c . cos B $=$ $\dot{C}$. sin. a; $\dot{C}$. sin. a $=$ $\dot{a}$. cot B; $\dot{B}$ sin. a $=$ $\dot{a}$. cot. C; $\dot{B}$. cot. B $=$ $\dot{C}$. cot. C; $\dot{B}$. tan C $=$ $\dot{C}$. tan. B.

If B and C be constant, the following equations exhibit the principal relations among the fluxions of the other parts.

$\dot{a}$. sin. b $=$ $\dot{A}$ cosect. C; $\dot{a}$ sin. C $=$ $\dot{A}$ cosect. b; $\dot{a}$. sin. C . cos. b $=$ $\dot{c}$. sin. A; $\dot{b}$ sin. A $=$ $\dot{A}$ cot. c; $\dot{b}$. cot. b $=$ $\dot{c}$. cot. C.

Examples of the Application of the fluxional Analogies of Spherical Triangles.

Example 1.—When is that part of the equation of time which depends on the obliquity of the ecliptic a maximum?

Here if b denote the sun's longitude, and c his right ascension, we have $\dot{b}$: $\dot{c}$ :: sin. 2 b : sin. 2 c, and when $\dot{b}$ $=$ $\dot{c}$, sin. 2 b $=$ sin. 2 c, hence 2 b and 2 c must be supplements of each other, or in the first quadrant of the ecliptic that part of the equation of time which depends on the obliquity is a maximum, when $b + c = 90°$.

Example 2.—The error in altitude being given to find the corresponding error in the hour angle.

In the last figure let A be the zenith, B the pole, and C the object observed. Then $\dot{B}$. sin. A . sin. c $=$ $\dot{b}$, or $\dot{B}$ $=$ b cosect. A . cosect. C; whence $\dot{B}$ is a minimum, when cosect. A is a minimum, or when A is 90°, that is, when the object is on the prime vertical.

We shall terminate this article with a few miscellaneous problems to illustrate the method of applying the fluxionary calculus in the different departments of science.

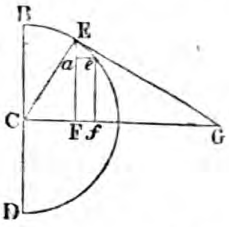
Problem 1.—The force of attraction above the earth being inversely as the square of the distance from the centre, it is proposed to determine the time, velocity, and other circumstances of a heavy body falling from any given height, the descent in the first second at the earth's surface being 193 inches.

Put r $=$ the earth's radius, a $=$ the height fallen from, x $=$ any variable distance from the earth's centre, v the velocity acquired in any time t, g $=$ 193, and f $=$ the force of gravity at any instant. Then sin. x^2 : r^2 :: 1 : $f = \frac{r^2}{x^2}$, the force at the distance x, that of gravity at the earth's surface being considered as 1; and $\dot{t}$ v $=$ $-\dot{x}$, also $v\dot{v} = -2gf\dot{x} = \frac{2gr^2\dot{x}}{x^2}$, and by taking the correct fluent of this last equation, we get $v = \sqrt{\frac{4gr \cdot a - x}{a\ x}}$; which when x $=$ r, is $\sqrt{\frac{4gr \cdot a - r}{a}}$, the velocity when the body strikes the earth.

When a is very great with respect to r, v is nearly $= \left(1 - \frac{r}{2a}\right) \cdot \sqrt{4gr}$, or nearly $= \sqrt{4gr}$, and it is accurately equal to this latter quantity when a is infinite. Making r $=$ 3965 miles, and the distance of the sun 12,000 times that quantity, this expression gives v $=$ 6·9·05 miles per second, the velocity acquired in falling from the distance of the sun; and that acquired in falling from the distance of the moon would be found to be 6·8927 miles per second.

Problem 2.—To determine the resistance of a fluid to any body moving in it with a curved end, as a sphere, or a cylinder with a hemispherical end.

Let B E A D be a section through the axis CA, of the solid moving in the direction of its axis. To any point in the curve draw the tangent EG, meeting the axis produced in G, draw the ordinates E F, e f, indefinitely near to each other, and draw a e parallel to C G.



Put C F $=$ x, E F $=$ y, B E $=$ z, sin. G $=$ s and p $=$ 3·1416, n the specific gravity of the fluid, and v $=$ the velocity; then 2 p y is the circumference described by the point E, in revolving about the axis, and 2 p y $\dot{z}$ is the fluxion of the surface, or it is the surface described by E e in the same revolution. Hence $\frac{p\ n\ v^2\ s^3}{2g} \cdot y\ z$ is the resistance on that ring, or the fluxion of the resistance to the body, whatever may be its figure; and the fluent of the expression will be the resistance required.

If the form is spherical, put C A or C B $=$ r, then $y = \sqrt{r^2 - x^2}$, $s = \frac{x}{r}$, and $y\ \dot{z} = r\ \dot{x}$, hence the general fluxion becomes $\frac{p\ n\ v^2}{2g\ r^2} \cdot x^3\ \dot{x}$, whose fluent is $\frac{p\ n\ v^2\ x^4}{8\ g\ r\ 2}$, the resistance on the spherical surface generated by B E, which when x $=$ r becomes $\frac{p\ n\ v^2\ r^2}{8g}$ the resistance for the hemisphere; and if $\frac{d}{2}$ be substituted for r, we have $\frac{p\ n\ v^2\ d^2}{3\ 2\ g}$.

But the perpendicular resistance to a circle of the same diameter is $\frac{p\ n\ v^2\ d^2}{1\ 6\ g}$, whence the resistance to a sphere is exactly half the resistance to a cylinder of the same diameter.

Problem 3.—Determine the sum of the infinite series.

$$1 + x + \frac{x^2}{1 \cdot 2} + \frac{x^3}{1 \cdot 2 \cdot 3} + \frac{x^4}{1 \cdot 2 \cdot 3 \cdot 4} + \text{&c.}$$

Put s for the sum; take the fluxion of each, and divide by $\dot{x}$, and we have $\frac{\dot{s}}{\dot{x}} = 1 + x + \frac{x^2}{1 \cdot 2} +$

$\frac{}{\cdot 3} + \frac{x^4}{1 \cdot 2 \cdot 3 \cdot 4}$ + &c. $= s$, whence $x = \frac{\dot{s}}{s}$ is the hyperbolic log. of s, whence $s = e^x$, ing the base of the hyperbolic system of ithms.

roblem 4.—Find the relation of x and y from fluxional equation $(x^2 + y^2)\,\dot{y} = (m\,y\,x)\,\dot{x}$. at $x = y^2$; then $\dot{x} = y\,\dot{z} + z\,\dot{y}$. By subting these values of x and $\dot{x}$ in the proposed tion, and dividing by y^2, we get $\overline{z^2 + 1} \cdot \dot{y} =$ $z\,\dot{z} + m\,z^2\,\dot{y}$, whence $\frac{\dot{y}}{y} + \frac{m}{2\,m - 2} \cdot$

$\overline{\overline{- m - 1}^{-1}} 6$, and by taking the fluents,

log. $y + \frac{m}{2\,m - 2}$· hyp. log. $(z^2 - \overline{m - 1}^{-1})$

g.c.(the correction); whence $y \cdot (z^2 - \overline{m - 1}^{-1})$

$- 2 = C$; an equation which by reduction omes $\overline{m - 1}\,y^{\frac{2m-2}{m}} z^2 - y^{\frac{2m-2}{m}} =$ $\overline{- 1} \cdot c^{\frac{2m-2}{m}}$ for z put $\frac{x}{y}$, and put a for constant quantity on the right of the equator, after reduction we obtain $\overline{m - 1} \cdot x^2 - y^2 =$

$\frac{2}{y\,m}$

roblem 5.—Given the height of an inclined ne; required its length, so that a given power, ng on a given weight, in a direction parallel he plane, may draw it up in the least time sible.

et a denote the height of the plane, x its gth, p the power, and w the weight. Now, mechanics, the tendency down the plane is $\frac{w}{x}$, hence $p - \frac{a\,w}{x}$ is the motive force, and

$\frac{- a\,w}{x} + w = \frac{p\,x - a\,w}{p + w\,x}$ = the accelerative force f;

ice $t^2 = \frac{s}{g\,f} = \frac{\overline{p + w} \cdot x^2}{p\,x - a\,w \cdot g}$ —which must a minimum; or in fluxions $2\,(p\,x - a\,w)$ $' - p\,x^2\,x' = \beta$, or $p : w :: 2\,a : x ::$ double height of the plane to its length.

Problem 6.—It is required to determine the antity of matter in a sphere, whose density varies as the nth power of the distance from the centre.

Let r denote the radius of the sphere, d the density at the surface, a = the area of a circle whose radius is 1, and x any distance from the centre; then $4\,a\,x^2\,x'$ is the fluxion of the magnitude, and $\frac{d\,x^n}{r^n}$ is the density; whence

$\frac{4\,a\,d\,x^{n+2}\,x'}{r^n}$ = the fluxion of the mass, the fluent of which is $\frac{4\,a\,d\,x^{n+3}}{n + 3 \cdot r^n}$; and when $x = r$, $\frac{4\,a\,d\,r^3}{n + 3}$ is the quantity of matter in the sphere.

We have given as full an account of the principles of this important branch of science, and the method of applying them, as the space to which we are limited will admit. Happily the English language is rich in works in which the student who intends to devote himself to scientific pursuits, may find all the aid that he can require. The treatises on fluxions by Simpson and Emerson are justly held in esteem by English mathematicians. A new edition of Simpson's treatise has lately been published, with very valuable appendixes on the modern improvements in the science, by a member of the university of Cambridge. Maclaurin's work contains, perhaps, upon the whole, the most elementary exposition of the principles of the science. Indeed it was written chiefly with the view of confuting some objections which the acute and ingenious Berkeley had advanced against the metaphysics of the science.

Dr Lardner of Dublin has recently published a work on the subject, marked by that elegance and originality which distinguishes whatever comes from his pen; and Mr. Jephson of Cambridge has in course of publication an elementary work on the subject, which, from what we have seen of it, will, we are persuaded, form a very valuable acquisition to the scientific world.

We should not, however, discharge our duty to our readers if we omitted to recommend the translation of Lacroix's work on this subject by Herschel, Babbage, and Peacock, with the collection of examples for exercise which they compiled; nor the very elegant and methodical work of Dealtry, a work in which the subject of fluents, and the application of the science to the doctrine of forces, are expounded with remarkable perspicuity.

FLY, *v. a.* & *v. n.*
FLY'BOAT, *n. s.*
FLY'ER, or FLIER, *n. s.*
FLIGHT', *n. s.*
FLIGHT'Y, *adj.*
FLIGHT'INESS, *n. s.*

Pret. flew, or fled; part. fled, or flown, *v. n.* Sax. fleogan. To fly is properly to use wings, and gives flew and flown. To flee is to escape, or to go away. Sax. flean, and makes fled: they are now confounded. To move through the air with wings; to pass through the air; to pass away with the idea of swiftness or escape; to move with rapidity; applied to a violent and sudden separation of adhering parts: to shiver; to burst asunder with a sudden explosion. Sax. flean; Germ. *flichen*. To run away; to attempt escape. In this sense the verb is properly to flee, when fled is formed: the verb active is used in the sense of to strain; to decline; to avoid; to refuse association with; to quit by flight; to attack by a bird of prey. It is probable that flew was originally the preterite of fly, when it signified volation, and fled when it signified escape: flown should be confined likewise to volation; but these distinctions are now confounded. We know not any book except the Scriptures in which fly and flee are carefully kept separate. The substantives are more restricted, and somewhat different in their application. Flyer, or flier, is one that flies, or runs away; one that uses wings: it is used in mechanics and in architecture: in the one to the wheel in a machine of a particular use and construction; Dr. Johnson says it is 'that part of a machine which, by being put into a more rapid motion than the other parts, equalises and regulates the motion of the rest, as in a jack; in the other it is the technical name for a certain kind of stairs. Stairs made of an oblong square figure, whose fore, and back sides are parallel to each other, and so are their ends: the second of these flyers stand parallel behind the first, the third behind the second, and so are said to fly off from one another.—Moxon's Mech. Exer. Flight is the act of flying, or escaping from danger; the act of using wings; removal from place to place, by means of wings, or impelled by fear: a flock of birds flying together; the birds produced in the same season; a volley; a shower: the space passed by flying; heat of the imagination; sally of the soul; excursion on the wing; the power of flying; a shower of arrows. Flightiness is applied to wildness and irregularity of mind, or conduct: the adjective signifies fleeting; swift; wild: full of imagination. Flyboat is a kind of vessel, nimble and light for sailing.

Fowl that may *fly* above the earth in the open firmament of heaven. *Gen.* i. 20.

Abiathar escaped and *fled* after David. 1 *Sam.* xxii.

Man is born unto trouble as the sparks *fly* upward. *Job* v.

Ye shall flee, as ye *fled* from before the earthquake. *Zech.* xiv. 5.

As birde *flyeth* up in the aire,
And liveth by birdes that ben meke,
So these ben *flowe* up in despair
And shenden sely soules eke.
Chaucer. The Plowman's Tale.

Flie, fro the prese and dwell with sothfastnesse,
Suffise unto thy gode though it be small,
For horde hath hate, and climbyng tikilnesse,
Prece hath envie, and wele it brent oer all
Chaucer

So that I mighten lyven and nat faile
To morowe for to taken my bataile,
I ne wolde never fro this place *flye*,
Tyl that ye shulde the very profe yei
For, now if that the soth I shall you say,
I have loved you ful many adaie.
Id. Legend Ariadne.

They hit one another with darts, as the others do with their hands, which they never throw counter, but at the back of the *flier*. *Sandy's Journal.*

For he so swift and nimble was of *flight*,
That from this lower tract he dared to stie
Up to the clowdes, and thence with pineons light
To mount aloft unto the crystall skie,
To view the workmanship of heaven's height:
Whence down descending, he along would *flie*
Upon the streaming rivers, sport to finde;
And oft would dare to tempt the troublous winde.
Spenser. Muiopotmos.

Which when the valient elf perceived, he leapt,
As lion fierce, upon the *flying* prey. *Spenser.*

These men's hastiness the warier sort of you do not commend: ye wish they had held themselves longer in, and not *flown* so dangerously abroad before the feathers of the cause had been grown. *Hooker.*

At the first *flight* of arrows sent
Full threescore Scots they slew. *Chevy Chase.*

———A *flight* drawn home,
A round stone from a sling.
Beaumont and Fletcher. Bonduca.

The gates are ope, now prove good seconds;
'Tis for the followers fortune widens them,
Not for the *fliers*. *Shakspeare. Coriolanus.*

Ere the bat hath *flown*
His cloistered flight. *Id. Macbeth.*

Time thou anticipatest my dread exploits:
The *flighty* purpose never is o'ertook,
Unless the deed go with it. *Id.*

Glad to catch this good occasion,
Most thoroughly to be winnowed, where my chaff
And corn shall *fly* asunder. *Shakspeare.*

He set up his bills here in Messina, and challenged Cupid at the *flight*. *Id.*

In my school-days, when I had lost one shaft,
I shot his fellow of the self-same *flight*
The self-same way. *Id.*

Love like a shadow *flies*, when substance love pursues;
Pursuing that which *flies*, and *flying* what pursues.
Id.

They take great pride in the feathers of birds, and this they took from their ancestors of the mountains who were invited into it by the infinite *flights* of birds that came up to the high grounds.
Bacon. New Atlantis.

If a man can tame this monster, and with her *fly* other ravening fowl, and kill them, it is somewhat worth. *Bacon.*

Here be of all sorts; *flights*, rovers, and butshafts.
Ben Jonson. Cynthian Revels.

———I can at will, doubt not,
Command a table in this wilderness;
And call swift *flights* of angels ministrant,
Arrayed in glory, on my cup t' attend. *Milton.*

O whither shall I run, or which way *fly*
The sight of this so horrid spectacle? *Id.*

The drowsy *flighted* steeds,
That draw the litter of close-curtained sleep
Id. Comus.

wonder that the *flying* roll, or quick and inevitarse, doth surprise the swearer, and cut him off, is in the prophet. *Barrow.*

e conscious stag, tho' once the forests' dread,
to the wood and hides his armless head.
Marvell.

Say from the golden quivers of the sky,
all thy winged arrows *fly*?
riftness and power by birth are thine;
om the great sire they came, thy sire the Word Divine. *Cowley.*

Old Pindar's *flights* by him are reacht,
When on that gale his wings are strecht.
Denham.

He grieves so many Britons should be lost;
king more pains, when he beheld them yield,
save the *fliers* than to win the field. *Waller.*

eep *flies* the wretch; for when with cares opprest,
his tossed limbs are wearied into rest,
dreams invade. *Dryden's Juvenal.*

Dedalus, to *fly* the Cretan shore,
His heavy limbs on jointed pinions bore,
The first who sailed in air. *Id. Æneid.*

e thinks by *flight* his mistress must be won,
claims the prize because he best did run.
Dryden.

As striplings whip the top for sport,
On the smooth pavement of an empty court,
The wooden engine *flies* and whirls about. *Id.*

Fowls, by Winter forced, forsake the floods,
nd wing their hasty *flight* to happier lands. *Id.*

The scouts with *flying* speed
Return, and through the city spread the news.
Id.

In half-whipt muslin needles useless lie,
nd shuttle-cocks across the counter *fly*. *Gay.*

You now a more delusive art must try,
And tempt their hunger with the curious *fly*. *Id.*

Earth rolls back beneath the *flying* steed. *Pope.*

'll *fly* from shepherds, flocks, and flow'ry plains;
m shepherds, flocks, and plains I may remove,
sake mankind, and all the world but love. *Id.*

Strange graces still, and stranger *flights* she had;
s just not ugly and was just not mad. *Id.*

t is not only the utmost pitch of impiety, but the hest *flight* of folly, to deride these things.
Tillotson.

If there were any certain height where the *flights* ambition end, one might imagine that the interest France were but to conserve its present greatness.
Temple.

Above an hundred arrows, discharged on my left nd, pricked me like so many needles; and besides y shot another *fliyht* into the air as we do bombs.
Swift.

The *flier*, tho't had leaden feet,
Turned so quick, you scarce could see't. *Id.*

One song employs all nations; and all cry,
Worthy the Lamb, for he was slain for us!
The dwellers in the vales and on the rocks
Shout to each other, and the mountain tops
From distant mountains catch the *flying* joy;
Till nation after nation taught the strain,
Earth rolls the rapturous Hosanna round.
Cowper.

Black Hassan from the Haram *flies*,
Nor bends on woman's form his eyes;
The unwonted chase each hour employs
Yet shares he not the hunter's joys,
Not thus was Hassan wont to *fly*,
When Leila dwelt in his Seraii.
Byron. Giaour.

To *fly* is used in connexion with other words which form phrases, and has in each a specific meaning. The following phrases are instanced by Dr. Johnson:—

To fly at. To spring with violence upon; to fall on suddenly.

A servant that he bred, thrilled with remorse,
Opposed against the act, bending his sword
To his great master; who, thereat enraged,
Flew on him, and amongst them felled him dead.
Shakspeare.

Though the dogs have never seen the dog-killer, yet they will come forth, and *fly at* him.
Bacon's Natural History.

No honour, no fortune, can keep a man from being miserable, when an enraged conscience shall *fly at* him, and take him by the throat. *South.*

This is an age that *flies at* all learning, and enquires especially into faults. *Id.*

To fly in the face. To insult.

This would discourage any man from doing you good, when you will either neglect him, or *fly in his face*; and he must expect only danger to himself.
Swift's Drapier's Letters.

To fly in the face. To act in defiance.

Fly in nature's *face!*
—But how, if nature *fly in* my *face* first?
—Then nature's the aggressor. *Dryden.*

To fly off. To revolt.

Deny to speak to me! They're sick, they're weary,
They have travelled all the night! mean fetches;
The images of revolt and *flying off*. *Shakspeare.*

The traytor Syphax
Flew off at once with his Numidian horse.
Addison's Cato.

To fly out. To burst into passion.

How easy is a noble spirit discerned,
From harsh and sulphurous matter that *flies out*
In contumelies, makes a noise, and stinks.
Ben Jonson's Catiline.

Passion is apt to ruffle, and pride will *fly out* into contumely and neglect. *Collier of Friendship.*

To fly out. To break out into license.

You use me like a courser spurred and reined;
If I *fly out*, my fierceness you command. *Dryden.*

Papists, when unopposed, *fly out* into all the pageantries of worship; but, when they are hard pressed by arguments, lie close intrenched behind the council of Trent. *Id.*

To fly out. To start violently from any direction.

All bodies, moved circularly, have a perpetual endeavour to recede from the centre, and every moment would *fly out* in right lines, if they were not restrained.
Bentley's Sermons.

To let fly. To discharge.

The noisy culverin, o'ercharged, *lets fly*,
And bursts, unaiming, in the rended sky.
Granville.

To be light and unincumbered: as a flying camp.

FLY, *n. s.*
FLY'BLOW, *v. a.*
FLY'-CATCHER, *n. s.*
FLY'-FISH,
FLY'-FLAP.

Sax. fleoge; Goth. *fluga*; Teut. *fliege*; Belg. *vliegen*; all clearly from the corresponding words in those languages, signifying to fly. A small winged insect of many species: applied to a wheel, in mechanics, it has the same meaning with flier: that part of a vane which points from what quarter the wind blows: to fly-blow is to taint with flies; to fill with maggots: a fly-catcher is one that hunts flies: to fly-

fish, is to angle with a hook baited with a fly, either natural or artificial: a fly-flap is a fly or flapper to keep flies off.

For lo the gentil kinde of the lion;
For whan a *flie* offendeth him or biteth,
He with his taile awaie the *flie* ysmiteth
Al easily, for of his genterie
Him deineth nat to wrecke him on a *flie*,
As doth a curre or els another best.
Chaucer. Leg. of Good Women, Prologue.

Like as the *fly* that seeth the flame,
And thinks to play her in the fire,
That found her woe and sought her game
Where grief did grow by her desire.
Earl of Surrey.

The fresh young *Flie*, in whom the kindly fire
Of lustfull youth began to kindle fast,
Did much disdaine to subject his desire
To loathsom sloth, or houses in ease to wast,
But ioyd to range abroad in fresh attire
Through the wide compas of the ayrie coast.
Spenser. Muiopotmos.

As *flies* to wanton boys, are we to the gods;
They kill us for their sport. *Shakspeare.*

To sacrifice the honour of sacred things to our vain pleasure, being like the ridiculous fondness of that people, which, as Ælian reporteth, worshipping a *fly*, did offer up an ox thereto. *Barrow.*

I am unwilling to believe that he designs to play tricks, and to *flyblow* my words, to make others distaste them. *Stillingfleet.*

There was more need of Brutus in Domitian's days, to mend, than of Horace, to laugh at a *flycatcher*. *Dryden.*

The swallow was a *flycatcher* as well as the spider. *L'Estrange.*

My country neighbours begin to think of being in general, before they come to think of the *fly* in their sheep, or the tares in their corn. *Locke.*

To prevent the *fly*, some propose to sow ashes with the seed. *Mortimer's Husbandry.*

So morning insects, that in muck begun,
Shine, buz, and *flyblow* in the setting sun. *Pope.*

Like a *fly-blown* cake of tallow;
Or, on parchment, ink turned yellow. *Swift.*

To heedless *flies* the window proves
A constant death. *Thomson's Summer.*

None save the Spanish *Fly* and Attic Bee
As yet are strongly stinging to be free. *Byron.*

Fly, or Musca, in entomology, a large order of insects, the distinguishing characteristic of which is, that their wings are transparent. By this they are distinguished from beetles, butterflies, grasshoppers, &c. See Entomology.

Fly, in mechanics, a cross, with leaden weights at its ends; or rather, a heavy wheel at right angles, to the axis of a windlass, jack, or the like; by means of which the force of the power, whatever it is, is not only preserved, but equally distributed in all parts of the revolution of the machine. See Mechanics.

Fly, Electric. See Electricity.

Fly Island, an island in the South Pacific Ocean, discovered by Le Maire and Schouten, in the year 1616, and so named from the number of flies seen there. It is covered with trees, and a lagoon seems to be formed in the interior by the flowing of the tide. The navigators observed a few naked inhabitants. Long. 150° 20′ W., lat. 15° S.

Fly, Vegetable, a very curious natural production, chiefly found in the West Indies. It resembles the drone both in size and color, excepting that it has no wings, more than any other British insect. In the month of May it buries itself in the earth, and begins to vegetate. By the end of July the tree has arrived at its full growth, and resembles a coral branch: it is about three inches in height, and bears several little pods, which dropping off, become worms, and then flies, like the British caterpillar. Such was the account originally given of this extraordinary production. But several boxes of these flies having been sent to Dr. Hill, for his examination, his report was as follows: 'There is in Martinique a fungus of the clavaria kind, different in species from those hitherto known. It produces soboles from its sides; I call it, therefore, clavaria sobolifera. It grows on putrid animal bodies, as our fungus ex pede equino, from the dead horse's hoof. The cicada is common in Martinique, and in its nymph state, in which the old authors call it tettigometra, it buries itself under the dead leaves to await its change; and, when the season is unfavorable, many perish. The seeds of the clavaria find a proper bed in this dead insect, and grow.' This is the solution of the mystery; though the untaught inhabitants suppose a fly to vegetate, and though there is a Spanish drawing of the plants growing into a trifoliate tree, and it has been figured with the creature flying with this tree upon its back. Mr. Edwards treats of this extraordinary production in his Gleanings of Natural History.

Fly, Honeysuckle. See Lonicera.

Fly, Honeysuckle, African. See Halleria.

Flying, the progressive motion of a bird, or other winged animal in the air. The parts of birds chiefly concerned in flying are the wings and the tail; by the former, the bird sustains and wafts himself along; and, by the latter, he is assisted in ascending and descending, to keep his body poised and upright, and to obviate the vacillations thereof. It is by the largeness and strength of the pectoral muscles, that birds are so well disposed for quick, strong, and continued flying. These, muscles, which, in men, are scarcely a seventieth part of the muscles of the body, in birds exceed and outweigh all the other muscles taken together. The tail, Messrs. Willoughby, Ray, and many others, imagined to be principally employed in steering and turning the body, as a rudder; but Borelli has shown that this is the least use of it. Its chief use is to assist the bird in its ascent and descent in the air, and to obviate the vacillations of the body and wings; for, as to turning the body to this or to that side, it is performed by the wings and inclination of the body, and but very little by the help of the tail. The flying of a bird, in fact, is a very different thing from the rowing of a vessel. Birds do not vibrate their wings towards the tail, as oars are struck towards the stern, but waft them downwards; nor does the tail of the bird cut the air at right angles, as the rudder does the water; but is disposed horizontally, and preserves the same situation what way soever the bird turns. In effect, as a vessel is turned about on its centre of gravity to the right, by a brisk application of the oars to the

left; so a bird, in beating the air with its right wing alone, towards the tail, will turn its fore part to the left. Thus pigeons, changing their course to the left, would labor it with their right wing, keeping the other almost at rest. Birds of a long neck, alter their course by the inclination of their head and neck, which altering the course of gravity, the bird will proceed in a new direction. The act of flying is thus performed: the bird first bends his legs, and springs with a violent leap from the ground; then opens and expands the joints of his wings, so as to make a right line perpendicular to the sides of his body: thus the wings, with all the feathers therein, constitute one continued lamina. Being now raised a little above the horizon, and vibrating the wings with great force and velocity perpendicularly against the subject air, that fluid resists those successions, both from its natural inactivity and elasticity, by means of which the whole body of the bird is protruded. The resistance the air makes to the withdrawing of the wings, and consequently the progress of the bird, will be so much the greater, as the stroke of the fan of the wing is longer; but, as the force of the wing is continually diminished by this resistance, when the two forces continue to be in equilibrio, the bird will remain suspended in the same place; for the bird only ascends so long as the arch of air the wing describes, makes a resistance greater than the excess of the specific gravity of the bird above the air. If the air, therefore, be so rare as to give way with the same velocity as it is struck withal, there will be no resistance, and consequently the bird can never mount. Birds never fly upwards in a perpendicular line, but always in a parabola. In a direct ascent, the natural and artificial tendency would oppose and destroy each other, so that the progress would be very slow. In a direct descent they would aid one another, so that the fall would be too precipitate.

Flying, Artificial, that attempted by men, by the assistance of mechanics. The art of flying has been attempted by several persons in all ages. The Leucadians, out of superstition, are reported to have had a custom of precipitating a man from a high cliff into the sea, first fixing feathers, variously expanded, round his body, in order to break the fall. Friar Bacon not only affirms the art of flying possible, but assures us, that he himself knew how to make an engine, wherein a man sitting, might convey himself through the air like a bird; and further adds, that there was then one who had tried it with success. The secret consisted in a couple of large thin hollow copper globes, exhausted of air, which, being much lighter than air, would sustain a chair whereon a person might sit. Father Francisco Lana, in his Prodromo, proposes the same thing as his own thought. He computes that a vessel of brass, fourteen feet in diameter, weighing three ounces the square foot, will only weigh 1848 ounces, whereas a quantity of air, of the same bulk, will weigh 2155⅔ ounces; so that the globe will not only be sustained in the air, but will carry with it a weight of 373⅓ ounces; and by increasing the bulk of the globe, without increasing the thickness of the metal, he adds, a vessel might be made to carry a much greater weight But a globe of the dimensions he describes, Dr. Hook shows, would not sustain the pressure of the air, but be crushed inwards. Besides, in whatever ratio the bulk of the globe were increased, in the same must the thickness of the metal, and consequently the weight be increased; so that there would be no advantage in such augmentation. See Aerostation. The same author describes an engine for flying, invented by the sieur Besnier, a smith, of Sable, in the county of Main. The philosophers of king Charles II.'s reign were greatly employed in endeavouring to attain this art. Bishop Wilkins was so confident of success, that he says, he does not question, but in future ages it will be as usual to hear a man call for his wings, when he is going a journey, as it is now to call for his boots.

Flying Bridges. See Bridge.

Flying Fish, a name given to several species of fish, which, by means of their long fins, keep themselves out of water a considerable time. See Exocoetus.

Flying Pinion, a part of a clock, having a fly or fan to gather air, and so bridle the rapidity of the clock's motion, when the weight descends in the striking pace.

Fly-Trap, Venus's. See Dionæa.

Fly-Wort, in botany. See Silene.

FO, or Foe, an idol of the Chinese, originally worshipped in the Indies, and thence transported into China. See China.

FOA, one of the Happaee islands, in the South Pacific Ocean, between Haano and Lefooga, to each of which it is connected by a reef.

FOAL, *n. s.*, *v. a.*, & *v. n.* Sax. ƿola; Goth. *ful*; Swed. *fole*; Belg. *veule*; qu. Lat. *pullus*; Gr. πωλος. The offspring of a mare, or other beast of burthen. The custom now is to use colt for a young horse, and foal for a young mare; but there was not, originally, any such distinction. To bring forth; to be disburthened of the fœtus.

Twenty she-asses and ten *foals*. *Gen.* xxxii. 15.

The fend, quod he, you fecche body and bones,
As ferforthly as ever ye were *foled*,
So mochel wo as I have with you tholed.
Chaucer. The Feeres Tale.

Also flew his steed,
And with his winged heels did tread the wind,
As he had been a *foal* of Pegasus's kind.
Faerie Queene.

Give my horse to Timon: it *foals* me straight
Ten able horses. *Shakspeare. Timon.*

Such colts as are
Of generous race, straight when they first are *foaled*,
Walk proudly. *May's Georgicks.*

About September take your mares into the house, where keep them till they *foal*. *Mortimer's Husbandry.*

FOAM, *n. s.*, *v. n.* } Sax. ƿam; Teut. *faum*;
Foam'y, *adj.* } Lat. *fumus*, smoke. The white substance which agitation or fermentation gathers on the top of liquors; froth; spume. To froth; to gather spume. The adjective signifies covered with foam; frothy. The verb is, metaphorically, to rage; a violent agitation of mind.

The *foam* upon the waters. *Hosea* x. 7.

As wild bores, gan they togeder smite
That frothen white as *fome* for ire wood,
Up to the ancle foughte they in hir blood.
Chaucer. The Knightes Tale.

My love and lord alas! in whom consists my wealth,
Hath fortune sent to pass the seas, in hazard of his health—
Whom I was wont to embrace with well contented mind,
Is now amid the *foaming* floods, at pleasure of the wind. *Earl of Surrey.*

There also, where the winged ships were seene
In liquid waves to cut their *foamie* waie,
And thousand fishers numbered to have been
In that wide lake, looking for plenteous praie
Of fish, which they with baits used to betraie,
Is now no lake. *Spenser. The Ruines of Time.*

Cæsar fell down in the market-place, and *foamed* at mouth, and was speechless. *Shakspeare.*

What a beard of the general's cut will do among *foaming* bottles and ale-washed wits, is wonderful. *Id. Henry V.*

I have been gathering wolves' hairs,
The mad-dogs' *foam*, and adders' ears,
The spurging of a dead man's eyes,
And all since the evening-star did rise. *Ben Jonson.*

More white than Neptune's *foamy* face,
When struggling rocks he would embrace. *Sidney.*

Behold how high the *foamy* billows ride!
The winds and waves are on the juster side. *Dryden.*

To Pallas high the *foaming* bowl he crowned,
And sprinkled large libations on the ground. *Pope.*

Whitening down their mossy tinctured stream
Descends the billowy *foam*. *Thomson's Spring.*

O'er the glad waters of the dark blue sea,
Our thoughts as boundless, and our souls as free—
Far as the breeze can bear the billows' *foam*
Survey our empire and behold our home! *Byron.*

FOB, *n. s.* & *v. a.* Germ. *fuppe, fupsacke;* Ital. *fioppe* (breeches), a small pocket. The verb, from the same root *(fuppen)*, signifies to cheat; to trick; to defraud: probably from being first applied to stealing out of the fob. It is used colloquially with *off*. To fob off is, to shift off; to put aside with an artifice; to delude by a trick.

I think it is scurvy, and begin to find myself *fobbed* in it. *Shakspeare. Othello.*

Shall there be a gallows standing in England when thou art king, and resolution thus *fobbed* as it is with the rusty curb of old father antick the law? *Id. Henry IV.*

You must not think
To *fob off* your disgraces with a tale. *Shakspeare.*

For they, poor knaves, were glad to cheat,
To get their wives and children meat;
But these will not be *fobbed off* so,
They must have wealth and power too. *Hudibras.*

Who picked a *fob* at holding forth. *Id.*

He goes pressing forward, till he was *fobbed* again with another story. *L'Estrange.*

He put his hand into his *fob*, and presented me in his name with a tobacco-stopper. *Addison.*

Two pockets he called his *fobs*: they were two large slits squeezed close by the pressure of his belly. *Swift.*

FOCHABERS, a town of Scotland, in Banffshire, on the Spey, formerly in the neighbourhood of Gordon Castle, but removed, not many years ago, to a rising ground about a mile south, and built on a neat plan, having a square in the centre, and streets entering it at right angles. It is a borough of barony, governed by a baron-bailie appointed by the Duke of Gordon who is superior. An elegant bridge has been lately built over the Spey at this town. It is a thriving place, and lies eighteen miles west of Banff, and forty-eight north-west of Aberdeen.

Fo-Chan, a populous town near Canton, in China, on the banks of the river whereon that city stands. It extends about three miles along the river, and is composed principally of a single street of large well built-houses. The tide flows up to this town, and one of the custom-houses is a fine building; not far distant is a temple. Grosnier observes that Fochan, 'properly speaking, is only a village, being unenclosed by walls, and not having a governor; but that it is the largest and most populous in the universe, because it is three leagues in circuit, and contains 1,000,000 of inhabitants.'

FOCHEA, or Fochia Nova, a sea-port town of Asiatic Turkey, in Natolia; with a castle and harbour, seated on the Gulf of Smyrna, at the mouth of the Hermûs; twenty-eight miles north-west of Smyrna, and thirty-two S. S. W. of Pergamo. In 1650 the Venetians defeated the Turkish fleet near this town.

FOCIL, *n. s.* Fr. *focile*. The greater or less bone between the knee and ankle, or elbow and wrist.

The fracture was of both the *focils* of the left leg. *Wiseman.*

FOCILLATION, *n. s.* Lat. *focillo*. Comfort; support.

FO'CUS, *n. s.* } Lat. In optics, The focus of
Focal, *adj.* } a glass is the point of convergence or concourse, where the rays meet and cross the axis after their refraction by the glass.

The point from which rays diverge, or to which they converge, may be called their *focus*. *Newton's Opticks.*

Schelhammer demandeth whether the convexity or concavity of the drum collects rays into a *focal* point or scatters them. *Derham.*

If the candle be placed nearer the glass than its *focal* distance, the rays will diverge after passing through the glass, more or less, as the candle is more or less distant from the *focus*. *Ferguson.*

But Juan was not meant to die so soon:
We left him in the *focus* of such glory
As may be seen, by favour of the moon
Or ladies' fancies,—rather transitory.
Byron.

Focus, in geometry, certain points in the transverse axis of the ellipse hyperbola and parabola from which two lines drawn to any point in the curve will bear a certain proportion; namely, their sum in the ellipse or parabola, and their difference in the hyperbola is equal to the transverse axis. See Conic Sections.

Focus, in optics, the point of convergence in which several rays meet, or are collected after being either reflected or refracted.

Focus of a Parabola, a point in the axis within the figure, and distant from the vertex by a fourth part of the parameter, or latus rectum.

Focus of an Elipsis, a point towards each end of the longer axis; from whence two right lines being drawn to any point in the circumference, shall be together equal to that longer axis.

FOCUS OF THE HYBERBOLA, a point in the ıcipal axis, within the opposite hyperbolas; n which if any two right lines are drawn, eting in either of the opposite hyperbolas, difference will be equal to the principal axis.

FOD'DER, *n. s.* & *v. a.* } Sax. ꝑoðne, ꝑoðen, FOD'DERER, *n. s.* } from ꝑod, food. y food stored up for cattle against winter. To d with dry food; he who fodders cattle.

Being not to be raised without wintering, they will p to force men into improvement of land by a essity of *fodder*. *Temple.*

Of grass and *fodder* thou defraudest the dams,
d of their mother's dugs the starving lambs.
Dryden's Virgil.

From winter keep
Well *foddered* in the stalls, thy tender sheep. *Id.*

Natural earth is taken from just under the turf of best pasture ground, in a place that has been well *dered* on. *Evelyn.*

FODDER, in agriculture, all such substances as y, straw, haulm, &c., which are kept for the nter food of cattle. In the giving of fodder all sorts of animals, care should be taken that is not wasted by their having too much, or by not being well put into racks or cribs, which ould be sufficiently numerous. Where these ints are not properly attended to, there must great loss, not only by the fodder being tered about the yard, but from many of the ore weak cattle not getting the quantity of od that may be necessary for their support. In spect to racks, those of the staddling and ısket kinds are best for foddering, if made rong enough, that is, so as not to be overturned; r these racks may be lifted up as the dung ses in the yard, which those fixed in the ground nnot be.

FOE, *n. s.* } Sax. fah; Goth *fega;* old FOE'MAN. } Teut. *fian*, to haste. One that ears hatred and malice against another. *Enemy* not properly the synonyme of foe. Enemy, *ımicus*, Lat. merely signifies one that is unfiendly. Foe implies deadly aversion. Crabbe ell observes, 'An *enemy* is not so formidable as *foe*; the former may be reconciled; but the ıtter remains always deadly. An *enemy* may e so in spirit, in action, or in relation; a *foe* is lways so in spirit, if not in action likewise; a ıan may be an *enemy* to himself, though not a *oe*.' These distinctions, however, are not strictly egarded even by our best writers. For foe is ften used to denote an enemy in war,—an nemy in common life; a persecutor; an oppoıent; an ill. wisher. Foeman is obsolete, except n poetry, where it is often introduced instead of oe, to eke out the number of feet.

To these gret conquerours two,
Fortune was first a friend and sith a *fo*.
Chaucer. The Monkes Tale.

His *fomen* made a feste upon a day,
And made him as hir fool before hem pleye,
And this was in a temple of gret array:—
But, at the last, he made a foule affray,
For he two pillers shoke, and made hem falle;
And down fell a temple and all, and ther it lay;
And slew himself, and eke his *fomen* alle. *Id.*

Eftsoones he spide a knight approaching nye;
Who seeing one in so great danger set
Mongst many *foes* himself did faster hye
To reskue him, and his weak part abet,
For pity so to see him overset.
Spenser. Faerie Queene.

Here haunts that fiend, and does his daily spoil;
Therefore henceforth be at your keeping well,
And ever ready for your *foeman* fell. *Id.*

God's benison go with you, and with those
That would make good of bad, and friends of *foes*.
Shakspeare

What valiant *foemen*, like to Autumn's corn,
Have we mowed down in top of all their pride?
Id. Henry VI

Let us not slip the occasion, whether scorn
Or satiate fury yield it from our *foe*. *Milton.*

Nature, her own sex's *foe*,
Long had taught her to be coy;
But she neither knew to enjoy
Nor yet let her lover go. *Marvell.*

Forced by thy worth, thy *foe* in death become,
Thy friend has lodged thee in a costly tomb.
Dryden's Fables.

Thy defects to know,
Make use of every friend, and every *foe*. *Pope.*

He that considers and enquires into the reason o things, is counted a *foe* to received doctrines.
Watts on the Mind.

Tell us who brought, and whence these colonies;
Who is their king, what *foes*, and what allies;
What laws maintain their peace; what wars and victories? *Fletcher's Purple Island.*

Old flames new wives, become our bitterest *foes*,
Converted *foes* should scorn to join with those.
Byron.

FŒNUS NAUTICUM. Where money was lent to a merchant, to be employed in a beneficial trade upon condition to be repaid, with extraordinary interest, in case such voyage was safely performed, the agreement was sometimes called *fœnus nauticum*, sometimes *usura maritima*. But, as this gave an opening for usurious contracts, 19 Geo. II. cap. 37 enacts, that all money lent on bottomry, on vessels bound to or from the East Indies, shall be expressly lent only upon the ship or merchandise: the lender to have the benefit of salvage, &c. *Blackstone.* See BOTTOMRY.

FŒSIUS (Anulius), a learned physician of Paris, born at Mentz in 1528. He published a translation of Galen's Commentaries upon the second book of Hippocrates, under the title of Hippocratis Coi Liber secundus de morbis vulgaribus, difficillimus et pulcherrimus: olim à Galeno Commentariis illustratus qui temporis injuriâ interciderunt; nunc vero penè in integrum restitutus Commentariis sex, et Latinitate donatus, 8vo. In the following year he published a pharmacopœia, in order to fix the regular formulæ and the particular medicines to be used by the apothecaries of Mentz: its title was, Pharmacopeia Medicamentorum omnium, quæ hodie ad publica medentium munia in officinis extant, tractationem et usum ex antiquorum Medicorum præscripto continens; Basileæ, 1561, 8vo. His constant meditations on the works of Hippocrates led him to arrange, in alphabetical order, all the terms which contributed to occasion any doubt or obscurity in the perusal of this ancient writer, under the title of Œconomia Hippocratis. After practising physic a long time with great reputation,

at Lorrain and other places, he died in the year 1596.

FŒTIDIA, in botany, a genus of plants of the icosandria class and monogynia order: CAL. superior, four-cleft: COR. none: CAPS. woody: four-celled: the cells one or two-seeded. Species, one only; a tree of Mauritius, with one-flowered terminal peduncles.

FŒTOR NARIUM (stench of the nostrils), a sort of disease arising from a deep ulcer within the nose, yielding a fetid smell, and remarkable as one of the causes for which marriage might formerly be annulled.

FŒTUS, *n. s.* Lat. *fœtus*, from *foveo*, to cherish; Fr. *fetus*. Both signify the thing cherished. It refers to what is formed in the womb of the mother: it differs from embryo, though it is applied to the same substance. Embryo is the first germ of conception; fœtus the same germ advanced to maturity of formation.

A *fœtus*, in the mother's worm, differs not much from the state of a vegetable. *Locke.*

FŒTUS, the young of all viviparous animals whilst in the womb, and of oviparous animals before being hatched. The name is transferred by botanists to the *embryos of vegetables*. Till the young is perfectly formed, it is more properly called EMBRYO. See ANATOMY, and MIDWIFERY. In the human fœtus there exist several peculiarities not to be found in the adult: 1. The arteries of the naval string, which are continuations of the hypogastrics, are after the birth shrivelled up, and form the lower umbilical ligament. 2. The veins of the navel-string are formed by the union of all the venous branches in the placenta; and, passing into the abdomen, become the falciform ligament of the liver. 3. The lungs, before being inflated with air, are compact and heavy; but after one inspiration they become light, and as it were spongy; and it may be noted here, that the notion of the lungs sinking in water before the child breathes, and of their swimming after the reception of air, are no certain proofs that the child had or had not breathed, much less that it was murdered: for the uninflated lungs become specifically lighter than water, as soon as any degree of putrefaction takes place in them, and this soon happens after the death of the child: besides, where the utmost care has been taken to preserve the child, it has breathed once or twice, and then died. 6. The thymus gland is very large in the fœtus, but dwindles away in proportion as years advance. 7. The foramen ovale in the heart of a fœtus is generally closed in an adult.

FŒTUS, PETRIFIED. Bartholine, Pare, Licetus, and many other writers, give an account of a petrified fœtus. The child which they describe, is kept as a great rarity in the king of Denmark's museum at Copenhagen. The woman lived at Sens in Champaign in 1582. It was cut out of her belly, and was supposed to have lain there about twenty years. That it is a real human fœtus, and not artificial, is evident to the eyes of any observer; and the upper part of it, is of a substance resembling gypsum, or the stone whereof they make Paris plaster. The lower part is much harder, the thighs and buttocks being perfect stone of a reddish color, and as hard as common quarry-stone; the grain and surface of this part appears exactly like that of the calculi or stones taken out of human bladders: and the whole substance examined ever so nearly, and felt ever so carefully, appears to be absolute stone. It was carried from Sens to Paris, and there purchased by a goldsmith of Venice; from whom Frederic III. king of Denmark purchased it for a very large sum.

FOG, *n. s.* Low Lat. *fogagium*. *Gramen in foresta regis locatur pro fogagio Leges forest. Scoticæ.* Aftergrass; grass which grows in autumn after the hay is mown.

FOG, or FOGG, is a term that properly signifies the fine soft grass that immediately springs up after the hay crop has been taken from the ground; but which is sometimes used for the long grass remaining in the pastures till the winter season.

FOG, *n. s.* / FOG'GINESS, *n. s.* / FOG'GY, *adj.* Dan. *fog*, a storm. A thick mist; a most dense vapor near the surface of the land or water. Metaphorically applied to the understanding, when it is unapprehensive, mystified, and dull.

Huge routs of people did about them band,
Shouting for joy; and still before their way
A *foggy* mist had covered all the land.
Spenser's Faerie Queene.

Infect her beauty,
You fensucked *fogs* drawn by the powerful sun,
To fall and blast her pride. *Shakspeare.*

Whence have they this mettle?
Is not their climate *foggy*, raw and dull?
Id. Henry V.

Lesser mists and *fogs* than those which covered Greece with so long darkness, present great alterations in the sun and moon. *Raleigh.*

Fly, fly, profane *fogs!* far hence fly away;
Taint not the pure streams of the springing day
With your dull influence: it is for you
To sit and scowl upon night's heavy brow.
Crashaw.

Alas! while we are wrapt in *foggy* mist
Of our self-love, so passions do deceive,
We think they hurt, when most they do assist.
Sidney.

About Michaelmas, the weather fair, and by no means *foggy*, retire your rarest plants.
Evelyn's Kalendar.

When sleep is first disturbed by morning cries,
From sure prognostics learn to know the skies,
Lest you of rheums and coughs at night complain,
Surprised in dreary *fogs* or driving rain. *Gay.*

Mean time his soul weighed down with muddy chains,
Can neither work nor move in captive bands;
But dulled in vap'rous *fogs* all ceaseless reigns,
Fletcher. Purple Island.

As when from fenny moors the lumpish clouds
With rising streams damp the light morning's face;
At length the piercing sun his beam unshrouds
And with his arrows the idle *fog* doth chase:
The broken mist lies melted all in tears. *Id.*

FOG, or MIST, according to lord Bacon, is an imperfect condensation of the air, consisting of a large proportion of the air, and a small one of the aqueous vapor. Fogs happen in winter, about the change of the weather from frost to thaw, or from thaw to frost; but in summer and

ng, from the expansion of the dew. The ors, which are raised plentifully from the h and waters, either by the solar or subter- eous heat, at their first entrance into the at- sphere meet with cold enough to condense m to a considerable degree; their specific vity is by that means increased, and so they l be stopped from ascending; and either re- n back in form of dew or of drizzling rain, remain suspended some time in the form of a

Vapors may be seen on the high grounds well as the low, but more especially about rshy places. They are easily dissipated by wind, as well as by the heat of the sun. ey continue longest in the lowest grounds, cause these places contain most moisture, and least exposed to the action of the wind. nce we may easily conceive, that fogs are ly low clouds, or clouds in the lowest region the air; as clouds are no other than fogs ised on high. See CLOUD, and MIST.

FOGGIA, a large town of Naples, in the Capi- nata, formerly of great importance, from being staple for wool and corn, and the seat of the gano or register-office for collecting the tax the sheep which pass to and from the pas- res of Puglia. The office of Foggia appointed eputations to other towns. The principal uare, and several of its streets, are under- ined with vaults, where corn is stored and reserved; the sides are said to be faced with one, and all the orifices carefully closed. The wn has been almost entirely rebuilt since the arthquake of 1732. A great fair is held here May. It contains 17,000 inhabitants. It is ixteen miles south-west of Manfredonia, and orty-two north-east of Benevento.

FOGLIETO (Oberto, or Hubert), a Genoese riest, and one of the most learned writers of he sixteenth century. He had a share in the disturbances that were raised at Genoa, for which he was banished; and died at Rome in 1581, aged sixty-three. He wrote a History of Genoa in Italian, which is highly esteemed; and many works in Latin.

FOH, *interj.* From Sax. fah, an enemy. An interjection of abhorrence: as if one should at sight of any thing hated cry out a foe!

Not to affect many proposed matches
Of her own clime, complexion and degree,
Whereto we see in all things nature tends,
Foh! one may smell in such a will most rank,
Foul disproportions, thoughts unnatural.
Shakspeare.

Indeed, Sir John, pray good my dear,
Tis wrong to make your kennel here—
Dogs in their place are good I own,
But in the parlour, *foh!* be gone! *Somervile.*

Foh 'twas a bribe that left it, he has touched
Corruption. *Cowper.*

FO-HI, another name for Fo, the chief deity of the Chinese. They represent him shining all in light, with his hands hid under his robes, to show that his power does all things invisibly. He has at his left Lanza, or Lanca, chief of the second sect of their religion. See CHINA.

FOHR, or FORA, a fertile island of Denmark, on the coast of Sleswick; twelve miles in circuit, with a safe harbour.

FOI'BLE, *n. s.* French. A little fault; a mental weakness rather than a moral taint. It is synonymous, or nearly so, with failing; failings and foibles are the smallest degrees of imperfection. Failings, perhaps, relate more to temper and disposition, and foibles to habit and prepossession.

He knew the *foibles* of human nature. *Friend.*

The witty men sometimes have sense enough to know their own *foible*, and therefore they crafully shun the attacks of argument. *Watts's Logick.*

If you insist upon your right to examine, they retreat, either in confusion or equivocation; and, like the scuttle-fish, throw a large quantity of ink behind them, that you may not see where to pursue. Whence this *foible* flows is obvious enough. *Mason.*

FOIL, *v. a.* & *n. s.* } Old Fr. *affoler*, to
FOI'LER, *n. s.* } wound. Crabbe thinks from fail, and the Lat. *fallo* to deceive; to make to fail. Thus it signifies to put to the worst; to defeat, though without a complete victory; and equally applies to the accomplishment of this, whether by stratagem or open resistance. A person is foiled, whatever the means, who is rebuffed and turned away from his meditated purpose: it is also used in the sense of puzzling and perplexing.

Bonduca, that victorious conqueresse,
That, lifting up her brave heroick thought
Bove womens weaknesse, with the Romanes fought.
Fought, and in field against them thrice prevailed;
Yet was she *foyled* whenas she me assailed.
Spenser. The Ruines of Time.

We of thy cunning had no diffidence;
One sudden *foil* shall never breed distrust.
Shakspeare.

Amazement seized
The rebel thrones; but greater rage to see
Thus *foiled* their mightiest. *Milton.*

Strange, that your fingers should the pencil *foil*,
Without the help of colours or of oil! *Waller.*

Virtue, disdain, despair, I oft have tried;
And, *foiled*, have with new arms my foe defied.
Dryden.

Death never won a stake with greater toil,
Nor e'er was fate so near a *foil*. *Id.*

Whilst I am following one character, I am crossed in my way by another, and put up such a variety of odd creatures in both sexes, that they *foil* the scent of one another, and puzzle the chace. *Addison.*

He had been *foiled* in the cure, and had left it to nature. *Wiseman's Surgery.*

In their conflicts with sin they have been so often *foiled*, that they now despair of ever getting the day. *Calamy's Sermons.*

When age shall level me to impotence,
And sweating pleasure leave me on the *foil*.
Southern.

FOIL, *n. s.* & *v. a.* Fr. *fouiller*. A blunt sword used in fencing: to blunt; to dull.

He that plays the king shall be welcome; his majesty shall have tribute of me: the adventurous knight shall use his *foil* and target. *Shakspeare.*

When light-winged toys
Of feathered Cupid *foil*, with wanton dulness,
My speculative and officed instruments. *Id.*

FOIL, *n. s.* Lat. *folium*; Fr. *feuille*. Leaf; gilding: something of another color near which jewels are set to raise their lustre; applied metaphorically to whatever enhances the value or beauty of any thing by contrast: the steel or

quicksilver placed at the back of a glass by which it is converted into a mirror.

Fructified olive of *foiles* faire and thicke.
Chaucer. Balade III.

A stately palace, built of squared brick,
Which cunningly was without mortar laid,
Whose walls were high, but nothing strong nor thick,
And golden *foil* all over them displayed.
Faerie Queene.

Like bright metal on a sullen ground,
My reformation glittering o'er my fault,
Shall shew more goodly, and attract more eyes,
Than that which hath no *foil* to set it off.
Shakspeare.

Fame is no plant that grows on mortal soil,
Nor in the glistering *foil*
Set off to the' world, nor in broad rumour lies.
Milton.

As she a black silk cap on him begun
To set for *foil* of his milk-white to serve. *Sidney.*

Hector has a *foil* to set him off; we oppose the incontinence of Paris to the temperance of Hector.
Broome on the Odyssey.

Foil, among looking-glass grinders, is a sheet of tin with quicksilver, or the like, laid on the backside of a looking-glass, to make it reflect. *Chambers.*

FOIL, in fencing, a long piece of steel of an elastic temper, mounted like a sword, which is used in fencing. It is without a point, having a button at the extremity, covered with leather. The amateurs of fencing caution the learner never to fence with short foils; they ought to measure from one extremity to the other three feet two inches; he will thus be enabled to keep a regular distance, and execute his movements with a greater degree of justness and dexterity.

FOIL, among jewellers, a thin leaf of metal placed under a precious stone, in order to make it look transparent, and give it an agreeable different color, either deep or pale: thus, if a stone is wanted to be of a pale color, put a pale-colored foil under it; or if deep, a dark one. These foils are made either of copper, gold, or gold and silver together. The copper foils are commonly known by the name of Nuremberg or German foils, and are thus prepared: Procure very thin copper-plates; beat these gently upon a well-polished anvil, with a polished hammer, as thin as possible; and placing them between two iron plates, as thin as writing-paper, heat them in the fire; then boil the foil in a pipkin with equal quantities of tartar and salt, constantly stirring them, till, by boiling, they become white; after which, taking them out and drying them, give them another hammering, till they are made fit for your purpose. Care must be taken not to give the foils too much heat, for fear of melting; nor must they be too long boiled, lest they should attract too much salt. The method of polishing them is this: Take a plate of the best copper, one foot long and about five or six inches wide, polished to the greatest perfection; bend this to a long convex, fasten it upon a half roll, and fix it to a bench or table; then take some chalk, washed as clean as possible, and filtered through a fine linen cloth, till it be as fine as it can be made; and, having laid some of it on the roll, and wetted the copper all over, lay the foils on it, and, with a polishing-stone and the chalk, polish them, till they are as bright as a looking-glass; after which they must be dried, and laid up secure from dust.

FOIN, *v. n.* & *n. s.* } Fr. *foindre, poindre*;
FOIN'INGLY, *adv.* } Lat. *pungo*. In fencing, to push; to thrust: a thrust; or push. In a pushing manner.

Ne no man shal unto his felow ride
But o cours, with a sharpe ygrounden spere,
Foin if him list on foot himself to were.
And he that is at meschief shal be take,
And not slaine, but be brought unto the stake
That shal ben ordeined on eyther side;
Thider he shal by force; and ther abide.
Chaucer. The Knightes Tale.

And, after that, with sharpe speres strong,
They *foineden* eche at other wonder long. *Id.*

He hewed, and lashed, and *foined*, and thundered blows,
And every way did seek into his life!

Ne plate, ne mail, could ward so mighty throws,
But yielded passage to his cruel knife.
Faerie Queene.

He cares not what mischief he doth, if his weapon be out: he will *foin* like any devil; he will spare neither man, woman, nor child. *Shakspeare.*

Then both, no moment lost, at once advance
Against each other, armed with sword and lance:
They lash, they *foin*, they pass, they strive to bore
Their corslets, and the thinnest parts explore.
Dryden.

FO'ISON, *n. s.* Fr. *foison*; Lat. *fusio, profusio*. Plenty; abundance. A word now out of use.

Who fed the Egyptian Mary in the cave
Or in desert? no wight but Crist sans faille.
Five thousand folk it was as gret marvaille,
With loves five and fishes two, to fede;
God sent his *foyson* at hire grete nede.
Chaucer. The Man of Lawes Tale.

Be wilful to kill, and unskilful to store,
And look for no *foison*, I tell thee before. *Tusser.*

Nature should bring forth,
Of its own kind, all *foison*, all abundance,
To feed my innocent people. *Shakspeare. Tempest.*

FOIST, *v. a.* Fr. *fausser*; perhaps of Lat. *falsito*. To insert by forgery; or in a forced and improper manner.

Lest negligence or partiality might admit or *foist* in abuses and corruption, an archdeacon was appointed to take account of their doings. *Carew.*

To what purpose, I pray, is God's name hooked and haled into our idle talk? why should we so often mention him, when we do not mean any thing about him? would it not, into every sentence to *foist* a dog or a horse, be altogether as proper and pertinent?
Barrow.

FOI'STY, *adj.* } See FUSTY. Mouldy;
FOIS'TINESS, *n. s.* } fusty.

Dress mustard, and lay it in cellar up sweet,
Lest *foistiness* make it for table unmeet. *Tusser.*

FOIX (Gaston de), a nephew of Louis XII. of France, was born in 1489, and was the son of John de Foix, viscount of Narbonne. In 1512 he succeeded the duke of Longueville, in the command of the French army in Italy, and forced Peter Navarro, the Spanish general, to raise the siege of Bologna, relieved Brescia, and laid siege to Ravenna. His daring exploits, which procured him the name of the Thunderbolt of Italy, were productive, however, of no permanent advantage; and he fell at the battle of Ravenna, in which he defeated the Spaniards,

ter Sunday, in 1512. Louis XII., on hear- of his death, exclaimed, 'I would surrender ost every inch of ground I possess in Italy to ore to life my nephew and his brave comrades. l preserve us from many such victories!'

'oix (Louis de), a French architect, was ployed by Philip II., of Spain, in the :tion of the palace of the Escurial. He aid to have been in the confidence of don :los, by betraying which, he contributed the destruction of that prince; soon after ich he left Spain and returned to France. 1579 he was employed in the port of Bay- ie, and constructed the canal of the Adour. Foix was also, in 1610, the architect of the ver of Cordouan, at the mouth of the Ga- ine.

FOKIEN, a province of China, bounded on north by that of Tche-Kiang; east by the ; south by Quang-Tong, and west by Kian- . It is commodiously situated for navigation d commerce. The natives catch large quan- ies of fish, which they send to other parts of e empire. Its shores are indented with many ys; and there are many forts built on the ast. The air is hot, but pure and wholesome. ie mountains are disposed into a kind of am- itheatres, by the labor of the inhabitants, ith terraces one above another. The fields are atered with rivers and springs, which issue it of the mountains, and which the husband- en conduct so as to overflow the fields of rice hen they please, by pipes of bamboo. It roduces all the commodities common in China, articularly musk, precious stones, quicksilver, lk, iron, &c. The natives make hempen oth, calico, and all sorts of utensils. They nport cloves, cinnamon, pepper, sandal-wood, mber, coral, &c. The capital is Fou-tcheou- 'ou, or Fucherofu. As for Fokien, which most eographers make the capital, Grosier informs s there is no such place. The silks and cloth f Fokien are of extraordinary fineness and eauty. The port of Enfouy was formerly open o European vessels, but all the trade has been ince transferred to Canton. Considerable com- nerce is carried on between this province and Japan, Formosa, the Philippine Islands, Java, nd Siam. Every city is said to have a peculiar lialect. Fou-tcheou, the capital, is celebrated 'or its literati; besides which, there are other arge towns, Tsuen-Tschosu, Yeu-Ping, and Tchang-Tcheou. The population has been com- puted at 15,000,000.

FOLARD (Charles), an eminent French ge- neral, born at Avignon in 1669, of a noble fa- mily. He discovered an early passion for arms; which was so inflamed by reading Cæsar's Com- mentaries, that he enlisted at sixteen years of age. His father procured his discharge and im- mured him in a monastery; but he escaped about two years after, and entered again as a cadet. His inclination for military affairs recommended him to notice. M. de Vendome, who com- manded in Italy in 1720, made him his aid-de- camp; and soon after sent him with part of his forces into Lombardy. Here his services were such, that he had a pension of 400 livres settled upon him, and was honored with the cross of St. Louis. He distinguished him- self greatly at the battle of Cassano; where he received a wound in his left hand, which de- prived him of the use of it ever after. At this battle he conceived the first idea of columns, which he afterwards prefixed to his Commen- taries on Polybius. In 1706 Folard had orders to throw himself into Modena, to defend it against prince Eugene: where he was very near being assassinated. He received a dangerous wound in the thigh at the battle of Malplaquet, and was some time after made prisoner by prince Eugene. Being exchanged in 1711, he was made governor of Bourbourg. In 1714 he went to Malta, to assist in defending that island against the Turks. Upon his return to France he embarked for Sweden, to see Charles XII. He acquired the esteem and confidence of that monarch, who sent him to France to negociate the restoration of James II: but, that project being given up, he returned to Sweden, follow- ed Charles XII. in his expedition to Norway, and served under him at the siege of Frederick- shall. Folard then returned to France; and made his last campaign in 1710, as colonel under the duke of Berwick. From that time he ap- plied intensely to the study of the military art; and built his theories upon the foundation of his experience. He contracted an intimacy with count Saxe; and was chosen F. R. S. of London in 1749; and, in 1751, made a journey to Avignon, where he died in 1752, aged eighty- three. His chief works are, 1. Commentaries upon Polybius, 6 vols. 4to. 2. New Disco- veries in War. 3. A Treatise concerning the defence of Places, in French.

FOLCZ (John), originally a barber of Nu- remberg, and born at Ulm about the middle of the fifteenth century, became one of the most celebrated of the German poets belonging to the class called Mastersingers, or Suabian bards. They consisted of clubs or societies established for the cultivation of the old German poetry, and were principally composed of the lower classes. Strasburgh and Nuremberg were the cities in which were found the most famous societies of Mastersingers; but they also existed at Memin- gen, Ulm, and Augsbourg. Taverns were their usual places of meeting. The epoch of these bards lasted from 1350 to 1519, when Luther produced a reform in the German language; but the soci- eties continued, that of Strasburgh particularly, till the latter part of the eighteenth century. Folcz, distinguished himself by the invention of a multitude of new metres. He printed at Nu- remberg a great number of his poems. The earliest, finished in 1470, was imprinted, or en- graved on wood, in 1474, and reprinted in a collection which appeared in 1534 at Nurem- berg, in 3 vols. 4to. This includes Ein teutsch worhaftig poetisch ystori; an abridged History of the German Empire, in rhyme; and Vitæ Patrum, vel Liber Colacionum. Of these productions Fischer has given a description. in his Typographical Rarities, Mentz, 1800, 8vo.

FOLD, *n. s.* & *v. a.* Sax. ƿalæð, ƿalð; from Goth. *faldar*, to enclose. There is also a barb. Latin word, *faldagium* (a fold). The ground on

which sheep are confined; the place where sheep are housed; the flock of sheep; a limit; a boundary.

Then said he, O cruel Goddes! that governe
This world with binding of your word eterne,
And writen in the table of Athament
Your parlement and your eterne grant,—
What is mankind unto yhold
Than is the shepe that rouketh in the to *fold*.
Chaucer. The Knightes Tale.

Time drives the flocks from field *fold*,
When rivers rage and rocks grow cold;
And Philomel becometh dumb,
And all complain of cares to come. *Raleigh.*

We see that the *folding* of sheep helps ground, as well by their warmth as by their compost. *Bacon.*

His eyes he opened, and beheld a field
Part arable and tilth; whereon were sheaves
New reaped; the other part, sheep walks and *folds*.
Milton.

In thy book record their groans,
Who were thy sheep, and in their ancient *fold*
Slain. *Id.*

The star that bids the shepherd *fold*,
Now the top of heaven doth hold. *Id.*

And this you see I scarcely drag along,
Who yeaning on the rocks has left her young,
The hope and promise of my failing *fold*. *Dryden.*

The bridegroom sun, who late the earth espoused,
Leaves his star-chamber; early in the east
He shook his sparkling locks, head lively roused,
While Morn his couch with blushing roses drest;
His shines the Earth soon latcht to gild her flowers:
Phosphor his gold fleeced drove *folds* in their bowers,
Which all the night had grazed about the' Olympic towers. *Fletcher's Purple Island.*

FOLD, *n. s.*, *v. a.* & *v. n.* Sax. ꝑilꝺ, ꝑaldan; Goth. *faldan*. See the foregoing word. A double; a complication; an involution; one part added to another; one part doubled upon another. From the foregoing signification is derived the use of fold in composition. Fold signifies the same quantity added: as two-fold, twice the quantity; twenty-fold, twenty times repeated. To double; to complicate; to inclose; include; to close over another of the same kind; to join with another of the same kind.

The two leaves of the one door were *folding*, and the two leaves of the other door were *folding*.
1 *Kings* vi. 34.

Yet a little sleep, a little slumber, a little *folding* of the hands to sleep. *Prov.* vi. 10.

They be *folden* together as thorns. *Nah.* i. 10.

But other fell into good ground, and brought forth fruit; some an hundred *fold*, some sixty *fold*, some thirty *fold*. *Matt.*

As a vesture shalt thou *fold* them up. *Heb.* i. 12.

And if that excellent were hire beautee,
A thousand *fold* more vertuous was she.
Chaucer. The Doctoure's Tale.

She in this trice of time
Commits a thing so monstrous, to dismantle
So many *folds* of favour!
Shakspeare. King Lear.

I have seen her rise from her bed, unlock her closet, take forth paper, *fold* it, write upon't, read it, seal it, and again return to bed. *Shakspeare.*

We will descend and *fold* him in our arms. *Id.*

Witness my son, now in the shade of death,
Whose bright outshining beams thy cloudy wrath
Hath in eternal darkness *folded* up. *Id.*

The ancient Egyptian mummies were shrowded in a number of *folds* of linen, besmeared with gums.
Bacon's Nat. History.

At last appear
Hell bounds high reaching to the horrid roof,
And thrice three *fold* the gates: three *folds* were brass,
Three iron, three of adamantine rock. *Milton.*

Their martyred blood and ashes sow
O'er all the Italian fields, where still doth sway
The triple tyrant; that from these may grow
A hundred *fold*. *Id.*

Not with indented wave, the serpent then
Prone on the ground, as since; but on his rear
Circular base of rising *folds*, that towered
Fold above *fold*, a surging maze! *Id.*

Let the draperies be nobly spread upon the body, and let the *folds* be large; the parts should be often traversed by the flowing of the *folds*. *Dryden.*

Both furl their sails, and strip them for the fight;
Their *folded* sheets dismiss the useless air. *Id.*

Conscious of its own impotence, it *folds* its arms in despair, and sits cursing in a corner. *Collier.*

The inward coat of a lion's stomach has stronger *folds* than a human, but in other things not much different. *Arbuthnot.*

FOLENGIO (Theophilus), of Mantua, known also by the title of Merlin Coccaye, an Italian poet. He was born at Mantua in 1491, and became a Benedictine; but soon after quitted his habit, and, after leading a rambling life for some years, resumed it again. He wrote several works, mostly of a licentious nature; but is memorable for his macaronic verses. This mode of writing, which has not very frequently been imitated with success, consists in interweaving with Latin verse a number of words and phrases in the vernacular tongue, thrown in at random, and made to fit the metre by Latin terminations. Folingio, if not the inventor of macaronic verse, was the first who brought it into vogue. He died in 1544.

FOLIA'CEOUS, *adj.*
FO'LIAGE, *n. s.*
FO'LIATE, *v. a.*
FOLIA'TION, *n. s.*
FO'LIATURE, *n. s.*
FO'LIOMORT, *adj.*

Lat. *foliaceous, foliatus, foliatio*, from *folium*; Fr. *feuillage*. Consisting of laminæ or leaves. Leaves; tufts of leaves; the apparel of leaves to a plant. To beat into laminæ or leaves. Foliation is the act of beating into thin leaves; it is also one of the parts of the flower, being the collection of those fugacious colored leaves called petala, which constitute the compass of the flower, and sometimes guard the fruit which succeeds the foliation, as in apples and pears, and sometimes stand within it, as in cherries and apricots; for these, being tender and pulpous, and coming forth in the spring, would be injured by the weather if they were not lodged up within their flowers.—Quincy. Foliature, is the state of being hammered into leaves. Foliomort (*folium mortuum*), is a dark yellow; the color of a leaf faded: vulgarly called philomot.

Gold *foliated*, or any metal *foliated*, cleaveth.
Bacon.

The great columns are finely engraven with fruits and *foliage*, that run twisting about them from the very top to the bottom. *Addison.*

If gold be *foliated*, and held between your eyes and light, the light looks of a greenish blue.
Newton's Opticks.

A piece of another, consisting of an outer crust, a ruddy talky spar, and a blue talky *foliacious* spar.
Woodward on Fossils.

A flinty pebble was of a dark green colour and the terior cortex of a *foliomort* colour. *Id.*

And too
ie trees with *foliage*, cliffs with flowers are crownd,
are rills through walls of verdure warbling go,
nd wonder, love, and joy, the peasant's heart o'erflow. *Beattie.*

FOLIAGE, in architecture, used for the representations of flowers, leaves, branches, rinds, &c., whether natural or artificial, that are used for enrichments on capitals, friezes, pediments, &c.

FOLIATING OF GLASS PLATES FOR MIRRORS, the spreading the plates over, after they are polished, with quicksilver, &c., to make them reflect images. It is performed thus:—A thin blotting paper is spread on the table, and then a fine lamina or leaf of tin, called foil, is laid over the paper; upon this is poured mercury, which is to be distributed equally over the leaf with a hare's foot, or cotton: over this is laid a clean paper, and over that the glass plate, which is pressed down with the right hand, and the paper drawn gently out with the left; this being done, the plate is covered with a thicker paper, and loaded with a greater weight, that the surperfluous mercury may be driven out and the tin adhere more closely to the glass. When it is dried, the weight is removed, and the looking-glass is complete. Some add an ounce of marcasite melted by the fire; and, lest the mercury should evaporate in smoke, they pour it into cold water; and when cooled, squeeze through a cloth, or through leather. Some add a quarter of an ounce of tin and lead to the marcasite, that the glass may dry the sooner.

FOLIATING OF GLOBE GLASSES FOR MIRRORS, is done as follows. Take five ounces of quicksilver and one ounce of bismuth; of lead and tin half an ounce each: first put the lead and tin into fusion, then put in the bismuth; and, when that is also in fusion, let it stand till it is almost cold, and pour the quicksilver into it: after this take the glass globe, which must be very clean, and the inside free from dust: make a paper funnel, which put into the hole of the globe, as near the glass as possible, so that the amalgam, when poured in, may not splash, and cause the glass to be full of spots; pour it in gently, and move it about so that the amalgam may touch every where; if the amalgam begin to be curdly and fixed, hold it over a gentle fire, and it will easily flow again; and, if it be too thin, add a little more lead, tin, and bismuth to it. The finer and clearer the globe is, the better will the looking-glass be.

FO'LIO, *n. s.* Lat. *in folio.* A large book of which the pages are formed by a sheet of paper once doubled.

Plumbinus and Plumeo made less progress in knowledge, though they had read over more *folios*.
Watts on the Mind.

FOLK, *n. s.* } Sax. folc, from polgian,
FOLKS, *n. s.* } to follow; Swed. *folc*, *folgia*, to follow; Belg. *volk*,
FOLK'MOTE, *n. s.* } from Goth. *folgia*, to follow. It is properly a noun collective, and has no plural but by modern corruption. People, in familiar language; any kind of people as discriminated from others. It is now seldom used but in familiar or burlesque language.

Infinite ben the sorwe and the teres
Of olde *folk* and *folk* of tendre years
In all the town, for deth of this Theban.
Chaucer. The Knightes Tale

Those hills were appointed for two special uses, and built by two several nations. the one is that which you call *folkmotes*, built by the Saxons, and signifies in the Saxon a meeting of *folk*. *Spenser on Ireland.*

The river thrice hath flowed, no ebb between;
And the old *folk*, time's doting chronicles,
Say it did so a little time before. *Shakspeare.*

Anger is a kind of baseness: as it appears well in the weakness of children, women, old *folks*, and sick *folks*. *Bacon.*

When with greatest art he spoke,
You'd think he talked like other *folk*;
For all a rhetorician's rules
Teach nothing but to name his tools.
Hudibras.

Dorilaus, having married his sister, had his marriage in short time blest, for so are *folk* wont to say, how unhappy so ever the children after grow, with a son. *Sidney.*

Old good man Dobson of the green,
Remembers he the tree has seen,
And goes with *folks* to shew the sight. *Swift.*
He walked and wore a threadbare cloak;
He dined and supped at charge of other *folk*. *Id.*

When I call 'fading' martial immortality
I mean, that every age and every year
And almost every day, in sad reality
Some sucking hero is compelled to rear,
Who, when we come to sum up the totality
Of deeds to human happiness most dear,
Turns out to be a butcher in great business,
Affecting young *folks* with a sort of dizziness. *Byron.*

FOLKES (Martin), an English antiquary, mathematician, and philosopher, born at Westminster about 1690, a fellow of the Royal Society of London, and of the Academy of Sciences at Paris. He was admitted into the former at twenty-four years of age; made one of their council two years after; named by Sir Isaac Newton himself, as vice-president; and, after Sir Hans Sloane, became president. Coins, ancient and modern, were his great object: and his last production was a book upon the English Silver Coin, from the conquest to his own times. A table of all the English gold coins, drawn up by Mr. Folkes, was afterwards printed at the request of the Royal Society, before whom he laid his Remarks on the Standard Measure preserved in the Capitol of Rome, and a model of an ancient sphere preserved in the Farnesian palace. A representation of this sphere was published in Dr. Bentley's edition of Manilius. He died in London in 1754. Dr. Birch drew up materials for his life, which are preserved in the Anecdotes of Bowyer.

FOLKESTONE, a sea-port and market town of Kent, between Dover and Hythe, and which appears to have been a very ancient place, from

the Roman coins and British bricks often found in it. Stillingfleet and Tanner take it for the Lapis Tituli of Nennius. It was burnt by earl Godwin, and by the French in the reign of Edward III. It had formerly five churches, but has now only one. It is a member of the town and port of Dover; and has a weekly market and an annual fair. The houses are mostly of brick, and form three streets, which are narrow, irregular, and badly paved; in a clear day, from this town distinct views of the French coast may be obtained. Folkestone contains three chapels for Baptists, Quakers, and Methodists; also a good charity-school, founded by the celebrated Dr. Harvey, who was a native of this place. It is a prescriptive corporation, and consists of a mayor, twelve jurats, and twenty-four common-council-men, a recorder, town-clerk, and chamberlain. The custom-house has several riding-officers attached to it, on account of the number of smugglers who frequent the coast. On the heights is a strong battery, and this part of the coast is also defended by three martello towers. It is chiefly noted for the multitude of fishing boats that belong to its harbour, which are employed in the season in catching mackerel for London; to which they are carried by the mackerel boats of London and Barking. About Michaelmas, the Folkstone barks go to the Suffolk and Norfolk coasts, to catch herrings for the merchants of Yarmouth and Lowestoft. It is seven miles south-west of Dover, and seventy-two E. S. E. of London.

FOLKMOTE, or Folcmote, Sax. folcgemote, i. e. a meeting of the people, is compounded of folk, the people, and mote, or gemote, to meet; and signified originally, as Somner, in his Saxon Dictionary informs us, a general assembly of the people, to consider of and order matters of the commonwealth. Sir Henry Spelman says, the folcmote was a sort of annual parliament, or convention of the bishops, thanes, aldermen, and freemen upon every May-day yearly; where the laymen were sworn to defend one another and the king, and to preserve the laws of the kingdom; and then consulted of the common safety. But Dr. Brady infers from the laws of the Saxon kings of England, that it was an inferior court, held before the king's reeve or steward, every month, to do folk right, or compose smaller differences, from whence there lay appeal to the superior courts. Manwood mentions folcmote as a court holden in London, wherein all the folk and people of the city did complain of the mayor and aldermen, for misgovernment within the said city. According to Kennet, the folcmote was a common council of all the inhabitants of a city, town, or borough, convened often by sound of bell, to the mote, hall, or house; or it was applied to a larger congress of all the freemen within a county, called the shiremote, where formerly all knights and military tenants did fealty to the king, and elected the annual sheriff on the 1st of October; till this popular election, to avoid tumults and riots, devolved to the king's nomination, anno 1315, 3 Edw. I.

'The folc-gemot' says Mr. Turner, is often mentioned 'in the Saxon laws. It is established for ceap-men, or merchants, that they bring the men that they lead with them before the king's gerefa in the folc-gemot, and say how many of them there be, and that they take these men up with them, that they may bring them again to the folc-gemot, if sued. And when they shall want to have more men with them in their journey, they shall announce it as often as it occurs to the king's gerefa, in the witness of the folc-gemot.

'These folc-gemots were ordered not to be held on a Sunday; and if any one disturbed them by a drawn weapon he had to pay a wite of 120s. to the ealdorman.

'The following may oe considered as proceedings before a folc-gemot. Begmund having unjustly seized some lands of a monastery, when the ealdorman came to Ely, the offenders were summoned to the placitum of the citizens and of the hundred, several times, but they never appeared. The abbot did not desist, but renewed his pleading, both within and without the city, and often made his complaint to the people. At length the ealdorman, coming to Cambridge, held a great placitum of the citizens and hundreds, before twenty-four judges. There the abbot narrated before all, how Begmund had seized his lands, and though summoned had not appeared. They adjudged the land to the abbot, and decreed Begmund to pay the produce of his fishery to the abbot for six years, and to give the king the were; and, if he neglected to pay, they authorised a seizure of his goods.'

FOL'LICLE, *n. s.* Lat. *folliculus*. A cavity in any body with strong coats. A term in botany, signifying the seed-vessels, capsula seminalis, or case, which some fruits and seeds have over them; as that of the alkengi, pedicularis, &c.—*Quincy*.

Although there be no eminent and circular *follicle*, no round bag or vesicle, which long containeth this humour; yet is there a manifest receptacle of choler from the liver into the guts. ***Browne.***

FOLLICULI are defined by Linnæus to be small glandular vessels distended with air, which appear on the surface of some plants; as at the root of water milfoil, and on the leaves of aldrovanda. In the former, the vessels in question are roundish, with an appearance like two horns; in the latter pot-shaped, and semicircular.

FOLLIS, or Folis, anciently signified a little bag or purse; whence it came to be used for a sum of money, and very different sums were called by that name: thus the scholiast on the Basilics, mentions a follis of copper which was worth but the twenty-fourth part of the miliarensis; the Glossæ Nomicæ, quoted by Gronovius and others, one of 125 miliarenses, and another of 250 denarii, which was the ancient sestertium; and three different sums of eight, four, and two pounds of gold, were each called follis. According to the scholiast, the ounce of silver, which contained five miliarenses of sixty in the pound, was worth 150 folles of copper. The glossographer, describing a follis of 250 denarii, says it was equal to 312 lbs. 6 oz. of copper; and as the denarius of that age was the eighth part of an ounce, an ounce of silver must have been worth 120 ozs. of copper; and, there-

, the scholiast's follis was an ounce of copper, equal to the glossographer's nummus. But, Constantine's copper money weighed a quarof a Roman ounce, the scholiast's follis and glossographer's nummus contained four of m, as the ancient nummus contained four es.

FOL'LOW, *v. a.* & *v. n.* } Sax. folgian; Dut. FOL'LOWER, *n. s.* } *volgen*, from Gr. ολFOL'LOWING, *a. part.* } κος, a trace, or ελκω, draw. It is applied to persons and things, l signifies the going in order, in a trace or e: it is taken literally for the motion of one ysical body in relation to another: to follow as a procession; to go after in point of time, and the same place, as persons follow each other the grave: to follow in relation to things is d either simply of the order in which they go, of such as go by a connexion between them. llow is used in abstract propositions—as sin d misery follow each other as cause and effect. e *Crabbe*. It is also used in the sense of itation; to copy as a pupil; to take up the inions of others; to be subordinate to them;—rtizans are followers, hangers on to great men; rvants, retinues, are all followers:—busily to rsue an object; to take up any pursuit, and ligently to persevere in it, is to follow. It is ten explained as meaning to succeed; to ensue; pursue; to continue; and to imitate. But ese, though they assist us in discovering the ense, are far from being strictly synonymous ith this word, or with each other.

A better preest I trowe that nowher non is,
He waited after no pompe ne reverence,
Ne maked him no spiced conscience.
But Cristes lore, and his apostles twelve,
He taught—but first he *folwed* it himselve.
Chaucer. Prologue to Canterbury Tales.

The nexte houre of Mars *folwing* this
Arcite unto the temple walked is
Of fierce Mars, to don his sacrifice
With all the rites of his payen wise.
Id. The Knightes Tale.

Where Rome keepeth that which is ancienter and better, others, whom we much more affect, leaving it for newer, and changing it for worse, we had rather *follow* the perfections of them whom we like not, than in defects resemble them whom we love. *Hooker.*

They bound themselves to his laws and obedience; and in case it had been *followed* upon them, as it should have been, they should have been reduced to perpetual civility. *Spenser.*

Little gallant, you were wont to be a *follower*; but now you are a leader; whether had you rather lead mine eyes, or eye your master's heels?
Shakspeare. Merry Wives of Windsor.

Such smiling rogues as these sooth every passion,
That in the nature of their lords rebels;
As knowing nought, like dogs, but *following*.
Id. King Lear.

Welcome all that lead or *follow*
To the oracle of Apollo. *Ben Jonson.*

I laugh, when those who at the spear are bold
And vent'rous, if that fail them, shrink and fear
What yet they know must *follow*, to endure
Exile, or ignominy, or bonds, or pain. *Milton.*

Yet doubt not but in valley and in plain
God is as here, and will be found alike
Present, and of his presence many a sign
Still *following* thee, still compassing thee round
With goodness and paternal love, his face
Express, and of his steps the track divine. *Id.*

Up he rode,
Followed with acclamation and the sound
Symphonious of ten thousand harps that tuned
Angelic harmonies. *Id.*

The understanding, that should be eyes to the blind faculty of the will, is blind itself; and so brings all the inconveniences that attend a blind *follower*, under the conduct of a blind guide. *South's Sermons.*

The true profession of christianity inviolably engages all its *followers* to do good to all men.
Sprat's Sermons.

Some pious tears the pitying hero paid,
And *followed* with his eyes the fleeting shade.
Dryden's Æneid.

And forced Æneas, when his ships were lost,
To leave his *followers* on a foreign coast. *Id.*

We *follow* fate, which does too fast pursue. *Id.*

To tempt them to do what is neither for their own, nor the good of those under their care, great mischiefs cannot but *follow*. *Locke.*

Dangerous doctrine must necessarily *follow*, from making all political power to be nothing else but Adam's paternal power. *Id.*

Fair virtue, should I *follow* thee,
I should be naked and alone,
For thou art not in company,
And scarce art to be found in one. *Evelyn.*

Signs *following* signs, lead on the mighty year
Pope.

Let not the muse then flatter lawless sway,
Nor *follow* fortune where she leads the way. *Id.*

The studious head, or generous mind,
Follower of God, or friend of human kind,
Poet or patriot, rose but to restore
The faith and moral nature gave before. *Id.*

I can't complain whose ancestors are there:
Goneis Radulphus eight-and forty manors
(If that my memory doth not greatly err)
Were their reward for *following* Billy's banners.
Byron.

'What *followed*?'—'A shot laid me on the back,
'And I became a prisoner to the foe. *Id.*

FOLLY. Fr. *folie*. See FOOL. 'Folly,' says Crabbe, 'is the abstract of foolish, and characterises the thing; foolery, the abstract of fool, and characterises the person: it signifies want of understanding; weakness of intellect; criminal weakness, having its source in depravity of mind: an act of negligence, or passion, unbelieving gravity or wisdom: in this sense it has a plural.

I say that it is no *foulie* to chaunge conseil whan the thing is changed, or elles whan the thing semeth otherwise than it semed afore.
Chaucer. The Tale of Melibeus.

For who my passed *follies* now pursewes
Beginnes his own, and my old fault renewes.
Spenser. Hymns.

Thinkest thou, that duty should have dread to speak,
When power to flattery bows? To plainness honour
Is bound, when majesty to *folly* falls. *Shakspeare.*

Love is blind, and lovers cannot see
The pretty *follies* that themselves commit;
For if they could, Cupid himself would blush
To see me thus transformed into a boy. *Id.*

He finds, where'er he succour might expect,
Confusion, *folly*, treachery, fear, neglect. *Marvell.*

Heaven hath timely tried their youth,
Their faith, their patience and their truth;

And send them here through hard assays
With a crown of deathless praise.
To triumph in victorious dance
O'er sensual *folly* and intemperance. *Milton.*

Would'st see the world abroad and have a share
In all the *follies* and the tumults there. *Cowley.*

Thy hum'rous vein, thy pleasing *folly*,
Lies all neglected, all forgot. *Prior.*

Leave such to trifle with more grace and ease,
Whom *folly* pleases, or whose *follies* please. *Pope.*

This is *folly*, childhood's guide,
This is childhood at her side. *Hawkesworth.*

Tired with the busy crowds that all the day
Impatient throng where *Folly's* altars flame,
My languid powers dissolve with quick decay,
Till genial sleep repair the sinking frame.
Beattie.

FOMENT', *v. a.* FOMENTA'TION, *n. s.* FOMENT'ER, *n. s.* } Fr. *fomenter*; Lat. *fomentor*. To cherish with heat; to bathe with warm lotions; to encourage; to support; to cherish; to soothe. A fomentation is partial bathing, called also stuping, which is applying hot flannels to any part, dipped in medicated decoctions, whereby the steams breathe into the parts, and discuss obstructed humors.

Fomentation calleth forth the humour by vapours; but yet, in regard of the way made by the poultis, draweth gently the humours out; for it is a gentle *fomentation*, and hath withal a mixture of some stupefactive. *Bacon's Natural History.*

These fatal distempers, as they did much hurt to the body politick at home, being like humours stirred in the natural without evacuation, so did they produce disadvantageous effects abroad; and better had it been that the raisers and *fomenters* of them had never sprung up. *Howel.*

Every kind that lives,
Fomented by his virtual power, and warmed. *Milton.*

Blame then thyself, as reason's law requires,
Since nature gave, and thou *foment'st* my fires.
Dryden.

They are troubled with those ill humours, which they themselves infused and *fomented* in them.
Locke.

He *fomented* the head with opiates to procure sleep, and a solution of opium in water to *foment* the forehead. *Arbuthnot.*

The medicines were prepared by the physicians, and the lotions or *fomentations* by the nurses. *Id.*

FOMENTATIONS are usually applied as warm as the patient can bear, in the following manner:—Two flannel cloths are dipped into the heated liquor, one of which is wrung as dry as the necessary speed will admit, then immediately applied to the part affected; it lies on until the heat begins to go off, and the other is in readiness to apply at the instant in which the first is removed: thus these flannels are alternately applied, so as to keep the affected part constantly supplied with them warm. This is continued fifteen or twenty minutes, and repeated two or three times a day. Every intention of relaxing and soothing by fomentations may be answered as well by warm water alone, as when emollients are boiled in it; but when discutients or antiseptics are required, such ingredients must be called in as are adapted to that end. The degree of heat should never exceed that of producing a pleasing sensation: great heat produces effects very opposite to that intended by the use of fomentations.

FON, *n. s.* Scott. A word now obsolete. A fool; an idiot.

Sicker I hold him for a greater *fon*,
That loves the thing he cannot purchase. *Spenser.*

FOND, *n. s.*, *v. a.* & *v. n.* FOND'LE, *v. a.* FOND'LER, *n. s.* FOND'LING, *n. s.* FOND'LY, *adv.* FOND'NESS, *n. s.* From the Saxon fandian, to gape; or the German *finden*, to find or seek. In Scottish it is *fon*. Chaucer uses *fonne* in the sense of to doat; to be foolish. It is now applied to the manner of displaying a too vehement and childish attachment, and generally signifies foolish; silly; indiscreet; imprudent; injudicious; foolishly tender; injudiciously indulgent; pleased in too great a degree; foolishly delighted. These senses apply to all the parts of the word fond.

He was beaten out of all love of learning by a *fond* school-master. *Ascham.*

Fondness it were, for any, being free,
To covet fetters, though they golden be. *Spenser.*

That the Grecians or Gentiles ever did think it a *fond* or unlikely way to seek men's conversion by sermons, we have not heard. *Hooker.*

How will this fadge? My master loves her dearly;
And I, poor monster, *fond* as much on him;
And she, mistaken, seems to doat on me. *Shakspeare.*

Tell these sad women,
'Tis *fond* to wail inevitable strokes,
As 'tis to laugh at them. *Id. Coriolanus.*

They err, that either through indulgence to others, or *fondness* to any sin in themselves, substitute for repentance any thing that is less than a sincere resolution of new obedience, attended with faithful endeavour, and meet fruits of this change. *Hammond.*

Thou see'st
How subtly to detain thee I devise,
Inviting thee to hear while I relate;
Fond! were it not in hope of thy reply. *Milton.*

As we should not be sour, so we ought not to be *fond*. *Barrow.*

'Twas not revenge for grieved Apollo's wrong
Those ass's ears on Midas' temple hung;
But *fond* repentance of his happy wish. *Waller.*

The bent of our own minds may favour any opinion or action, that may shew it to be a *fondling* of our own.
Locke.

Like Venus I'll shine,
Be fond and be fine. *Addison.*

I, *fond of* my well-chosen seat,
My pictures, medals, books complete. *Prior.*

Any body would have guessed Miss to have been bred up under a cruel stepdame, and John to be the fondling of a tender mother.
Arbuthnot's John Bull.

Fondly or severely kind. *Savage.*

Even before the fatal engine closed,
A wretched sylph too *fondly* interposed:
Fate urged the shears, and cut the sylph in twain.
Pope.

Some valuing those of their own side or mind,
Still make themselves the measure of mankind:
Fondly we think we merit honour then,
When we but praise ourselves in other men. *Id.*

Bred a *fondling* and an heiress,
Dressed like any lady may'ress;
Cockered by the servants round,
Was too good to touch the ground. *Swift*

They are allowed to kiss the child at meeting and parting; but a professor, who always stands by, will not suffer them to use any *fondling* expressions. *Id.*

Corinna, with that youthful air,
Is thirty, and a bit to spare:
Her *fondness* for a certain earl
Began when I was but a girl. *Id.*

Some are so *fond* to know a great deal at once, and love to talk of things with freedom and boldness before they thoroughly understand them. *Watts.*

This is *fond*, because it is the way to cheat thyself. *Tillotson.*

Your extreme *fondness* was perhaps as displeasing to God before, as now your extreme affliction. *Temple.*

But reason with your *fond* religion fights;
For many gods are many infinites. *Dryden.*

Fame is in itself a real good, if we may believe Cicero, who was perhaps too *fond of* it. *Id.*

——————: upon a tone
A touch of hers, his blood would ebb and flow,
And his cheek change tempestuously—his heart
Unknowing of its agony.
But she in these *fond* feelings had no share:
Her sighs were not for him; to her he was
Even as a brother—but no more.
Byron. The Dream.

FONE, *n. s.* Plural of foe. Obsolete.

A barbarous troop of clownish *fone*. *Spenser.*

FONG-YANG, a city of China, in the province of Kiang-Nan, situated on a mountain, which hangs over the Yellow River, and encloses with its walls several fertile little hills. Its jurisdiction is very extensive, comprehending eighteen cities; five of which are of the second, and thirteen of the third class. As this was the birth-place of the emperor Hong-Vou, chief of the preceding dynasty, he formed a design of rendering it a magnificent city, and making it the seat of empire. After having expelled the western Tartars, who had taken possession of China, he transferred his court hither, and named the city Fong-Yang, i. e. the Place of the Eagle's Splendor. His intention was to beautify and enlarge it: but the inequality of the ground, the scarcity of fresh water, and above all the vicinity of his father's tomb, made him change his design. By the unanimous advice of his principal officers he established his court at Nan-King, and put a stop to the intended works, and nothing was finished but three monuments, which still remain. The extent and magnificence of these show what the beauty of this city would have been, had the emperor pursued his original design. The first is the tomb of his father, to decorate which no expense was spared: it is called Hoan-Lin, or the Royal Tomb. The second is a tower of an oblong form, and 100 feet high. The third is a magnificent temple erected to the god Fo. At first it was only a pagod to which Hong-Vou retired after having lost his parents, and where he was admitted as an inferior domestic (See Hong-Vou); but, as soon as he mounted the throne, he caused this superb temple to be raised out of gratitude to the Bonzes, who had received him in his distress, and assigned them a revenue sufficient for the maintenance of 300 persons, under a chief of their own sect, whom he constituted a mandarin, with power of governing them independent of the officers of the city This pagod was supported as long as this dynasty lasted; but that of the eastern Tartars, which succeeded, suffered it to fall to ruin.

FONSECA (Eleanor, marchioness de), a modern Neapolitan political writer, was born in Naples about 1768, and married the marquis de Fonseca, a Spanish nobleman settled in that city in 1784. She was an attendant on the late queen; but having given offence to her majesty, and the English minister, she was dismissed, and forbidden to appear again at court. She now engaged in her studies, and assisted the celebrated Spallanzani in his scientific researches. On the breaking out of the French revolution, she became one of its warmest partizans: and engaged in various intrigues against her country. In 1799, the king and royal family being obliged to quit Naples, the Lazaroni rose and threatened the lives of those who were in the French interest; among whom the marchioness de Fonseca narrowly escaped their fury. When her party obtained the ascendancy, she commenced the Neapolitan Monitor, a journal in which she vehemently attacked the royal family, and especially the queen. Madame Fonseca was in the zenith of her fame when the measures of cardinal Ruffo obliged the French to quit Naples, and she was persuaded to seek her safety in flight; but she refused, and the cardinal caused her to be arrested. She was hanged July 29th, 1790.

FONT, *n. s.* Lat. *fons*; Fr. *fonte*. A stone vessel in which the water for holy baptism is contained in the church.

The presenting of infants at the holy *font* is by their godfathers. *Hooker.*

The time is come, a knave child she bere;
Mauricius at the *font*-stone they him calle.
Chaucer. The Man of Lawes Tale

I have no name, no title;
No, not that name was given me at the *font*.
Shakspeare

There the large olive rains its amber store,
In marble *fonts*. *Byron. Don Juan*

Font was anciently used for the place, whether river, lake, or artificial reservoir, in which persons received their initiation into Christianity by the ceremony of immersion. It is now generally confined to those marble vessels in the churches in which the water for the sprinkling of infants is kept. Great Britain can boast of many extraordinary fonts highly interesting to the ecclesiastical antiquary. That of Bridekirk, in Cumberland, is allowed to be of Danish origin; and that which was recently removed, in the spirit of modern improvement, from the church of St. Peter in the East, Oxford, exhibited proofs of an antiquity nearly as early. The font in St. Mary's church, Lincoln, dated 1340, is handsome and of good proportions, as is the elaborately sculptured one in Winchester cathedral.

FONTAINBLEAU, a town of France, in the department of the Seine and Marne, and chief place of a canton in the district of Melun. It is celebrated for its magnificent palace, once the general autumnal residence of the kings of France. It was erected in the thirteenth century, and considerably improved by Louis XIV. and

XV. It is a vast irregular pile of building; surrounded by the forest of Fontainbleau, anciently called the forest of Bierre, of a circular form, and said to contain 26,480 acres. The town and chateau stand in the centre. The town principally consists of one street, of considerable length. Hither Buonaparte brought the royal family of Spain, and made a memorable treaty with them, in 1807. Here also he first resigned his imperial dignity. The town is said to contain a population of 9000.

FONTAINE (John de la), a celebrated French poet, was born at Chateau-Thierri in Champagne, July 8th, 1621. At nineteen he entered amongst the Oratorians, but quitted that order in eighteen months. At the age of twenty-two, on hearing an ode of Malherbe's read, upon the assassination of Henry IV., he was so taken with it, that the poetical fire, which had before lain dormant within him, seemed to be kindled from that of Malherbe. He read his works with those of the best Latin and Greek authors, as well as the best compositions in French and Italian. Some time afterwards he married a daughter of a lieutenant-general, a relation of the great Racine. This young lady was remarkable for the delicacy of her wit, and Fontaine never composed any work without consulting her. The famous duchess of Bouillon, niece to cardinal Mazarine, being exiled to Chateau-Thierri, took particular notice of Fontaine. Upon her recall, he followed her to Paris, where he obtained a pension, and met with many friends and patrons at court. She took him to live at her house, where, divested of domestic concerns, he cultivated an acquaintance with all the great men of the age. It was his custom, after he was fixed at Paris, to go every year, in September, to Chateau-Thierri, and visit his wife, carrying with him Racine, Despreaux, Chapelle, and other celebrated writers. After the death of M. de la Sabliere, he was invited into England, particularly by St. Evremond, who promised him all the comforts of life; but the difficulty of learning English, and the liberality of the duke of Burgundy, prevented his voyage. About the end of 1692 he fell dangerously ill, made a general confession, and, before he received the sacrament, sent for the gentlemen of the French Academy, and in their presence declared his sincere compunction for having composed his Tales; a work which he said he could not reflect upon without the greatest detestation. He survived this illness two years, living in the most exemplary manner, and died 13th of March 1695, aged seventy-four. He had one son by his wife in 1660. At the age of fourteen he put him into the hands of M. de Harlay, the first president, recommending to him his education and fortune. Having been a long time without seeing him, he happened to meet him one day visiting, without recollecting him, and mentioned to the company that he thought that young man had a good deal of wit. When they told him it was his own son, he answered, 'Ha? truly, I am glad of it.' His descendants were before the revolution, exempted in France from all taxes and impositions. According to D'Alembert, Fontaine, 'if not the greatest, is the most singularly original of all the writers of the age of Louis XIV. the most an object of despair to imitators, and the writer whom it would cost nature most pains to reproduce.'

FONTAINE L'EVEQUE, in the department of the North, and ci-devant province of Hainault, between the Sambre and Meuse, three miles west of Charleroi, and ten east of Mons. It was ceded to France in 1667. Near it the French were defeated by the troops of the allies under the prince of Orange, in June 1794.

FONTAINES (Peter Francis), a French critic, born at Rouen in 1685. At fifteen he entered into the society of the Jesuits, and at thirty quitted it, though he was a priest, and had a cure in Normandy. Having excited some attention at Paris by his critical productions, the abbé Bignon in 1724 committed to him the Journal des Sçavans. In 1731 he began a work entitled Nouvelliste du Parnasse, ou Reflexions sur les Ouvrages Nouveaux; but only proceeded to two volumes; the work having been suppressed by authority, from the incessant complaints of authors ridiculed therein. In 1735 he obtained a new privilege for a periodical production entitled, Observations sur les Ecrits Modernes; which, after continuing to thirty-three volumes, was suppressed in 1733. Yet in 1744 he published another weekly paper, called Jugemens sur les Ouvrages Nouveaux which proceeded to eleven volumes; the last two being completed by other hands. In 1745 he was attacked with a disorder in the breast which ended in a dropsy that proved fatal in five weeks. The abbé de la Porte, published, in 1757, L'Esprit de l'Abbè des Fontaines, in 4 vols. 12mo. with his Life, a catalogue of his works, and of writings against him.

FO'NTANEL, *n. s.* Fr. *fontanelle*. An issue; a discharge opened in the body.

A person pletorick, subject to hot defluxions, was dvised to a *fontanel* in her arm.
Wiseman.

FONTA'NGE, *n. s.* From the name of the first wearer. A knot of ribands on the top of the head-dress. Out of use.

Those old-fashioned *fontanges* rose an ell above the head: they were pointed like steeples, and had long loose pieces of crape, which were fringed, and hung down their backs. *Addison.*

FONTENAY (John Baptist Blain De), a painter of fruits and flowers, born at Caen in 1654. Louis XIV. gave him a pension, and an apartment in the Louvre. His fruits and flowers have all the freshness of nature; the very dew seems to trickle down their stalks, with all the lustre and transparency of the diamond, while the insects upon them seem perfectly alive. He died at Paris in 1715.

FONTENAY, ci-devant Le-Comte, the capital of the department of the Vendée, seated in a fertile vale on the Vendée, and containing about 6600 inhabitants. It has a good trade in cattle, mules, woollen cloths, &c., with three annual fairs. It lies near the sea, twenty-eight miles north-east of Rochelle

FONTANA (Felix), a distinguished Italian physiologist and philosopher, was born 15th of April 1730, at Pomarolo, in the Tyrol.

He began his education at Roveredo, and pursued it in the schools of Verona and Parma; whence he was afterwards removed to the universities of Padua and Bologna. He then visited Rome, and Florence, where he obtained from the emperor Francis I., then grand duke of Tuscany, the appointment of professor of philosophy at Pisa; but the grand duke Peter Leopold (also afterwards emperor) invited him to settle at Florence, and gave him an establishment as fisico or naturalist, and director of the cabinet of natural history to his household. In 1757 Fontana engaged in an investigation, tending to confirm the doctrines of Haller respecting the irritability of the muscles, considered as a distinct inherent quality of those organs, and Haller published several of his letters as a part of his own Memoires upon that subject, Florence, 1775. One of the most important of Fontana's works is his Ricerche fisiche sopra 'l veneno della vipera, Lucca, 1767; containing a great variety of experiments, calculated to show that the poison of the viper acts by mixing with the blood, and destroying the irritability of the muscles to which it is conveyed. In 1766 our author published an essay entitled Nuove Osservazioni sopra i Globetti rossi del Sangue, confuting the assertions which had lately been advanced by Della Torre, respecting the complicated structure and changes of form of the globules of the blood. In the next year Osservazioni sopra la Ruggine del Grano, describing an animalcule like an eel, to which he attributes the rust of coin. There is also a Lettre sur l'ergot. Journ. Phys. VII. p. 42. The Lettera sopra le Idatidi e le Tenie, Opuscoli Scelti. VI. p. 108, Milan, 1783, contains an account of the hydatids which produce the symptoms of vertigo in sheep.

Fontana entered also minutely, but not very accurately, into the chemical discoveries which occupied so much attention throughout Europe in the latter half of the last century, and seems to have had the merit of first applying the discoveries of Priestley respecting nitric oxide to the examination of the qualities of the atmosphere, by means of the eudiometer. This is the subject of his Descrizione e usi di alcuni stromenti per misurar la salubrità dell' aria, 8vo. Flor. 1774, 4to. 1775; and it is further illustrated in his Recherches Physiques sur la Nature de l'Air Dephlogistiqué et de l'Air Nitreux, 8vo. Par. 1776. The Philosophical Transactions for 1779, p. 187, contain his Experiments and Observations on the Inflammable Air breathed by various Animals, consisting of a repetition of Scheele's attempt to breathe hydrogen gas. To the Memoirs of the Italian Society Fontana also contributed several short essays.

In 1790 our author remarks that his chemical pursuits had, of late, been interrupted by the attention required for the completion of his wax models of anatomical subjects, and by the duplicates which he was preparing for the cabinet of Vienna at the request of the emperor. At a later period, a series of copies of these models was ordered by Buonaparte to be sent to Paris; but, it being there found inferior to the preparations already existing in the Ecole de Medicine, it was sent to Montpelier. Fontana was latterly engaged in the preparation of a colossal model of a man, built up anatomically of all his component parts, represented in wood; but this design he never completed. Wearing the habit of an ecclesiastic (though he never, we believe, took orders), Fontana was called abbé, and treated with great respect by the French generals on their irruptions into Tuscany in 1799; a circumstance which gave rise to a jealousy on the part of his Imperial patrons, and he was for a short time imprisoned, on the re-establishment of the Austrian authorities. His last illness arose from a fall from his horse, in January 1806: he died the 9th of March of that year, and was buried near the tomb of Galileo, in the church of the Holy Cross, Florence.

FONTANA (George), a distinguished Italian mathematician, brother of the preceding, was born in 1735, and educated at Roveredo and Rome, where he entered the order of the Pia Schola. He early formed an intimacy with the marquis Julio Fagnani, who inspired him with a taste for the mathematics. In 1763 count de Firmian appointed him professor of logic and metaphysics, and director of the library, at Pavia. Five years after, he succeeded Boscovitch in the chair of mathematics, and filled it with the greatest reputation during nearly thirty years. In 1796 he was appointed a member of the legislative body of the Cisalpine republic. After the battle of Marengo, having become professor emeritus of the university, he removed to Milan. On the new organization of the republic of Italy, he became a member of the electoral college De' Dotti; but, in the midst of his literary and political labors, was seized by a violent fever, which caused his death, August the 24th, 1803.

FONTANES (M. de), a political writer and member of the French Institute, was born of a noble family at Mort in 1761. He edited in the commencement of the French revolution a journal, entitled The Moderator, and after the fall of Robespierre joined La Harpe and others in Le Memorial, which was, together with about forty more of the same description, suppressed by the National Convention on the 6th of September, 1797, the proprietors, editors, &c., being all included in a common sentence of banishment. M. de Fontanes now came to England, where he contracted an intimacy with M. de Chateaubriand, in company with whom he returned to his native country, and joined Messrs. Ronald and La Harpe in conducting the Mercure de France. Shortly after he obtained a seat in the corps legislatif, of which body he became the president. In 1808 he was appointed grand-master of the university of Paris; and, in 1814, possessing the dignity of a senator, he made a decided speech in favor of the restoration of the Bourbons. He was placed on the committee for drawing up the constitutional charter; and, on the re-establishment of that body, raised to the peerage. M. de Fontaines died at Paris, March 17th, 1821.

FONTENELLE (Bernard de), a celebrated French author, born in 1657. He discharged

the office of perpetual secretary to the Academy of Sciences above forty years with universal applause; and his History of that Academy throws great light upon their memoirs. In his poetical performances, and his Dialogues of the Dead, the spirit of Voiture was discernible, though more extended and more philosophical. His Plurality of Worlds is a singular work, the design of which was to present that part of philosophy to view in a pleasing dress. In his advanced years, he published comedies, which were little fitted to the stage; and An Apology for Des Cartes's Vortices. Voltaire, who declares him to have been the most universal genius the age of Louis XIV. produced, says, 'We must excuse his comedies, on account of his age, and his Cartesian opinions, as they were those of his youth.' He died in 1756, nearly 100 years old.

FONTENOY, a village of France, in the department of Yonne, and ci-devant duchy of Burgundy, remarkable for a bloody battle, in 841, between the Germans and the French, in which the Germans were defeated, and above 100,000 men killed. It lies twenty miles south-east of Auxerre.

FONTEVRAULD, a town of France, in the department of Maine and Loire, and late province of Anjou; famous for its abbey, in the church of which several kings and queens of England lie interred. It is six miles south-east of Saumur, and 160 south-west of Paris.

FONTEVRAULD, or FRONTEVAUX, ORDER OF, in ecclesiastical history, a religious order instituted by Robert d'Arbrissel, about the end of the eleventh century; taken under the protection of the holy see, by pope Pascal II. in 1106; confirmed by a bull in 1113, and invested by his successors with extraordinary privileges. The chief of this order is a female, who is appointed to inspect both the monks and the nuns. It is divided into four provinces, which are those of France, Aquitaine, Auvergne, and Bretagne, in each of which they have several priories.

FONTICULUS, or FONTANELLA, in surgery, an issue, seton, or small ulcer, made to eliminate the latent corruption of the body.

FONTINALIA, or FONTANALIA, in antiquity, a religious feast held among the Romans in honor of the deities who presided over fountains or springs. Varro says, it was the custom to visit the wells on those days, and to cast crowns into fountains. Scaliger, in his conjectures on Varro, takes this not to be a feast of fountains in general, as Festus insinuates, but of the fountain which had a temple at Rome, near the Porta Capena, called also Porta Fontinalis; and that of this fountain Cicero speaks in his second book De Legibus. The fontinalia were held on the 13th of October.

FONTINALIS, water moss, in botany, a genus of the natural order of musci, belonging to the cryptogamia class. The anthera is hooded; the calyptra, or covering of the anthera, sessile, enclosed in a perichætium or empalement of leaflets different from those of the rest of the plant. There are four species, all natives of Britain. They grow on the banks of rivulets, and on the trunks of trees. The most remarkable is the F. antipyretica, with purple stalks. The Scandinavians line the insides of their chimneys with this moss, to defend them against the fire; for, contrary to the nature of other mosses, it is difficult of combustion.

FOOD, *n. s.* } Gr. Βοτειν; Low German,
FOOD'FUL, *adj.* } *fode*, or *foder*; Sax. fæ'ban;
FOOD'Y, *adj.* } Dutch, *veeden*, to feed; Scot. *feed*. The general term for what is eaten: regimen and diet are specific; both are particular modes of living: the latter respects the quality of food; the former the quantity, as well as quality. Food specifies no circumstances, and is applicable to all living creatures. See Crabbe. Food, then, is victuals; provision for the mouth; any thing that nourishes: the adjectives signify full of food; plenteous: eatable; fit for food.

Worldely *fode* and sustenaunce I desire none;
Soche living as I finde, soch wol I take,
Rotes that growen on the craggy stone
Shal me suffise with water of the lake.
Chaucer. Lament of Mary Magdeleine.

On my knees I beg,
That you'll vouchsafe me raiment, bed, and *food*.
Shakspeare.

Give me some musick; musick, moody *food*
Of us that trade in love. *Id. Antony and Cleopatra.*

O dear son Edgar,
The *food* of thy abused father's wrath,
Might I but live to see thee in my touch,
I'd say I had eyes again. *Id. King Lear.*

To vessels, wine she drew;
And into well-sewed sacks poured *foody* meal.
Chapman.

Under my lowly roof thou hast vouchsafed
To enter, and these earthly fruits to taste;
Food not of angels, yet accepted so,
As that more willingly thou could'st not seem
At heaven's high feasts t' have fed. *Milton.*

They give us *food*, which may with nectar vie,
And wax that does the absent sun supply. *Waller.*

There Tityus was to see, who took his birth
From heaven, his nursing from the *foodful* earth.
Dryden.

FOOD. Although in the article ALIMENT we have presented the reader with extensive Tables of human food, and in that of MEDICINE and STOMACH purpose to treat more fully of the modern theories of digestion, we feel disposed here to offer for the benefit of our unprofessional readers some general observations on the subject of diet, in the course of which we shall be largely indebted to the late valuable work of Dr. Paris on this subject.

The most remarkable distinction of foods, in a medical view, is into those which are already assimilated into the animal nature, and such as are not. Of the first kind are animal substances in general; which, if not entirely similar, are nearly so, to our nature. The second comprehends vegetables, which are much more difficultly assimilated. But as the nourishment of all animals, even those which live on other animals, can be traced originally to the vegetable kingdom, it is plain, that the principle of all nourishment is in vegetables. Though there is perhaps no vegetable which does not afford nourishment to some species of animal or other; yet, with regard to mankind, a very considerable distinction is to be made. Those vegetables which are of a mild,

bland, agreeable taste, yield proper nourishment; while those of an acrid, bitter, and nauseous taste are generally improper. We use, indeed, several acrid substances as food; but the mild, the bland, and palatable, are in the largest proportion in almost every vegetable. Such as are very acrid, and at the same time of an aromatic nature, are not used as food, but as spices or condiments which answer the purposes of medicine rather than any thing else. Sometimes, indeed, acrid and bitter vegetables seem to be admitted as food. Thus celery and endive are used in common food, though both are substances of considerable acrimony; but they are previously blanched, which almost totally destroys their acrimony. Or, if we employ other acrid substances, we generally, in a great measure, deprive them of their acrimony by boiling. In different countries the same plants grow with different degrees of acrimony. Thus, garlic seldom enters our food; but in the southern countries, where the plants grow more mild, they are frequently used for that purpose. The plant which furnishes cassada, being very acrimonious, and even poisonous in its recent state, affords an instance of the necessity of preparing acrid substances even in the hot countries; and there are other plants, such as arum roots, which are so exceedingly acrimonious in their natural state, that they cannot be swallowed with safety; yet, when deprived of that acrimony, afford good nourishment.

Animal food, although it gives strength, yet loads the body; and Hippocrates long ago observed, that the athletic habit, by a small increase, was exposed to the greatest hazards. In the first stage of life animal food is seldom necessary to give strength; in manhood, when we are exposed to active scenes, it is more proper; and in the decline of life a considerable proportion of it is necessary to keep the body in vigor. There are some diseases, says Dr Cullen, which come on in the decay of life, that are at least aggravated by it: among these he ranks the gout as the most remarkable. But the late Dr. Brown, from repeated experience, found that the gout was highly aggravated by vegetable food, and that animal food was the most proper regimen in that disease, and all others arising from debility. It is allowed, however, on all hands, by the friends of both the old and new systems of medicine, that animal food, although it gives strength, is yet of some hazard to the constitution, which, by the frequent repetition of this stimulus, is sooner exhausted than by a diet chiefly vegetable. Therefore it is to be questioned, whether we should desire this high degree of bodily strength, with all the inconveniences and dangers attending it. Those who are chiefly employed in mental researches, and not exposed to much bodily labor, should avoid an excess of animal food. But in nervous disorders, hysterical and hypochondriacal cases, and in general all diseases arising from weakness, fresh animal food, given frequently, and not in too great quantities, either in the form of soup, or that of a steak, will be found a much more speedy and effectual restorative.

Another question, Dr. Cullen observes, has been much agitated, viz. What are the effects of variety in food? Is it necessary and allowable, or universally hurtful? Variety of a certain kind seems necessary; as vegetable and animal foods have their mutual advantages, tending to correct each other. Another variety, which is very proper, is that of liquid and solid food, which should be so managed as to temper each other; for liquid food, especially of the vegetable kind, is too ready to pass off before it is properly assimilated, while solid food makes a long stay. But this does not properly belong to the question, whether variety of the same kind is necessary or proper, as in animal foods, beef, fish, fowl, &c. It does not appear that there is any inconvenience arising from this mixture or difficulty of assimilation, provided a moderate quantity be taken. When any inconvenience does arise, it probably proceeds from this, that one of the particular substances in the mixture, when taken by itself, would produce the same effects; and indeed it would appear, that this effect is not heightened by the mixture, but properly obviated by it. There are few exceptions to this, if any, e. g. taking a large proportion of acescent substances with milk. The coldness, &c., acidity, flatulency, &c., may appear; and it is possible that the coagulum, from the acescency of the vegetables being somewhat stronger induced, may give occasion to too long retention in the stomach, and to acidity in too great degree. Again, the mixture of fish and milk often occasions inconvenience. The theory of this is difficult, though, from universal consent, it must certainly be just. Can we suppose that fish gives occasion to such a coagulum as runnet? If it does so, it may produce bad effects. Besides, fishes approach somewhat to vegetables, in giving little stimulus; and are accused of the same bad effects as these, viz. bringing on the cold fit of fever. Thus much may be said for variety. But it has also its disadvantages, provoking to gluttony; this and the art of cookery making men take in more than they properly can digest; and hence, perhaps very justly, physicians have almost universally recommended simplicity of diet; for, in spite of rules, man's eating will only be measured by his appetite, and satiety is sooner produced by one than by many substances. But this is so far from being an argument against variety, that it is one for it; as the best way of avoiding a full meal of animal food, and its bad effects, is by introducing a quantity of vegetables. Another means of preventing the bad effects of animal food is to take a large proportion of liquid; and hence the bad effects of animal food are less felt in Scotland on account of their drinking much with it, and using broths, which are at once excellent correctors of animal food and preventives of gluttony.

Dr. Paris thus compares the relative advantages of an *animal* and *vegetable* diet, particularly in this country. 'As every description of food,' says he, 'whether derived from the animal or vegetable kingdom, is converted into blood, it may be inferred that the ultimate effect of all aliments must be virtually the same; and that the several species can only differ from each other in the quantity of nutriment they afford,

in the comparative degree of stimulus they impart to the organs through which they pass, and in the proportion of vital energy they require for their assimilation. Were the degree of excitement which attends the digestion of a meal commensurate with the labor imposed upon the organs which perform it, less irritation and heat would attend the digestion of animal than of vegetable food; for, in the one case, the aliment already possesses a composition analogous to that of the structure which it is designed to supply, and requires little more than division and depuration; whereas, in the other, a complicated series of decompositions and recompositions must be effected before the matter can be animalised, or assimilated to the body. But the digestive fever, if we may be allowed the use of that expression, and the complexity of the alimentary changes, would appear, in every case, to bear an inverse relation to each other. This must depend upon the fact of animal food affording a more highly animalised chyle, or a greater proportion of that principle which is essentially nutritive, as well as upon the immediate stimulus which the alimentary nerves receive from its contact. In hot countries therefore, or during the heats of summer, we are instinctively led to prefer vegetable food; and we accordingly find that the inhabitants of tropical climates select a diet of this description: the Brahmins in India, and the people of the Canary Islands, Brasils, &c., live almost entirely on herbage, grains, and roots, while those of the north use little besides animal food. On account of the superior nutritive power of animal matter, it is equally evident that the degree of bodily exertion, or exercise, sustained by an individual should not be overlooked in an attempt to adjust the proportion in which animal and vegetable food should be mixed. Persons of sedentary habits are oppressed, and ultimately become diseased, from the excess of nutriment which a full diet of animal food will occasion; such a condition, by some process not understood, is best corrected by acescent vegetables. It is well known that artizans and laborers, in the confined manufactories of large towns, suffer prodigiously in their health whenever a failure occurs in the crops of common fruits; this fact was remarkably striking in the years 1804 and 1805. Young children and growing youths generally thrive upon a generous diet of animal food; the excess of nutritive matter is consumed in the development of the body, and, if properly digested, imparts strength without repletion. Adults and old persons comparatively require but a small proportion of aliment, unless the nutritive movement be accelerated by violent exercise and hard labor.

'Those who advocate the exclusive value of animal food, and deny the utility of its admixture with vegetable matter, adduce in proof of their system the rude health and Herculean strength of our hardy ancestors. The British aborigines, when first visited by the Romans, certainly do not appear to have been conversant with the cultivation of the ground, and according to the early writers, Cæsar, Strabo, Diodorus, Siculus, and others, their principal subsistence was on flesh and milk; but, before any valid conclusion can be deduced from this circumstance, the habits of the people must be compared with those of their descendants. The history of later times will furnish us with a satisfactory answer to those who deny the necessity of vegetable aliment. We learn from the London bills, that scurvy raged to such an excess in the seventeenth century as to have occasioned a very great mortality: at this period the art of gardening had not long been introduced. It appears that the most common articles of the kitchen garden, such as cabbages, were not cultivated in England until the reign of Catharine of Arragon; indeed, we are told that this queen could not procure a salad until a gardener was sent for from the Netherlands to raise it. Since the change thus happily introduced into our diet, the ravages of the scurvy are unknown. It follows, then, that in our climate a diet of animal food cannot, with safety, be exclusively employed. It is too highly stimulant; the springs of life are urged on too fast; and disease necessarily follows. There may, nevertheless, exist certain states of the system which require such a preternatural stimulus; and the physician may, therefore, confine his patient to an animal regimen with as much propriety as he would prescribe opium, or any other remedy. By a parity of reasoning, the exclusive use of vegetable food may be shown to be inconsistent with the acknowledged principles of dietetics, and to be incapable of conveying a nourishment sufficiently stimulating for the active exertions which belong to our present civilised condition. At the same time it must be allowed, that an adherence to vegetable diet is usually productive of far less evil than that which follows the use of an exclusively animal regimen.'

Dr. Paris quotes some curious experiments made by M. Majendie to ascertain the relative quantities of azote (nitrogen) yielded by animal and vegetable food. 'He took a small dog of three years old, fat, and in good health, and put it to feed upon sugar alone, and gave it distilled water to drink: it had as much as it chose of both. It appeared very well in this way of living for the first seven or eight days; it was brisk, active, ate eagerly, and drank in its usual manner. It began to get thin in the second week, although its appetite continued good, and it took about six or eight ounces of sugar in twenty-four hours. Its alvine excretions were neither frequent nor copious; that of the urine was very abundant. In the third week its leanness increased, its strength diminished, the animal lost its liveliness, and its appetite declined. At this period there was developed upon one eye, and then on the other, a small ulceration on the centre of the transparent cornea; it increased very quickly, and in a few days it was more than a line in diameter; its depth increased in the same proportion; the cornea was very soon entirely perforated, and the humors of the eye ran out. This singular phenomenon was accompanied with an abundant secretion of the glands of the eyelids. It, however, became weaker and weaker, and lost its strength; and, though the animal ate from three to four ounces of sugar per day, it became so weak that it could neither chew nor

vallow; for the same reason every other motion as impossible. It expired the thirty-second ıy of the experiment. M. Majendie opened e animal with every suitable precaution. He und a total want of fat; the muscles were re-ıced more than five-sixths of their ordinary ze; the stomach and intestines were also much minished in volume, and strongly contracted. he gall and urinary bladders were distended by eir proper fluids, which M. Chevreul was lled upon to examine. That distinguished ıemist found in them nearly all the characters hich belong to the urine and bile of herbivo-us animals; that is, that the urine, instead of eing acid, as it is in carnivorous animals, was nsibly alkaline, and did not present any trace uric acid, nor of phosphate. The bile con-ined a considerable portion of picromel; a ıaracter considered as peculiar to the bile of e ox, and, in general, to that of herbivorous ıimals. The excrements were also examined y M. Chevreul, and were found to contain very ttle azote, whereas they usually furnish a con-derable quantity.

'M. Majendie considered that such results re-uired to be verified by new experiments: he ccordingly repeated them on other dogs, but ways with the same conclusions. He there-ore considered it proved, that sugar, by itself, incapable of supporting dogs. This want of ıe nutritive quality, however, might possibly be eculiar to sugar: he therefore proceeded to nquire, whether other substances, non-azotised, ut generally considered as nutritive, would be ttended with the same consequences. He fed wo dogs with olive oil and distilled water, upon hich they appeared to live well for about fifteen ays: but they afterwards underwent the same eries of accidents, and died on the thirty-sixth ay of the experiment. In these cases, however, he ulceration of the cornea did not occur.'

The result of these experiments, in M. Ma-endie's opinion, was, that the azote of the organs s produced by the food, and consequently that o substance which does not contain this prin-iple can support life. Dr. Paris distributes vhat he calls the *Nutrientia*, into the following lasses.

Class I. *Fibrinous Aliments.*—Comprehend-ng the flesh and blood of various animals, es-ecially such as have arrived at puberty: ve-ıison, beef, mutton, hare.

Class II. *Albuminous.*—Eggs; certain animal natter.

Class III. *Gelatinous Aliments.* The flesh of young animals: veal, chickens, calf's foot, certain fishes.

Class IV. *Fatty and Oily Aliments.*—Animal fats, oils, and butter; cocoa, &c.; ducks, pork, geese, eels, &c.

Class V. *Caseous Aliments.*—The different kinds of milk, cheese, &c.

Class VI. *Farinaceous Aliments.*—Wheat, barley, oats, rice, rye, potatoe; sago, arrow-root, &c.

Class VII. *Mucilaginous Aliments.*—Carrots, turnips, asparagus, cabbage, &c.

Class VIII. *Sweet Aliments.*—The different kinds of sugar, figs, dates, &c.; carrots.

Class IX. *Acidulous Aliments.*—Oranges, apples, and other acescent fruits.

To these we may add condiments; such as salt, the varieties of pepper, mustard, horse-radish, vinegar, &c.

In classing the different species of potations, we may, in like manner, be governed by the chemical composition which distinguishes them. They may be arranged under four divisions, viz.

Class I. *Water.*—Spring, river, well water, &c.

Class II. *The Juices and Infusions of Vegetables and Animals.*—Whey, tea, coffee, &c.

Class III. *Fermented Liquors.*—Wine, beer, &c.

Class IV. *The Alcoholic Liquors, or Spirits.*—Alcohol, brandy, rum, &c.

'By *cookery*,' he says, 'alimentary substances undergo a twofold change; their principles are chemically modified, and their textures mechanically changed. The extent and nature, however, of these changes, will greatly depend upon the manner in which heat has been applied to them; and if we enquire into the culinary history of different countries, we shall trace its connexion with the fuel most accessible to them. This fact readily explains the prevalence of the peculiar species of cookery which distinguishes the French table, and which has no reference, as some have imagined, to the dietetic theory, or superior refinement, of the inhabitants.'

By *boiling*, according to this author, 'the principles not properly soluble are rendered softer, more pulpy, and, consequently, easier of digestion; but the meat, at the same time, is deprived of some of its nutritive properties by the removal of a portion of its soluble constituents: the albumen and gelatin are also acted upon; the former being solidified, and the latter converted into a gelatinous substance. If, therefore, our meat be boiled too long or too fast, we shall obtain, where the albumen predominates, as in beef, a hard and indigestible mass, like an over-boiled egg; or, where the gelatin predominates, as in young meats, such as veal, a gelatinous substance equally injurious to the digestive organs. Young and viscid food, therefore, as veal, chickens, &c., are more wholesome when roasted than when boiled, and are easier digested. Dr. Prout has very justly remarked, that the boiling temperature is too high for a great many of the processes of cooking, and that a lower temperature and a greater time, or a species of infusion, are better adapted for most of them. This is notorious with substances intended to be stewed, which, even in cookery books, are directed to be boiled slowly (that is, not at all), and for a considerable time. The ignorance and prejudice existing on these points is very great, and combated with difficulty; yet, when we take into account their importance, and how intimately they are connected with health, they will be found to deserve no small share of our attention. The loss occasioned by boiling partly depends upon the melting of the fat, but chiefly from the solution of the gelatine and os-mazone: mutton generally loses about one-fifth, and beef about one-fourth, of its original weight. Boiling is particularly applicable to vegetables, rendering them more soluble in the stomach, and

depriving them of a considerable quantity of air, so injurious to weak stomachs. But, even in this case, the operation may be carried to an injurious extent; thus, potatoes are frequently boiled to the state of a dry, insipid powder, instead of being preserved in that state in which the parts of which they are composed are rendered soft and gelatinous, so as to retain their shape, yet be very easily separated. On the other hand, the cabbage tribe, and carrots, are frequently not boiled long enough, in which state they are highly indigestible. In conducting this process, it is necessary to pay some attention to the quality of the water employed; thus, mutton boiled in hard water is more tender and juicy than when soft water is used; while vegetables, on the contrary, are rendered harder and less digestible when boiled in hard water.

'By *roasting* the fibrine is corrugated, the albumen coagulated, the fat liquefied, and the water evaporated. As the operation proceeds, the surface becomes first brown, and then scorched; and the tendinous parts are rendered softer and gluey. Care should always be taken that the meat should not be over-done, nor ought it to be under-dressed; for, although in such a state it may contain more nutriment, yet it will be less digestible, on account of the density of its texture. This fact has been satisfactorily proved by the experiments of Spallanzani; and Mr. Hunter observes, that 'boiled, and roasted, and even putrid meat, is easier of digestion than raw.' Animal matter loses more by roasting than by boiling: it has been stated above, that by this latter process mutton loses one-fifth, and beef one-fourth; but by roasting, these meats lose about one-third of their weight. In roasting, the loss arises from the melting out of the fat, and the evaporating of the water; but the nutritious matter remains condensed in the cooked solid; whereas, in boiling, the gelatine is partly abstracted. Roast are, therefore, more nutritive than boiled meats.'

'*Frying*,' Dr. P. thinks, 'is, perhaps, the most objectionable of all the culinary operations. The heat is applied through the medium of boiling oil, or fat, which is rendered empyreumatic, and therefore extremely liable to disagree with the stomach.

'By the operation of *broiling*, the sudden browning or hardening of the surface prevents the evaporation of the juices of the meat, which imparts a peculiar tenderness to it. It is the form selected, as the most eligible, by those who seek to invigorate themselves by the art of training.

'The peculiarity of *baking* depends upon the substance being heated in a confined space, which does not permit the escape of the fumes arising from it; the meat is, therefore, from the retention of its juices, rendered more sapid and tender. But baked meats are not so easily digested, on account of the greater retention of their oils, which are, moreover, in an empyreumatic state. Such dishes accordingly require the stimulus of various condiments to increase the digestive powers of the stomach.'

Condiments and *Drinks* have not so distinctly received our attention, in the former part of this work, as the more solid contributions of nature to the food of man. The former are divided by the popular author whom we have already quoted into the *saline*, the *aromatic*, and the *oily*.

'*Salt*,' he says, 'appears to be a necessary and universal stimulus to animated beings; and its effects upon the vegetable as well as animal kingdom have furnished objects of the most interesting enquiry to the physiologist, the chemist, the physician, and the agriculturist. It appears to be a natural stimulant to the digestive organs of all warm-blooded animals, and that they are instinctively led to immense distances in pursuit of it. This is strikingly exemplified in the avidity with which animals in a wild state seek the salt pans of Africa and America, and in the difficulties they will encounter to reach them: this cannot arise from accident or caprice, but from a powerful instinct, which, beyond control, compels them to seek, at all risks, that which is salubrious. To those who are anxious to gain further information upon this curious subject, I would recommend the perusal of a work entitled Thoughts on the Laws relating to Salt, by Samuel Parkes, Esq., and a small volume by my late lamented friend, Sir Thomas Bernard, on the Case of the Salt Duties, with Proofs and Illustrations. We are all sensible of the effect of salt on the human body; we know how unpalatable fresh meat and vegetables are without it. During the course of my professional practice, I have had frequent opportunities of witnessing the evils which have attended an abstinence from salt. In my examination before a committee of the house of commons in 1818, appointed for the purpose of enquiring into the laws respecting the salt duties, I stated, from my own experience, the bad effects of a diet of unsalted fish, and the injury which the poorer classes, in many districts, sustained in their health from an inability to procure this essential condiment. I had some years ago a gentleman of rank and fortune under my care, for a deranged state of the digestive organs, accompanied with extreme emaciation. I found that, from some cause which he could not explain, he had never eaten any salt with his meals: I enforced the necessity of his taking it in moderate quantities, and the recovery of his digestive powers was soon evinced in the increase of his strength and condition. One of the ill effects produced by an unsalted diet is the generation of worms. Mr. Marshall has published the case of a lady who had a natural antipathy to salt, and was in consequence most dreadfully infested with worms during the whole of her life.—(London Medical and Physical Journal, vol. xxix. No. 231). In Ireland, where, from the bad quality of the food, the lower classes are greatly infested with worms, a draught of salt and water is a popular and efficacious anthelmintic. Lord Somerville, in his Address to the Board of Agriculture, gave an interesting account of the effects of a punishment which formerly existed in Holland. 'The ancient laws of the country ordained men to be kept on bread alone, unmixed with salt, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible; these wretched criminals are said to

have been devoured by worms engendered in their own stomachs.' The wholesomeness and digestibility of our bread are undoubtedly much promoted by the addition of salt which it so universally receives.

'An excess of salt is,' however, we are told, 'as injurious as its moderate application is salutary. This observation applies with as much force to the vegetable as to the animal kingdom; a small proportion, applied as a manure, promotes vegetation in a very remarkable manner; whereas a larger quantity actually destroys it The experiments of Sir John Pringle have also shown, that a little salt will accelerate putrefaction, and a large quantity prevent it. In explaining the operation of salting meat, and in appreciating the effects of such meat as food, it will be necessary to advert to a chemical fact which has not hitherto attracted the attention which its importance merits. The salt thus combined with the animal fibre ought no longer to be considered as the condiment upon which so much has been said; a chemical combination has taken place, and, although it is difficult to explain the nature of the affinities which have been brought into action, or that of the compound to which they have given origin, it is sufficiently evident that the texture of the fibre is so changed as to be less nutritive, as well as less digestible. If we are called upon to produce any chemical evidence in support of such an assertion, we need only relate the experiment of M. Eller, who found, that if salt and water be boiled in a copper vessel, the solution will contain a notable quantity of that metal; whereas, if, instead of heating a simple solution, the salt be previously mixed with beef, bacon, or fish, the fluid resulting from it will not contain an atom of copper. Does not this prove that the process of salting meat is something more than the mere saturation of the animal fibre with muriate of soda?

'*Vinegar*, in small quantities, is recommended as a grateful and wholesome stimulant; it will often check the chemical fermentation of certain substances in the stomach, and prevent vegetable matter in its raw state from inducing flatulence; but its use requires caution, and in some morbid states of the system it is obviously improper. Fatty and gelatinous substances frequently appear to be rendered more digestible in the stomach by the addition of vinegar, although it is difficult to offer either a chemical or physiological explanation of the fact. The native vegetable acids may also be occasionally substituted: the addition of lemon juice to rich and glutinous soups renders them less liable to disagree with the stomach; and the custom of eating apple-sauce with pork is, undoubtedly, indebted for its origin to the same cause.

'*The aromatic condiments* comprise the foreign spices, as pepper, Cayenne pepper, cinnamon, nutmeg, cloves, ginger; and the indigenous herbs and roots, such as parsley, thyme, sage, garlick, leek, onion, horse-radish, mustard, &c. The former of these were not intended by nature for the inhabitants of temperate climes: they are heating, and highly stimulant. I am, however, not anxious to give more weight to this objection than it deserves. Man is no longer the child of nature, nor the passive inhabitant of any particular region: he ranges over every part of the globe, and elicits nourishment from the productions of every climate. It may be therefore necessary that he should accompany the ingestion of foreign aliment with foreign condiment. If we go to the East for tea, there is no reason why we should not go to the West for sugar. The dyspeptic invalid, however, should be cautious in their use; they may afford temporary benefit at the expense of permanent mischief. It has been well said, that the best quality of spices is to stimulate the appetite, and their worst to destroy, by insensible degrees, the tone of the stomach. The intrinsic goodness of meats should always be suspected, when they require spicy seasoning to compensate for their natural want of sapidity. But, mischievous as the abuse of aromatic condiments may be, it is innocent in comparison with the custom of swallowing a quantity of brandy to prevent the upbraiding of our stomachs, or an increased libation of wine to counteract the distress which supervenes a too copious meal—as if drunkenness were an antidote to gluttony.

'Oil and butter, constitute what is called the *oleaginous* condiments. Melted butter is, perhaps, the most injurious of all the inventions of cookery: oil, when used in extremely small quantities, as a seasoning to salads, appears to prevent their running into fermentation, and consequently obviates flatulency.'

Of the different kinds of water used as drink we are told

'*Rain water*, when collected in the open fields, is certainly the purest natural water, being produced as it were by a natural distillation. When, however, it is collected near large towns, it derives some impregnation from the smoky and contaminated atmosphere through which it falls; and, if allowed to come in contact with the houses, will be found to contain calcareous matter; in which case it ought never to be used without being previously boiled and strained. Hippocrates gave this advice; and M. Margraaf, of Berlin, has shown the wisdom of the precaution, by a satisfactory series of experiments.

'*Spring water*, in addition to the substances detected in rain water, generally contains a small portion of muriate of soda, and frequently other salts: but the larger springs are purer than the smaller ones; and those which occur in primitive countries, and in silicious rocks, or beds of gravel, necessarily contain the least impregnation. An important practical distinction has been founded upon the fact, that the water of some springs dissolves soap, while that of others decomposes and curdles it: the former has been termed soft, the latter hard, water. Soft water is a more powerful solvent of all vegetable matters, and is consequently to be preferred for domestic as well as medicinal purposes. The brewer knows well, from experience, how much more readily and copiously soft water will dissolve the extractive matter of his malt; and the housewife does not require to be told, that hard water is incapable of making good tea. Sulphate of lime is the salt which generally imparts the quality of hardness to water; and it has

been said that its presence will sometimes occasion an uneasy sense of weight in a weak stomach. The quantity of this salt varies considerably; but, in general, it appears that the proportion of five grains in a pint of water will constitute hardness, unfit for washing with soap, and for many other purposes of domestic use. Animals appear to be more sensible of the impurities of water than man. Horses, by an instinctive sagacity, always prefer soft water; and when, by necessity or inattention, they are confined to the use of that which is hard, their coats become rough and ill-conditioned, and they are frequently attacked with the gripes. Pigeons are also known to refuse hard, after they have been accustomed to soft water.

'*River water*.—This, being derived from the conflux of numerous springs with rain water, generally possesses considerable purity; that the proportion of its saline contents should be small, is easily explained by the precipitation which must necessarily take place from the union of different solutions: it is, however, liable to hold in suspension particles of earthy matter, which impair its transparency, and sometimes its salubrity. This is particularly the case with the Seine, the Ganges, and the Nile: but as the impurities are, for the most part, only suspended, and not truly dissolved, mere rest or filtration will therefore restore to it its original purity. The chemist, therefore, after such a process, would be unable to distinguish water taken up at London from that procured at Hampton-court. There exists a popular belief, that the water of the Thames is peculiarly adapted for the brewery of porter; it is only necessary to observe, that such water is never used in the London breweries. The vapid taste of river, when compared with spring, water, depends upon the loss of air and carbonic acid, from its long exposure.

'*Well water* is essentially the same as spring water, being derived from the same source; it is, however, more liable to impurity from its stagnation or slow infiltration: hence our old wells furnish much purer water than those which are more recent, as the soluble particles are gradually washed away. Mr. Dalton observes, that the more any spring is drawn from, the softer the water will become.

'*Snow water* has been supposed to be unwholesome, and in particular to produce bronchocele, from the prevalence of that disease in the Alps; but it does not appear upon what principle its insalubrity can depend. The same strumous affection occurs at Sumatra, where ice and snow are never seen; while, on the contrary, the disease is quite unknown in Chili and Thibet, although the rivers of those countries are supplied by the melting of the snow with which the mountains are covered. The same observations will apply to ice water. The trials of Captain Cook, in his voyage round the world, prove its wholesomeness beyond a doubt: in the high southern latitudes he found a salutary supply of fresh water in the ice of the sea. 'This melted ice,' says Sir John Pringle, 'was not only sweet but soft, and so wholesome as to show the fallacy of human reasoning, unsupported by experiments.' When immediately melted, snow water contains no air, as it is expelled during the act of freezing, consequently it is remarkably vapid; but it soon recovers the air it had lost, by exposure to the atmosphere.

'*Lake water* is a collection of rain, spring, and river waters, contaminated with various animal and vegetable matter, which from its stagnant nature have undergone putrefaction in it. This objection may be urged with greater force against the use of water collected in ponds and ditches, and which the inhabitants of some districts are often under the necessity of drinking. I have known an endemic diarrhœa to arise from such a circumstance.

'*Marsh water*, being the most stagnant, is the most impure of all water, and is generally loaded with decomposing vegetable matter. There can be no doubt, that numerous diseases have sprung up from its use.'

'The juices and infusions of vegetable and animal matter,' says Dr. Paris, 'constitute the second division of drinks. By impregnating water with the soluble parts of *toasted bread*, it will frequently agree with those stomachs which rebel against the use of the pure fluid. It is thus rendered slightly nutritive, holding a certain portion of gum and starch in solution. Sir A. Carlisle recommends that it should be prepared with hard biscuit, reduced by fire to a coffee color. This drink, he says, being free from yeast, is a most agreeable beverage. Much depends upon the water being at a boiling temperature, and it ought to be drank as soon as it has cooled sufficiently; for, by keeping, it acquires an unpleasant flavor. Infusions of other kinds of bread, in particular of toasted oat-cakes, also dried or toasted oatmeal, have been recommended; but the taste of such infusions would not be palatable to any one who has not been accustomed to oat-bread.

'*Barley water*.—The decoction of barley is a very ancient beverage: it is recommended by Hippocrates, and preferred by him to every other aliment in acute diseases. Barley has the advantage over other grains, in affording less viscid potations. The invention of pearl barley has greatly increased the value of this grain; it is prepared by the removal of its husk or cuticle, and afterwards by being rounded and polished in a mill. These well-known granules consist chiefly of fecula, with portions of mucilage, gluten, and sugar, which water extracts by decoction; but the solution soon passes into the acetous fermentation. The bran of barley contains an acrid resin, and it is to get rid of such an ingredient that it is deprived of its cuticle. The addition of lemon juice and sugar-candy greatly improve the flavor of this drink.

'*Gruel*.—Oats, when freed from their cuticle, are called groats; in which state, as well as when ground into meal, they yield to water, by coction, the fecula they contain, and form a nutritious gruel, which has also the property of being slightly aperient. It should never be kept longer than forty-eight hours, as it becomes acescent after that period. Gruel may be made of a different degree of consistence, according to the object of its potation. If it be used as a demulcent drink, it should be thin; and may be made, as Dr. Kitchener, our culinary censor,

informs us, by mixing well together, by degrees, in a pint basin, one table-spoonful of oatmeal with three of cold water, and then adding carefully a pint of boiling water, which is to be boiled for five minutes, stirring it all the time, to prevent the oatmeal from burning at the bottom of the stewpan; then strain through a hair sieve, to separate the undissolved parts of the meal from the gruel. If a more substantial repast is required, double the above quantity of oatmeal must be treated in a similar manner. To increase the nutritive quality of this aliment, broth or milk may be substituted for water. Some persons are in the habit of introducing a piece of butter into gruel; but the propriety of this practice is questionable, where the stomach is disposed to generate acidity.

'*Sage tea.*—The virtues of sage have been so extravagantly praised, that, like many of our remedies, the plant is fallen into disuse from the disgust which its panegyrists have excited. I am convinced, however, that in the form of infusion it possesses some power in allaying the irritability of the stomach, and that, on many occasions, it will furnish a salutary beverage. The same observation will apply to balm tea.' We cannot here find room for the entire observations of this author on TEA; but see this article.

'When drunk four hours after the principal meal,' he observes, 'it will assist the ulterior stages of digestion, and promote the insensible perspiration; while it will afford to the stomach a grateful stimulus after its labors. In enumerating, however, the advantages of tea, it must not be forgotten that it has introduced and cherished a spirit of sobriety; and it must have been remarked by every physician of general practice, that those persons who dislike tea, frequently supply its place by spirit and water. The addition of milk certainly diminishes the astringency of tea; that of sugar may please the palate, but cannot modify the virtues of the infusion.

'*Coffee.* The hostility which has been manifested against the use of tea has been extended, with equal rancour, against that of coffee; and, probably, with equal injustice. The principle upon which its qualities depend is more stimulant than that of tea, and certainly exerts a different species of action upon the nervous system, although it is very difficult to define the nature of this difference. If taken immediately after a meal, it is not found to create that disturbance in its digestion which has been noticed as the occasional consequence of tea; on the contrary, it accelerates the operations of the stomach, and will frequently enable the dyspeptic to digest substances, such as fat and oily aliment, which would otherwise occasion much disturbance. The custom of taking coffee immediately after dinner, as so universally practised by the French, no doubt must counteract the evil effects which the peculiar form of their diet is calculated to produce. Coffee, like tea, has certainly an antisoporific effect on many individuals; it imparts an activity to the mind which is incompatible with sleep: but this will rarely occur if the beverage be taken for several hours before our accustomed period of repose. It seems to be generally admitted, that it possesses the power of counteracting the effects of narcotics; and hence it is used by the Turks with much advantage, in abating the influence of the inordinate quantities of opium they are accustomed to swallow. Where our object is to administer it as a promoter of digestion, it should be carefully made by infusion; decoction dissipates its aroma. The addition of milk is one of unquestionable propriety; that of sugar, or rather sugar-candy, may be allowed. I have known some persons who have never taken this beverage without suffering from acidity in the stomach: where this happens, the practice must be abandoned.

'*Chocolate.*—In consequence of the large quantity of nutritive matter which this liquid contains, it should be regarded,' Dr. Paris observes, 'rather as food than drink. It is prepared by reducing the cocoa-nut into paste, with sugar, milk, or eggs: it is also frequently mixed with different aromatics, the most common of which is the vanilla, a substance very liable to disagree with the stomach, and to produce a train of nervous symptoms. As a common beverage, chocolate is highly objectionable; it contains an oil which is difficult of assimilation; it therefore oppresses the stomach: this effect is of course increased by the application of too much heat in its preparation. Another objection against its use is to be found in the observations which I have already offered upon the subject of too great concentration.

'*Cocoa* is usually considered as a substitute for chocolate. As it contains less nutritive matter, it is not so objectionable; and, as the oily matter exists only in small quantities, it is less likely to disagree with the stomach.

'*Whey* is a delightful beverage; but as its nature and operation cannot be well understood until the composition of milk is investigated, the observations which I have to offer upon its use will be deferred until the history of that fluid has been examined.

'There are certain saline solutions which are frequently employed as drinks, and deserve some attention in this place: such are imperial and soda water. *Imperial* is a solution of cream of tartar flavored with lemon peel. It ought never to be used except as a medicine. If employed as an ordinary drink, it is apt to retard digestion. If ever useful as an article of diet, it will be under circumstances of robust health, and where a large quantity of animal food has been taken.

'*Soda Water.*—The modern custom of drinking this inviting beverage during, or immediately after dinner, has been a pregnant source of dyspepsia. By inflating the stomach at such a period, we inevitably counteract those muscular contractions of its coats which are essential to chymification. The quantity of soda thus introduced scarcely deserves notice: with the exception of the carbonic acid gas, it may be regarded as water, more mischievous only in consequence of the exhilarating quality inducing us to take it at a period at which we should not require the more simple fluid.'

Of Malt liquors.—Dr. Paris says, 'malt

liquors differ from wines in several essential points: they contain a much larger proportion of nutritive matter, and a less proportion of spirit; while they contain a peculiar bitter and narcotic principle derived from the hop. It would appear, that the extractive matter furnished by the malt is highly nutritive; and we accordingly find, that those persons addicted to such potations are in general fat. Where, however, they are indulged in to any extent, without a corresponding degree of exercise, they induce a plethoric state of the body, and all the diseases consequent upon such a condition. To those whose diet is not very nutritive, ale may be considered not only as an innocent, but as a salubrious article; and happy is that country, whose labouring classes prefer such a beverage to the mischievous potations of ardent spirit. These remarks, however, cannot apply to those classes of the community who 'fare sumptuously every day.' They will not require a nutritive potation of such a character; and light wines have accordingly, in these days of luxury, very properly superseded its use: but I am not disposed to extend this remark to its more humble companion, 'table-beer.' I regard its dismissal from the tables of the great as a matter of regret; its slight, but invigorating bitter is much better adapted to promote digestion than its more costly substitutes. But it should be soft and mild; for, when stale and hard, it is likely to disturb the bowels, and occasion effects the very opposite to those it is intended to produce. Nor ought it to have too great a proportion of hops, but should be thoroughly fermented and purified. Sydenham always took a glass of small beer at his meals, and he considered it as a preservative against gravel.'

For Wine, see that article.

On the subject of *the food of the poor* we have seen no remarks more intelligent than those of Count Rumford, in his ingenious Essay on Food. He observes; 'There is, perhaps, no operation of nature which falls under the cognizance of our senses, more surprising, or more curious, than the nourishment and growth of plants and animals; and there is certainly no subject of investigation more interesting to mankind. As providing subsistence is, and ever must be, an object of the first concern in all countries, any discovery or improvement by which the procuring good and wholesome food can be facilitated, must contribute very powerfully to increase the comforts and promote the happiness of society. That our knowledge in regard to the science of nutrition is still very imperfect, is certain; but I think there is reason to believe, that we are upon the eve of some very important discoveries relative to that mysterious operation. Since it has been known that water is not a simple element, but a compound, and capable of being decomposed, much light has been thrown upon many operations of nature, which formerly were wrapped up in obscurity. In vegetation, for instance, it has been rendered extremely probable, that water acts a much more important part than was formerly assigned to it by philosophers; that it serves not merely as the vehicle of nourishment, but constitutes at least one part, and probably an essential part, of the food of plants; that it is decomposed by them, and contributes materially to their growth; and that manures serve rather to prepare the water for decomposition, than to form of themselves, substantially and directly, the nourishment of the vegetables. Now a very clear analogy may be traced, between the vegetation and growth of plants, and the digestion and nourishment of animals; and as water is indispensably necessary in both processes, and as in one of them (vegetation) it appears evidently to serve as food, why should we not suppose it may serve as food in the other? There is, in my opinion, abundant reason to suspect that this is really the case; and I shall now briefly state the grounds upon which this opinion is founded. Having been engaged for a considerable length of time in providing food for the poor at Munich, I was naturally led, as well by curiosity as motives of economy, to make a great variety of experiments upon that subject; and I had not proceeded far in my opinions, before I began to perceive that they were very important; even much more so than I had imagined. The difference in the apparent goodness, or the palatableness, and apparent nutritiousness of the same kinds of food, when prepared or cooked in different ways, struck me very forcibly; and I constantly found that the richness or quality of a soup depended more upon a proper choice of ingredients, and a proper management of the fire in the combination of these ingredients, than upon the quantity of solid nutritious matter employed; much more upon the art and skill of the cook, than upon the amount of the sums laid out in the market. I found likewise, that the nutritiousness of a soup, or its power of satisfying hunger, and affording nourishment, appeared always to be in proportion to its apparent richness or palatableness. But what surprised me not a little was, the discovery of the very small quantity of solid food, which, when properly prepared, will suffice to satisfy hunger, and support life and health; and the very trifling expense at which the stoutest and most laborious man may in any country be fed. After an experience of more than five years in feeding the poor at Munich, during which time every experiment was made that could be devised, not only with regard to the choice of the articles used as food, but also in respect to their different combinations and proportions, and to the various ways in which they could be prepared or cooked; it was found that the cheapest, most savoury, and most nourishing food that could be provided, was a soup composed of pearl barley, peas, potatoes, cuttings of fine wheaten bread, vinegar, salt and water, in certain proportions. The method of preparing this soup is as follows. The water and the pearl barley are first put together into the boiler, and made to boil; the peas are then added, and the boiling is continued over a gentle fire about two hours; the potatoes are then added (having been previously peeled with a knife, or having been boiled, in order to their being more easily deprived of their skins), and the boiling is continued for about one hour more; during which time the contents of the boiler are frequently stirred

about with a large wooden spoon or ladle, to destroy the texture of the potatoes, and to reduce the soup to one uniform mass. When this is done, the vinegar and salt are added; and last of all, at the moment it is to be served up, the cuttings of bread. The soup should never be suffered to boil, or even to stand long before it is served up, after the cuttings of bread are put to it. It will, indeed, for reasons which will hereafter be explained, be best never to put the cuttings of bread into the boiler at all, but (as is always done at Munich) to put them into the tubs in which the soup is carried from the kitchen into the dining hall; pouring the soup hot from the boiler upon them, and stirring the whole well together with the iron ladles used for measuring out the soup to the poor in the hall. It is of more importance than can well be imagined, that this bread, which is mixed with the soup, should not be boiled. It is likewise of use it should not be cut as fine or thin as possible; and if it be dry and hard, it will be so much the better. The bread we use at Munich is what is called semel bread, being small loaves, weighing from two to three ounces; and as we receive this bread in donations from the bakers, it is commonly dry and hard, being that which, not being sold in time, remains on hand, and becomes stale and unsaleable; and we have found by experience, that this hard and stale bread answers for our purpose much better than any other, for it renders mastication necessary; and mastication seems very powerfully to assist in promoting digestion; it likewise prolongs the duration of the enjoyment of eating, a matter of very great importance indeed, and which has not hitherto been sufficiently attended to. The quantity of this soup furnished to each person at each meal, or one portion of it (the cuttings of the bread included) is just one Bavarian pound in weight; and as the Bavarian pound is to the pound avoirdupois as 1,125,842 to 1,—it is equal to about nineteen ounces and nine-tenths avoirdupois. Now, to those who know that a full pint of soup weighs no more than about sixteen ounces avoirdupois, it will not, perhaps, at the very first view, appear extraordinary, that a portion weighing nearly twenty ounces, and consequently making nearly one pint and a quarter of this rich, strong, savoury soup, should be found sufficient to satisfy the hunger of a grown person; but when the matter is examined narrowly, and properly analysed, and it is found that the whole quantity of solid food which enters into the composition of one of these portions of soup does not amount to quite six ounces, it will then appear to be almost impossible that this allowance should be sufficient. That it is quite sufficient, however, to make a good meal for a strong healthy person has been abundantly proved by long experience. I have even found that a soup composed of nearly the same ingredients, except the potatoes, but in different proportions, was sufficiently nutritive, and very palatable, in which only about four ounces and three-quarters of solid food entered into the composition of a portion weighing twenty ounces. But this will not appear incredible to those who know, that one single spoonful of salope, weighing less than one quarter of an ounce, put into a pint of boiling water, forms the thickest and most nourishing soup that can be taken; and that the quantity of solid matter which enters into the composition of another very nutritive food, hartshorn jelly, is not much more considerable. The barley in my soup seems to act much the same part as the salope in this famous restorative; and no substitute that I could ever find for it, among all the variety of corn and pulse of the growth of Europe, ever produced half the effect; that is to say, half the nourishment at the same expense. Barley may therefore be considered as the rice of Great Britain. It requires, it is true, a great deal of boiling; but, when it is properly managed, it thickens a vast quantity of water; and, as I suppose, prepares it for decomposition. It also gives the soup, into which it enters as an ingredient, a degree of richness which nothing else can give. It has little or no taste in itself, but, when mixed with other ingredients which are savory, it renders them peculiarly grateful to the palate. It is a maxim as ancient, I believe, as the time of Hippocrates, that whatever pleases the palate nourishes; and I have often had reason to think it perfectly just. Could it be clearly ascertained and demonstrated, it would tend to place cookery in a more respectable situation among the arts than it now holds. That the manner in which food is prepared is a matter of real importance; and that the water used in that process acts a much more important part than has hitherto been generally imagined, is, I think, quite evident; for it seems to me to be impossible, upon any other supposition, to account for the appearances. If the very small quantity of solid food which enters into the composition of a portion of some very nutritive soup were to be prepared differently, and taken under some other form, that of bread, for instance; so far from being sufficient to satisfy hunger, and afford a comfortable and nutritive meal, a person would absolutely starve upon such a slender allowance; and no great relief would be derived from drinking crude water to fill up the void in the stomach. But it is not merely from an observation of the apparent effects of cookery upon those articles which are used as food for man, that we are led to discover the importance of these culinary processes. Their utility is proved in a manner equally conclusive and satisfactory, by the effects which have been produced by employing the same process in preparing food for brute animals. It is well known that boiling the potatoes with which hogs are fed renders them much more nutritive; and, since the introduction of the new system of feeding horned cattle, that of keeping them confined in the stables all the year round (a method which is now coming fast into common use in many parts of Germany), great improvements have been made in the art of providing nourishment for those animals; and particularly by preparing their food, by operations similar to those of cookery; and to these improvements it is most probably owing, that stall feeding has in that country, been so universally successful. It has long been a practice in Germany for those who fatten bullocks for the butcher, or feed milch cows, to give them frequently what is called a drank or drink; which is a kind of pottage, prepared differently in different parts

of the country and in different seasons, according to the greater facility with which one or other of the articles occasionally employed in the composition of it may be procured, and according to the particular fancies of individuals. Many feeders make a great secret of the composition of their drinks, and some have, to my knowledge, carried their refinement so far, as actually to mix brandy in them in small quantities; and pretend to have found their advantage in adding this costly ingredient. The articles most commonly used are, bran, oat meal, brewers' grains, mashed potatoes, mashed turnips, rye meal, and barley meal, with a large proportion of water; sometimes two or three or more of these articles are united in forming a drink: and, of whatever ingredients the drink is composed, a large proportion of salt is always added to it. There is perhaps nothing new in the method of feeding cattle with liquid mixtures, but the manner in which these drinks are now prepared in Germany is, I believe, quite new; and shows, what I wish to prove, that cooking renders food really more nutritive. These drinks were formerly given cold, but it was afterwards discovered that they were more nourishing when given warm; and of late their preparation is, in many places, become a very regular culinary process. Kitchens have been built, and large boilers provided and fitted up, merely for the cooking for the cattle in the stables; and I have been assured by many very intelligent farmers, who have adopted this new mode of feeding (and have also found by my own experience), that it is very advantageous indeed; that the drinks are evidently rendered much more nourishing and wholesome by being boiled; and that the expense of fuel, and the trouble attending this process, are amply compensated by the advantages derived from the improvement of the food. We even find it advantageous to continue the boiling a considerable time, two or three hours for instance; as the food goes on to be still farther improved, the longer the boiling is continued. These facts seem evidently to show, that there is some very important secret with regard to nutrition, which has not yet been properly investigated; and it seems to me to be more than probable, that the number of inhabitants who may be supported in any country upon its internal produce, depends almost as much upon the state of the art of cookery, as upon that of agriculture. The Chinese, perhaps, understand both these arts better than any other nation. Savages understand neither of them. But, if cookery be of so much importance, it certainly deserves to be studied with the greatest care; and it ought to be particularly attended to in times of general alarm on account of a scarcity of provisions; for the relief which may in many cases be derived from it is immediate and effectual, while all other sources are distant and uncertain.' After anticipating some objections to his plan, Count Rumford recommends the establishment of public kitchens in all towns and large villages throughout the kingdom. See KITCHEN.

FOOL, *n. s.*, *v. n.* & *v. a.*, FOOL'ERY, *n. s.*, FOOL'ISH, *adj.*, FOOL'ISHLY, *adv.*, FOOL'ISHNESS, *n. s.* Greek φαυλος; German *faul*, and probably foul in English. Thus, the original meaning of fool is worthless, or good for nothing; dirty or idle: applied to the mind, weak, muddy in its ideas; slow of apprehension; reluctant to think It is now generally applied to a natural, an idiot; one to whom nature has denied reason; to one who counterfeits folly; a buffoon or jester. In Scripture the term is employed to designate a wicked man, to intimate that wickedness is folly; as it debases reason, and dishonors the character. The neuter verb is used in the sense to trifle; to toy; to play; to idle; to sport. The active signifies to treat with contempt; to disappoint; to frustrate; to cheat; to defeat; to infatuate; to allure from the dictates of reason and sobriety. Foolery is either habitual folly, or a solitary act, or the object of folly. Foolish, to be void of understanding; weak of intellect; imprudent; indiscreet; ridiculous; contemptible. Foolishly, weakly; without understanding. In Scripture all these terms signify wicked and wickedly. Foolishness is folly; want of understanding; actual deviation from the right. Fool is used in composition and in phrases idiomatic and peculiar—the following are instances of both, and their illustrations are placed in the regular chronological order with those of their etymon.

FOOL'BORN, *adj.* Fool and born. Foolish from the birth.

FOOL'-HAPPY, *adj.* Fool and happy. Lucky; without contrivance or judgment.

FOOL'-HARDINESS, *n. s.*, FOOL'-HARDISE, *n. s.*, FOOL'-HARDY, *adj.* Fool and hardy. Mad rashness; courage without sense. The second noun is obsolete: it is however used by Spenser, and signifies adventurousness without judgment: the adjective signifies foolishly bold.

FOOL'-LARGE, *adj.* Fool and large. Foolishly liberal.

FOOL'-TRAP, *n. s.* Fool and trap. A snare to catch fools in, generally set by rogues.

To play the fool. To play pranks like a hired jester; to jest; to make sport; to act like one void of common understanding.

To make a fool of. To disappoint; to defeat.

To fool away. To squander; to waste substance; to exchange without an adequate equivalent.

To fool one of his money, is to cheat him by flattering his vanity, or cajoling his understanding; that is, to rob him through the medium of his folly or his ignorance.

> The *fool* hath said in his heart there is no God.
> *Psalm* xiv. 1.

> A ful gret *fool* is any conseillour,
> That serveth any lord of high honour,
> That dare presume, or ones thinken it
> That his conseil shuld pass his lordes wit.
> *Chaucer. The Marchantes Tale.*

> But for as moche as som folk ben unmesurable, men oughten for to avoid and eschue *fool-largesse*, the whiche men clepen waste. Certes, he that is *fool-large*, he geveth not his catel, but he leseth his catel.
> *Id. The Persones Tale.*

> This is my lif but if that I wol fight;
> And out at dore anon I mote me dight,
> Or elles I am lost, but if that I
> Be, like a wild leon, *fool-hardy*.
> *Id. Prologue to the Monkes Tale.*

As when a ship, that flies fair under sail,
a hidden rock escaped unawares,
That lay in wait her wreck for to bewail;
he mariner, yet half amazed, stares
perils past, and yet in doubt he dares
joy at his *fool-happy* oversight. *Faerie Queene.*
ore huge in strength than wise in works he was,
reason with *foolhardise* over-ran;
ern melancholy did his courage pass,
was, for terror more, all armed in shining brass.
Id.

One mother, when as her *foolhardy* child
id come too near, and with his talons play,
alf dead through fear, her little babe reviled.
Id.

Pray do not mock me;
I am a very *foolish* fond old man:
I fear I am not in my perfect mind.
Shakspeare.

e, of all the men that ever my *foolish* eyes looked
, was the best deserving a fair lady.
Id. Merchant of Venice.

o'st thou call me *fool*, boy?
ll thy other titles thou hast given away that thou
wast born with. *Id. King Lear.*

If it be you that stir these daughters hearts
gainst their father, *fool* me not so much
o bear it tamely. *Id.*

Well, thus we *play the fool* with the time, and the
its of the wise sit in the clouds and mock us.
Id. Henry IV.

Reply not to me with a *foolborn* jest. *Id.*

We are come off
Like Romans: neither *foolish* in our stands,
Nor cowardly in retire. *Id. Coriolanus.*

Twere as good a deed as to drink when a man's
ungry, to challenge him to the field, and then to
ak promise with him, and *make a fool of* him.
Id. Twelfth Night.

Foolery, Sir, does walk about the orb like the sun;
shines every where: I would be sorry, Sir, but the
l should be as oft with your master as with my
stress. *Id.*

When I am read, thou feign'st a weak applause,
if thou wert my friend, but lackest a cause:
This but thy judgment *fools*; the other way
ould both thy folly and thy spite betray.
Ben Jonson.

That Pythagoras, Plato, or Orpheus, believed in
y of these *fooleries*, it cannot be suspected.
Raleigh's History.

Fool not; for all may have,
If they dare try, a glorious life, a grave. *Herbert.*

If you have the luck to be court-*fools*, those that
ave either wit or honesty, you may *fool* withal, and
are not. *Denham.*

If this disguise sit not naturally on so grave a per-
on, yet it may become him better than that *fool's*
oat. *Id.*

Him over-weaning
To over-reach; but with the serpent meeting,
Fooled and beguiled. *Milton's Paradise Lost.*

I scorn, although their drudge, to be their *fool* or
jester. *Milton.*

If any yet be so *foolhardy*,
T' expose themselves to vain jeopardy;
If they come wounded off and lame,
No honour's got by such a maim. *Hudibras.*

I returning where I left his armour, found another
instead thereof, and armed myself therein to play the
fool. *Sidney.*

Is this a time for *fooling*? *Dryden.*

When I consider life, 'tis all a cheat;
For *fooled* with hope, men favour the deceit. *Id.*

There is a difference betwixt daring and *foolhardiness*: Lucan and Statius often ventured them too far, our Virgil never. *Id.*

I am tired with waiting for this chemick gold,
Which *fools* us young, and beggars us when old.
Id.

To be thought knowing, you must first put the *fool* upon all mankind. *Id. Juvenal, Preface.*

Bets at the first, were *foolraps*, where the wise
Like spiders lay in ambush for the flies. *Dryden.*

We are transported with *fooleries*, which, if we understood, we should despise. *L'Estrange.*

It must be an industrious youth that provides against age; and he that *fools* away the one, must either beg or starve in the other. *Id.*

He must be happy that knows the true measures of *fooling*. *Id.*

Is it worth the name of freedom to be at liberty to play the *fool*, and draw shame and misery upon a man's self? *Locke.*

It may be asked, whether the eldest son, being a *fool*, shall inherit paternal power before the younger, a wise man. *Id.*

If men loved to be deceived and *fooled* about their spiritual estate, they cannot take a surer course than by taking their neighbour's word for that, which can be known only from their own heart. *South.*

A false glozing parasite would call his *foolhardiness* valour, and then he may go on boldly because blindly. *Id.*

Foolishness being properly a man's deviation from right reason, in point of practice, must needs consist in his pitching upon such an end as is unsuitable to his condition, or pitching upon means unsuitable to the compassing of his end. *Id.*

Charmed by their eyes, their manners I acquire,
And shape my *foolishness* to their desire. *Prior.*

What could the head perform alone,
If all their friendly aids were gone?
A *foolish* figure he must make;
Do nothing else but sleep and ake. *Id.*

I would advise this blinded set of men not to give credit to those, by whom they have been so often *fooled* and imposed upon. *Addison's Freeholder.*

A woman, who is not a *fool*, can have but one reason for associating with a man who is one.
Congreve. Way of the World.

'Tis not so hard to counterfeit joy in the depth of affliction, as to dissemble mirth in the company of *fools*! *Congreve.*

He thanks his stars he was not born a *fool*. *Pope.*

Although we boast our winter sun looks bright,
And *foolishly* are glad to see it in its height;
Yet so much sooner comes the long and gloomy night.
Swift.

It is mere *foolery* to multiply distinct particulars in treating of things, where the difference lies only in words. *Watts.*

He allows himself in *foolish* hatreds and resentments against particular persons, without considering that he is to love every body as himself. *Law.*

——————! Call me not
Mother; for if I brought thee forth, it was
As *foolish* hens at times hatch vipers, by
Sitting upon strange eggs.
Byron. Deformed Transformed.

FOOLADOO, a district of Africa, near the sources of the Senegal, situated between Kaarta, Konkodoo, Jallonkadoo, and Manding. It is rocky, and watered by the numerous streams that fall into the Senegal, of which the principal are the Wonda, the Ba Lee, and the Ba Woollima. This country is the original residence of the

Foulahs, a people widely diffused over Western Africa.

FOOLICONDA, a town of Yani, in Western Africa, on the northern side of the Gambia, sixty miles north-west of Pisania.

Fool'stones, *n. s.* A plant.

FOOSHT, an island in the Red Sea, situated, according to the observations of Mr. Bruce, in N. lat. 15° 59′ 43″. It is described by him as about five miles long from north to south, though only nine in circumference. It is low and sandy in the south, but the north rises in a black hill of inconsiderable height. It is covered with a kind of bent grass, which never arrives at any great length, by reason of want of rain and the constant browsing of the goats. There are great appearances of the black hill having once been a volcano; and near the north cape the ground sounds hollow like the Solfaterra in Italy. The inhabitants are poor fishermen of a swarthy color, going almost naked.

FOOT, *n. s.*, *v. n.* & *v. a.* / Foot'ed, *adj.* / Foot'ing, *n. s.* / Feet, *n. s. plural*, / Feet'less, *adj.* } Sax. fot; Scot. *fut*; Gothic and Swed. *fot*, Dan. *foet*; Teut. *feus*: qu. of Gr. πους? The lower part; the base; that on or by which any body or thing is supported; the lowest member of the human frame; the end; the lowest part. It is applied to the practice of walking; and to the posture and action of those that walk. It is used in a military sense to designate infantry from cavalry, and in this application has no plural. Footing seems to have been once proverbially used for the level; the square; the par. It metaphorically designates state; character; condition; scheme; plan; settlement. It is used in the singular, to characterise one of a certain number of syllables, constituting a distinct part of a verse which are called feet. It is also used for a measure containing twelve inches; on foot, a phrase denoting walking as distinguished from riding or being conveyed. The verb differs little from the noun, except in the following instances: to dance; to tread wantonly; to trip. Footed signifies, shaped in the foot. Footing is ground for the foot; support; root; basis; place; possession; tread; walk; dance; steps; road; track; entrance; beginning; establishment; state; condition; settlement. The following are instances of its use in composition:—

Foot-ball, *n. s.* Foot and ball. A ball commonly made of a blown bladder, cased with leather, driven by the foot. The sport or practice of kicking the foot-ball.

Foot-boy, *n. s.* Foot and boy. A male domestic servant, usually in livery.

Foot-bridge, *n. s.* Foot and bridge. A bridge on which passengers walk; a narrow bridge.

Foot-cloth, *n. s.* Foot and cloth. A sumpter cloth.

Foot-fight, *n. s.* Foot and fight. A fight made on foot, in opposition to that on horseback.

Foot-hold, *n. s* Foot and hold. Space to hold the foot; space on which one may tread surely.

Foot-licker, *n. s.* Foot and licker. A slave, a humble fawner: one who licks the foot.

Foot-man, *n. s.* Foot and man. A soldier belonging to the infantry, as distinguished from the cavalry; a domestic servant in or out of livery. One who practices to walk or run.

Footmanship, *n. s.* From foot-man. The art or faculty of a runner.

Foot-pace, *n. s.* Foot and pace. Part of a pair of stairs, whereon, after four or five steps, you arrive to a broad place, where you make two or three paces before you ascend another step, thereby to ease the legs in ascending the rest of the stairs; a pace no faster than a slow walk.

Foot-pad, *n. s.* Foot and pad A highwayman, that robs on foot.

Foot-path, *n. s.* Foot and path. A narrow way, which will not admit horses or carriages.

Foot-post, *n. s.* Foot and post. A post or messenger that travels on foot.

Foot-stall, *n. s.* Foot and stall. A woman's stirrup.

Footstep, *n. s.* Foot and step. Impression left by the foot; hence trace; track-mark; print; impression, token, and evidence of any thing; To follow the footsteps of another is also to follow his example.

Foot-stool, *n. s.* Foot and stool. Stool on which he that sits places his feet.

Antiochus departed, weening in his pride to make the land navigable, and the sea passable by *foot*.
2 *Mac.* v. 21.

Ther, stomblen stedes strong, and doun goth all
He rolleth under *foot* as doth a ball.
Chaucer. The Knightes Tale.

And eke his stede driven forth with staves
With *footmen*, bothe yemen and eke knaves. *Id.*

Feet, in our English versifying, without quantity and joints, be sure signs that the verse is either born deformed, unnatural, or lame.
Ascham's Schoolmaster.

A wounded dragon under him did ly,
Whose hideous tayle his lefte *foot* did enfold,
And with a shafte was shot through either eye,
That no man forth might draw, ne no man remedye.
Spenser.

By this the dreadful beast drew nigh to land,
Half flying and half *footing* in his haste.
Faerie Queene.

Didst thou hear these verses?
—O yes, I heard them all, and more too; for some o' them had in them more *feet* than the verses would bear. *Shakspeare.*

Yond' towers, whose wanton tops do buss the clouds,
Must kiss their own *feet*. *Id. Troilus and Creseide.*

Take heed, have open eye; for thieves do *foot* by night. *Shakspeare.*

While other jests are something rank on *foot*,
Her father hath commanded her to slip
Away with Slender to marry. *Id.*

What confederacy have you with the traitors
Late *footed* in the kingdom? *Id. King Lear.*

You, that did void your rheum upon my beard, and *foot* me as you spurn a stranger cur over your threshold. *Shakspeare.*

The queen that bore thee,
Oft'ner upon her knees than on her *feet*,
Died every day she lived. *Id. Macbeth.*

Saint Withold *footed* thrice the wold:
He met the knight-mare, and her name told;
Bid her alight, and her troth plight,
And aroynt thee, witch, aroynt thee right. *Id.*

The centurions and their charges billeted already in the entertainment, and to be on *foot* at an hour's warning. *Shakspeare.*

I'll read you matter deep and dangerous;
As full of peril and adventurous spirit
As to o'erwalk a current, roaring loud,
On the unsteadfast *footing* of a spear.
Id. Henry VI.

Thus have we swept suspicion from our seat,
And made our *footstool* of security. *Id.*

Knowest thou the way to Dover?
—Both stile and gate, horseway and *footpath.*
Shakspeare.

Was it discretion, lords, to let this man
This honest man, wait like a lowsy *footboy*
At chamber-door? *Id. Henry VIII.*

Do that good mischief which may make this island
Thine own for ever; and I, thy Caliban,
For ay thy *footlicker.* *Id. Tempest.*

Three times a day my *footcloth* horse did stumble,
And started when he looked upon the Tower,
As loath to bear me to the slaughterhouse.
Shakspeare.

Am I so round with you as you with me,
That like a *football* you do spurn me thus? *Id.*

The numbers levied by her lieutenant did consist of *footmen* three millions, of horsemen one million.
Raleigh's History.

Were it not for this easy borrowing upon interest, men's necessities would draw upon them a most sudden undoing, in that they would be forced to sell their means, be it lands or goods, far under *foot.*
Bacon's Essays.

An orange, lemon, and apple, wrapt in a linen cloth, being buried for a fortnight's space four *foot* deep within the earth, came forth no ways mouldy or rotten. *Bacon.*

He was carried in a rich chariot, litterwise, with two horses at either end, and two *footmen* on each side. *Id.*

Like running weeds that have no certain root; or like *footings* up and down, impossible to be traced.
Id. Henry VII.

The Irish archers espying this, suddenly broke up, and committed the safety of their lives to their nimble *footmanship.* *Hayward.*

For carrying such letters, every thoroughfare weekly appointeth a *footpost*, whose dispatch is well near as speedy as the horses. *Carew.*

We are the earth, and they,
Like moles within us, heave and cast about;
And till they *foot* and clutch their prey,
They never cool, much less give out. *Herbert.*

Fretting, by little and little, washes away and eats out both the tops, and sides, and *feet* of mountains.
Hakewill.

Little need we stir our *feet*, to learn to tell either loud lies, or large truths. *Bp. Hall.*

Break off, break off, I feel the different pace
Of some chaste *footing* near about this ground.
Milton.

Yet then with *foot*, as stumbling as his tongue,
Pressed for his place among the learned throng.
Marvell.

Palemon's shepherd, fearing the *footbridge* was not strong enough, loaded it so long, 'till he broke that which would have borne a bigger burden. *Sidney.*

So began our *footfight* in such sort, that we were well entered to blood of both sides. *Id.*

Let echoing anthems make his praises known
On earth, his *footstool*, as in heaven his throne.
Roscommon.

As when a sort of lusty shepherds try
Their force at *football*, care of victory
Makes them salute so rudely, breast to breast,
That their encounter seems too rough for jest.
Waller.

By the phrase of worshipping his *footstool*, no more is meant than worshipping God at his *footstool.*
Stillingfleet.

Thrice horse and *foot* about the fires are led,
And thrice with loud laments they wail the dead.
Dryden.

Lonely the vale and full of horror stood,
Brown with the shade of a religious wood;
The moon was up, and shot a gleamy light;
He saw a quire of ladies in a round,
That featly *footing* seemed to skim the ground.
Id.

What dismal cries are those?
—Nothing; a trifling sum of misery,
New added to the *foot* of thy account:
Thy wife is seized by force, and borne away. *Id.*

Set cloven stakes; and wond'rous to behold,
Their sharpened ends in earth their *footing* place,
And the dry poles produce a living race. *Id. Virgil.*

This man's son would, every *foot* and anon, be taking some of his companions into the orchard.
L'Estrange.

All fell to work at the roots of the tree, and left it so little *foothold*, that the first blast laid it flat on the ground. *Id.*

Yet, says the fox, I have baffled more of them with my wiles and shifts than ever you did with your *footmanship.* *Id.*

A man shall never want crooked paths to walk in, if he thinks that he is in the right way, wherever he has the *footsteps* of others to follow. *Locke.*

All those sublime thoughts take their rise and *footing* here: the mind stirs not one jot beyond those ideas which sense or reflection have offered. *Id.*

Snouted and tailed like a boar, and *footed* like a goat. *Grew.*

What colour of excuse can be for the contempt with which we treat this part of our species, the negroes, that we should not put them upon the common *foot* of humanity, that we should only set an insignificant fine upon the man who murders them? *Addison.*

Like *footmen* running before coaches,
To tell the inn what lord approaches. *Prior*

When suffocating mists obscure the morn,
Let thy worst wig, long used to storms be worn;
This knows the powdered *footman*, and, with care,
Beneath his flapping hat secures his hair. *Gay.*

Let us turn our thoughts to the frame of our system, if there we may trace any visible *footsteps* of Divine wisdom and beneficence. *Bentley's Sermons.*

And Sidney's verse halts ill on Roman *feet.*
Pope.

His brother's image to his mind appears,
Inflames his heart with rage, and wings his *feet* with fears. *Id.*

I ask, whether upon the *foot* of our constitution, as it stood in the reign of the late king James, a king of England may be deposed? *Swift.*

Sacred Thespio! which in Sinai's grove
First took'st thy being and immortal breath,
And vaunt'st thy offspring from the highest Jove,
Yet deign'st to dwell with mortals here beneath,
With vilest earth, and men more vile residing;
Come holy Virgin, to my bosom gliding;
With thy glad angel-light my blind-fold *footsteps* guiding. *Fletcher's Purple Island.*

The trumpet sounds, your legions swarm abroad
Through the ripe harvest lies their destined road;
At every step beneath their *feet* they tread
The life of multitudes, a nation's bread. *Cowper.*

O'er her fair limbs convulsive tremors fleet,
Start in her hands, and struggle in her *feet*;
In vain to scream with quivering lips she tries,
And strains in palsied lids her tremulous eyes.
Darwin.

'Tis necessary for the further daring
Of our too needy army, that their chief
Plant the first *foot* upon the foremost ladder's
First step. *Byron. Deformed Transformed.*

—— You may sometimes trace
A feeling in each *footstep* as disclosed
By Sallust, in his Catiline, who chased
By all the demons of all passions showed
Their work even by the way in which he trode.
Byron.

Foot. See Anatomy, Index.

Foot, in the Latin and Greek poetry, a measure composed of a certain number of long and short syllables. They are commonly reckoned twenty-eight: of these some are simple, as consisting of two or three syllables, and therefore called dissyllabic or trisyllabic feet; others compound, consisting of four syllables, and therefore called tetrasyllabic feet. The dissyllabic feet are four in number, viz. the pyrrhichius, spondeus, iambus, and trocheus. See Pyrrhic, &c. The trisyllabic feet are eight in number, viz. the dactylus, anapæstus, tribrachys, molossus, amphibrachys, amphimacer, bacchius, and antibacchius. See Dactylus, &c. The tetrasyllabic are sixteen in number, viz. the procleusmaticus, dispondeus, choriambus, antispastus, diiambus, dichoreus, ionicus a majore, ionicus a minore, epitritus primus, secundus, tertius, and quartus, pæon primus, secundus, tertius, and quartus. See Procleusmaticus.

Foot, in measures, a division of length, containing twelve inches. See Arithmetic. The Roman foot was equal to about ·965 of the English foot; the Ancona foot is 1·282 English; Bologna foot, 1·244; Brescia foot, 1·560; Ferrara foot, 1·317; Florence foot, ·995; Geneva foot, 1·919; Leghorn foot, ·992; Milan decimal foot, ·855; Modena foot, 2·081; Naples palm, ·861; Paris foot, 1·066; Paris metre, 3·281; Parma foot, 1·869; Pavia foot, 1·540; Piacenza, same as the Parmese; Rhinland, 1·023 to 1·030; Rome foot, ·966; Sienna foot, 1·239; Trent foot, 1·201; Turin foot, 1·676; Venice foot, 1·137; Verona foot, 1·117; Vicenza foot, 1·136. The ancient Greek foot is eleven inches ·875 of the English foot.

Foot of a Horse, in the manege, the extremity of the leg, from the coronet to the lower part of the hoof. See Farriery.

Foot, Solid or Cubic, is the same measure in all the three dimensions, length, breadth, and depth or thickness, containing 1728 cubic inches.

Foot, Square, is the same measure both in breadth and length, containing 144 square or superficial inches.

FOOTA Jallo, an extensive country of Western Africa, near the sources of the Gambia, the Rio Grande, and probably the Niger. It is computed to be 350 miles from east to west, and 200 from north to south. The climate is good, and parts of it are extremely fertile. The objects of cultivation are rice and maize, which are both raised and carried to market by females. The hilly grounds afford pasture to sheep. They also contain iron stone, which is dug and manufactured. The mines are deep, and worked with long galleries or horizontal passages, having openings for the admission of air. Here too the women are said chiefly to perform the labor. The inhabitants are Foulahs, and have numerous mosques. Their houses are detached, neat, and convenient. In the towns are manufactories of narrrow cloth, workmen in iron, silver, wood, leather, &c. Many of the natives undertake long commercial journeys, and are acquainted both with Cassina and Tombuctoo, with which there is a free communication by a journey of four months. The principal towns are Teemboo and Laby, the former containing 7000, and the latter 5000 inhabitants.

FOOTA Torra, a country of Western Africa, between the higher parts of the Senegal and Gambia; to the west of Bondou. It is extensive, and occupied by Foulahs, but is little known. The king is said to be a zealous Mahommedan; and Park, in returning from his first journey, received accounts of a species of crusade in which he had engaged against his western neighbour, the damel of the Jaloffs, with a view to compelling him to embrace Mahommedanism. The latter, however, carried on a harassing warfare, cutting off his supplies, and, having thus reduced his force, surprised and took him prisoner. After compelling him to labour as a slave for three months, however, he restored him to his kingdom.

FOOTE (Samuel), was born at Truro, in Cornwall, and descended from a very ancient family. His father was M. P. for Tiverton, in Devonshire, and commissioner of the prize office and fine contract. Through his mother's relations, Foote became possessed of a considerable part of the Goodere estate, which was worth rather more than £5000 a-year. He was educated at Worcester College, Oxford, and, on leaving the university, commenced student of law in the Temple; but as the dryness of this study did not suit the liveliness of his genius, he soon relinquished it. He married a young lady of a good family and fortune; but the connexion was not productive of happiness. He now launched into gaming and all the fashionable follies of the age; and in a few years spent his whole fortune. His necessities led him to the stage, and he made his first appearance in Othello. But as Mr. Foote was never a distinguished actor in the plays of others, his salary was very unequal to his gay and extravagant turn: and he contracted debts which forced him to take refuge within the verge of the court. On this occasion, he relieved his necessities by the following stratagem:—Sir Francis Delaval had long been his intimate friend, and had dissipated his fortune by similar extravagance. A lady, who was likewise an intimate acquaintance of Foote's, and who was exceedingly rich, was fortunately at that time bent upon a matrimonial scheme. Foote strongly recommended to her to consult upon this momentous affair the conjurer in the Old Bailey, whom he represented as a man of surprising skill and penetration. He employed an acquaintance of his own to per-

sonate the conjurer; who depicted Sir Francis at full length; described the time when, the place where, and the dress in which she would see him. The lady was so struck with the coincidence of every circumstance, that she married Delaval in a few days. For this service Sir Francis settled an annuity upon Foote, which enabled him once more to emerge from obscurity. In 1747 he opened the little theatre in the Haymarket, taking upon himself the double character of author and performer; and appeared in a dramatic piece of his own composing, called the Diversions of the Morning. This piece consisted of nothing more than the exhibition of several characters well known in real life; whose manner of conversation and expression Foote very happily hit off in his drama, and still more happily represented on the stage. In the concluding part of his speech, under the character of a theatrical director, Mr. Foote took off, with great humor and accuracy, the styles of acting of every principal performer on the English stage. This entertainment at first met with some opposition; but Foote being patronised by many of the nobility, and other persons of distinction, the opposition was over-ruled: and, having altered the title of his performance, he proceeded, without further molestation, to give Tea in a Morning to his friends, and represented it through a run of forty mornings to crowded and splendid audiences. The ensuing season he produced another piece which he called An Auction of Pictures. This piece also had a great run. His Knights, which was the produce of the ensuing season, was a performance of somewhat more dramatic regularity. His dramatic pieces, exclusive of the interlude called Piety in Pattens, are, Taste, The Knights, The Author, The Englishman in Paris, The Englishman returned from Paris, The Mayor of Garrat, The Liar, The Patron, The Minor, The Orators, The Commissary, The Devil upon Two Sticks, The Lame Lover, The Maid of Bath, The Nabob, The Cozeners, The Capuchin, The Bankrupt, and an unfinished comedy called the Slanderer. In 1766, being on a party of pleasure with the then duke of York, lord Mexborough, and Sir Francis Delaval, Mr. Foote broke his leg, by a fall from his horse; in consequence of which he suffered an amputation. The duke on this occasion obtained for Mr. Foote a patent for life; whereby he was allowed to perform at the little theatre in Haymarket, from the 15th May to the 15th September, every year. He now became a greater favorite of the town than ever: his laughable pieces, with his more laughable performance, constantly filled his house; and his receipts were in some seasons almost incredible. Parsimony was never one of his vices; his hospitality and generosity were ever conspicuous; he was visited by the first nobility, and he was sometimes honored even by royal guests. In the midst of this success an attack was made upon his character by a villainous domestic, whom he had dismissed for misbehaviour; and though he was honorably acquitted of the crime imputed, it was thought that the shock which he received from it accelerated his death. Mr. Foote on the decline of his health, entered into an agreement with Mr. Colman, for his patent of the theatre; according to which he was to receive from the latter £1600 a-year, besides a stipulated sum whenever he chose to perform. Mr. Foote made his appearance two or three times in some of his most admired characters; but was suddenly affected with a paralytic stroke one night whilst upon the stage, and compelled to retire. Being advised to bathe, he repaired to Brighton, where he recovered his health and spirits, and a few weeks before his death returned to London: but, by the advice of his physicians, set out with an intention to spend the winter at Paris and in the south of France. At Dover he was suddenly attacked by another stroke of the palsy, which in a few hours terminated his existence, on the 21st of October, 1777, in the fifty-sixth year of his age. He was privately interred in the cloisters of Westminster Abbey. Foote has often been styled the English Aristophanes; and a better proof of his comic powers cannot, perhaps, be needed than the following anecdote from Boswell's Life of Johnson. 'The first time,' says Dr. Johnson, 'I was in company with Foote, was at Fitzherbert's. Having no good opinion of the fellow, I was resolved not to be pleased; and it is very difficult to please a man against his will. I went on eating my dinner pretty sullenly, affecting not to mind him; but the dog was so very comical, that I was obliged to lay down my knife and fork, throw myself back in my chair, and fairly laugh it out. Sir, he was irresistible.'

Foot-Halt, a disorder incident to sheep. It takes its source from an insect, which, when it comes to a certain maturity, resembles a worm of two, three, or four inches in length. The first appearance of this malady is, when the sheep gives signs of lameness, which increases to so high a degree as to prevent grazing; when, with want of sufficient food, and pain, the poor animal suffers greatly, and lingers till it dies, if not cured by extracting the insect or worm. The sooner this is done the better, as it is easily performed. As soon as the lameness is perceived, let the foot that is lame be examined between the close of the claws, and it will be found that in the skin where the close separates is a small hole (not natural), through which the insect, when yet small, gets its entrance, and by degrees has worked itself upwards along the leg, between the outward skin and bone, and obtains its largest magnitude. Proportionally it finds its nourishment, when it is left undisturbed. This worm must be extracted by moving the claws backward and forward in contrary directions; when the under part of the worm will soon make its appearance at the above-mentioned small hole, and continuing the same operation of moving the claws, the whole worm will work itself out. This is better than at its first appearance to draw it out with danger of breaking off; lest part of it should remain in the sheep's leg, and, by rotting there, prove hurtful. This easy operation will be effectual without any application whatever, and the channel, which the worm had made along the leg, will cure of itself. This malady is in some years more prevalent than in others, particularly in wet seasons; and is oftener ob-

served to begin in spring and autumn than in summer and winter; notwithstanding sheep suffer more by the wet in winter than in any of the other seasons. In high grounds they are less liable to it than in low marshy and meadow grounds.

FOP, *n. s.*
FOP'-DOODLE, *n. s.*
FOP'PERY, *n. s.*
FOP'PISH, *adj.*
FOP'PISHLY, *adv.*
FOP'PISHNESS, *n. s.*
FOP'PLING, *n. s.*

A word probably made by chance, and therefore without etymology, says Dr. Johnson: but there is a regular Teut. substantive *fop* (Belg. *vop*); from which it is clearly derived. A simpleton; a coxcomb; a man of small understanding and much ostentation; a pretender; a man fond of show, dress, and flutter; an impertinent: foppery is derived from fop, and signifies that kind of folly which displays itself in dress and manners: to be foppish is to be fantastically and affectedly fine; vain; ostentatious; showy, and ridiculous: foppling is the diminutive of fop, a fool half grown; a stunted and insignificant coxcomb; a thing without species or gender, that endeavours to attract admiration to its pretty person, its pretty dress, &c. In composition it makes fop-doodle, a fool double distilled; one that provokes ridicule and contempt, who thrusts himself into danger with no other chancethan a sound beating for his pains.

A whole tribe of *fops*,
Got 'tween asleep and awake.
Shakspeare. King Lear.

This is the excellent *foppery* of the world, that when we are sick in fortune, often the surfeits of our own behaviour, we make guilty of our disasters, the sun, the moon, and stars, as if we were villains on necessity. *Id.*

Fools ne'er had less grace in a year;
For wise men are grown *foppish*,
And know not how their wits to wear,
Their manners are so apish. *Id.*

Let not the sound of shallow *foppery* enter
My sober house. *Id. Merchant of Venice.*

I was three or four times in the thought they were not fairies; and yet the guiltiness of my mind, the sudden surprise of my powers, drove the grossness of the *foppery* into a received belief, in despight of the teeth of all rhyme and reason, that they were fairies.
Id. Merry Wives of Windsor.

Where sturdy butchers broke your noddle,
And handled you like a *fopdoodle*. *Hudibras.*

When such a positive abandoned *fop*,
Among his numerous absurdities,
Stumbles upon some tolerable line,
I fret to see them in such company.
Roscommon.

ve had to-day a dozen billet-doux,
m *fops*, and wits, and cits, and Bow Street beaux;
Some from Whitehall, but from the Temple more,
A Covent Garden porter brought me four. *Dryden.*

The leopard's beauty, without the fox's wit, is no better than a *fop* in a gay coat. *L'Estrange.*

The Romans grew extremely expensive and *foppish*; so that the emperor Aurelian forbid men that variety of colours on their shoes, allowing it still to women. *Arbuthnot.*

I wish I could say quaint *fopperies* were wholly absent from graver subjects. *Swift.*

But though we fetch from Italy and France
Our *fopperies* of tune and modes of dance
Our sturdy Britons scorn to borrow sense.
Granville.

Thy works in Chloe's toilet gain a part,
And with his taylor share the *foppling's* heart.
Tickell.

You would know who is rude and ill-natured, who is vain and *foppish*, who lives too high, and who is in debt. *Law.*

FOR, *prep.* and *conj.* Sax. ꝼoꝛ. Dr. Johnson says preposition. Junius derives it from the Greek προ, transposing the ρ and changing π into ꝼ. Skinner and Tyrwhitt from the Latin *pro*. Mr. Horne Tooke from the Gothic noun *fairina*, cause. 'I imagine,' observes Mr. Tooke, 'the word for (whether denominated preposition, conjunction, or adverb) to be a noun, and to have always one and the same single signification, viz. cause, and nothing else. Though Greenwood attributes to it eighteen, and S. Johnson forty-six different meanings; for which Greenwood cites above forty, and Johnson above 200 instances. But, with a little attention to these instances, you will easily perceive, that they usually attribute to the preposition the meaning of some other words in the sentence';—vide *Diversions of Purley*, p. 345. We are, speaking generally, of Mr Tooke's opinion as to this word: but the instances of Dr. Johnson will fully illustrate both his definitions, and this more simple one of Mr. Tooke's. We therefore subjoin them, with some few additions and rectifying the chronology.

Because of.

That which we *for* our unworthiness are afraid to crave, our prayer is, that God *for* the worthiness of his Son would notwithstanding vouchsafe to grant.
Hooker.

Edward and Richard,
With fiery eyes, sparkling *for* very wrath,
Are at our backs. *Shakspeare. Henry VI.*

Speak, good Cominius;
Leave nothing out *for* length. *Shakspeare.*

For as much as the question cannot be scanned, unless the time of Abraham's journey be considered of, I will search into a tradition concerning his travels. *Raleigh's History.*

An astrologer saith, if it were not *for* two things that are constant, no individual would last one moment. *Bacon.*

For as much as it is a fundamental law in the Turkish empire, that they may, without any other provocation, make war upon Christendom for the propagation of their laws; so the Christians may at all times, as they think good, be upon the prevention. *Id. War with Spain.*

Let no man, *for* his own poverty, become more oppressive in his bargains; but quietly recommend his estate to God, and leave the success to him.
Taylor.

I but revenge my fate; disdained, betrayed,
And suffering death *for* this ungrateful maid.
Dryden.

Sole on the barren sands, the suffering chief
Roared out *for* anguish, and indulged his grief.
Id.

Children, discountenanced by their parents *for* any fault, find a refuge in the caresses of foolish flatterers.
Locke.

A sound mind in a sound body is a short but full description of a happy state in this world: he that has these two has little more to wish *for*, and he that

wants either of them will be but little better *for* any thing else. *Locke*..

Persons who have lost most of their grinders, having been compelled to use three or four only in chewing, wore them so low, that the inward nerve lay bare, and they would no longer *for* pain make use of them. *Ray on the Creation.*

The middle of the gulph is remarkable *for* tempests. *Addison.*

My opened thought to joyous prospect raise,
And *for* thy mercy let me sing thy praise. *Prior.*

Which best or worst you could not think;
And die you must *for* want of drink. *Id.*

It is a most infamous scandal upon the nation, to reproach them *for* treating foreigners with contempt. *Swift.*

We can only give them that liberty now *for* something, which they have so many years exercised *for* nothing, of railing and scribbling against us. *Id.*

With respect to; with regard to.

Rather our state's defective *for* requital,
Than we to stretch it out. *Shakspeare. Coriolanus.*

A paltry ring
That she did give me, whose poesy was,
For all the world, like cutler's poetry
Upon a knife; love me and leave me not.
Shakspeare.

For all the world,
As thou art at this hour, was Richard then. *Id.*

It was young counsel *for* the persons, and violent counsel *for* the matters. *Bacon's Essays.*

Authority followeth old men, and favour and popularity youth; but *for* the moral part, perhaps, youth will have the pre-eminence, as age hath for the politick. *Id.*

After death, we sprights have just such natures
We had, *for* all the world, when human creatures. *Dryden.*

Such little wasps, and yet so full of spite;
For bulk mere insects, yet in mischief strong. *Tate.*

Hobbes has given us a correct explanation of the sense in general; but *for* particulars and circumstances, he continually lops them. *Pope.*

Lo, some are vellum, and the rest as good,
For all his lordship knows, but they are wood. *Id.*

In this sense it has often *as* before it.

As for Maramaldus the general, they had no just cause to mislike him, being an old captain of great experience. *Knolles.*

In the character of.

If a man can be fully assured of any thing *for* a truth, without having examined, what is there that he may not embrace *for* truth? *Locke.*

Say, is it fitting in this very field,
This field, where from my youth I've been a carter,
I, in this field, should die *for* a deserter? *Gay.*

She thinks you favoured:
But let her go, *for* an ungrateful woman.
A. Phillips.

With resemblance of.

I hear *for* certain, and do speak the truth,
The gentle York is up. *Shakspeare. Henry IV.*

Now, now *for* sure, deliverance is at hand,
The kingdom shall to Israel be restored. *Milton.*

The startling steed was seized with sudden fright,
And, bounding, o'er the pommel cast the knight;
Forward he flew, and pitching on his head,
He quivered with his feet, and lay *for* dead.
Dryden.

Considered as; in the place of.

The council-table and star-chamber held *for* honourable that which pleased, and *for* just that which profited. *Clarendon.*

Our present lot appears
For happy, though but ill; *for* ill, not worst,
If we procure not to ourselves more woe. *Milton.*

In advantage of; for the sake of.

An ant is a wise creature *for* itself; but it is a shrewd thing in an orchard. *Bacon.*

He refused not to die *for* those that killed him,
And shed his blood *for* some of those that spilt it.
Boyle.

Shall I think the world was made *for* one,
And men are born *for* kings, as beasts *for* men,
Not *for* protection, but to be devoured?
Dryden.

Read all the prefaces of Dryden,
For those our criticks much confide in;
Though merely writ at first *for* filling,
To raise the volume's price a shilling. *Swift.*

Conducive to; beneficial to.

It is *for* the general good of human society, and consequently of particular persons, to be true and just; and it is *for* men's health to be temperate. *Tillotson.*

It can never be *for* the interest of a believer to do me a mischief, because he is sure, upon the balance of accounts, to find himself a loser by it. *Addison.*

With intention of going to a certain place.

We sailed from Peru *for* China and Japan. *Bacon.*

As she was brought *for* England, she was cast away near Harwich haven. *Hayward.*

We sailed directly *for* Genoa, and had a fair wind. *Addison.*

In comparative respect.

For tusks with Indian elephants he strove,
And Jove's own thunder from his mouth he drove.
Dryden.

With appropriation to.

Shadow will serve *for* Summer: prick him; *for* we have a number of shadows to fill up the muster-book. *Shakspeare.*

After O an expression of desire.

O *for* a muse of fire that would ascend
The brightest heaven of invention! *Shakspeare.*

In account of; in solution of.

Thus much *for* the beginning and progress of the deluge. *Burnet's Theory of the Earth.*

Inducing to as a motive.

There is a natural, immutable, and eternal reason *for* that which we call virtue, and against that which we call vice. *Tillotson.*

In expectation of.

He must be back again by one and twenty, to marry and propagate: the father cannot stay any longer *for* the portion, nor the mother *for* a new set of babies to play with. *Locke.*

Noting power or possibility.

For a holy person to be humble, *for* one, whom all men esteem a saint, to fear lest himself become a devil, is as hard as *for* a prince to submit himself to be guided by tutors. *Taylor.*

Noting dependence.

The colours of outward objects, brought into a darkened room, depend *for* their visibility upon the dimness of the light they are beheld by. *Boyle.*

In prevention of; for fear of.

Corn being had down, any way ye allow,
Should wither as needeth *for* burning in mow.
Tusser

And, *for* the time shall not seem tedious,
I'll tell thee what befel me on a day,
In this self place. *Shakspeare. Henry VI.*

There must be no alleys with hedges at the hither end, *for* letting your prospect upon this fair hedge from the green: nor at the farther end, *for* letting your prospect from the hedge through the arches upon the heath. *Bacon's Essays.*

She wrapped him close *for* catching cold. *Lovelace.*

In remedy of.

Sometimes hot, sometimes cold things are good *for* the toothach. *Garretson.*

In exchange of.

He made considerable progress in the study of the law, before he quitted that profession *for* this of poetry. *Dryden.*

In the place of; instead of.

To make him copious is to alter his character; and to translate him line *for* line is impossible. *Dryden.*

We take a falling meteor *for* a star. *Cowley.*

In supply of; to serve in the place of.

Most of our ingenious young men take up some cried-up English poet *for* their model, adore him, and imitate him, as they think, without knowing wherein he is defective. *Dryden.*

Through a certain duration.

Some please *for* once, some will *for* ever please. *Roscommon.*

Those who sleep without dreaming, can never be convinced that their thoughts are *for* four hours busy, without their knowing it. *Locke.*

The administration of this bank is *for* life, and partly in the hands of the chief citizens. *Addison.*

In search of; in quest of.

Philosophers have run so far back *for* arguments of comfort against pain, as to doubt whether there were any such thing; and yet, for all that, when any great evil has been upon them, they would cry out as loud as other men. *Tillotson.*

According to.

Chymists have not been able, *for* aught is vulgarly known, by fire alone to separate true sulphur from antimony. *Boyle.*

Noting a state of fitness or readiness.

Nay, if you be an undertaker, I am *for* you. *Shakspeare.*

If he be brave, he's ready *for* the stroke. *Dryden.*

In hope of; for the sake of; noting the final cause.

How quickly nature
Falls to revolt, when gold becomes her object!
For this the foolish, over-careful fathers,
Have broke their sleeps with thought, their brains with care,
Their bones with industry: *for* this, engrossed
The cankered heaps of strong atchieved gold:
For this they have been thoughtful to invest
Their sons with arts and martial exercises. *Shakspeare.*

The kingdom of God was first rent by ill counsel; upon which counsel there are set, *for* our instruction, two marks. *Bacon.*

Whether some hero's fate,
In words worth dying *for*, he celebrate. *Cowley.*

For he writes not *for* money, nor *for* praise,
Nor to be called a wit, nor to wear bays. *Denham.*

There we shall see a sight, worthy dying *for*, that blessed Saviour, who so highly deserves of us. *Boyle.*

He is not disposed to be a fool, and to be miserable *for* company. *Tillotson.*

Even death's become to me no dreadful name;
In fighting fields, where our acquaintance grew,
I saw him, and contemned him first *for* you. *Dryden.*

For this, 'tis needful to prevent her art,
And fire with love the proud Phœnician's heart. *Id. Virgil.*

Some pray *for* riches; riches they obtain;
But watched by robbers, *for* their wealth are slain. *Dryden.*

Let them who truly would appear my friends,
Employ their swords like mine *for* noble ends. *Id.*

Of tendency to; towards.

The kettle to the top was hoist:
But with its upside down, to show
Its inclination *for* below. *Swift.*

In favor of; on the part of; on the side of.

Ye suppose the laws *for* which ye strive are found in Scripture; but those not against which we strive. *Hooker. Preface.*

It becomes me not to draw my pen in the defence of a bad cause, when I have so often drawn it *for* a good one. *Dryden.*

Jove was *for* Venus; but he feared his wife. *Id.*

Noting accommodation or adaptation.

Fortune, if there be such a thing as she,
Spies that I bear so well her tyranny,
That she thinks nothing else so fit *for* me. *Donne.*

It is *for* wicked men to dread God; but a virtuous man may have undisturbed thoughts, even of the justice of God. *Tillotson.*

A few rules of logick are thought sufficient, in this case, *for* those who pretend to the highest improvement. *Locke.*

His country has good havens, both *for* the Adriatic and Mediterranean. *Addison on Italy.*

Persia is commodiously situated *for* trade both by sea and land. *Arbuthnot on Coins.*

With intention of.

And by that justice hast removed the cause
Of those rude tempests, which, *for* rapine sent,
Too oft, alas, involved the innocent. *Waller*

Here huntsmen with delight may read
How to chuse dogs *for* scent or speed. *Id*

For this, from Trivia's temple and her wood,
Are coursers driven, who shed their master's blood. *Dryden.*

Such examples should be set before them, as patterns *for* their daily imitation. *Locke.*

The next question usually is, what is it *for*? *Id.*

Achilles is *for* revenging himself upon Agamemnon by means of Hector. *Broome.*

Becoming; belonging to.

It were more *for* his honour to raise his siege than to spend so many good men in the winning of it by force. *Knolles.*

It were not *for* your quiet, nor your good,
Nor *for* my manhood, honesty, and wisdom,
To let you know my thoughts. *Shakspeare. Othello.*

Jests *for* Dutchmen and English boys. *Cowley.*

The' offers he doth make,
Were not *for* him to give, nor them to take. *Daniel.*

It is a reasonable account *for* any man to give, why he does not live as the greatest part of the world do, that he has no mind to die as they do, and perish with them. *Tillotson.*

Is it *for* you to ravage seas and land,
Unauthorized by my supreme command?
Dryden.

His sire already signs him *for* the skies,
And marks the seat amidst the deities. *Id.*

Notwithstanding.

This, *for* any thing we know to the contrary, might be the self-same form which Philojudæus expresseth. *Hooker.*

God's desertion shall, *for* aught he knows, the next minute supervene. *Decay of Piety.*

Probability supposes that a thing may or may not be so, *for* any thing yet certainly determined on either side. *South*

If such vast masses of matter had been situated nearer to the sun, or to each other, as they might as easily have been, *for* any mechanical or fortuitous agent, they must necessarily have caused a considerable disorder in the whole system. *Bentley.*

For any thing that legally appears to the contrary, it may be a contrivance to fright us. *Swift.*

To the use of; to be used in.

The oak *for* nothing ill,
The osier good *for* twigs, the poplar *for* the mill.
Spenser.

Your understandings are not bright enough *for* the exercise of the highest acts of reason. *Tillotson.*

In consequence of.

For love they force through thickets of the wood,
They climb the steepy hills and stem the flood.
Dryden.

In recompense of; in return of.

Now, *for* so many glorious actions done,
For peace at home, and *for* the publick wealth,
I mean to crown a bowl *for* Cæsar's health;
Besides, in gratitude *for* such high matters,
Know I have vowed two hundred gladiators.
Dryden.

First the wily wizard must be caught;
For unconstrained he nothing tells *for* nought.
Id.

In proportion to.

He is not very tall, yet *for* his years he's tall.
Shakspeare.

As he could see clear, *for* those times, through superstition; so he would be blinded, now and then, by human policy. *Bacon.*

Exalted Socrates! divinely brave!
Injured he fell, and dying he forgave;
Too noble *for* revenge. *Dryden's Juvenal.*

By means of; by interposition of.

Moral consideration can no way move the sensible appetite, were it not *for* the will. *Hale.*

Of some calamity we can have no relief but from God alone; and what would men do in such a case, if it were not *for* God? *Tillotson.*

In regard of; in preservation of; *I cannot* for *my life*, is, I cannot if my life might be saved by it.

I bid the rascal knock upon your gate;
But could not get him *for* my heart.
Shakspeare.

I cannot *for* my heart leave a room, before I have thoroughly examined the papers pasted upon the walls. *Addison's Spectator.*

For all. Notwithstanding.

For all the carefulness of the Christians the English bulwark was undermined by the enemy, and upon the fourth of September part thereof was blown up. *Knolles's History.*

But as Noah's pigeon, which returned no more,
Did shew she footing found *for all* the flood.
Davies.

Neither doubt you, because I wear a woman's apparel, I will be the more womanish; since I assure you, *for all* my apparel, there is nothing I desire more than fully to prove myself a man in this enterprize. *Sidney.*

They resolute, *for all* this, do proceed
Unto that judgment. *Daniel.*

Though that very ingenious person has anticipated part of what I should say, yet you will, *for all* that, expect that I should give you a fuller account. *Boyle.*

If we apprehend the greatest things in the world of the emperor of China or Japan, we are well enough contented, *for all* that, to let them govern at home. *Stillingfleet.*

She might have passed over my businesses; but my rabble is not to be mumbled up in silence, *for all* her pertness. *Dryden.*

For all his exact plot, down was he cast from all his greatness, and forced to end his days in a mean condition. *South.*

For to. In the language used two centuries ago *for* was commonly used before *to*, the sign of the infinitive mood, to note the final cause. As, I come *for to* see you, for I love to see you: in the same sense with the French *pour*. Thus it is used in the translation of the Bible. But this distinction was by the best writers sometimes forgotten; and *for*, by wrong use, appearing superfluous, is now always omitted.

But, *for to* tellen you of his araie,—
His hors wos good, but he ne wos not gaie.
Chaucer. Prologue to Cant. Tales.

Who shall let me now
On this vile body *for to* wreak my wrong?
Faerie Queene.

A large posterity
Up to your happy palaces may mount,
Of blessed saints *for to* increase the count.
Spenser.

These things may serve *for to* represent how just cause of fear this kingdom may have towards Spain. *Bacon.*

For, *conj.* The word by which the reason is introduced of something advanced before.

Goth now your way, 'quod he,' al stille and soft,
And let us dine as sone as that ye may,
For by my kalendar it is prime of day.
Chaucer. The Shipmannes Tale.

Heaven doth with us as we with torches deal,
Not light them for themselves; *for* if our virtues
Did not go forth of us, 'twere all alike
As if we had them not.
Shakspeare. Measure for Measure.

Tell me what kind of thing is wit:
For the first matter loves variety less. *Cowley.*

Old husbandmen I at Sabinum know,
Who for another year dig, plough, and sow;
For never any man was yet so old,
But hoped his life one Winter more would hold.
Denham.

For the hope of happiness, said he, is so strongly impressed, that the longest experience is not able to efface it. *Johnson's Rasselas.*

Nor swelled his breast with uncouth pride,
That heaven on him above his charge had laid;
But, *for* his great Creator would the same,
His will increased; so fire augmenteth flame.
Fairfax.

Because; on this account that. It is in this sense properly followed by *that*, and, without it, is elliptical. This sense is almost obsolete.

Many excrescences of trees grow chiefly where the tree is dead or faded; *for that* the natural sap of the tree corrupteth into some preternatural substance.
Bacon's Natural History.

For as much. In regard to that; in consideration of.

For as much as in publick prayer we are not only to consider what is needful, in respect of God; but there is also in men that which we must regard: we somewhat incline to length, lest overquick dispatch should give occasion to deem that the thing itself is but little accounted of. *Hooker.*

For as much as the thirst is intolerable, the patient may be indulged the free use of spa water.
Arbuthnot.

For why. Because; for this reason that.

Solyman had three hundred fieldpieces; *for why*, Solyman purposing to draw the emperor into battle, had brought no pieces of battery with him. *Knolles.*

FOR'AGE, *v. n.*, *v. a.* & *n. s.* From Lat. *foris*, abroad; Germ. and Fr. *fourrage*. To wander far; to rove at a distance; to wander in search of spoil, generally of provisions for an army; to ravage; to feed on spoil; to plunder; to strip; to spoil. Provisions in general; provisions sought abroad; search of provisions; the act of feeding abroad.

They will both strengthen all the country round, and also be as continual holds for her majesty, if the people should revolt; for without such it is easy to *forage* and over-run the whole land. *Spenser.*

He wearie sate
To rest himselfe, foreby a fountaine syde,
Disarmed all of yron-coted plate;
And by his side his steed the grassy *forage* ate.
Spenser's Faerie Queene.

Forage, and run
To meet displeasure farther from the doors,
And grapple with him, ere he come so nigh.
Shakspeare.

His most mighty father on a hill
Stood smiling, to behold his lion's whelp
Forage in blood of French nobility. *Id.*

One way a band select from *forage* drives
A herd of beeves, fair oxen, and fair kine,
From a fat meadow ground; or fleecy flock,
Ewes and their bleating lambs, over the plains
Their booty. *Milton's Paradise Lost.*

The victorious Philistines were worsted by the captivated ark, which *foraged* their country more than a conquering army. *South.*

Some o'er the publick magazines preside,
And some are sent new *forage* to provide.
Dryden.

Nor dare they stray
When rain is promised or a stormy day;
But near the city walls their watering take,
Nor *forage* far, but short excursions make. *Id.*
Provided *forage*, our spent arms renewed. *Id.*

FORAMEN, in anatomy, a name given to several apertures or perforations in divers parts of the body; as, 1. The external and internal foramen of the cranium or skull. 2. The foramina in the upper and lower jaw. 3. Foramen lachrymale. 4. Foramen membranæ tympani. See ANATOMY.

FORAMEN OVALE, an oval aperture or passage through the heart of a fœtus, which closes up after birth. It arises from the coronal vein, near the right auricle, and passes directly into the left auricle of the heart, serving for the circulation of the blood in the fœtus, till the infant breathes, and the lungs are open; generally reckoned one of the temporary parts of the fœtus, wherein it differs from an adult; although almost all anatomists assure us, that the foramen ovale has sometimes been found in adults. See FOETUS.

FORAM'INOUS, *adj.* From Lat. *foramen*. Full of holes; perforated in many places; porous.

Soft and *foraminous* bodies, in the first creation of the sound, will deaden it; but in the passage of the sound they will admit it better than harder bodies.
Bacon's Natural History.

FORBE'AR, *v. n.* pret. & *v. a.* } I forbore, anFORBE'ARANCE, *n. s.* } ciently forbare;
FORBE'ARER, *n. s.* } part. forborn;

Sax. ꝼoꝛbæꝛan. For has in composition the power of privation, as forbear; or depravation, as forswear; and other powers not easily explained.—Dr. Johnson. To cease from any thing; to intermit; to pause; to delay; to omit voluntarily; not to do; to abstain; to restrain any violence of temper; to be patient; to decline; to avoid voluntarily; to spare; to treat with clemency; to withhold. The noun is used in all these senses. Forbearer, in addition to intermitter, signifies an interceptor of any thing; as well as that which does not yield, bear, or bring forth.

Forbear thee from meddling with God, who is with me, that he destroy thee not. 2 *Chron.* xxxv. 21.

With all lowliness and meekness, with long suffering, *forbearing* one another in love. *Eph.* iv. 2.

Ye shul understond also, that Fasting stont in three thinges;—in *forbering* of bodily mete and drinke; in *forbering* of worldly jolitee; and in *forbering* of dedly sinne; this is to say, that a man shall kepe him fro dedly sinne with all his might.
Chaucer. The Persones Tale.

The West as a father all goodness doth bring,
The East a *forbearer*, no manner of thing. *Tusser*

But by what meanes that shame to her befell,
And how thereof herselfe she did acquite,
I must awhile *forbeare* to you to tell;
Till that, as comes by course, I doe recite
What fortune to the Briton prince did lite.
Spenser. Faerie Queene.

Have a continent *forbearance*, 'till the speed of his rage goes slower. *Shakspeare. King Lear.*

Forbear his presence, until time hath qualified the heat of his displeasure. *Id.*

True nobleness would
Learn him *forbearance* from so foul a wrong.
Shakspeare.

I pray you, tarry: pause a day or two,
Before you hazard; for in chusing wrong,
I lose your company; therefore *forbear* a while. *Id.*

I remember Gerson brings in an Englishman asking a Frenchman, Quot annos habes? 'How many years are you?' a usual Latin phrase when we ask after a man's age: His answer is, Annos non habeo; 'I am no years at all, but death hath *forborne* me these fifty.' *Bp. Hall. Sermon* 30.

The wolf, the lion, and the bear,
When they their prey in pieces tear,
To quarrel with themselves *forbear*. *Denham.*

If it passed only by the house of peers, it should be looked upon as invalid and void, and execution should be thereupon *forborn* or suspended.
Clarendon.

O Trojan race! your needless aid *forbear*,
And know my ships are my peculiar care.
Dryden.

.t this he started, and *forbore* to swear;
out of conscience of the sin, but fear. *Dryden.*
erty is the power a man has to do, or forbear
any particular action, according as its doing or
rance has the actual preference in the mind.
Locke.
ere is not any one action whatsoever which a
ought to do, or to *forbear*, but the Scripture will
him a clear precept or prohibition for it.
South.
is may convince us how vastly greater a pleasure
nsequent upon the *forbearance* of sin, than can
bly accompany the commission of it. *Id.*
or do I take notice of this instance of severity in
wn country to justify such a proceeding, but only
splay the mildness and *forbearance* made use of
r the reign of his present majesty.
Addison's Freeholder.
'ho can *forbear* to admire and adore him who
hed the mountains in scales, and the hills in a
nce. *Cheyne.*

FORBES (Duncan), Esq. of Culloden, an nent Scots lawyer and judge, born in 1685. the advice of his friends he early applied him- to the civil law; in which he made a quick gress, and in 1709 was admitted an advo-e. From 1722 to 1737 he represented the oughs of Inverness, &c. In 1725 he was de king's advocate; and in 1737 Lord Pre-ent. In 1744 and 1745 he espoused the royal se, and almost ruined his private fortune; government did not make him the smallest ompense. He was well versed in the Hebrew guage; and wrote some treatises concerning ural and revealed religion. He died in 1747, the sixty-second year of his age; and his rks have since been published in 2 vols. 8vo.

FORBES (Patrick), bishop of Aberdeen, was rn in 1654, when the affairs of the church of otland were in much confusion; to the settle-ent of which he greatly contributed. As chan-llor of the university of Aberdeen, he improved at seat of learning by repairing the fabric, aug-enting the library, and reviving the professor-ips. He published a Commentary on the evelations, at London, 1613; and died in 635.

FORBES (John), the son of Patrick, also bishop Aberdeen; but was expelled by the Cove-anters, and forced to fly beyond sea. Upon is return, he lived privately on an estate at Corse, ll he died at 1648. His works were printed 1 2 vols. folio, in Amsterdam in 1703. His Historical and Theological Institutes have been ighly valued.

FORBES (William), born in 1585, was the first ishop of Edinburgh. His ill health and the nti-episcopal disposition of the Scots, confined im chiefly to a retired life: and he died three nonths after his consecration in 1634.

FORBES (Sir William), was born in 1739 at Pitsligo, in Scotland. Born to the inheritance of an ample fortune, he early devoted himself to the promotion of the commercial interests of his country, and was, in conjunction with the late Sir James Hunter Blair, the founder of the well known banking establishment at Edin-burgh which bears their name. In his youth he had devoted much of his time to the study of literature; and, during the course of his long life, he never lost sight of those literary pursuits which early association had endeared to him, and which relieved the pressure of his more serious avocations, and lent a distinguished grace to his character. Sir W. Forbes was one of the earliest members of the celebrated literary club which boasted amongst its illustrious associates the names of Johnson, Reynolds, Garrick, and Burke. The literary leisure of his latter days was devoted to the drawing up an account of the life and writings of his friend Dr. Beattie, which was published in 2 vols. 4to. 1806. He died at his seat near Edinburgh in 1806, in the sixty-eighth year of his age.

FORBES (James), an accomplished modern writer, was born in London in 1749, and early sent out by the East India Company to Bombay as a cadet. While in India he traversed various parts of that continent, making observations and forming drawings of every thing worthy of no-tice. He returned to England with an ample fortune in 1784. At the rupture of the peace of Amiens, he was detained with the other English visitors in France, but obtained his release after a stay of a few months, at the request of the National Institute. He died at Aix-la-Chapelle, August 1st, 1819. Mr. Forbes was the author of Letters from France, 2 vols. 8vo. Reflections on the Character of the Hindoos, 8vo. and Ori-ental Memoirs, 4 vols. 4to. splendidly illustrated with nearly 100 plates.

FORBID', *v. a.* & *v. n.* } Pret. I forbade;
FORBID'DANCE, *n. s.* } part. forbidden or for-
FORBID'DINGLY, *adv.* } bid. Saxon, *forbeo-*
FORBID'DER, *n. s.* } *ban*; Gothic, *forbu-*
FORBID'DING, *part. adj.* } *da*; Dut. *verbieden.*

To prohibit; to interdict any thing; to command to forbear any thing; to oppose; to hinder: to accurse, to blast; in this sense obsolete: to utter a prohibition. Forbiddance signifies an edict against any thing: to do any thing forbiddingly is to do it in an unlawful manner. Forbidding, the participial adjective, is used to signify rais-ing abhorrence, repelling approach; causing aversion.

Here may ye see, that not only the dede of this is *forboden*, but eke the desire to don that sinne.
Chaucer. The Persones Tale.

Trouth is a thing that I wol ever kepe
Unto the day in whiche that I shal crepe
Into my grave, and elles God *forbede*:
Beliveth this as siker as your crede.
Id. The Chanones Yemannes Tale.

Ere long to him a homely groome there came,
That in rude wise him asked what he wos,
That durst so boldly, without let or shame,
Into his lords *forbidden* hall to passe.
Spenser's Faerie Queene.

Now the good gods *forbid*,
That our renowned Rome
Should now eat up her own!
Shakspeare. Coriolanus.

Sleep shall neither night nor day
Hang upon his penthouse lid;
He shall live a man *forbid*. *Id. Macbeth.*

A witch, a quean, an old cozening quean; have I not *forbid* her my house? *Shakspeare.*

With all confidence he swears, as he had seen't,
That you have touched his queen *forbiddenly*. *Id*

The moisture being *forbidden* to come up in the plant, stayeth longer in the root, and so dilateth it. *Bacon's Natural History.*

How hast thou yielded to transgress
The strict *forbiddance*? how to violate
The sacred fruit *forbidden*? *Milton's Paradise Lost.*

Other care, perhaps,
May have diverted from continual watch
Our great *forbidder*. *Id.*

She with so sweet a rigour *forbad* him, that he durst not rebel. *Sidney.*

The chaste and holy race
re all *forbidden* this polluted place.
Dryden's Æneid.

Tragedy was made *forbidding* and horrible. *A. Hill.*

We left our hero and third heroine in
A kind of state more awkward than uncommon;
For gentlemen must sometimes risk their skin
For that sad tempter, a *forbidden* woman. *Byron.*

FORCADO Rio, a river of Waree, in Africa, said to rise from a source far inland, and to have a winding course. It is about two English miles broad, but so shallow as not to be navigable for vessels of more than seven or eight feet water. Its banks are covered with trees, and produce a species of colored stones. The Portuguese carry on a trade here in slaves. Lat. 6° N.

FORCE, *n. s.* & *v. a.*
FORC'ES, *n. s. plu.*
FORC'EDLY, *adv.*
FORCE'FUL, *adj.*
FORCE'FULLY, *adv.*
FORCE'LESS, *adj.*
FOR'CER, *n. s.*
FOR'CIBLE, *adj.*
FOR'CIBLENESS, *n. s.*
FOR'CIBLY, *adv.*

Fr. *force*; Lat. *fortis*. Literally it signifies the exertion of strength: it is however applied to persons, words, and things, in a variety of senses, all of them, however, to be easily resolved into the primary meaning. Force is power in action, either physical, mechanical, legal, military, moral, or literary. To force is to compel; to overpower; to impel.—In the active sense it also signifies to lay stress upon. Dr. Johnson says this word he only found in the passage quoted below from Camden's Remains.

Thou shalt not destroy the trees by *forcing* an ax against them. *Deuteronomy* xx. 19.

How *forcible* are right words! *Job.*

A testament is of *force* after men are dead. *Hebrews* ix.

For certes, by no *force*, ne by no mede,
Him thought he wos not able for to spede,
For she was strong of frendes.
Chaucer. The Doctoures Tale.

I can not se ne why ne how,
That he hath trespossed again you,
Save that he loveth, wherefore ye shold
The more in charite of him hold;
The *force* of Love maketh him doe this;
Who would him blame, he did amis.
Chaucer. Romaunt of the Rose.

He himself with greedy great desire
Into the castle entered *forcibly*. *Faerie Queene.*

Manifest it is, that the very majesty and holiness of the place where God is worshipped, hath, in regard of us, great virtue, *force*, and efficacy; for that it serveth as a sensible help to stir up devotion. *Hooker.*

He never could maintain his part but in the *force* of his will. *Shakspeare. Much Ado about Nothing.*

Thus got the house of Lancaster the crown,
Which now they hold by *force*, and not by right. *Shakspeare.*

Why, what need we
Commune with you of this, but rather follow
Our *forceful* instigation? *Id. Winter's Tale.*

Here let them lye,
'Till famine and the ague eat them up:
Were they not *forced* with those that should be ours,
We might have met them dareful, beard to beard. *Shakspeare.*

O Thou! whose captain I account myself,
Look on my *forces* with a gracious eye. *Id. Richard III.*

God hath assured us, that there is no inclination or temptation so *forcible* which our humble prayers and desires may not frustrate and break asunder. *Raleigh's History.*

That morning that he was to join battle with Harold, his armorer put on his backpiece before, and his breastplate behind; the which being espied by some that stood by, was taken among them for an ill token, and therefore advised him not to fight that day; to whom the duke answered, I *force* not of such fooleries; but if I have any skill in soothsaying, as in sooth I have none, it doth prognosticate that I shall change copy from a duke to a king. *Camden's Remains.*

The secret of the power of Spain consisteth in a veteran army, compounded of miscellany *forces* of all nations. *Bacon.*

The taking and carrying away of women *forcibly*, and against their will, except female wards and bondwomen, was made capital. *Id. Henry VII.*

Dangers are light, if they once seem light; and more dangers have deceived men than *forced* them. *Bacon.*

A ship, which hath struck sail, doth run
By *force* of that *force* which before it won. *Donne.*

Liberal Nature did dispense
To all things arms for their defence;
And some she arms with sinewy *force*
And some with swiftness in the course. *Cowley.*

The usual means for the ascent of water is either by suckers or *forcers*. *Wilkins's Dædalus.*

Not long in *force* this charter stood;
Wanting that seal, it must be sealed in blood. *Denham.*

O that fortune
Had brought me to the field where thou art famed
To have wrought such wonders with an ass's jaw,
I should have *forced* thee soon with other arms. *Milton.*

Who therefore can invent
With what more *forcible* we may offend
Our yet unwounded enemies? *Id.*

Ye myrtles brown, with ivy never sere,
I come to pluck your berries harsh and crude,
And with *forced* fingers rude
Shatter our leaves before the mellowing year. *Id.*

He swifter far,
Me overtook, his mother all dismayed,
And in embraces *forcible* and foul
Ingendering with me. *Id.*

The Gospel offers such considerations as are fit to work very *forcibly* upon two of the most swaying and governing passions in the mind, our hopes and our fears. *Tillotson.*

Stooping, the spear descended on his chine,
Just where the bone distinguished either loin:
It stuck so fast, so deeply bury'd lay,
That scarce the victor *forced* the steel away. *Dryden.*

To free the ports, and ope the Punique land
To Trojan guests; lest, ignorant of fate,
The queen might *force* them from her town and state.
Id.

Force her.—I like it not. *Id.*

This foundation of the earth upon the waters doth most aptly agree to that structure of the abyss and antediluvian earth; but very improperly and *forcedly* to the present form of the earth and the waters.
Burnet's Theory.

Jersey, beloved by all; for all must feel
The influence of a form and mind,
Where comely grace and constant virtue dwell,
Like mingled streams, more *forcible* when joined:
Jersey shall at thy altars stand,
Shall there receive the azure band. *Prior.*

Now to the copse thy lesser spaniel take,
Teach him to range the ditch and *force* the brake.
Gay's Rural Sports.

The heat of the dispute had *forced out* from Luther expressions that seemed to make his doctrine run higher than really it did. *Atterbury.*

He poised in air, the javelin sent,
Through Paris' shield the *forceful* weapon went.
Pope.

What tender *force*, what dignity divine,
What virtue consecrating every feature;
Around that neck what dross are gold and pearl!
Young's Busiris.

But when the day had his meridian run,
Between his highest throne and low declining,
Thirsil again his *forced* task begun,
His wonted audience his sides entwining.
Fletcher's Purple Island.

With what *force*, my Lord, with what protection are you prepared to meet the united detestation of the people of England. *Junius.*

All philosophy is only *forcing* the trade of happiness, when nature seems to deny the means. *Goldsmith.*

There the vast mill-stone with inebriate whirl
On trembling floors his *forceful* fingers twirl,
Whose flinty teeth the golden harvests grind,
Feast without blood! and nourish human-kind.
Darwin.

He stumbled on to try if he could find
A path to add his own slight arm and *forces*,
To corps the greatest part of which were corses.
Byron.

Force, in philosophy, denotes the cause of the change in the state of a body, when being at rest, it begins to move, or has a motion which is either not uniform or not direct. While a body remains in the same state, either of rest or of uniform and rectilinear motion, the cause of its remaining in such a state is in the nature of the body, and it cannot be said that any extrinsic force has acted on it. This internal cause or principle is called Inertia. Mechanical forces may be reduced to two sorts; one of a body at rest, the other of a body in motion. The force of a body at rest, is that which we conceive to be in a body lying still, on a table, or hanging by a rope, or supported by a spring, &c., and this is called by the names of pressure, tension, force, or vis mortua, solicitatio, conatus movendi, conamen, &c. To this class also of forces we must refer centripetal and centrifugal forces, though they reside in a body in motion; because these forces are homogeneous to weights, pressures, or tensions of any kind. The force of a body in motion is a power residing in that body so long as it continues its motion; by means of which it is able to remove obstacles lying in its way; to lessen, destroy, or overcome the force of any other moving body, which meets it in an opposite direction; or to surmount any dead pressure or resistance, as tension, gravity, friction, &c., for some time; but which will be lessened or destroyed by such resistance as lessens or destroys the motion of the body. This is called vis motrix, moving force, and by some late writers vis viva, to distinguish it from the vis mortua spoken of before; and by these appellations, however different, the same thing is understood by all mathematicians, viz. that power of displacing, of withstanding opposite moving forces, or of overcoming any dead resistance, which resides in a moving body, and which, in whole or in part, continues to accompany it, so long as the body moves. See Mechanics.

Force, Comparative, of Men and Horses. There are several curious as well as useful observations in Desagulier's Experimental Philosophy, concerning the comparative forces of men and horses, and the best way of applying them. A horse draws with the greatest advantage when the line of direction is level with his breast; in such a situation, he is able to draw 200 pounds eight hours a day, walking about two miles and a half, an hour. And if the same horse is made to draw 240 pounds he can work but six hours a day, and cannot go quite so fast. On a carriage, indeed, where friction alone is to be overcome, a middling horse will draw 1000 pounds. But the best way to try a horse's force is by making him draw up out of a well, over a single pulley or roller; and in such a case, one horse with another will draw 200 pounds. Five men are found to be equal in strength to one horse, and can, with as much ease, push round the horizontal beam of a mill, in a walk forty feet wide; whereas three men will do it in a walk only nineteen feet wide. The worst way of applying the force of a horse, is to make him carry or draw up hill; for if the hill be steep, three men will do more than a horse, each man climbing up faster with a burden of 100 pounds weight, than a horse that is loaded with 300 pounds, a difference which is owing to the position of the parts of the human body being better adapted to climb than those of a horse. On the other hand, the best way of applying the force of a horse, is in an horizontal direction, wherein a man can exert least force; thus a man, weighing 140 pounds and drawing a boat along by means of a rope coming over his shoulders, cannot draw above twenty-seven pounds, or exert above one-seventh part of the force of a horse employed to the same purpose. The very best and most effectual posture in a man, is that of rowing; wherein he not only acts with more muscles at once for overcoming the resistance, than in any other position; but as he pulls backwards, the weight of his body assists by way of lever. See Desaguliers, Exp. Phil. vol. i. p. 241; where we have several other observations relative to force acquired by certain positions of the body, from which that author accounts for most feats of strength and activity. See also a Memoire on this subject by M. de la Hire, in

Mem. Roy. Acad. Sc. 1629; or in Desaguliers, Exp., &c. p. 267, &c., who has published a translation of part of it with remarks.

Force, or La Force, in geography, a town of France, in the department of Dordogne, six miles west of Bergerac; famed for its trade in cattle, grain, and wine.

Force, in law, signifies any unlawful violence offered to things or persons, and is divided into simple and compound.

Force, Compound, is where some other violence is committed with such an act as of itself alone is criminal; as if one enters by force into another's house, and there kills a person, or ravishes a woman. There is likewise a force implied in law, as in every trespass, rescue, or disseisin, and an actual force with weapons, number of persons, &c. Any persons may lawfully enter a tavern, inn, or victualling house; so may a landlord his tenant's house, to view repairs, &c. But if, in these cases, the person that enters commits any violence or force, the law will intend that he entered for that purpose.

Force, Simple, is what is so committed that it has no other crime attending it; as where a person, by force, enters on another's possession, without committing any other unlawful act.

Forcible Detainer, in law, is where one by violence withholds the possession of lands, &c., so that the person who has a right of entry is barred, or hindered therefrom.

Forcible Entry is a violent and actual entry into houses or lands. At common law, any person that had a right to enter into lands, &c., might retain possession of it by force But this liberty being abused, to the breach of the peace, it was therefore found necessary that the same should be restrained; though, at this day, he who is wrongfully dispossessed of goods may by force retake them. By statute, no persons shall make an entry on any lands or tenements, except where it is given by law, and in a peaceable manner, even though they have title of entry, on pain of imprisonment; and where a forcible entry is committed, justices of peace are authorised to view the place, and enquire of the force by a jury, summoned by the sheriff of the county; and they may cause the tenements, &c., to be restored, and imprison the offenders till they pay a fine. A writ of forcible entry also lies, where a person seised of a freehold is by force put out thereof.

Forcible Marriage, of a woman of estate, is felony. For, by the statute 3 Hen. VII. c. 2., it is enacted, 'That if any persons shall take away any woman having lands or goods, or that is heir apparent to her ancestor, by force, and against her will, and marry or defile her; the takers, procurers, abettors, and receivers of the woman taken away against her will, and knowing the same, shall be deemed principal felons;' but as to procurers and accessories, they are, before the offence be committed, to be excluded the benefit of clergy, by 39 Eliz. c. 9. The indictment on the statute 3 Hen. VII. is expressly to set forth, that the woman taken away had lands or goods, or was heir apparent; and also that she was married or defiled, because no other case is within the statute: and it ought to allege that the taking was for lucre. It is no excuse that the woman at first was taken away with her own consent: for if she afterwards refuse to continue with the offender, and be forced against her will, she may from that time properly be said to be taken against her will; and it is not material whether a woman so taken away be at last married or defiled with her own consent or not, if she were under force at the time; the offender being in both cases equally within the words of the act. Those persons who, after the fact, received the offender, are bu accessories after the offence, according to the rules of common law; and those that are only privy to the damage, but not parties to the forcible taking away, are not within the act, H. P. C. 119. A man may be indicted for taking away a woman by force in another country; for the continuing of the force in any country, amounts to a forcible taking there. Ibid. Taking away any woman child under the age of sixteen years and unmarried, out of the custody and without the consent of the father or guardian, &c. the offender shall suffer fine and imprisonment; and if the woman agrees to any contract of matrimony with such person, she shall forfeit her estate during life, to the next of kin to whom the inheritance should descend, &c. Statute 4. and 5. P. & M. c. 8. This is a force against the parents; and an information will lie for seducing a young man or woman from their parents, against their consents, in order to marry them, &c. See Marriage.

Forcing, in gardening, a method of producing ripe fruits from trees, before their natural season. The method of doing it is this: a wall should be erected ten feet high; a border must be marked out on the south side of it, of about four feet wide, and some stakes must be fastened into the ground, all along the edge of the border; these should be four inches thick. They are intended to rest the glass lights upon, which are to slope backwards to the wall, to shelter the fruit as there shall be occasion: and there must be, at each end, a door to open either way, according as the wind blows. The frame should be made moveable along the wall, that when a tree has been forced one year, the frame may be removed to another, and so on, that the trees may each of them be forced only once in three years, at which rate they will last a long time. They must be always well grown trees that are chosen for forcing; for young ones are soon destroyed, and the fruit that is produced from them is never so well tasted. The dung, before it is put to the wall, should be laid in a heap for five or six days, that it may heat thoroughly; and when thus prepared, it must be laid four feet thick at the base of the wall, and go sloping up till it is two feet thick at the top. It must be laid at least within three or four inches of the top of the wall; and when it sinks, as it will sink two or three feet, more dung must be laid on; for the first heat will do little more than just swell the blossom-buds. The covering the trees with glasses is of great service; but they should be taken off to admit the benefit of gentle showers to the trees, and the doors at the ends should be either left entirely open, or one or both

of them opened, and a mat hung before them, at once to let the air circulate and keep off the frosts. The dung is never to be applied till towards the end of November; and three changes of it will be sufficient to ripen the cherries, which will be very fine in February. As to the apricots, grapes, nectarines, peaches, and plums, if the weather be milder, the glasses are to be opened, to let in sunshine, or gentle showers. If a row or two of scarlet strawberries be planted at the back of the frame, they will ripen in February, or the beginning of March; the vines will blossom in April, and the grapes will be ripe in June. It should be carefully observed, not to place early and late ripening fruits together, because the heat necessary to force the late ones will be of great injury to the early ones after they have fruited. The masculine apricot will be ripe in the beginning of April; the early nectarines will be ripe about the same time; and the forward sort of plums by the end of that month. Gooseberries will have fruit fit for tarts in January or February, and will ripen in March; and currants will have ripe fruit in April. The trees need not be planted so distant at these walls as at others, for they do not shoot so freely as in the open air; nine feet asunder is sufficient. They should be pruned about three weeks before the heat is applied. See HORTICULTURE and HOT HOUSE.

FORCING, in the wine trade, a term used by wine merchants, for the fining down wines, and rendering them fit for immediate draught. The principal inconvenience of the common way of fining down the white wines by isinglass, and the red by whites of eggs, is the slowness of the operation; these ingredients not performing their office in less than a week, or sometimes a fortnight, according as the weather proves favorable, cloudy or clear, windy or calm: this appears to be matter of constant observation. But the wine-merchant frequently requires a method that shall, with certainty, make the wines fit for tasting in a few hours. A method of this kind there is, but it is kept in a few hands as a valuable secret. Perhaps it depends upon a prudent use of a tartarised spirit of wine, and the common forcing, along with gypsum, as the principal; all of which are to be well stirred about in wine, for half an hour before it is suffered to rest.

FO'RCEPS, *n. s.* Lat.

Forceps properly signifies a pair of tongs; but is used for an instrument in chirurgery, to extract any thing out of wounds, and the like occasions. *Quincy.*

FORCEPS, in surgery, &c., is also used for a pair of scissars for cutting off, or dividing, the fleshy membranous parts of the body. See SURGERY.

FO'RCIPATED, *adj.* From forceps. Formed like a pair of pincers to open and enclose.

The locusts have antennæ, or long horns before, with a long falcation or *forcipated* tail behind. *Browne.*

When they have seized their prey, they will so tenaciously hold it with their *forcipated* mouth, that they will not part therewith, even when taken out of the waters. *Derham.*

FORD, *n. s.* & *v. a.* } Sax. ꝼoꝛꝺ, from ꝼa-
FORD'ABLE, *adj.* } nan, to go, proceed. See FARE. Goth. *fiard;* Swed. *fiord;* Welsh *fford.* A shallow part of a river where it may be passed without swimming. It sometimes signifies the stream; the current: to pass without swimming.

Adam's shin-bones must have contained a thousand fathom, and much more, if he had *forded* the ocean. *Raleigh's History.*

Pliny placeth the Schenitæ upon the Euphrates, where the same beginneth to be *fordable.* *Raleigh.*

Her men the' paths rode through made by her sword;
They pass the stream, when she had found the *ford.*
Fairfax.

Medusa with Gorgonian terror guards
The *ford,* and of itself the water flies
All taste of living wight.
Milton's Paradise Lost.

Rise, wretched widow! rise; nor undeplored
Permit my ghost to pass the Stygian *ford:*
But rise, prepared in black to mourn thy perished lord. *Dryden.*

A countryman sounded a river up and down, to try where it was most *fordable;* and where the water ran too smooth, he found it deepest; and, on the contrary, shallowest where it made most noise. *L'Estrange.*

FORD (John), a dramatic writer of considerable elegance, was the second son of a gentleman of Devonshire, where he was born in 1586. He entered in the Middle Temple in 1602, for the purpose of studying law, and, while there, published in 1606 a piece entitled Fame's Memoriall, a species of monody on the earl of Devonshire. In his twenty-first year, having been disappointed by the death of lord Mountjoy, an expected patron, he resolved to travel, but it is doubtful whether he did so, as nothing more is known of him until he printed his first tragedy of the Lover's Melancholy in 1629. But this was not his first play, as a piece of his, entitled A Bad Beginning makes a good Ending, was previously acted at court. He wrote, or assisted to write, at least eleven dramas; and such as were printed appeared from 1629 to 1634. Most of these were his own composition, but some were written in conjunction with Decker, Drayton, Hathrewaye, &c. The date of his death is uncertain, but it is thought that he did not long survive 1639. A writer in the Censura Literaria, has attributed to him an able little manual, entitled A Line of Life pointing to the Immortalitie of a Vertuous Name, 1620, 12mo.

FORD (Sir John), a gentleman of considerable talents as an engineer of the seventeenth century, was the son of Sir John Ford, of Harting, Sussex, where he was born in 1605. He was educated at Trinity College, Oxford, and knighted by Charles I., after serving the office of high-sheriff of Sussex. He afterwards commanded a regiment of horse in the royal cause, and was imprisoned on suspicion of aiding the escape of the king from Hampton Court. He was however soon released by the interest, as it is thought, of Ireton, whose sister he had married, and in 1656 employed himself in several mechanical inventions of importance. With Cromwell's encouragement, and at the request of the citizens of

London, he contrived machinery for raising the Thames water into all the high streets. He also suggested several improvements in the coinage, which he acquired a patent to try in Ireland, but died there before he could put it into execution, September 3d, 1670. He was the author of a Design for bringing up a River from Rickmansworth, Herts, to St. Giles' in the Fields, London, 1641, 4to.; Experimental Proposals to pay the Fleet, re-build London, establish the Fishing Trade, &c., 1666, 4to. To this last work was added A Defence of Bill Credit; and in 1663 he printed a Proposal for raising Money by Bills of Exchange, which should pass current instead of Money, to prevent Robbery. Wood speaks of him as a man of promising talents.

FORDINGBRIDGE, a town of Hampshire situated on the north-west side of the Avon, and on the borders of the New Forest. Although it is a small inland town, it is mentioned in Domesday-book, as having formerly had a church, and two mills. The principal manufacture is that of checks and bed-ticks, and there is a calico printing-field. At the south-east entrance of the town there is a handsome stone bridge of seven arches over the Avon. The government of the town is vested in a constable, who is chosen annually at the court-leet of the lord of the manor. It has a weekly market on Saturday, and a fair September 9th. It lies six miles from Ringwood, twelve from Salisbury, and ninety-one from London.

FORDUN (John de), a Scotch ecclesiastic of the fourteenth century, the author of the Scoto-chronicon. He was possessed of the benefice of Fordun in 1377, having dedicated his history to the bishop of Glasgow from thence. In 1722 Hearne published at Oxford, Joannis de Fordun Scoto-chronicon Genuinum, una cum ejusdem Supplemento ac Continuatione, 3 vols., 8vo. Part of the work had previously appeared in the Quindecim Scriptores; it was also published by Goodall, 2 vols., folio, Edinburgh, 1759.

FORDWICH, a town of Kent, called in the Domesday Book, 'the little borough of Fordwich,' is a member of the port of Sandwich, and was anciently incorporated by the style of the barony of the town of Fordwich, and enjoys the same privileges as the cinque-ports. It is famous for excellent trouts, taken in the Stour. It is said to have once been a more extensive place than at present, having suffered frequently by fire.

FORDYCE (David), an elegant and learned writer, born at Aberdeen in 1711. After receiving the early part of his education at the grammar-school, he was, at the age of thirteen, entered at the Greek class in the Marischal College, Aberdeen; and in 1728 he obtained the degree of M. A., and became a professor of moral philosophy in the same college in 1742. He was designed for the ministry, and in 1748 published a work entitled Theodorus, or the Art of Preaching. Having finished this work, he went abroad in 1750; but, after a successful tour through several parts of Europe, he was unfortunately shipwrecked in a storm on the coast of Holland, in the forty-first year of his age. He wrote also Dialogues on Education, 8vo.; and a Treatise on Moral Philosophy, published in the Preceptor. The third edition of his Theodorus was published in London by his brother.

FORDYCE (George), an eminent physician and lecturer on medicine, nephew of the preceding was born near Aberdeen in 1736. He received his education at the university of that city, and attained the literary degree of M. A. when only fourteen years of age. In about a year after this he was placed with an uncle, a surgeon and apothecary, at Uppingham in Rutlandshire. After residing some time at Uppingham, he went to prosecute his studies at the university of Edinburgh, and there his assiduity and attainments gained particular attention from Dr. Cullen, then professor of chemistry. From Edinburgh he went to Leyden, where, in 1758, he took his doctor's degree, though only twenty-two years of age. After residing one winter at Leyden, the greater part of his patrimony being spent in the prosecution of his studies, he determined to settle in London, which he did in 1759. In this metropolis he commenced with a course of lectures on the materia medica; and in 1768 published his Elements of the Practice of Physic, which formed the text book of his medical course. By this time he had acquired a very respectable private practice; and in 1770 was appointed physician to St. Thomas's Hospital. In 1776 he was chosen Fellow of the Royal Society; and in 1787 a Fellow of the College of Physicians. About this time he published his Elements of Agriculture and Vegetation; besides which he wrote an Essay on Digestion, four Essays on Fever, and various miscellaneous papers. Though his constitution discovered symptoms of premature decay, he continued to discharge his professional duties till the 26th of June, 1802, when he was carried off by an irregular gout and water in the chest, in the sixty-sixth year of his age.

FORDYCE (James), an eminent Scottish divine, was born at Aberdeen in 1720. His first settlement as a minister was at Brechin, in the county of Angus; whence he was called to Alloa near Stirling. While he resided at Alloa, the attention of the public was particularly drawn towards him by the excellence of his pulpit compositions. The university of Glasgow conferred on him the degree of D. D. Having many friends in London, he received an invitation to go there, as assistant to Dr. Lawrence, minister of a respectable congregation in Monkwell Street, which he accepted about 1762; and Dr. Lawrence dying a few months after, the eloquence of Dr. Fordyce soon became famous, and for several years attracted crowded audiences. But Dr. Fordyce lived to see his popularity decline, and his pews became thin. Many of his most steady hearers and liberal supporters withdrew from him on account of the losses they sustained by the failure of a younger brother, an extensive banker; and his hearers were still farther diminished by an unhappy difference which took place between him and his colleague, Mr. Toller, about 1775. In a short time after this, the declining state of his health made it necessary for him to resign his charge; Mr. James Lindsay was accordingly appointed his successor in 1782; and at his ordination the doctor delivered one of his most eloquent sermons. Dr. Fordyce now retired to

Hampshire, where he lived in the vicinity of the earl of Bute, being very intimate with that nobleman, and having the freest access to his valuable library; but he afterwards removed to Bath, where he died of an asthmatic complaint, on the 1st October, 1796, in the seventy-sixth year of his age. Dr. Fordyce is known as the author of Sermons to Young Women, 2 vols. 12mo., which have been translated into several European languages; A Sermon on the Character and Conduct of the Female Sex; Address to Young Men, 2 vols. 12mo.; Addresses to the Deity; a volume of Poems; A Discourse on Pain, and Additions to his brother's Temple of Virtue.

FORE, *adj.* & *adv.* Sax. ꝑoꝛe; Goth. *vor*; Belg. *voor*. Anterior; coming first in a progressive motion: fore is a word much used in composition to mark priority of time. A vicious orthography, says Dr. Johnson, has confounded for and fore in composition.

Each of them will bear six demiculverins and four sakers, needing no other addition than a slight spar deck *fore* and aft, which is a slight deck throughout.
Raleigh's Essays.

Though there is an orb or spherical area of the sound, yet they move strongest and go farthest in the *fore* lines from the first local impression.
Bacon.

Resistance in fluids arises from their greater pressing on the *fore* than hind part of the bodies moving in them. *Cheyne.*

FORE, a town of Ireland, in Westmeath, twenty-two miles from Dublin, is a small borough, supposed anciently to have been a seat of learning. It contains the ruins of a monastery and three churches, as well as the cell of an anchorite. It is seated on Lough-Lane, meaning the Lake of Learning.

FOREADVI'SE, *v. a.* Fore and advise. To counsel early; to counsel before the time of action, or the event.

Thus to have said,
As you were *foreadvised*, had touched his spirit,
And tried his inclination.
Shakspeare Coriolanus.

FOREAPPOINT', *v. a.* Fore and appoint. To order beforehand.

FOREARM', *v. a.* Fore and arm. To provide for attack or resistance before the time of need.

He *forearms* his care
With rules to push his fortune, or to bear.
Dryden.

A man should fix and *forearm* his mind with this persuasion, that, during his passion, whatsoever is offered to his imagination tends only to deceive.
South.

FOREBODE', *v. n.* & *v. a.* } Fore and bode.
FOREBO'DER, *n. s.* } Sax. ꝑoꝛebodian; Swed. *forboda*. To prognosticate; to foretell; to foreknow; to feel a secret sense of something future with a mixture of dread and apprehension: foreboder is a soothsayer, or a croaker who is always predicting evil.

An ancient augur, skilled in future fate,
With these *foreboding* words restrains their hate.
Dryden.

Fate makes you deaf, while I in vain implore:
My heart *forebodes* I ne'er shall see you more. *Id.*

Your raven has a reputation in the world for a bird of omen, and a kind of small prophet: a crow that had observed the raven's manner and way of delivering his predictions, sets up for a *foreboder*.
L'Estrange.

My soul *foreboded* I should find the bower
Of some fell monster, fierce with barb'rous power.
Pope.

Spirit of freedom! when on Phyle's brow
Thou sat'st with Thrasybulus and his train,
Couldst thou *forebode* the dismal hour which now
Dims the green beauties of thine Attic plain.
Byron. Childe Harold.

FOREBY', *prep.* Fore and by. Near; hard by; fast by.

Not far away he hence doth won
Foreby a fountain, where I late him left.
Faerie Queene.

FORE'CAST, *v. n.*, *v. a.* & *n. s.* } Fore and
FORECA'STER, *n. s.* } cast. To scheme; to plan before execution; to contrive antecedently: scheme; plan; antecedent policy.

He shall *forecast* his devices against the strong holds. *Daniel* xi.

The spices that sourden of pride, sothly whan sourden of malice imagined, avised and *forecaste*, or elles of usage ben dedly sinnes it is no doute.
Chaucer. Persones Tale.

And whatso heavens in their secret doom
Ordained have, how can frail fleshy wight
Forecast, but it must needs to issue come?
Spenser.

When broad awake, she finds in troublous flit,
Forecasting how his foe he might annoy.
Faerie Queene.

Alas! that Warwick had no more *forecast*,
But while he thought to steal the single ten,
The king was slily fingered from the deck!
Shakspeare.

The feast was served; the time so well *forecast*,
That just when the dessert and fruits were placed,
The fiend's alarm began.
Dryden's Theodore and Honoria.

It is wisdom to consider the end of things before we embark, and to *forecast* consequences.
L'Estrange.

He makes this difference to arise from the *forecast* and predetermination of the gods. *Addison.*

The last, scarce ripened into perfect man,
Saw helpless him from whom their life began:
Memory and *forecast* just returns engage;
That pointed back to youth, this on to age. *Pope*

FO'RECASTLE, *n. s.* Fore and castle. In a ship, is that part where the foremast stands, and is divided from the rest of the floor by a bulk-head: that part of the forecastle which is aloft, and not in the hold, is called the prow.—*Harris.*

The commodity of the new cook-room the merchants have found to be so great, as that, in all their ships, the cook-rooms are built in their *forecastles*, contrary to that which had been anciently used.
Raleigh's Essays.

FORECASTLE, a short deck placed in the fore part of the ship, above the upper deck: it is usually terminated, in vessels of war, by a breast-work, both before and behind; the foremost part forming the top of the beak-head, and the hind-part reaching to the after-part of the fore-chains.

FORECHO'SEN, *part.* Fore and chosen. Pre-elected.

FORECITED, *part.* Fore and cite. Quoted before, or above.

Greaves is of opinion, that the alteration mentioned in that *forecited* passage is continued. *Arbuthnot.*

FORE'CLOSE, *v. a.* Fore and close. To shut up; to preclude; to prevent.

The embargo with Spain *foreclosed* this trade. *Carew.*

To foreclose a mortgage, is to cut off the power of redemption.

FO'REDECK *n. s.* Fore and deck. The anterior part of the ship.

I to the *foredeck* went, and thence did look
For rocky Scylla. *Chapman's Odyssey.*

FOREDESI'GN, *v. a.* Fore and design. To plan beforehand.

All the steps of the growth and vegetation, both of animals and plants, have been foreseen and *foredesigned* by the wise Author of nature. *Cheyne.*

FORE'DO, *v. a.* From for and do, not fore, says Dr. Johnson. Mr. Horne Tooke considers it as a corruption of 'forth-done, i. e. done, to go forth; or caused to go forth, i. e. out of doors; in modern language, turned out of doors.' But we have a Saxon compound forbon, of the same signification; and we cannot but regard Dr. Johnson as nearer the truth: to fore or fordo, for it is found both ways, is to 'do for,' to finish; a common colloquial expression: to ruin; to destroy; opposed to making happy; to overdo; to weary; to harass.

But al so colde towardes the
Thy ladies is—as frost in winter mone;
And thou *fordon*—as snowe in fire is sone.
Chaucer. Troilus and Creseide.

Beseeching him, if either salves or oils,
A *foredone* wight from door of death might raise,
He would at her request prolong her nephew's days.
Faerie Queene.

This is the night
That either makes me, or *foredoes* me quite.
Shakspeare.

Whilst the heavy plowman snores,
All with weary task *foredone*. *Id.*

OREDO'OM, *v. a.* Sax. forbeman. Fore and doom. To predestinate; to determine beforehand.

Through various hazards and events we move
To Latium, and the realms *foredoomed* by Jove.
Dryden's Æneid.

The willing metal will obey thy hand,
Following with ease: if favoured by thy fate,
Thou art *foredoomed* to view the Stygian state.
Dryden.

Fate *foredoomed*, and all things tend
By course of time to their appointed end. *Id.*

Here Britain's statesmen oft the fall *foredoom*
Of foreign tyrants, and of nymphs at home.
Pope.

FORE-END, *n. s.* Fore and end. The anterior part.

I have lived at honest freedom; paid
More pious debts to heaven than in all
The *fore-end* of my time.
Shakspeare. Cymbeline.

In the *fore-end* of it, which was towards him, grew a small green branch of palm. *Bacon.*

FOREFA'THER, *n. s.* Fore and father. Ancestor; one who in any degree of ascending genealogy precedes another.

The custom of the people of God, and the decrees of our *forefathers*, are to be kept, touching those things whereof the Scripture hath neither one way or other given us charge. *Hooker*

Conceit is still derived
From some *forefather* grief; mine is not so.
Shakspeare.

Shall I not be distraught,
And madly play with my *forefathers'* joints? *Id.*

If it be a generous desire in men to know from whence their own *forefathers* have come, it cannot be displeasing to understand the place of our first ancestor. *Raleigh's History.*

When a man sees the prodigious pains our *forefathers* have been at in these barbarous buildings, one cannot but fancy what miracles of architecture they would have left us, had they been instructed in the right way. *Addison on Italy.*

Blest Peer! his great *forefather's* every grace
Reflecting, and reflected in his race. *Pope.*

FOREFE'ND, *v. a.* It is doubtful whether from fore or for and defend. 'If from fore, it implies antecedent provision; as forearm: if from for, prohibitory security; as forbid. Of the two following examples one favors for, and the other fore.'—Johnson. To prohibit; to avert.

I would not kill thy unprepared spirit;
No, heavens *forefend!* I would not kill thy soul.
Shakspeare.

Down with the nose,
Down with it flat: take the bridge quite away
Of him, that, his particular to *forefend*,
Smells from the general weal. *Id.*

Perhaps a fever, which the gods *forefend*,
May bring your youth to some untimely end.
Dryden.

FOREFI'NGER, *n. s.* Fore and finger. The finger next the thumb; the index.

An agate stone
On the *forefinger* of an alderman. *Shakspeare.*

Polymnia shall be drawn, as it were, acting her speech with her *forefinger*. *Peacham on Drawing.*

Some wear this on the middle-finger, as the ancient Gauls and Britons; and some upon the *forefinger*. *Browne.*

FO'REFOOT, *n. s.* Plural forefeet. Fore and foot. The anterior foot of a quadruped: in contempt, a hand.

He ran fiercely, and smote at Heliodorus with his *forefeet*. 2 *Mac.* iii. 25.

Give me thy fist, thy *forefoot* to me give.
Shakspeare.

I continue my line from thence to the heel; then making the breast with the eminency thereof, bring out his near *forefoot*, which I finish.
Peacham on Drawing.

FORE-FOOT, a piece of timber which terminates the keel at the fore end. It is connected by a scarf to the extremity of the keel, of which it makes a part; and the other end of it, which is incurvated upwards into a sort of knee, is attached to the lower end of the stem: of which it also makes a part, being also called the gripe.

FORE'FRONT, *n. s.* Fore and front. The anterior front of a thing or place.

Upon the *forefront* of the mitre it shall be.
Exod. xxviii. 31.

Set ye Uriah in the *forefront* of the hottest battle.
2 *Sam.* xi. 15.

'OREGO', *v. a.* } Fore and go. To quit;
'OREGO ER, *n. s.* } to give up; to resign; to before; to be past; to provide for; to se-e: foregoer is used in the sense of ancestor; genitor.

Vhat shal my soroufull life done, in this caas,
forgo that I so dere have bought?
Chaucer. Troilus and Creseide.

pecial reason oftentimes causeth the will to prefer good thing before another; to leave one for ther's sake, to *forego* meaner for the attainment of ıer degrees. *Hooker.*

Is it her nature, or is it her will,
'o be so cruel to an humble foe?
If nature, then she may it mend with skill;
f will, then she at will may will *forego*. *Spenser.*

Iaving all before absolutely in his power, it re-ineth so still, he having already neither foregiven *foregone* any thing thereby unto them, but having eived something from them. *Id.*

Must I then leave you? Must I needs *forego*
good, so noble, and so true a master?
Shakspeare.

Let us not *forego*
That for a trifle which was bought with blood. *Id.*

Honours best thrive,
When rather from our acts we them derive
Than our *foregoers*. *Id.*

By our remembrances of days *foregone*,
ch were our faults: O! then we thought them not.
Id.

It is to be understood of Cain, that many years *regone*, and when his people were increased, he ilt the city of Enoch. *Raleigh.*

How can I live without thee! how *forego*
Thy sweet converse, and love so dearly joined,
To live again in these wild woods forlorn!
Milton.

This argument might prevail with you to *forego* a tle of your repose for the publick benefit. *Dryden.*

I was seated in my elbow-chair, where I had in-ılged the *foregoing* speculations. *Addison.*

FORE'GROUND, *n. s.* Fore and ground. he part of the field, or expanse of a picture, hich seems to lie before the figures.

All agree that white can subsist on the *foreground* f the picture: the question therefore is to know, if it ın equally be placed upon that which is backward, ıe light being universal, and the figures supposed to e in an open field. *Dryden.*

FORE'HAND, *n. s.* & *adj.* } From fore and
FORE'HANDED, *n. s.* } hand. The part of horse which is before the rider. The chief part. Vot in use. Done sooner than is regular; early; imely; formed in the foreparts.

The great Achilles whom opinion crowns
The sinew and the *forehand* of our host.
Shakspeare.

You'll say she did embrace me as a husband,
And so extenuate the *forehand* sin. *Id.*

If by thus doing you have not secured your time y an early and *forehanded* care, yet be sure, by a imely diligence, to redeem the time. *Taylor.*

He's a substantial true-bred beast, bravely *fore-handed*: mark but the cleanness of his shapes too.
Dryden.

FORE'HEAD, *n. s.* Sax. ꝼoꞃheaꝼoꝺ. Fore and head. That part of the face which reaches from the eyes upward to the hair. Impudence; confidence; assurance; audaciousness; audacity. The forehead is the part on which shame visibly operates.

Hire *forehed* shone as bright as any day
So wos it washen when she lete her werk.
Chaucer. The Milleres Tale.

Her yvorie *forhead*, full of bounty brave,
Like a broad table did itselfe dispred
For Love his loftie triumphes to engrave,
And write the battailes of his great godhed:
All good and honour might therein be red;
For there their dwelling was.
Spenser's Faerie Queene.

The breast of Hecuba,
When she did suckle Hector, looked not lovelier
Than Hector's *forehead* when it spit forth blood
At Grecian swords contending.
Shakspeare. Coriolanus.

The sea o'er fraught would swell, and the unsought diamonds
Would so imblaze the *forehead* of the deep,
And so bestud with stars, that they below
Would grow inured to light, and come at last
To gaze upon the Sun with shameless brows.
Milton's Comus.

Some angel copied, while I slept, each grace,
And moulded every feature from my face:
Such majesty does from her *forehead* rise,
Her cheeks such blushes cast, such rays her eyes.
Dryden.

A man of confidence presseth forward upon every appearance of advantage; where his force is too feeble, he prevails by dint of impudence: these men of *fore-head* are magnificent in promises, and infallible in their prescriptions. *Collier.*

I would fain know to what branch of the legislature they can have the *forehead* to apply. *Swift.*

Upon her *forehead* Love his trophies fits,
A thousand spoils in silver arch displaying:
And in the midst himself full proudly sits
Himself in awful majesty arraying:
Upon her brows lies his bent ebon bow
And ready shafts: deadly those weapons show;
Yet sweet the death appeared, lovely that deadly blow.
Fletcher's Purple Island.

FOREHO'LDING, *n. s.* Fore and hold. Predictions; ominous accounts; superstitious prognostications.

How are superstitious men hagged out of their wits with the fancy of omens, *foreholdings*, and old wives' tales! *L'Estrange.*

FOR'EIGN, *adj.* } Fr. *forain*; Span. *fora-*
FOR'EIGNER, *n. s.* } *no*; from Lat. *foris*; Gr.
FOR'EIGNNESS, *n. s.* } θυρα, a gate or door; i. e. from without doors. Not domestic; not of this country; alien; remote; not allied. It is often used with *to*; but more properly with *from*. Excluded; not admitted; held at distance; extraneous. In law. A foreign plea, *placitum forinsecum*; as being a plea out of the proper court of justice. A man that comes from another country; not a native; a stranger. Remoteness; want of relation to something.

They will not stick to say you envied him;
And fearing he would rise, he was so virtuous,
Kept him a *foreign* man still; which so grieved him,
That he ran mad and died.
Shakspeare. Henry VIII.

Your son, that with a fearful soul
Leads discontented steps in *foreign* soil,
This fair alliance quickly shall call home.
Shakspeare.

I'll speak to her
And she shall be my queen,—Hail *foreign* wonder!
Milton.

The learned correspondence you hold in *foreign* parts. *Id.*

Joy is such a *foreigner*,
So mere a stranger to my thoughts, I know
Not how to entertain him. *Denham's Sophy.*

To this false *foreigner* you give your throne,
And wronged a friend, a kinsman, and a son.
Dryden's Æneid.

Let not the *foreignness* of the subject hinder you from endeavouring to set me right. *Locke.*

There are who, fondly studious of increase,
Rich *foreign* mould in their ill-natured land
Induce. *Philips.*

I must dissemble,
And speak a language *foreign to* my heart.
Addison.

Fame is a good so wholly *foreign to* our natures, that we have no faculty in the soul adapted to it, nor any organ in the body to relish it, placed out of the possibility of fruition. *Id.*

Water is the only native of England made use of in punch; but the lemons, the brandy, the sugar, and the nutmegs, are all *foreigners*. *Id.*

The parties and divisions amongst us may several ways bring destruction upon our country, at the same time that our united force would secure us against all the attempts of a *foreign* enemy. *Id. Freeholder.*

This design is not *foreign from* some people's thoughts. *Swift.*

Nor could the majesty of the English crown appear in a greater lustre, either to *foreigners* or subjects. *Id.*

The positions are so far from being new, that they are commonly to be met with in both ancient and modern, domestick and *foreign*, writers. *Atterbury.*

'Twas merely known, that on a secret mission
A *foreigner* of rank had graced our shore,
Young, handsome, and accomplished, who was said
(In whispers) to have turned his sovereign's head.
Byron.

FOREIGN, in the English law, is used in various significations. Thus:—

FOREIGN ATTACHMENT, is an attachment of the goods of foreigners found within a city or liberty, for the satisfaction of some citizen to whom the foreigner is indebted; or it signifies an attachment of a foreigner's money in the hands of another person.

At the instance of an ambassador or consul, any offender against the laws here may be sent for hither from a *foreign kingdom* to which he hath fled. And, where a stranger of Holland, or any foreign country, buys goods in London, for instance, and there gives a note under his hand for payment, and then goes away privately into Holland: in that case, the seller may have a certificate from the lord mayor, on the proof of the sale and delivery of such goods, whereupon a process will be executed on the party in Holland.

FOREIMAG'INE, *v. a.* Fore and imagine. To conceive or fancy before proof.

We are within compass of a *foreimagined* possibility in that behalf. *Camden's Remains.*

FOREJUDGE', *v. a.* Fore and judge. To judge beforehand; to be prepossessed; to prejudge.

FOREKNO'W, *v. a.* } Fore and know.
FOREKNOWL'EDGE, *n. s.* } To have prescience
FOREKNOW'ABLE, *adj.* } of; to foresee: possible to be known before they happen: prescience; knowledge of that which has not yet happened.

Wherefore for to departen softily,
Toke purpose ful this wight, *forknowing*, wise;
And to the Grekes host, ful prively,
He stale anon.
Chaucer. Troilus and Creseide.

It is certainly *foreknowable* what they will do in such and such circumstances. *More.*

Our being in Christ by eternal *foreknowledge*, saveth us not without our actual and real adoption into the fellowship of his saints in this present world. *Hooker.*

I told him you was asleep: he seems to have a *foreknowledge* of that too, and therefore chuses to speak with you. *Shakspeare.*

We *foreknow* that the sun will rise and set, that all men born in the world shall die again; that after Winter the Spring shall come; after the Spring, Summer and Harvest; yet is not our foreknowledge the cause of any of those. *Raleigh.*

He *foreknew* John should not suffer a violent death, but go into his grave in peace. *Browne.*

If I foreknew,
Foreknowledge had no influence on their fault,
Which had no less proved certain unforeknown.
Milton.

Who would the miseries of man *foreknow?*
Not knowing, we but share our part of woe.
Dryden.

I hope the *foreknowledge* you had of my esteem for you, is the reason that you do not dislike my letters. *Pope.*

FORE'LAND, *n. s.* Fore and land. A promontory; headland; high land jutting into the sea; a cape.

As when a ship, by skilful steersman wrought,
Nigh river's mouth, or *foreland*, where the wind
Veers oft, as oft so steers, and shifts her sails.
Milton.

FORELA'Y, *v. a.* Fore and lay. To lay wait for; to intrap by ambush; to contrive antecedently.

A serpent shoots his sting at unaware;
An ambushed thief *forelays* a traveller:
The man lies murdered, while the thief and snake,
One gains the thickets, and one thrids the brake.
Dryden.

FORELIFT', *v. a.* Fore and lift. To raise aloft any interior part.

So dreadfully he towards him did pass,
Forelifting up aloft his speckled breast;
And often bounding on the bruised grass,
As for great joy of his new comen guest. *Spenser.*

FORE'LOCK, *n. s.* Fore and lock. The hair that grows from the forepart of the head.

Tell her the joyous time will not be staid,
Unless she do him by the *forelock* take. *Spenser.*

Hyacinthine locks,
Round from his parted *forelock* manly hung,
Clustering, but not beneath his shoulders broad.
Milton.

Zeal and duty are not slow,
But on occasion's *forelock* watchful wait. *Id.*

Time is painted with a lock before, and bald behind, signifying thereby that we must take time by the *forelock*; for, when it is once past, there is no recalling it. *Swift.*

FORE'MAN, *n. s.* Fore and man. The first or chief person.

He is a very sensible man, shoots flying, and has been several times *foreman* of the petty jury. *Addison.*

OREMEN'TIONED, *adj.* Fore and mened. Mentioned or recited before. It is obable that many particles are compounded *fore*, whose verbs have no such composition.

acier, in the life of Aurelius, has not taken notice ıe *foremention*ed figure on the pillar.
Addison on Italy.

'ORE'MOST, *adj.* From fore. First in place: in dignity.

.ll three were set among the *foremost* ranks of fame, great minds to attempt, and great force to perform ıt they did attempt. *Sidney.*

These ride *foremost* in the field,
As they the *foremost* rank of honour held.
Dryden.

The bold Sempronius,
ıt still broke *foremost* through the crowd of patriots, with a hurricane of zeal transported,
d virtuous even to madness. *Addison's Cato*

FORENA'MED, *adj.* Fore and name. Nomied before.

And such are sure ones,
As Curius and the *forenamed* Lentulus.
Ben Jonson.

FORE'NOON, *n. s.* Fore and noon. The ıe of day reckoned from the middle point, beeen the dawn and the meridian, to the meridian: posed to afternoon.

The manner was, that the *forenoon* they should run tilt, the afternoon in a broad field in manner of a ttle, 'till either the strangers or the country knights ın the field. *Sidney.*

Curio, at the funeral of his father, built a temporary eatre, consisting of two parts turning on hinges, acrding to the position of the sun, for the conveniency *forenoon's* and afternoon's diversion.
Arbuthnot on Coins.

FORENO'TICE, *n. s.* Fore and notice. Inrmation of an event before it happens.

So strange a revolution never happens in poetry, but ther heaven or earth give some *forenotice* of it.
Rymer's Tragedies.

FOREN'SIC, *adj.* Lat. *forensis.* Belonging) courts of judicature.

Person is a *forensick* term, appropriating actions ıd their merit; and so belongs only to intelligent gents, capable of a law, and happiness and misery. his personality extends itself beyond present existnce to what is past, only by consciousness. *Locke.*

The forum was a public place in Rome, where lawers and orators made their speeches before the proper ıdges in matters of property, or in criminal cases: hence all sorts of disputations in courts of justice, where several persons make their distinct speeches, nay come under the name of *forensick* disputes.
Watts on the Mind.

FOREORDAIN', *v. a.* Fore and ordain. To predestinate; to predetermine; to preordain.

The church can discharge, in manner convenient, a work of so great importance, by *foreordaining* some short collect wherein briefly to mention thanks.
Hooker.

FORE'PART, *n. s.* Fore and part. The part first in time: the part anterior in place.

Had it been so raised, it would deprive us of the sun's light all the *forepart* of the day. *Raleigh.*

The ribs have no cavity in them, and towards the *forepart* or breast are broad and thin, to bend and give way without danger of fracture. *Ray.*

FOREPA'ST, *adj* Fore and past. Past before a certain time.

Now cease, ye damsels, your delights *forepast*;
Enough it is that all the day is yours. *Spenser.*

My *forepast* proofs, howe'er the matter fall,
Shall tax my fears of little vanity,
Having vainly feared too little. *Shakspeare.*

Such is the treaty which he negociates with us, an offer and tender of a reconciliation, an act of oblivion, of all *forepast* sins, and of a new covenant.
Hammond on Fundamentals.

FOREPOSSES'SED, *adj.* Fore and possess Preoccupied; prepossessed; preengaged.

The testimony either of the ancient fathers, or of other classical divines, may be clearly and abundantly answered to the satisfaction of any rational man, not extremely *forepossessed* with prejudice. *Sanderson.*

FORERA'NK, *n. s.* Fore and rank First rank; front.

Yet leave our cousin Catherine here with us;
She is our capital demand, comprised
Within the *forerank* of our articles. *Shakspeare.*

FORERECI'TED, *adj.* Fore and recite. Mentioned or enumerated before.

Bid him recount
The *forerecited* practices, whereof
We cannot feel too little, hear too much.
Shakspeare.

FORERU'N, *v. a.* } Fore and run. To come
FORERUN'NER, *n. s.* } before as an earnest of something following; to introduce as an harbinger: to precede; to have the start of: an harbinger; a messenger sent before to give notice of the approach of those that follow: a prognostic; a sign foreshowing any thing.

Against ill chances men are ever merry;
But heaviness *foreruns* the good event.
Shakspeare.

The six strangers seek for you, madam, to take their leave; and there is a *forerunner* come from a seventh, the prince of Morocco. *Id.*

O Eve! some further change awaits us nigh,
Which heaven, by these mute signs in nature, shews
Forerunners of his purpose. *Milton's Paradise Lost.*

The sun
Was set, and twilight from the East came on,
Forerunning night. *Id.*

A cock was sacrificed as the *forerunner* of day and the sun, thereby acknowledging the light of life to be derived from the divine bounty, the daughter of Providence. *Stillingfleet.*

She bids me hope: oh heavens, she pities me:
And pity still *foreruns* approaching love,
As lightning does the thunder. *Dryden.*

My elder brothers, my *forerunners* came,
Rough draughts of nature, ill designed, and lame:
Blown off, like blossoms, never made to bear;
'Till I came finished, her last laboured care. *Id.*

Loss of sight is the misery of life, and usually the *forerunner* of death. *South.*

The keeping insensible perspiration up in due measure is the cause as well as sign of health, and the least deviation from that due quantity, the certain *forerunner* of a disease. *Arbuthnot.*

Already opera prepares the way,
The sure *forerunner* of her gentle sway. *Pope.*

For I have drawn much less with a long bow
Than my *forerunners.* *Byron.*

FORESAY', *v. a.* Fore and say. To predict; to prophesy; to foretell.

Let ordinance
Come as the gods *foresay* it.
Shakspeare. Cymbeline.

FORESEE', *v. a.* Fore and see. To see before hand; to see what has not yet happened; to have prescience; to foreknow. To provide for; with *to*. Out of use.

The first of them could things to come *foresee*;
The next could of things present best advise;
The third things past could keep in memory.
Faerie Queene.

A king against a storm must *foresee to* a convenient stock of treasure. *Bacon.*

If there be any thing *foreseen* that is not usual, be armed for it by a hearty though a short prayer, and an earnest resolution beforehand, and then watch when it comes. *Taylor.*

No sooner by his incomprehensible wisdom did he *foresee* we should lose ourselves, than by his immense grace he did conclude to restore us. *Barrow.*

At his *foreseen* approach, already quake
The Caspian kingdoms and Meotian lake:
Their seers behold the tempest from afar,
And threatening oracles denounce the war.
Dryden.

FORESHAD'OW, *v. a.* Fore and shadow. To prefigure; to pity.

The great excellency and efficacy of our Saviour's death—was by manifold types *foreshadowed*, and in diverse prophecies foretold. *Barrow.*

FORESHAME, *v. a.* Fore and shame. To shame; to bring reproach upon.

Oh bill, *foreshaming*
Those rich-left heirs, that let their fathers lie
Without a monument. *Shakspeare. Cymbeline.*

FO'RESHEW, *v. a.* See FORESHOW.

FO'RESHIP, *n. s.* Fore and ship. The anterior part of the ship.

The shipmen would have cast anchors out of the *foreship*. *Acts* xxvii. 30.

FORESHORTEN, *v. a.* Fore and shorten. To shorten figures for the sake of showing those behind.

The greatest parts of the body ought to appear foremost; and he forbids the *foreshortenings*, because they make the parts appear little.
Dryden's Dufresnoy.

FORESHOW', *v. a.* Fore and show. To discover before it happens; to predict; to prognosticate; to represent before it comes.

What else is the law but the gospel *foreshowed*?
What other the gospel than the law fulfilled?
Hooker.

Christ had called him to be a witness of his death, and resurrection from the dead, according to that which the prophets and Moses had *foreshowed*. *Id.*

Next, like Aurora, Spenser rose,
Whose purple blush the day *foreshows*.
Denham.

You chose to withdraw yourself from publick business, when the face of heaven grew troubled, and the frequent shifting of the wind *foreshowed* a storm.
Dryden.

FORE'SIGHT, *n. s.* } Fore and sight. Pre-
FORESIGHT'FUL, *adj.* } science; prognostication; foreknowledge; the accent anciently on the last syllable. Provident care of futurity; prescient; provident.

Therefore of clay, base, vile, and next to nought,
Yet formed by wondrous skill, and by his might,
According to an heavenly patterne wrought,
Which He had fashioned in his wise *foresight*,
He man did make, and breathed a living spright
Into his face, most beautifull and fayre,
Endewd with wisdomes riches, heavenly rare.
Spenser.

He had a sharp *foresight*, and working wit,
That never idle was, ne once could rest a whit.
Id.

In matters of arms he was both skilful and industrious, and as well in *foresight* as resolution present and great. *Hayward.*

Death gave him no such pangs as the *foresightful* care he had of his silly successor. *Sidney.*

Let Eve, for I have drenched her eyes,
Here sleep below; while thou to *foresight* wak'st,
As once thou sleep'st, whilst she to life was formed.
Milton.

For their wise general, with *forseeing* care,
Had charged them not to tempt the doubtful war;
Nor though provoked in open fields advance,
But close within their lines attend their chance.
Dryden.

FORESIG'NIFY, *v. a.* Fore and signify. To betoken beforehand; to foreshow; to typify.

Discoveries of Christ already present, whose future coming the Psalms did but *foresignify*. *Hooker.*

Yet as being past times noxious, where they light
On man, beast, plant, wasteful and turbulent,
They oft *foresignify*, and threaten ill. *Milton.*

FORE'SKIN, *n. s.* Fore and skin. The prepuce.

Their own hand
An hundred of the faithless foe shall slay,
And for a dower their hundred *foreskins* pay,
Be Michal thy reward. *Cowley's Davideis.*

FORE'SKIRT, *n. s.* Fore and skirt. The pendulous or loose part of the coat before.

A thousand pounds a year for pure respect!
No other obligation?
That promises more thousands: honour's train
Is longer than his *foreskirt*.
Shakspeare. Henry VIII.

FORESLACK', *v. a.* Fore and slack. To neglect by idleness.

It is a great pity that so good an opportunity was omitted, and so happy an occasion *foreslacked*, that might have been the eternal good of the land.
Spenser's State of Ireland.

FORESLOW', *v. a.* & *v. n.* Fore and slow. To delay; to hinder; to impede; to obstruct; to neglect; to omit; to loiter; to be dilatory.

This may plant courage in their quailing breasts,
For yet is hope of life and victory;
Foreslow no longer, make we hence amain.
Shakspeare.

When the rebels were on Blackheath, the king knowing well that it stood him upon, by how much the more he had hitherto protracted the time in not encountering them, by so much the sooner to dispatch with them, that it might appear to have been no coldness in *foreslowing*, but wisdom in chusing his time, resolved with speed to assail them.
Bacon's Henry VII.

No stream, no wood, no mountain could *foreslow*
Their hasty pace. *Fairfax.*

Our good purposes *foreslowed* are become our tormentors upon our death-bed. *Bishop Hall.*

w the illustrious nymph returned again,
s every grace triumphant in her train;
wondering Nereids, though they raised no storm,
lowed her passage to behold her form. *Dryden.*

remes, how many fishers do you know
rule their boats and use their nets aright,
at neither wind, nor time, nor tide *foreslow*?
such have been: but, ah! by tempests spite
r boats are lost,; while we may sit and moan
few were such, and now these few are none.
P. Fletcher.

ORESPEAK', *v. n.* Fore and speak. To lict; to foresay; to foreshow; to foretell. orbid. From for and speak.

Thou hast *forespoke* my being in these wars,
nd sayest it is not fit.
Shakspeare. Antony and Cleopatra.

ld Godfrey of Winchester, thinketh no ominous *speaking* to lie in names. *Camden's Remains.*

'ORESPENT', *adj.* Fore and spent. Wasted; d; spent. Forepassed; past. Fore and nt. Bestowed before.

Is not enough thy evil life *forespent*?
Faerie Queene.

You shall find his vanities *forespent*
Were but the outside of the Roman Brutus,
Covering discretion with a coat of folly.
Shakspeare.

We must receive him
According to the honour of his sender;
And towards himself, his goodness *forespent* on us,
We must extend our notice. *Id.*

After him came spurring hard,
A gentleman, almost *forespent* with speed. *Id.*

FORE'SPURRER, *n. s.* Fore and spur. ne that rides before.

A day in April never came so sweet,
To show how costly summer was at hand,
As this *forespurrer* comes before his lord.
Shakspeare.

FOR'EST, *n. s.* } Fr. *forest*; Ital. *foresta*;
FOREST'ER, *n. s.* } Welsh, *fforest*; Teut. *fo-*
FOREST'BORN, *adj.* } *rest*. According to Du ange from the Lat. *feris*, i. e. *ferarum statio*, a ation for wild beasts: according to Vossius nd Spelman from the Lat. *foris*, i. e. beyond ne gate of towns. A wild uncultivated tract of round interspersed with wood; an officer of ne forest; an inhabitant of a wild country.

First on the wall was peinted a *forest*
n which ther wonneth neyther man ne best;
With knotty, knarry, barrein trees old,
Of stubbes sharpe, and hidous to behold;
n which ther ran a romble and a swough,
As though a storme shuld bresten every bough.
Chaucer. The Knightes Tale.

There overtoke. Ta grete route
Of hunters and of *foresters*.
Id. Boke of the Duchesse.

By many tribulations we enter into the kingdom of heaven, because, in a *forest* of many wolves, sheep cannot chuse but feed in continual danger of life.
Hooker.

Macbeth shall never vanquished be, until
Great Birnham-wood to Dunsinane's high hill
Shall come against him.
——That will never be:
Who can impress the *forest*, bid the tree
Unfix his earth-bound root. *Shakspeare. Macbeth.*

Forester, my friend, where is the bush,
That we may stand and play the murtherer in?
—Here by, upon the edge of yonder coppice.
Shakspeare.

This boy is *forestborn*,
And hath been tutored in the rudiments
Of desperate studies. *Id. As You Like It.*

There be airs, which the physicians advise their patients to remove unto, which commonly are plain champaigns, but grasing, and not overgrown with heath; or else timber-shades, as in *forests*. *Bacon.*

How the first *forest* raised its shady head.
Roscommon.

Now Cancer glows with Phœbus' fiery car,
The youth rush eager to the Sylvan war;
Swarm o'er the lawns, the *forest* walk surround,
Rouse the fleet hart and cheer the opening hound.
Pope.

A mighty mass of brick, and smoke and shipping,
Dirty and dusky, but as wide as eye
Could reach, with here and there a sail just skipping
In sight, then lost amidst the *forestry*
Of masts. *Byron.*

But when the rising moon begins to climb
Its topmost arch, and gently pauses there;
When the stars twinkle through the loops of time,
And the low night-breeze waves along the air,
The garland-*forest*, which the grey walls wear,
Like laurels on the bald first Cæsar's head;
When the light shines serene but doth not glare,
Then in this magic circle, raise the dead:
Heroes have trod this spot—'tis on their dust ye tread.
Id. Childe Harold.

FOREST, in geography. The Caledonian and Hercynian forests are famous in history. The first was a celebrated retreat of the ancient Picts and Scots; the latter anciently occupied the greatest part of Europe; particularly Germany, Poland, Hungary, &c. In Cæsar's time it extended from the borders of Alsatia and Switzerland to Transylvania, and was computed sixty days' journey long, and nine broad: some parts or cantons thereof are still remaining. The ancients adored forests, and imagined a great part of their gods to reside therein; temples were frequently built in the thickest forests; the gloom and silence whereof naturally inspire sentiments of devotion, and turn men's thoughts within themselves. For similar reasons the Druids made forests the place of their residence, performed their sacrifices, instructed their youth, and gave laws in them.

FOREST, in law. Forests are bounded with unremoveable marks and meres; either known by record or prescription; replenished with wild beasts of venery or chase, with great coverts of vert for the said beasts; for preservation and continuance whereof, with the vert and venison, there are certain particular laws, privileges, and officers. A forest in the hands of a subject is properly the same thing with a chase; being subject to the common law, and not to the forest laws. But a chase differs from a forest, in that it is not enclosed; and likewise that a man may have a chase in another man's ground as well as his own; being, indeed, the liberty of keeping beasts of chase, or royal game therein, protected even from the owner of the land, with a power of hunting them thereon. See PARK. Though the king may erect a forest on his own ground and waste, he may not do it on the ground of other persons without their consent; and agreements with them for that purpose ought to be confirmed by parliament. If he grants a forest to a subject, on request made in the chancery, that subject

and his heirs shall have justices of the forest, in which case the subject has a forest in law. A second property of a forest is, the courts thereof. A third property is the officers belonging to it, as the justices, warden, verderer, forester, agistor, regarder, keeper, bailiff, beadle, &c. See Bailiff, Forester, &c. By the laws of the forest, the receivers of trespasses in hunting or killing of the deer, if they know them to be the king's property, are principal trespassers. If a trespass be committed in a forest, and the trespasser dies, after his death it may be punished in the life-time of the heir, contrary to common law. The Anglo-Norman kings punished such as killed deer in any of their forests with great severity; also in various manners; as by hanging, loss of limbs, gelding, and putting out eyes. By magna charta de foresta, it is ordained, that no person shall lose life or member for killing the king's deer in forests, but shall be fined; and, if the offender has nothing to pay the fine, he shall be imprisoned a year and a day, and then be delivered, if he can give security not to offend for the future, &c. 9 Hen. III. c. 1. Before this statute, it was felony to hunt the king's deer; and by a late act, persons armed and disguised, appearing in any forest, &c., if they hunt, kill, or steal, any deer, &c., are guilty of felony. 9 Geo. I. c. 22. He who has any license to hunt in a forest or chase, &c., is to take care that he does not exceed his authority; otherwise he shall be deemed a trespasser from the beginning, and be punished for that fact, as if he had no license. See Game and Game Laws.

Forest Courts, courts instituted for the government of the king's forests, and for the punishment of all injuries done to the king's deer, to the vert or greensward, and to the covert in which such deer are lodged. These are the courts of attachments, of regard, of sweinmote, and of Justice-seat. 1. The court of attachments, wood-mote, or forty-days' court, judge Blackstone observes, is to be held before the verderers of the forest once in every forty days; and is instituted to enquire into all offenders against vert and venison: who may be attached by their bodies, if taken with the mainour (manœuvre à manu), that is, in the very act of killing venison, or stealing wood, or in the preparing so to do, or by fresh and immediate pursuit after the act is done; else they must be attached by their goods. And, in this forty days' court, the foresters or keepers are to bring in the attachments, or presentments de viridi et venatione; and the verderers are to receive the same, and to enrol them, and to certify them under their seals to the court of justice seat or sweinmote: for this court can only enquire of, but not convict offenders. 2. The court of regard, or survey of dogs, is to be holden every third year for the lawing or expeditation of mastiffs; which is done by cutting off the claws of the forefeet, to prevent them from running after deer. No other dogs but mastiffs are to be thus lawed or expeditated, for none other were permitted to be kept within the precincts of the forests; it being supposed that the keeping of these, and these only, was necessary for the defence of a man's house. 3. The court of sweinmote is to be holden before the verderers, as judges, by the steward of the sweinmote, thrice in every year; the sweins or freeholders within the forest composing the jury. The principal jurisdiction of this court is, first, to enquire into the oppressions and grievances committed by the officers of the forest: 'de super-oneratione forestarorium, et aliorum ministrorum forestæ; et de eorum oppressionibus populo regis illatis;' and secondly, to receive and try presentments certified from the court of attachments against offences in vert and venison. And this court may not only enquire, but convict also; which conviction shall be certified to the court of justice seat under the seals of the jury, for this court cannot proceed to judgment. But the principal court is, 4. The court of justice seat, which is held before the chief justice in eyre, or chief itinerant judge, capitalis justitiarius in itinere, or his deputy; to hear and determine all trespasses within the forest, and all claims of franchises, liberties, and privileges, and all pleas and causes whatsoever therein arising. It may also proceed to try presentments in the inferior courts of the forests, and to give judgment upon conviction of the sweinmote. And the chief justice may therefore, after presentment made or indictment found, but not before, issue his warrant to the officers of the forest to apprehend the offenders. It may be held every third year; and forty days' notice ought to be given of its sitting. The court may fine and imprison for offences within the forest, it being a court of record: and therefore a writ of error lies from hence to the court of king's bench, to rectify and redress any mal-administration of justice; or the chief justice in eyre may adjourn any matter of law into the court of king's bench.

Forest Laws are peculiar laws, different from the common law of England. Before the making of Charta de Foresta, in the time of king John and his son Henry III., confirmed in parliament by 9 Henry III. offences committed therein were punished at the pleasure of the king in the severest manner. By this charter, many forests were disafforested and stripped of their oppressive privileges, and regulations were made for the government of those that remained; particularly, killing the king's deer was made no longer a capital offence, but only punished by fine, imprisonment, or abjuration of the realm: yet even in the charter there were some grievous articles, which the clemency of later princes has since, by statute, thought fit to alter per assisas forestæ. And to this day, in trespasses relating to the forest, voluntas reputabitur pro facto; so that if a man be taken hunting a deer, he may be arrested as if he had taken a deer. To hunt in a forest, park, &c., in the night, disguised, if denied or concealed, upon examination before a justice of the peace, it is felony; but, if confessed, it is only fineable. Keepers, &c., may seize instruments used in unlawful cutting of trees. Stat. 4 Geo. III. c. 31. Between the years 1787 and 1793 a series of Reports, seventeen in number, was made by commissioners specially appointed to enquire into the state of the woods, forests, and land-revenues of the crown. The third report gives a list of the forests, parks, and chases in England, then under the survey of the

surveyor general of the woods, in which there was any stock of timber: these are in *Berkshire*, Windsor Forest, Cranburn Chase, and Windsor Great and Little Park. *Essex*, Waltham Forest, anciently called the Forest of Essex, and sometimes Epping or Hainault Forest. *Gloucestershire*, Dean Forest. *Hampshire*, the New Forest, Alice Holt and Woolmer Forest, Bere Forest. *Kent*, Greenwich Park. *Middlesex*, St. James's Park, Hyde Park, Bushy Park, and Hampton Court Park. *Northamptonshire*, the Forests of Whittlebury, Salcey, and Rockingham. *Nottinghamshire*, Sherwood Forest. *Oxfordshire*, Whichwood Forest. *Surrey*, Richmond Park. Of these, Sherwood is the only one north of Trent; the others all being south of Trent. By several acts, passed in consequence of these Reports and further enquiries, the boundaries of several of these and other forests have been ascertained, and regulations made for disafforesting and enclosing them in part or in the whole, and applying them to the benefit of the public.

Forest, Black, or Schwartzwald, an extensive forest in Germany, in Suabia, on the right side of the Rhine, consisting chiefly of mountains, which run across the greatest part of Suabia from north to south, and from east to west. This forest lies chiefly between Switzerland, the Rhine, and Wurtemburg.

Forest sur Sevre, a town of France, in the department of the Two Sevres, eight miles south-west of Bressuire.

Forest, or Forrest (Arthur), an English naval officer of the eighteenth century. He was lieutenant of one of the ships sent under Vernon on the unsuccessful expedition against Carthagena. He distinguished himself under the captains Boscawen, Watson, and Cotes, in the attack of the Barradera battery, being among the foremost who entered the enemy's work, at the head of a party of seamen. He was not, however, advanced to the rank of a post-captain till the 9th of March, 1745, at which time he was appointed to the Wager. In 1746 he was employed in this ship on the Jamaica station, where he took a large Spanish privateer. In 1755 he was appointed to the Rye; and soon after to the Augusta, in which ship he was ordered to the West Indies. In the month of October, 1757, as he, in the Augusta, with the Dreadnought and Edinburgh under his command, was cruising off Cape François, a remarkable head-land of St. Domingo, on the 21st at seven in the morning, the Dreadnought made a signal for seeing the enemy's fleet coming out of Cape François; in consequence of which captain Forest made sail towards them. About half an hour after eight he could enumerate seven sail of large ships, a schooner, and a pilot boat. He, nevertheless, bore down upon the French; and, about twenty minutes after three, the action commenced with great spirit on both sides, and continued for two hours and a half; when, in consequence of a signal from the French commodore, one of the frigates bore down to tow him out of the line, and the rest of the French ships followed him. The British ships had suffered so much in their masts and rigging during the engagement, that they were not in a condition to pursue them In this engagement, besides the damage which their ships sustained, the French had 500 men among the killed and wounded, while the British had only twenty-three men killed and eighty-nine wounded. This brilliant display of intrepidity was followed, on the 24th of December 1759, by the capture of the Mars, a French frigate of thirty-two guns, with her whole convoy, consisting of eight sail, laden with sugar, indigo, coffee, cotton, &c., which cost £170,000. The Mars struck on receiving the first broadside, and all the rest instantly followed her example. Soon after this event captain Forest returned to England, and, in 1760, was appointed to the Centaur, and sent out to Jamaica as commodore and temporary commander on that station. He sailed from England, with a convoy of thirty-four ships, on the 16th of January, and arrived at Port Royal on the 6th of March. He continued on that station till the conclusion of the war, and, in 1769, was again appointed to the same command, with the established rank of commodore; but died soon after his arrival in that country, on the 26th of May, 1770.

Forest (John), a celebrated landscape painter, born at Paris in 1636. His landscapes gained him the appointment of painter to the king of France. He died in 1712.

Fore-staff, an instrument formerly used at sea for taking the altitudes of heavenly bodies, so called because the observer, in using it, turned his face towards the object; in contradistinction to the back-staff, where he turned his back to the object. This instrument is now, however, entirely exploded.

FORESTALL, *v. a.* } Sax. ꝑopeꝑtallan, i. e.
Forestaller, *n. s.* } ꝑope and ꝑtal, a station; i. e. to stop from coming to, or to anticipate a market, or station of goods: hence to anticipate; take up beforehand; hinder by preoccupation or prevention; to seize or gain possession of before another; to buy, in order to raise the price; one that anticipates the market; one that purchases before others, to raise the price.

He bold spake, Sir knight, if knight thou be,
Abandon this *forestalled* place at erst,
For fear of further harm, I counsel thee.
Spenser. Faerie Queene.

And though good luck prolonged hath thy date,
Yet death then would the like mishap *forestall*.
Id.

What's in prayer, but this twofold force
To be *forestalled* ere we come to fall,
Or pardoned being down.
Shakspeare. Hamlet.

But for my tears,
I had *forestalled* this dear and deep rebuke,
Ere you with grief had spoke. *Id.*

May
This night *forestall* him of the coming day. *Id.*

If thou be master-gunner, spend not all
That thou can'st speak at once; but husband it,
And give men turns of speech; do not *forestall*
By lavishness thine own and others wit,
As if thou mad'st thy will. *Herbert*

What need a man *forestall* his date of grief,
And run to meet what he would most avoid?
Milton.

If you covet death, as utmost end
Of misery, so thinking to evade
The penalty pronounced, doubt not but God
Hath wiselier armed his vengeful ire, than so
To be *forestalled*. *Id. Paradise Lost.*

Commodities, good or bad, the workman must take at his master's rate, or sit still and starve; whilst, by this means, this new sort of ingrossers or *forestallers* having the feeding and supplying this numerous body of workmen, set the price upon the poor landholder. *Locke.*

FORESTALLING, in law, buying or bargaining for any corn, cattle, victuals, or merchandise, in the way as they come to fairs or markets to be sold, before they get thither, with an intent to sell the same again at a higher price. The punishment for this offence upon conviction at the quarter sessions, by two or more witnesses, is, for the first time, two months imprisonment and the loss of the goods, or the value; for the second offence, the offender shall be imprisoned six months, and lose double the value of the goods; for the third offence he shall suffer imprisonment during the king's displeasure, forfeit all his goods and chattels.

FORESTERS are appointed by the king's letters patent, and sworn to walk the forest at all hours, and watch over the vert and venison; also to make attachments and true presentments of all trespasses committed within the forest. If a man comes into a forest by night, a forester cannot lawfully beat him before he makes some resistance; but in case such a person resists the forester, he may justify a battery. And a forester shall not be questioned for killing a trespasser that, after the peace cried to him, will not surrender himself, if it be not done on any former malice; though where trespassers in a forest, &c., kill a person that opposes them, it is murder in all, because they were engaged in an unlawful act, and therefore malice is implied to the person killed.

FORESTUS (Peter), a Dutch physician, born in 1522. He studied in Italy, and afterwards became medical professor at Leyden. He died in 1597. He wrote Observations on Medicine, which were printed at Frankfort in 1623, in 6 vols. folio.

FO'RESWAT, *adj.* } From for and swat,
FO'RESWART. } from sweat. Spent with heat.

Miso and Mopsa, like a couple of *foreswat* melters, were getting the pure silver of their bodies out of the ore of their garments. *Sidney.*

FORETASTE, *v. a.* & *n. s.* Fore and taste. To have antepast of; to have prescience of; to taste before another; anticipation of.

Perhaps the fact
Is not so heinous now, *foretasted* fruit,
Profaned first by the serpent, by him first
Made common, and unhallowed, ere our taste.
Milton.

A pleasure that a man may call as properly his own as his soul and his conscience, neither liable to accident, nor exposed to injury: it is the *foretaste* of heaven, and the earnest of eternity. *South.*

FORETELL, *v. a.* & *v. n.* } Preter. and part.
FORETELLER, *n. s.* } pass. foretold; (fore and tell.) To predict; to prophesy; to foretoken; to foreshow; to utter prophecy: predicter; foreshower.

All the prophets from Samuel, and those that follow after, have likewise *foretold* of these days. *Acts* iii. 4.

What art thou, whose heavy looks *foretell*
Some dreadful story hanging on thy tongue?
Shakspeare.

I found
The new-created world, which fame in heaven
Long had *foretold*. *Milton.*

Others are proposed, not that the foretold events should be known; but that the accomplishment that expounds them may evince, that the *foreteller* of them was able to foresee them. *Boyle on Colours.*

Mercia's king,
Warned in a dream, his murder did *foretell*,
From point to point, as after it befell. *Dryden.*

When great Ulysses sought the Phrygian shores,
Deeds then undone my faithful tongue *foretold*;
Heaven sealed my words, and you those deeds behold.
Pope.

FORETHINK, *v. a.* & *v. n.* } Fore and think.
FORETHOUGHT, *n. s.* } To anticipate in the mind; to have prescience of; to contrive antecedently; to contrive beforehand: provident care; prescience; anticipation.

But may I live a litel while
He shal *forthinke* his faire semblaunt.
And with that worde came Diede avaunt;
Which wos abashed, and in grete fere
When he wist Jelousie wos there.
Chaucer. Romaunt of the Rose.

The soul of every man
Prophetically does *forethink* thy fall.
Shakspeare.

I do pray to thee
Thou virtuous Dauphin, alter not the doom
Forethought by heaven. *Id. King John.*

Adam could not be ignorant of the punishments due to neglect and disobedience; and felt, by the proof thereof, in himself another terror than he had *forethought*, or could imagine. *Raleigh.*

Friday! the fatal day! when next it came,
Her soul *forethought* the fiend would change his game.
Dryden.

He that is undone, is equally undone, whether it be by spitefulness of *forethought*, or by the folly of oversight, or evil counsel. *L'Estrange.*

What's my frenzy will be called my crime:
What then is thine? Thou cool deliberate villain!
Thou wise, *forethinking*, weighing politician!
Smith.

Blessed be that God which hath given you an heart to *forethink* this, and a will to honour him with his own. *Bishop Hall.*

FORETOKEN, *v. n.* & *n. s.* Fore and token. To foreshow; to prognosticate as a sign: prevenient sign; prognostic.

They misliked nothing more in king Edward the Confessor, than that he was Frenchified, and accounted the desire of foreign language then to be a *foretoken* of bringing in of foreign powers, which indeed happened. *Camden's Remains*

The king from Ireland hastes; but did no good;
Whilst strange prodigious signs *foretoken* blood.
Daniel.

It may prove some ominous *foretoken* of misfortune.
Sidney.

FORE'TOOTH, *n. s.* Fore and tooth. The tooth in the anterior part of the mouth; the incisor.

The *foreteeth* should be formed broad, and with a thin sharp edge like chisels. *Ray on the Creation.*

FO'RETOP, *n. s.* Fore and top. That part of a woman's head-dress that is forward, or the top of a periwig.

So may your hats your *foretops* never press,
Untouched your ribbons, sacred be your dress.
Dryden.

FOREVO'UCHED, *part.* Fore and vouch. Affirmed before; formerly told.

Sure her offence
Must be of such unnatural degree,
That monsters it; or your *forevouched* affection
Fallen into taint. *Shakspeare. King Lear.*

FO'REWARD, *n. s.* Fore and ward. The van; the front.

They that marched in the *foreward* were all mighty men. 1 *Mac.* ix. 11.

FOREWARN, *v. a.* Fore and warn. To admonish beforehand; to inform previously of any future event; to caution against any thing beforehand.

I will *forewarn* you whom you shall fear: fear him which, after he hath killed, hath power to cast into hell. *Luke* xii. 5.

Well I will arm me, being thus *forewarned.*
Shakspeare. Henry VI.

Divine interpreter, by favour sent
Down from the empyrean to *forewarn*
Us timely of what might else have been our loss
Unknown. *Milton's Paradise Lost.*

Thy pride,
And wandering vanity, when least was safe,
Rejected my *forewarning*, and disdained
Not to be trusted. *Id.*

Though Phœbus had *forewarned* him of singing wars, yet the search of nature was free.
Dryden's Virgil, Dedication.

Young Chorœbus, who by love was led
To win renown and fair Cassandra's bed,
Had lately brought his troops to Priam's aid;
Forewarned in vain by the prophetick maid. *Id.*

FOREWA'STE, *v. a.* Fore and waste. To desolate; to destroy. Out of use.

Vespasian, with great spoil and rage,
Forewasted all, until Gemissa gent
Persuaded him to cease. *Faerie Queene.*

High time 'gan it wex for Una fair,
To think of those her captive parents dear,
And their *forewasted* kingdom to repair. *Id.*

FOREWEA'RY, *v. a.* For and weary. To dispirit with labor.

By your toil
And labour long, through which ye hither came,
Ye both *forewearied* be: therefore a while
I read your rest, and to your bowers recoil.
Faerie Queene.

FOREWI'SH, *v. a.* Fore and wish. To desire beforehand.

The wiser sort ceased not to do what in them lay, to procure that the good commonly *forewished* might in time come to effect. *Knolles.*

FOREWO'RN, *part.* Fore and worn, from wear. Worn out; wasted by time or use.

Neither the light was enough to read the words, and the ink was already *foreworn*, and in many places blotted. *Sidney.*

FORFAR, or Angus, a county of Scotland, is bounded on the north by Aberdeen and Kincardine, on the east by the German Ocean, on the south by the frith of Tay, and on the west by the county of Perth. It is twenty-eight miles and a half from north to south, twenty-nine from east to west, and has a superficial area of 831 Scottish, or, according to some authorities, 977 square English miles, or 625,901 acres. It includes the districts of Glenisla, Glenesk, and Glenprassin. Part of the Grampian mountains runs through this county, which is agreeably diversified with hill and dale, well watered with lakes, rivers, rivulets, and fountains, shaded with large forests, interspersed with fields and meadows, and adorned with fine seats and plantations. The rivers are—the North Esk, which, rising in mountain torrents, and afterwards issuing from a small lake called Lochlee, falls into the sea about three miles north of Montrose: the South Esk, which rises among the Grampians, and falls into an inland bay called the basin of Montrose; and the Isla, which has its source in the glen of Isla among the Grampians, and, after being joined by the Melgam, is received by the Tay, in Perthshire. Besides these, there are the smaller streams of the Dean, Lunan, Dighty, and Noran. All the rivers rise towards the north, and, excepting the Isla, fall into the sea. Near Montrose, Aberbrothock, in the parish of Dunnichen, and in some other parts, there are chalybeate springs; the second more resorted to than the others. The heaths and woods abound with harts, hinds, roebucks, and moor fowls; the streams are stocked with trout and salmon, and the hills covered with flocks of sheep. The mountains on the west and north are inhabited by Highlanders. Forfar contains five royal boroughs, viz. Dundee, Arbroath, Montrose, Brechin, and Forfar, with the small towns of Glammis, and Kirriemuir, which are all employed in the linen manufacture. It contains also fifty-six parishes, in many of which a considerable quantity of linen cloth is made. The annual export of this manufacture has been estimated at 11,000,000 yards. In the low country the soil is various, but generally fertile; and the most approved modes of agriculture encouraged by the landlord, and followed by the tenant, with enclosures and stone fences and ditches. In wheat and barley, the produce is generally more than sufficient for the consumption of the country; but in oats a supply is frequently required. Considerable numbers of black cattle are reared in the county; but the sheep are not numerous. The horses, which in the Highlands are indigenous and small, are estimated at 9000. The mineral products of this county consist of inexhaustible beds of limestone, veins of porphyry, large quantities of jasper of different colors, from bright yellow to deep red, susceptible of the highest polish; and all varieties of pebbles: it is said that the real topaz is found here; colored crystals, called cairngorms, commonly five-sided prisms, and terminating in a pyramid of the same description, are frequently found. Lead and iron ore were wrought, in the year 1678, to some extent, the lead yielding a sixty-fourth part of silver. Shell marl is procured plentifully at the bottom

of lakes, and used as manure. Not more than half the surface of this county is cultivated. But about a fifth of the families are engaged in agriculture, which has rapidly improved here of late years. The fisheries are conducted with great vigor and success: large quantities of salmon are sent to London in wooden boxes and preserved with pounded ice. Grain, fish, and linen are the chief exports. The burden of vessels engaged in the whole fishery was estimated a short time since at 21,859 tons. Some few antiquities are found in Forfar: amongst which the encampment at Cartherun has been said to be most worth notice.

Forfar, a royal burgh of Scotland, is the capital of the foregoing county, and was anciently the residence of several of the Scottish monarchs. Malcolm Canmore held his first parliament here in 1057, and the vestiges of the castle used for this purpose are still to be seen in the neighbourhood. From the time of this monarch, we have little or no account of Forfar till the middle of the seventeenth century, except an act passed in the thirteenth parliament of James VI. 21st of July, 1593, changing the weekly market day from Sunday to Friday. It is now held on Saturday. During the usurpation of Oliver Cromwell, a detachment of his forces, after sacking Dundee, came to Forfar and burnt all the public records of the town. The only charter it now has, is one granted by Charles II. after his restoration, confirming all its ancient rights and privileges. Nine persons were condemned and burnt here for witchcraft betwixt 1650 and 1662; and there is still preserved here a strange and barbarous implement of torture, called the witch bridle, by which, and an iron chain, those miserable persons were led to the stake. The ground on which the town stands, with that for a considerable way around, is uneven, and, though low with respect to the circumjacent country on every side except the west, it is high in comparison to the general level of the country. Forfar has been the seat of the sheriff-courts for upwards of two centuries. The streets are irregular, but those of modern construction are much superior in this respect. A spacious church, capable of admitting a congregation of between 2000 and 3000 persons, was erected in 1790, to which a fine steeple, 150 feet high, was added in the year 1814. Besides this there are places of worship for the Episcopalians and Antiburghers. A modern town-house fronts the market place, and contains a noble room for public meetings. There are three public schools; two endowed by the magistracy, and one by them and the heritors of the parish jointly. The principal manufactures are of brown linens, which were introduced about the year 1745. The scarcity of fuel is an impediment to manufactures in general. Forfar unites with Dundee, Perth, Cupar in Fife, and St. Andrews, in returning a representative to parliament. It lies fourteen miles west of Montrose, twelve north-west of Arbroath, and fourteen north of Dundee.

FOR'FEIT, *n. s.*, *v. a.* & *part. adj.* } Fr. *forfait*; Welsh, *fforfed*; Scotch,
FOR'FEITABLE, *adj.* }
FOR'FEITURE, *n. s.* }

forfault; from barb. Lat. *foris facere*, *foris factum*, i. e. (Du Cange) extra rationem, ou-of reason; therefore to incense, offend. Somet thing lost by the commission of a crime: a fine; a mulct; something paid for expiation for crime; to lose by some breach of condition; to lose by some offence. Forfeit and forfeiture mean the same, with this difference, that the one signifies in the primary acceptation the thing forfeited, and the other the act of forfeiting.

All the souls that are, were *forfeit* once;
And he that might the 'vantage best have took,
Found out the remedy.
Shakspeare. Measure for Measure.

Beg that thou mayest have leave to hang thyself;
And yet, thy wealth being *forfeit* to the state,
Thou hast not left the value of a cord. *Id.*

Thy slanders I forgive, and therewithal
Remit thy other *forfeits*. *Id.*

The court is as well a Chancery to save and debar *forfeitures*, as a court of common law to decide rights; and there would be work enough in Germany and Italy, if imperial *forfeitures* should go for good titles.
Bacon's War with Spain.

Ancient privileges and acts of grace indulged by former kings, must not without high reason be revoked by their successors; nor *forfeitures* be exacted violently, nor penal laws urged rigorously. *Taylor.*

He asked, but all the heavenly quire stood mute,
And silence was in Heaven: on Man's behalf
Patron or intercessor none appeared,
Much less that durst upon his own head draw
The deadly *forfeiture* and ransom set.
Milton. Paradise Lost.

The execution leave to high disposal,
And let another hand, not thine, exact
Thy penal *forfeit* from thyself. *Id. Agonistes.*

Thy life, Melantius! I am come to take,
Of which foul treason does a *forfeit* make.
Waller.

Men displeased God, and consequently *forfeited* all right to happiness. *Boyle.*

Straight all his hopes exhaled in empty smoke,
And his long toils were *forfeit* for a look.
Dryden.

Methought with wonderous ease he swallowed down
His *forfeit* honour, to betray the town. *Id.*

A father cannot alien the power he has over his child: he may perhaps to some degrees *forfeit* it, but cannot transfer it. *Locke.*

How the murderer paid his *forfeit* breath;
What lands so distant from that scene of death,
But trembling heard the fame? *Pope's Odyssey.*

Forfeiture originally signifies a transgression or offence against some penal law. Lobineau in his glossary will have forisfacta properly to signify a mulct or amend, not a forfeit; which last he derives from the base British *forfed*, a penalty. But it is now more frequently used for the effect of such transgression; or the losing some right, privilege, estate, honor, office, or effects, in consequence thereof; than for the transgression itself. Forfeiture differs from confiscation, in that the former is more general; while confiscation is particularly applied to such things as become forfeited to the king's exchequer; and goods confiscated are said to be such as nobody claims. Forfeitures may be either in civil or criminal cases.

Forfeiture in Civil Cases. A man who has an estate for life or years, may forfeit it many

ways, as well as by treason or felony; such as alienation, claiming a greater estate than he hath, for affirming the reversion to be in a stranger, &c. When a tenant in tail makes leases not warranted by the statute; a copyholder commits waste, refuses to pay his rent, or do suit of court; and where an estate is granted upon condition, on non-performance thereof, &c., they will make a forfeiture. Entry for a forfeiture ought to be by him who is next in reversion, or remainder, after the estate forfeited. As if tenant for life or years commits a forfeiture, he who has the immediate reversion or remainder ought to enter; though he has the fee only an estate tail.

Forfeiture in Criminal Cases is two-fold; of real and personal estates.

Forfeiture of Personal Estates. The forfeiture of goods and chattels accrues in every one of the high kinds of offence; in high treason, or misprision thereof, petit treason, felonies of all sorts, whether clergyable or not, self murder or felony de se, petty larceny, standing mute, &c. For flight also on an accusation of treason, felony, or even petit larceny, whether the party be found guilty or acquitted, if the jury find the flight, the party shall forfeit his goods and chattels; for the very flight is an offence, carrying with it a strong presumption of guilt, and is at least an endeavour to elude and stifle the course of justice prescribed by the law. But the jury very seldom find the flight; forfeiture being looked upon, since the vast increase of personal property of late years, as too large a penalty for an offence to which a man is prompted by the natural love of liberty. There is a remarkable difference or two between the forfeiture of lands, and of goods and chattels. 1. Lands are forfeited upon attainder, and not before; goods and chattels are forfeited by conviction. Because, in many of the cases where goods are forfeited, there never is any attainder; which happens only where judgment of death or outlawry is given; therefore, in those cases, the forfeiture must be upon conviction or not at all; and, being necessarily upon conviction in those, it is so ordered in all other cases, for the law loves uniformity. 2. The forfeiture of lands has relation to the time the fact was committed, so as to avoid all subsequent sales and incumbrances; but the forfeiture of goods and chattels has no relation backwards; so that those only which a man has at the time of conviction shall be forfeited. Therefore a traitor or felon may bonâ fide sell any of his chattels, real or personal, for the sustenance of himself and family between the fact and conviction; for personal property is of so fluctuating a nature, that it passes through many hands in a short time; and no buyer could be safe, if he were liable to return the goods which he had fairly bought, provided any of the prior venders had committed a treason or felony. Yet if they be collusively and not bonâ fide parted with, merely to defraud the crown, the law (and particularly the statute 13 Elizabeth c. 5) will reach them; for they are all the while truly and substantially the goods of the offender; and as he, if acquitted, might recover them himself, as not parted with for a good consideration; so, in case he happens to be convicted, the law will recover them for the king.

Forfeiture of Real Estates. By attainder in high treason, says Blackstone, a man forfeits to the king all his lands and tenements of inheritance, whether fee-simple or fee-tail; and all his rights of entry on lands and tenements, which he had at the time of the offence committed, or at any time afterwards, to be for ever vested in the crown; and also the profits of all lands and tenements, which he had in his own right for life or years, so long as such interest shall subsist.—This forfeiture relates backwards to the time of the treason committed; so as to avoid all intermediate sales and incumbrances, but not those before the fact; and therefore a wife's jointure is not forfeitable for the treason of her husband; because settled upon her previous to the treason committed. But her dower is forfeited, by the express provision of statutes 5 & 6 of Edward VI. c. 11. And yet the husband shall be tenant by the courtesy of the wife's lands, if the wife be attainted of treason; for that is not prohibited by the statute. But though, after attainder, the forfeiture relates back to the time of the treason committed, yet it does not take effect unless an attainder be had, of which it is one of the fruits; and therefore, if a traitor dies before judgment is pronounced, or is killed in open rebellion, or is hanged by martial law, it works no forfeiture of his land; for he never was attainted of treason. But if the chief justice of the king's bench (the supreme coroner of all England) in person, upon the view of the body of him killed in open rebellion, records it, and returns the record into his own court, both lands and goods shall be forfeited. The natural justice of forfeiture or confiscation of property for treason, is founded on this consideration: that he who hath thus violated the fundamental principles of government, and broken his part of the original contract between king and people, hath abandoned his connexions with society, and hath no longer any right to those advantages which before belonged to him purely as a member of the community; among which social advantages the right of transferring or transmitting property to others is one of the chief. Such forfeitures, moreover, whereby his posterity must suffer as well as himself, will help to restrain a man, not only by the sense of his duty, and dread of personal punishment, but also by his passions and natural affections; and will interest every dependent and relation he has to keep him from offending; according to that beautiful sentiment of Cicero, 'nec vero me fugit quam sit acerbum, parentum scelera filiorum pœnis lui: sed hoc præclare legibus comparatum est, ut caritas liberorum amiciores parentes reipublicæ redderet.' And therefore Aulus Cascellius, a Roman lawyer in the time of the triumvirate, used to boast that he had two reasons for despising the power of the tyrants; his old age and his want of children; for children are pledges to the prince of the father's obedience. Yet many nations have thought that this posthumous punishment savours of hardship to the innocent;

especially for crimes that do not strike at the very root and foundation of society, as treason against the government expressly does. And therefore, although confiscations were very frequent in the times of the earlier emperors, yet Arcadius and Honorius, in every other instance but that of treason, thought it more just, ibi esse pœnam, ubi et noxa est; and ordered, that 'peccata suos teneant auctores, nec ulterius progrediatur metus quam reperiatur delictum:' and Justinian also made a law to restrain the punishment of relations; which directs the forfeiture to go, except in the case of crimen majestatis, to the next of kin to the delinquent. On the other hand, the Macedonian laws extended even the capital punishment of treason, not only to the children, but to all the relations of the delinquent; and of course their estates must be also forfeited, as no man was left to inherit them. And in Germany, by the famous golden bull (copied almost verbatim from Justinian's code), the lives of the sons of such as conspire to kill an elector are spared, as it is expressed by the emperor's particular bounty. But they are deprived of all their effects and rights of succession, and are rendered incapable of any honor ecclesiastical and civil: to the end that, being always poor and necessitous, they may for ever be accompanied by the infamy of their father; may languish in continual indigence; and 'may find,' says this merciless edict, 'their punishment in living, and their relief in dying.' In England, forfeiture of lands and tenements to the crown for treason is by no means derived from the feudal policy, but was antecedent to the establishment of that system in this island; being transmitted from their Saxon ancestors, and forming a part of the ancient Scandinavian constitution. But in certain treasons relating to the coin (which seem rather a species of the crimen falsi, than the crimen læsæ majestatis, it is provided by some of the modern statutes which constitute the offence, that it shall work no forfeiture of lands, save only for the life of the offenders; and by all, that it shall not deprive the wife of her dower. And, in order to abolish such hereditary punishment entirely, it was enacted by statute 7 Ann. c. 21, that, after the decease of the late pretender, no attainder for treason should extend to the disinheriting of any heir, nor to the prejudice of any person, other than the traitor himself. By which the law of forfeitures for high treason would by this time have been at an end, had not a subsequent statute intervened to give them a longer duration. The history of this matter is somewhat singular, and worthy observation. At the time of the union, the crime of treason in Scotland was, by the Scots law, in many respects different from that of treason in England; and particularly in its consequence of forfeitures of entailed estates, which was more peculiarly English; yet it seemed necessary, that a crime so nearly affecting government should, both in its essence and consequences, be put upon the same footing in both parts of the united kingdoms. In new modelling these laws, the Scots nation and the English house of lords struggled hard, partly to maintain, and partly to acquire, a total immunity from forfeiture and corruption of blood; which the house of lords as firmly resisted. At length a compromise was agreed to, which is established by this statute, viz. that the same crimes, and no other, should be treason in Scotland that are so in England; and that the forfeitures and corruption of blood should take place in Scotland till the death of the then pretender, and then cease throughout the whole of Great Britain: the lords artfully proposing this temporary clause, in hopes (it is said) that the prudence of succeeding parliaments would make it perpetual. This has partly been done by the statute 17 Geo. II. c. 39 (made in the year preceding the late rebellion), the operation of these indemnifying clauses being thereby still farther suspended till the death of the sons of the pretender. In petit treason and felony, the offender also forfeits all his chattel interest absolutely, and the profits of all freehold estates during life; and after his death all his lands and tenements in fee simple (but not those in tail) to the crown, for a very short period of time: for the king shall have them for a year and a day, and may commit therein what waste he pleases: which is called the king's year, day, and waste. Formerly the king had only a liberty of committing waste on the lands of felons, by pulling down their houses, extirpating their gardens, ploughing their meadows, and cutting down their woods. And a punishment of a similar spirit appears to have obtained in the oriental countries, from the decrees of Nebuchadnezzar and Cyrus, in the books of Daniel and Ezra; which, besides the pain of death inflicted on the delinquents there specified, ordain, 'that their houses shall be made a dunghill.' But this tending greatly to the prejudice of the public, it was agreed in the reign of Henry I. in England, that the king should have the profits of the land for one year and a day, in lieu of the destruction he was otherwise at liberty to commit: and therefore magna charta provides, that the king shall only hold such lands for a year and a day, and then restore them to the lord of the fee, without any mention made of waste. But the statute 17 Edw. II. de prerogativâ regis, seems to suppose that the king shall have his year, day, and waste; and not the year and day instead of waste: which Sir Edward Coke (and the author of the Mirror before him) very justly look upon as an encroachment, though a very ancient one, of the royal prerogative. This year, day, and waste, are now usually compounded for; but otherwise they regularly belong to the crown; and after their expiration the land would naturally have descended to the heir (as in gavel-kind tenure it still does), did not its feudal quality intercept such descent, and give it by way of escheat to the lord. These forfeitures for felony do also arise only upon attainder; and therefore a felo de se forfeits no lands of inheritance or freehold, as he never is attainted as a felon. They likewise relate back to the time the offence was committed, as well as forfeitures for treason, so as to avoid all intermediate charges and conveyances. This may be hard upon such as have unwarily engaged with the offender: but the cruelty and reproach must lie on the part, not of

ıw, but of the criminal; who has thus know- and dishonestly involved others in his own nities.

)RFEX, in Roman antiquity, a way of ing up an army in the form of a pair of s. It was intended to receive the cuneus, edge, if the enemy should make use of that e. For when the forfex opened to admit vedge, they had an opportunity of defeating design, and cutting them in pieces.

)RFICULA, the ear-wig, in zoology, a ge- of insects belonging to the order of coleop- The antennæ are bristly; the elytra are diated; the wings are covered; and the tail rked. This genus of insects is one of the known, the forceps at the extremity of their)men forming a very distinctive character. s this seeming weapon that has occasioned e insects to be called forficula; and the name ar-wigs has been given them: the forceps, ever, which the ear-wig carries at his tail, with which he seems provided for his de- e, are not so formidable as at first appears, ıg destitute of strength sufficient to produce least sensible impression. The larva differs y little from the perfect insect. Ear-wigs are y mischievous vermin in gardens, especially re carnations are preserved; for they are so d of these flowers, that, if care is not taken to vent them, they will entirely destroy them, eating off the sweet parts at the bottom of the ves. To prevent which, most people have nds erected, which have a basin of earth or d round each supporter, which is constantly ot filled with water. Others hang the hollow ws of crabs and lobsters upon sticks in divers rts of the garden into which those vermin get; d, by often searching them, one will destroy m without much trouble, which will be of eat service to the wall-fruit.

FORGAVE, the preterite of forgive.

FORGE, *n. s.* & *v. a.* } Fr. *forge*; Ital. *for-*
FORGER, *n. s.* } *gia*; barb. Lat. *forica*;
FORGERY, *n. s.* } *favrica*, corrupted from *brica*, as some think; to fabricate; put to- ther: but the Icel. *fergia* is suggested by Mr. allender as the more probable etymology. The lace where iron is beaten into form. In com- ıon language we use forge for large work, and nithy for small; but in books the distinction is ot kept. Any place where any thing is made r shaped. Manufacture of metalline bodies; ıe act of working. To form by the hammer; to eat into shape. To make by any means. To ounterfeit; to falsify. One who makes or forms.)ne who counterfeits any thing; a falsifier. The rime of falsification. Smith's work; fabri- ation; the act of the forge.

But in his sleve, he gan to thring
A rasour sharpe and well biting,
That was *yforged* in a *forge*
Whiche that men clepen coupé Gorge.
Chaucer. Romaunt of the Rose.

I know under the green, the serpent how he lurks
The hammer of the restless *forge* I know eke how it works,
I know, and can by rote the tale that I would tell;
But oft the words come forth aury of him that loveth well. *Surry.*

——————— The flashing fier flies,
As from a *forge*, out of their burning shields,
And streams of purple bloud new die the verdant fields. *Spenser. Faerie Queene.*

Of those he chose out two, the falsest twoo,
And fittest for to *forge* true seeming lyes;
The one of them he gave a message too,
The other by himself staide other work to do.
Id.

From no other *forge* hath proceeded a strange conceit, that to serve God with any set form of common prayer is superstitious. *Hooker.*

Were I king,
I should cut off the nobles for their lands;
For my more having would be but as sauce
To make me hunger more, that I should *forge*
Quarrels unjust against the good and loyal,
Destroying them for wealth.
Shakspeare. Macbeth.

He was a kind of nothing, titleless,
'Till he had *forged* himself a name i' the fire
Of burning Rome. *Id. Coriolanus.*

His heart's his mouth:
What his breast *forges*, that his tongue must vent.
Shakspeare.

Has your king married the lady Gray?
And now to sooth your *forgery* and his,
Sends me a paper to persuade me patience. *Id.*

Now behold,
In the quick *forge* and working-house of thought,
How London doth pour out her citizens. *Id.*

In the greater bodies the *forge* was easy, the matter being ductile and sequacious and obedient to the stroke of the artificer, and apt to be drawn, formed and moulded. *Bacon.*

He ran on embattled armies clad in iron,
And, weaponless himself,
Made arms ridiculous, useless the *forgery*
Of brazen shield and spear, the hammered cuirass,
Chalybean tempered steel, and frock of mail
Adamantean proof. *Milton's Agonistes.*

In other part stood one, who at the *forge*
Labouring, two massy clods of iron and brass
Had melted. *Id. Paradise Lost.*

The queen of martials,
And Mars himself conducted them; both which, being *forged* of gold,
Must needs have golden furniture.
Chapman's Iliad.

Those names that the schools *forged*, and put into the mouths of scholars, could never get admittance into common use, or obtain the licence of publick approbation. *Locke.*

As in stealing, if there were no receivers there would be no thieves; so in slander, if there were fewer spreaders, there would be fewer *forgers* of libels.
Government of the Tongue.

Tyger with tyger, bear with bear you'll find
In leagues offensive and defensive joined;
But lawless man the anvil dares profane,
And *forge* that steel by which a man is slain,
Which earth at first for plough-shares did afford,
Nor yet the smith had learned to form a sword.
Tate's Juvenal.

The o'er laboured Cyclop from his task retires,
The Æolian *forge* exhausted of its fires. *Pope.*

A *forgery*, in setting a false name to a writing, which may prejudice another's forune, the law punishes with the loss of ears; but has inflicted no adequate penalty for doing the same think in print, though books sold under a false name are so many *forgeries*.
Swift.

No *forger* of lies willingly and wittingly furnishes out the means of his own detection. *West.*

A subtil craftman framed him seemly arms,
Forged in the shop of wrangling sophistry;
And wrought with curious arts, and mighty charms
Tempered with lies, and false philosophy.
Fletcher's Purple Island.

FORGE properly signifies a little furnace, wherein smiths and other artificers of iron or steel, &c., heat their metals red-hot, to soften them, and render them more malleable and manageable on the anvil. An ordinary forge is nothing but a pair of bellows, the nozzle of which is directed upon a smooth area, on which coals are placed. The nozzle of a pair of bellows may be also directed to the bottom of any furnace, to excite the combustion of the coals placed there by which a kind of forge is formed. In laboratories, there is generally a small furnace consisting of one cylindrical piece open at top, which has at its lower side a hole for receiving the nozzle of a double bellows. This kind of forge furnace is very convenient for fusions, as the operation is quickly performed, and with few coals. In its lower part, two inches above the hole for receiving the nozzle of the bellows, may be placed an iron plate of the same diameter, supported upon two horizontal bars, and pierced near its circumference with four holes diametrically opposite to each other. By this disposition, the wind of the bellows, pushed forcibly under this plate, enters at these four holes; and thus the heat of the fire is equally distributed, and the crucible in the furnace is equally surrounded by it. This contrivance is used in the forge furnaces for melting copper, with this difference only, that these furnaces are square, which is a matter of no consequence. As the wind of bellows strongly and rapidly excites the action of the fire, a forge is very convenient when a great heat is to be applied quickly: but it is not suitable when the heat is to be gradually increased. The forge or blast of bellows, is used in several operations; as to fuse salts, metals, ores, &c., and chiefly in the smelting of ores, and fusion of metallic matters.

FORGE is also used for a large furnace, wherein iron ore taken out of the mine is melted down: or it is more properly applied to another kind of furnace, wherein the iron ore, melted down and separated in a former furnace, and then cast into sows and pigs, is heated and fused over again, and beaten afterwards with large hammers, and thus rendered more soft, pure, ductile, and fit for use.

FORGE, in the train of artillery, is generally called a travelling forge, and may not be improperly called a portable smith's shop: at this forge all manner of smith's work is made, and it can be used upon a march as well as in camp. Formerly they were very ill contrived, with two wheels only, and wooden supporters to prop the forge for working when in the park. Of late they are made with four wheels, which answers their purpose much better.

FORGE FOR RED-HOT BALLS is a place where the balls are made red-hot before they are fired off; it is built about five or six feet below the surface of the ground, of strong brick-work, and an iron grate, upon which the balls are laid, with a very large fire under them.

FORGERY, in law, is the fraudulent imitation of a name, or alteration of a writing, to the prejudice of another man's right. By statute 5 Eliz. c. 14. to forge or make, or knowingly to publish or give in evidence, any forged deed, court-roll, or will, with intent to affect the right of real property, either freehold or copyhold is punished by a forfeiture to the party aggrieved of double costs and damages; by standing in the pillory, and having both his ears cut off, and his nostrils slit, and seared; by forfeiture to the crown of the profits of his lands, and by perpetual imprisonment. For any forgery relating to a term of years or annuity, bond, obligation, acquittance, release, or discharge of any debt or demand of any personal chattels, the same forfeiture is given to the party grieved; and on the offender is inflicted the pillory, loss of one of his ears, and half a year's imprisonment: the second offence, in both cases, being felony without benefit of clergy. Besides this general act, a multitude of others, since the Revolution, when paper credit was first established, have inflicted capital punishment on the forging, altering, or uttering as true when forged, of any bank bills or notes, or other securities; of bills of credit issued from the exchequer; of south-sea bonds, &c.; of lottery tickets or orders; of army or navy debentures; of East India bonds; of writings under the seal of the London or Royal Exchange Assurance; of the hand of the receiver of the prefines, or of the accountant-general and certain other officers of the chancery; of a letter of attorney, or other power, to receive or transfer stock or annuities; and on the personating a proprietor thereof, to receive or transfer such annuities, stock, or dividends: also on the personating, or procuring to be personated, any seaman or other person, intitled to wages or other naval emoluments, or any of his personal representatives; and the taking, or procuring to be taken, any false oath in order to obtain a probate, or letters of administration, in order to receive such payments; and the forging, or procuring to be forged, and likewise the uttering or publishing, as true, of any counterfeited seaman's will, or power: to which may be added, though not strictly reducible to this head, the counterfeiting of Mediterranean passes, under the hands of the lords of the admiralty, to protect one from the piratical states of Barbary; the forging, or imitating, of any stamps to defraud the public revenue: and the forging of any marriage register or license: all which are, by distinct acts of parliament, made felonies without benefit of clergy. By statutes 13 Geo. III. c. 52 and 59, forging, or counterfeiting, any stamp or mark, to denote the standard of gold and silver plate, and certain other offences of the like tendency, are punished with transportation for fourteen years. By statute 12 Geo. III. c. 48, certain frauds on the stamp duties, therein described, principally by using the same stamps more than once, are made single felony, and liable to transportation for seven years. And the same punishment is inflicted by statute 13 Geo. III. c. 38, on such as counterfeit the common seal of the corporation for manufacturing plate glass (thereby erected), or knowingly demand money of the company by

virtue of any writing under such counterfeit seal. There are also two other general laws with regard to forgery; the one, 2 Geo. II. c. 25, whereby the first offence in forging or procuring to be forged, acting or assisting therein, or uttering or publishing as true, any forged deed, will, bond, writing obligatory, bill of exchange, promissory note, indorsement or assignment thereof, or any acquittance or receipt for money or goods, with intention to defraud any person, or corporation, is made felony without benefit of clergy. And, by statute, 7 Geo. II. c. 22, it is equally penal to forge, or cause to be forged, or utter as true, a counterfeit acceptance of a bill of exchange, or the number of any accountable receipt for any note, bill, or any other security for money, or any warrant or order for the payment of money, or delivery of goods. So that, through the number of these general and special provisions, there is now hardly a case possible to be conceived, wherein forgery that tends to defraud, whether in the name of a real or fictitious person, is not made a capital crime.

A deed forged in the name of a person who never had existence is within the statute 2 Geo. II. c. 25. for the statute does not use the words the deed of any person, or the deed of another, or any words of like import, but any deed. Lord Coke's description of forgery, 3 Inst. 169, 'When the act is done in the name of another person,' is apparently too narrow, and only takes in that species of forgery which is most commonly practised; but there are many other species of forgery which will not come within the letter of that description. Fost. 116. That the use of a name merely fictitious is sufficient to constitute forgery, was also solemnly determined in Bolland's case, O. B. 1772: 1 Leach, 83: 2 East's P. C. c. 19, sect. 49.

This offence of forgery may be complete though there be no publication or uttering of the forged instrument: for the very making, with a fraudulent intention, and without lawful authority, of any instrument which at common law or by statute is the subject of forgery, is of itself a sufficient completion of the offence before publication; and though the publication of the instrument be the medium by which the intent is usually made manifest, yet it may be proved as plainly by other evidence. 2 East's P. C. c. 19. sect. 4, 44: Elliot's case, 1777: 1 Leach, 173: 2 New Rep. 93.

By 45 Geo. III. c. 89, sect. 1, consolidating and amending the provisions of former acts, the penalty of felony without clergy, is enacted against all persons who shall falsely make, forge, counterfeit, or alter (or cause or procure to be so done, or willingly act or assist in so doing), any deed, will, testament, bond, writing obligatory, bill of exchange, promissory note, or any indorsement, assignment, or acceptance of any such bill or note, or any acquittance or receipt for money or goods, or any accountable receipt for any security for money, or any warrant or order for payment of money or delivery of goods, with intent to defraud any person or corporation: and the like penalty on all persons who shall offer, dispose of, or put away any such forged deed, will, or instrument, knowing it to be forged, and with intent to defraud as aforesaid. By stat. 41 Geo. III. c. 57, persons, not authorised, making any paper, &c., with the name or firm of any private bankers, &c., are punishable by imprisonment from six months to two years for the first offence; and for the second by transportation for seven years. By the same act the like punishment is imposed on persons engraving plates of private bankers without authority; and persons engraving signatures of private bankers in hair strokes, &c., are punishable by imprisonment from one year to three, and for the second offence to transportation. By stat. 43 Geo. III. c. 139, sect. 2, the engraving plates for foreign bills of exchange, is declared a misdemeanor punishable by six months' imprisonment, and whipping, and fine; and for the second offence by fourteen years' transportation.

Forgery, by the common-law, extends to false and fraudulent making or altering of a deed or writing, whether it be a matter of record, in which seems to be included a parish register; which is punishable by fine, imprisonment, and corporeal punishment at the discretion of the court; or any other writing, deed, or will. 3 Inst. 169. 1 Rol. Abr. 65. 1 Hawk. P. C. c. 70. Not only where one makes a false deed; but where a fraudulent alteration is made of a true deed, in a material part of it, as by making a lease of the manor of Dale, and it appears to be a lease of the manor of Sale, by changing the letter D. into an S. or by altering a bond, &c., for £500 expressed in figures, to £5000 by adding a new cypher, these are forgery: so it is, if one finding another's name at the bottom of a letter, at a considerable distance from the other writing, causes the letter to be cut off, and a general release to be written above the name, &c. 1 Hawk. P. C. c. 70.

A writing is said to be forged, where one being directed to draw up a will for a sick person, doth insert some legacies therein falsely of his own head; though there be no forgery of the hand or seal; for the crime of forgery consists as well in endeavouring to give an appearance of truth to a mere falsity, as in counterfeiting a man's hand, &c. 1 Hawk. P. C. c. 70; 3 Inst. 170. But a person cannot regularly be guilty of forgery by an act of omission; as by omitting a legacy out of a will, which he is directed to draw for another: though it has been held, that, if the wilful omission of a bequest to one cause a material alteration in the limitation of an estate to another, as if the devisor directs a gift for life to one man, and the remainder to another in fee, and the writer omit the estate for life, so that he in remainder hath a present estate upon the death of the devisor, not intended to pass, this is a forgery. Noy, 118. Moor, 760.

It seems to be no way material, whether a forged instrument be made in such manner, that if it were in truth such as it is counterfeited for, it would be of validity or not. 1 Sid. 142. Neither is it necessary that this resemblance to the known instrument should be exact. 2 East's P. C. c. 19, sect. 6. 44.

If a person engraves a counterfeit stamp (for medicines under 44 Geo. III. c. 98), similar in some parts, dissimilar in others, to the legal stamps, and, cutting out the dissimilar parts,

utters the similar parts as genuine, concealing, by a seal, the space whence the dissimilar part is cut out, the offence is complete under the act, 4 W. P. Taunton, 400. The counterfeiting writings of an inferior nature, as letters and such like, it hath been said, is not properly forgery; but the deceit is punishable.—But in the case of John Ward, of Hackney, it was determined that to forge a release or acquittance for the delivery of goods, although not under seal, was forgery at common law. See Barn. K. B. 10. Raym. 81. Stra. 747. And this case is considered as having now settled the rule that the counterfeiting of any writing with a fraudulent intent, whereby another may be prejudiced, is forgery at common law. 2 East's P. C. c. 19, sect. 7.

The offence of forgery at common law cannot be tried at the quarter sessions, nor can they take cognizance of it as a cheat. 2 Hawk. P. C. c. 8, sect. 64: 2 East, P. C. c. 19, sect. 7. The trial of forgery must be had in the county where the offence is committed, as the indictment can only be preferred in that county.

In Scotland the punishment of forgery is not expressly laid down by statute, but the common law and practice of that country hath been to inflict a capital punishment in all cases of gross forgery. Bell's Scotch Law Dict. See further on this subject, Russel on Crimes, c. 27—34, where it is treated with great accuracy.

Forging, in smithery, the beating, or hammering iron on the anvil, after having first made it red-hot in the forge, to extend it into various forms, and fashion it into works. See Forge. There are two ways of forging and hammering iron. One is by the force of the hand, in which there are usually several persons employed, one of them turning the iron and hammering likewise, and the rest only hammering. The other is by the force of a water-mill, which raises and works several huge hammers beyond the force of man; under the strokes whereof the workmen present large lumps of iron, which are sustained at one end by the anvils, and at the other by iron chains fastened to the ceiling of the forge. This last way of forging is only used in the largest works, as anchors for ships, &c., which usually weigh several thousand pounds. For light works, a single man holds, beats, and turns, with one hand, while he hammers with the other. Each purpose the work is designed for requires its proper heat; for if it be too cold it will not feel the weight of the hammer, as the smiths call it, when it will not batter under the hammer; and, if it be too hot, it will red-sear, that is, break or crack under the hammer. The several degrees of heat the smiths give their iron are, 1. A blood-red heat; 2. A white flame heat; and 3. A sparkling, or welding heat.

FORGET', *v. a.*
Forget'ful, *adj.*
Forget'fulness, *n. s.*
Forget'ter, *n. s.*
Forgot', or
Forgot'ten, *pas. part.*

Preter. forgot; part. forgotten, or forgot; Sax. ꝼoꞃgẏtan; Dut. *vergeten*; Swed. *forgata*; from *for*, a regular prefix, and Goth. *ga*, *geta*, to heed, Thomson. To lose memory of; to let go from the remembrance; not to attend; to neglect; not retaining the memory of; causing oblivion; oblivious; inattentive; negligent; neglectful; careless: oblivion; cessation to remember; loss of memory; inattention; one that forgets; a careless person. 'Forgetfulness, 'says Crabbe', characterises the person; oblivion the state of the thing: the former refers to him who forgets, the latter to that which is forgotten: we blame a person for his forgetfulness; but we sometimes bury things in oblivion.

Forget not thy friend in thy mind, and be not unmindful of him in thy riches. *Ecclus.* xxxvii. 6.

Can a woman *forget* her sucking child? Yea, they may *forget*; yet I will not *forget* thee. *Isaiah* xlix. 5.

As though the erthe, there envye wolde
To be gayer than is the heven
To have mo floures soche [sithe] seven
As in the welken sterres be.
It had *forget* the poverte
Of Winter. *Chaucer. Boke of the Duchesse.*

Thou hast dronke so muche hony of swete temporal richesses, and delices, and honours of this world, that thou art dronken, and host *forgotten* Jesu Crist thy Creatour. *Id. The Tale of Melibeus.*

The church of England is grievously charged with *forgetfulness* of her duty. *Hooker.*

That is not *forgot*
Which ne'er I did remember; to my knowledge,
I never in my life did look on him. *Shakspeare*

When I am *forgotten*, as I shall be,
And sleep in dull cold marble, where no mention
Of me must more be heard. *Id.*

O gentle sleep!
Nature's soft nurse, how have I frighted thee,
That thou no more wilt weigh my eyelids down,
And steep my senses in *forgetfulness!* *Id.*

I have read in ancient authors invitations to lay aside care and anxiety, and give a loose to that pleasing *forgetfulness* wherein men put off their characters of business. *Steele.*

But when a thousand rolling years are past,
So long their punishments and penance last,
Whole droves of minds are by the driving god
Compelled to drink the deep Lethean flood,
In large *forgetful* draughts to steep the cares
Of their past labours, and their irksome years.
Dryden's Æneid.

I, in fact, a real interest have,
Which to my own advantage I would save;
And, with the usual courtier's trick, intend
To serve myself, *forgetful* of my friend. *Prior.*

Thro' the long Strand together let us stray;
With thee conversing, I *forget* the way. *Gay.*

No sooner was our deliverance compleated, but we *forgot* our danger and our duty. *Atterbury.*

Alive, ridiculous; and dead, *forgot*. *Pope.*

All birds and beasts lie hushed; sleep steals away
The wild desires of men and toils of day;
And brings, descending through the silent air,
A sweet *forgetfulness* of human care.
Pope's Statius.

How often hope, despair, resent, regret
Conceal, disdain,—do all things but *forget*.
Pope.

If we might *forget* ourselves, or *forget* God; if we might disregard our reason, and live by humour and fancy in any thing, or at any time, or at any place, it would be as lawful to do the same in every thing, at every time, and every place. *Law.*

To *forget* or to remember at pleasure, are equally beyond the power of man. Yet as memory may be assisted by method, and the decays of knowledge repaired by stated times of recollection, so the power of *forgetting* is capable of improvement.
Johnson. Idler.

And, pausing as she saw him kneel
his despatch, *forgot* to break the seal. *Byron.*

Adieu fair Cadiz! yea a long adieu:
ıo may *forget* how well thy walls have stood?
ıen all were changing thou alone wert true,
st to be free and last to be subdued.
Id. Childe Harold.

)RGIVE', *v. a.* } Sax. ꝼoꞃꝹıꝼan; Swed.
ıRGIVE'NESS, *n. s.* } *forgifiva*; Teut. *vergeben*;
ıRGIV'ER, *n. s.* } compounded of the pri-
e for, and give. Signifies not to give the
shment that is due; to relax from the rigor
ıstice in demanding retribution: to remit
t is due either on the score of demerit or any
r obligation. To pardon a crime; not to
t debt or penalty. Forgiveness not only
es to the act but to the disposition—thus it
lies clemency, placability, readiness to for-
.

ıe people that dwell therein shall be *forgiven* their
ıity. *Isaiah* xxxiii. 24.

he lord of that servant was moved with compas-
, loosed him, and *forgave* him the debt.
Matt. xviii. 27.

o the Lord our God belong mercies and *forgive-*
s. *Daniel.*

And they answered al unto hire, fayre,
hat they *forgave* it hire, for it was right.
: was no gylte, it lay not in hire might;
nd sayden hire ensamples many one—
ut al for naught; for thus she said anone.
Be it as it may' (quod she), 'of *forgivyng*,
will not have no *forgifte*, for nothing.'
Chaucer. Legende of Good Women.

'hen heaven *forgive* him too! *Shakspeare.*

I do beseech your grace for charity;
f ever any malice in your heart
Vere hid against me, now *forgive* me frankly.
—Sir Thomas Lovell, I as free *forgive* you,
As I would be *forgiven*; I *forgive* all. *Id.*

Exchange *forgiveness* with me, noble Hamlet;
ıe and my father's death come not upon thee,
r thine on me. *Id.*

Mercy above did hourly plead
For her resemblance here below;
And mild *forgiveness* intercede
To stop the coming blow. *Dryden.*

Forgiveness to the injured does belong;
But they ne'er pardon who commit the wrong.
Id.

God has certainly promised *forgiveness* of sin to
ery one who repents. *South.*

Slowly provoked, she easily *forgives*. *Prior.*

Ye stars which are the poetry of heaven!
If in your bright leaves we would read the fate
Of men and empires, 'tis to be *forgiven*,
That in our aspirations to be great,
Our destinies o'erleap their mortal state,
And claim a kindred with you: for ye are
A beauty and a mystery, and create
In us such love and reverence from afar,
hat fortune, fame, power, life have named themselves
a star. *Byron. Childe Harold.*

FORHA'IL, *v. a.* An old word. Probably
ır *forhaul*, from *for* and *haul*. To harass; tear;
ırment.

All this long tale
Nought easeth the care that doth me *forhail*.
Spenser's Past.

FORK, *n. s.* & *v. n.* } Saxon ꝼoꞃc; Welsh
FORK'ED, *adj.* } *fforch*; French *fourche*;
FORK'EDLY, *adv.* } Ital. *forca*; Lat. *furca*.
FORK'EDNESS, *n. s.* } An instrument divided
FORK'HEAD, } at the end into two or
FORK'Y, *adj.* } more points or prongs,
used on many occasions; to shoot into blades, as corn does out of the ground. It is sometimes used for the point of an arrow; a point; opening into two or more parts.

It seizing, no way enter might;
But back resounding, left the *forkhead* keen,
Eftsoons it fled away, and might no where be seen.
Faerie Queene.

The bow is bent and drawn: make from the shaft.
—Let it fall rather, though the *fork* invade
The region of my heart. *Shakspeare. King Lear.*

Naked, he was, for all the world, like a *forked* radish, with a head fantastically carved upon it with a knife. *Shakspeare.*

Sometimes we see a cloud that's dragonish,
A *forked* mountain, or blue promontory. *Id.*

Come, shall we go and kill us venison?
And yet it irks me the poor dappled fools
Should in their own confines, with *forked* heads,
Have their round haunches gored. *Id.*

He would have spoke:
But hiss for hiss returned, with *forked* tongue
To *forked* tongue. *Milton's Paradise Lost.*

Ye dragons, whose contagious breath
Peoples the dark retreats of death,
Change your fierce hissing into joyful song,
And praise your Maker with your *forked* tongue.
Roscommon.

The vicar first, and after him the crew,
With *forks* and staves the felon to pursue,
Ran Coll our dog. *Dryden's Nun's Priest.*

The corn beginneth to *fork*.
Mortimer's Husbandry.

Several are amazed at the wisdom of the ancients, that represented a thunderbolt with three *forks*, since nothing could have better explained its triple quality of piercing, burning, and melting. *Addison.*

The smiling infant in his hand shall take
The crested basilisk and speckled snake;
Pleased the green lustre of the scales survey,
And with their *forky* tongue and pointless sting shall
play. *Pope's Messiah.*

I dine with *forks* that have but two prongs.
Swift.

In this heart-city, four main streams appear;
One from the Hepar, where the tribute landeth,
Largely pours out his purple river here;
At whose wide mouth, a band of Tritons standeth,
(Three Tritons stand) who with their three *forked*
mace
Drive on, and speed the river's flowing race;
But strongly stop the wave, if once it back repass.
Fletcher's Purple Island.

Now, where the quick Rhone hath cleft her way,
The mightiest of the storms hath ta'en his stand:
For here not one, but many, make their play,
And fling their thunder-bolts from hand to hand,
Flashing and cast around: of all the band
The brightest through these parted hills hath *forked*
His lightnings,—as if he did understand,
That in such gaps as desolation worked,
There the hot shaft should blast whatever therein
lurked. *Byron. Childe Harold.*

FORKS, TABLE, according to Voltaire, were in use on the continent in the thirteenth and fourteenth centuries; but that they were a novelty in England in the reign of queen Elizabeth, is

evident from the following passage in the first part of Fynes Morison's Itinerary, where, speaking of his bargain with the patron of the vessel which conveyed him from Venice to Constantinople, he says, 'We agreed with the master himself, who, for seven gold crowns by the month, paid by each of us, did courteously admit us to his table, and gave us good diet, serving each man with his knife, and spoone, and his forke (to hold the meat, while he cuts it, for they hold it ill manners that one should touch the meat with his hand), and with a glass or cup to drink in peculiar to himself.' Still farther, Thomas Croyate, who travelled in 1608, after describing with no small solemnity the manner of using them, 'in all parts of Italy;' adds, 'Hereupon I myself thought good to imitate the Italian fashion by this forked cutting of meate, not only while I was in Italy, but also in Germany, and oftentimes in England since I came home.' Thus they seem to have been introduced into Britain.

FORLI, a considerable town of the Papal States, Italy, in the province of Romagna, at the confluence of the Rones and Montone. It is situated near the site of the ancient Forum Livii whence it had its name and first inhabitants. In 1521 the French defeated the Spanish and Papal forces near it; and on February 12th, 1797, the French army, under Buonaparte, entered it, after defeating the troops of pope Pius VI. It is a bishop's see, has various handsome public buildings, and a noble square. There is a manufacture of wax cloth. The town and the environs are fertile. Population 13,000. It lies fourteen miles S.S.W. of Ravenna, and thirty-three south-east of Bologna.

FORLIMPOPOLI, a town of the Papal States, in the province of Romagna, formerly a bishop's see, but ruined in 1630, by the cardinal of Burgundy. It was anciently named Forum Populi, and stood on the Via Emilia; being one of the Fora, where the Roman magistrates had a court. The present population is 5800. It is three miles north of Bertinero.

FORLORE', *pret.* & *part.* } Sax. ꝼoꝛlopen,
FORLORN', *adj.* & *n. s.* } from ꝼoꝛleoꝛan;
FORLORN'NESS, *n. s.* } Goth. *forlora;* Sw. *forloren;* Dat. *verloren.* Forlore is the old preterite and participle of this verb. Deserted; destitute; forsaken; wretched; helpless; solitary; taken away. This sense shows that it is the participle of an active verb, now lost: small; despicable: in a ludicrous sense; a lost, solitary, forsaken man: destitution; misery; solitude.

For it is Cristes conseil that I say
And if thou tell it man, thou art *orlore*
For this vengeance thou shalt have therefore,
That if thou prey me thou shalt be wood.
Chaucer. The Milleres Tale.

Such as Diana by the sandy shore
Of swift Eurotas, or on Cynthus' green,
Where all the nymphs have her *orlore.*
Spenser. Faerie Queene.

That wretched world he 'gan for to abhor,
And mortal life 'gan loth as thing *orlore.* *Id.*

When as night hath us of light *forlorn,*
I wish that day would shortly reascend.
Spenser.

What is become of great Acrates' son!
Or where hath he hung up his mortal blade,
That hath so many haughty conquests won?
Is all his force *forlorn,* and all his glory done?
Faerie Queene.

Tell me, good Hobinol, what gars thee greet?
What! hath some wolf thy tender lambs ytorn?
Or is thy bagpipe broke, that sounds so sweet?
Or art thou of thy loved lass *forlorn?* *Spenser.*

In every place was heard the lamentation of women and children; every thing shewed the heaviness of the time, and seemed as altogether lost and *forlorn.* *Knolles's History.*

He was so *forlorn,* that his dimensions to any thick sight were invincible. *Shakspeare. Henry IV.*

Henry
Is of a king become a banished man,
And forced to live in Scotland a *forlorn.*
Shakspeare.

Thus fell the trees, with noise the desarts roar:
The beasts their caves, the birds their nests *forlore.*
Fairfax.

Like a declining statesman, left *forlorn*
To his friends' pity and pursuers' scorn.
Denham.

Men displeased God, and consequently forfeited all right to happiness; even whilst they compleated the *forlornness* of their condition by the lethargy of not being sensible of it. *Boyle.*

——— Thus roving on,
In confused march *forlorn,* the' adventurous bands
With shuddering horror, pale, and eyes aghast,
Viewed first their lamentable lot, and found
No rest. *Milton. Paradise Lost.*

How can I live without thee! how forego
Thy sweet converse, and love so dearly joined,
To live again in those wild woods *forlorn!*
Milton.

Their way
Lies through the perplexed paths of this drear wood;
The nodding horrour of whose shady brows,
Threat the *forlorn* and wandering passenger. *Id.*

The good old man, *forlorn* of human aid,
For vengeance to his heavenly patron prayed.
Dryden.

The raven croaks *forlorn* on naked spray,
And hark! the river bursting every mound
Down the vale thunders, and with wasteful sway
Uproots the groves, and rolls the shattered rocks away. *Beattie.*

I know
You like to be the hope of the *forlorn,*
And doubtless would be foremost
After the hardships you've already borne.
Byron.

FORLORN HOPE. The soldiers who are sent first to the attack and are therefore doomed to perish.

Criticks in plume,
Who lolling on our foremost benches sit,
And still charge first, the true *forlorn* of wit.
Dryden.

FORLORN HOPE, in the military art, a body of men detached from several regiments, or otherwise, appointed, to make the first attack in the day of battle; or at a siege, to storm the counterscarp, mount the breach, &c. They are so called from the great danger to which they are unavoidably exposed.

FORLI'E, *v. n.* From fore and lie. To lie before.

Knit with a golden baldric, which *forlay*
Athwart her snowy breast, and did divide

Her dainty paps, which, like young fruit in May,
Now little 'gan to swell; and being tyed
Through her thin weed, their places only signified.
Faerie Queene.

FORM, *n. s.* & *v. a.* Fr. *forme;* Swed. and Dan. *form;* Lat. *forma;* probably from φορημα, & φορεω, to bear, signifies properly the image borne or stamped. It is used with its derivatives, in a great variety of senses, which all however recognise the primary definition. Its generic meaning is being, as modified by a particular shape, or rather it is the 'essential, specifical, or distinguishing modification of the matter of which any thing is composed, so as thereby to give it such a peculiar manner of existence.' Thus it is applied to the external shape or appearance of any thing; to mere appearance; empty show; to elegance and beauty; to order, regularity, and method; to ceremonies and external rites; to established usage; ritual and prescribed mode. To form, signifies not merely to impress, to shape, and to methodise; but also to make out of materials, or out of nothing. The proper meaning of formal is, done according to established modes, rules, and methods: not irregular; not sudden; not extemporaneous; it also signifies ceremonious; solemn; precise; exact to affectation. The illustrations will show the various senses in which the other derivatives of form are used. Formalist is one who practises external ceremony; one who prefers appearance to reality; one who seems what he is not.

FOR'MAL, *adj.*
FOR'MALIST, *n. s.*
FORMAL'ITY, *n. s.*
FOR'MALIZE, *v. a.*
FORMA'TION, *n. s.*
FOR'MATIVE, *adj.*
FOR'MER, *n. s.*
FOR'MERLY, *adv.*
FORM'LESS, *adj.*

Haue thou the *fourme* of hoolsum wordis whiche thou herdist of me in feith and loue in Crist Iesus.
Wiclif. 2 *Tymo.* ii.

And the earth was without *form,* and void.
Genesis i. 2.

God *formed* man of the dust of the ground.
Id. ii. 7.

It stood still; but I could not discern the *form* thereof.
Job iv. 16.

He hath no *form* nor comeliness.
Isaiah liii. 2.

Not a word spoke he more than was nede;
And that was said in *forme* and reverence,
And short and quike and full of high sentence.
Chaucer. Prologue to Canterbury Tales.

As in a *fourme,* sitteth a wery hare.
Chaucer. The Shipmannes Tale.

The same spirit which anointed the blessed soul of our Saviour Christ, doth so *formalize,* unite, and actuate his whole race, as if both he and they were so many limbs compacted into one body. *Hooker.*

In definitions, whether they be framed larger to augment, or stricter to abridge the number of sacraments, we find grace expressly mentioned as their true essential *form,* and elements as the matter whereunto that *form* did adjoin itself. *Id.*

He who affirmeth speech to be necessary amongst all men, throughout the world, doth not thereby import that all men must necessarily speak one kind of language; even so the necessity of policy and regimen in all churches may be held, without holding any one certain *form* to be necessary in them all. *Id.*

You and your followers do stand *formally* divided against the authorised guides of the church, and the rest of the people. *Id.*

The justice,
In fair round belly, with good capon lined,
With eyes severe, and beard of *formal* cut,
Full of wise saws and modern instances,
And so he plays his part.
Shakspeare. As You Like It.

Though well we may not pass upon his life,
Without the *form* of justice: yet our power
Shall do a courtesy to our wrath, which men
May blame, but not controul. *Id. King Lear.*

What he spoke though it lacked *form* a little,
Was not like madness. *Id. Hamlet.*

Formal in apparel,
In gait and countenance surely like a father.
Shakspeare.

Formally, according to our law,
Depose him. *Id.*

I will not let him stir,
Till I have used the approved means I have;
With wholesome syrups, drugs and holy prayers,
To make of him a *formal* man again. *Id.*

When noble benefits shall prove
Not well disposed, the mind grown once corrupt,
They turn to vicious *forms,* ten times more ugly
Than ever they were fair. *Id. Henry VIII.*

As there are *formal* and written leagues, respective to certain enemies; so there is a natural and tacit confederation amongst all men against the common enemies of human society, so as there needs no intimation or denunciation of the war; but all these formalities the law of nature supplies, as in the case of pirates. *Bacon.*

It is a ridiculous thing, and fit for a satyr to persons of judgment, to see what shifts *formalists* have, and what prospectives to make superficies to seem a body that hath depth and bulk. *Id.*

Ceremonies be not to be omitted to strangers and *formal* natures; but the exalting them above the mean is not only tedious, but doth diminish the credit of him that speaks. *Id.*

A long table, and a square table, or a seat about the walls, seem things of *form,* but are things of substance; for at a long table, a few at the upper end, in effect, sway all the business; but in the other *form,* there is more use of the counsellors' opinions that sit lower. *Id. Essays.*

They inferred, if the world were a living creature, it had a soul and spirit, by which they did not intend God, for they did admit of a deity besides, but only the soul, or essential *form* of the universe.
Id. Natural History.

That the parliaments of Ireland might want no decent or honourable *form* used in England, he caused a particular act to pass, that the lords of Ireland should appear in parliament robes. *Davies.*

Nor are constant *forms* of prayer more likely to flat and hinder the spirit of prayer and devotion, than unpremeditated and confused variety to distract and lose it. *King Charles.*

Formalities of extraordinary zeal and piety are never more studied and elaborate than in desperate designs. *Id.*

Their general used, in all dispatches made by himself, to observe all decency in their *forms.*
Clarendon.

The liquid ore he drained
Into fit molds prepared; from which he *formed*
First his own tools; then, what might else be wrought.
Milton.

Creature in whom excelled
Whatever can to sight or thought be *formed,*
Holy, divine, good, amiable, or sweet. *Id.*

To fix on God the *formality* of faculties, or affections, is the imposture of our fancies, and contradictory to his divinity. *Glanville's Scepsis.*

The chorion, a thick membrane obscuring the *formation*, the dam doth tear asunder. *Browne.*

The *formal* stars do travel so,
As we their names and courses know;
And he that on their changes looks,
Would think them governed by our books.
Waller.

May not a man vow to A. and B. that he will give a hundred pounds to an hospital? Here the vow is made both to God and to A. and B. But here A. and B. are only witnesses to the vow; but the *formality* of the vow lies in the promise made to God. *Stillingfleet.*

He makes the mere apprehension of excellency to include the *formal* reason of it: whereas mere excellency, without superiority, doth not require any subjection, but only estimation. *Id.*

Of *formal* duty, make no more thy boast;
Thou disobeyest where it concerns me most.
Dryden.

Here toils and death, and death's half-brother, sleep,
Forms terrible to view, their sentry keep;
With anxious pleasures of a guilty mind,
Deep frauds before, and open force behind. *Id.*

Nor seek to know
Their process, or the *forms* of law below. *Id.*

If men forswear the deeds and bonds they draw,
Though signed with all *formality* of law;
And though the signing and the seal proclaim
The barefaced perjury, and fix the shame. *Id.*

It will be necessary to see and examine those work, which have given so great a reputation to the masters of the first *form*. *Id.*

Lucretius taught him not to *form* his heroe, to give him piety or valour for his manners. *Id.*

Many a worthy man sacrifices his peace to *formalities* of compliment and good manners. *L'Estrange.*

He that will look into many parts of Asia and America, will find men reason there perhaps as acutely as himself, who yet never heard of a syllogism, nor can reduce any one argument to those *forms*. *Locke.*

The wonderful art and providence of the contriver and *former* of our bodies, appears in the multitude of intentions he must have in the formation of several parts for several uses. *Ray on the Creation.*

A grave, staunch, skilfully managed face, set upon a grasping aspiring mind, having got many a sly *formalist* the reputation of a primitive and severe piety. *South.*

He dies too soon;
And fate, if possible, must be delayed:
The thought that labours in my *forming* brain,
Yet crude and immature, demands more time.
Rowe.

The Heathens and the Christians may agree in material acts of charity; but that which *formally* makes this a Christian grace, is the spring from which it flows. *Smalridge.*

It lengthens out every act of worship, and produces more lasting and permanent impressions in the mind, than those which accompany any transient *form* of words that are uttered in the ordinary method of religious worship. *Addison.*

Have you observed a sitting hare,
Listening, and fearful of the storm
Of horns and hounds, clap back her ear,
Afraid to keep or leave her *form*? *Prior.*

To be stiff and *formally* reserved, as if the company did not deserve our familiarity, is a downright challenge of homage. *Collier on Pride.*

The matter discharged forth of volcanos, and other spiracles, contributes to the *formation* of meteors. *Woodward.*

Nor was his attendance on divine offices a matter of *formality* and custom, but of conscience. *Atterbury.*

The very life and vital motion, and the *formal* essence and nature of man, is wholly owing to the power of God. *Bentley.*

As we have established our assertion of the seminal production of all kinds of animals; so likewise we affirm, that the meanest plant cannot be raised without seed, by any *formative* power residing in the soil. *Id. Sermons.*

Still in constraint your suffering sex remains,
Or bound in *formal* or in real chains. *Pope.*

She *formed* the phantom of well-bodied air. *Id.*

To enter the palace of learning at the great gate, requires an expense of times and *forms*; therefore, men of much haste and little ceremony are content to get in by the back-door. *Swift.*

Matter, as wise logicians say,
Cannot without a *form* subsist;
And *form*, say I as well as they,
Must fail, if matter brings no grist. *Id.*

The pretender would have infallibly landed in our northern parts, and found them all sat down in their *formalities*, as the Gauls did the Roman senators. *Id*

They were young heirs sent only for *forms* from schools where they were not suffered to stay three months. *Id.*

Complicated ideas, growing up under observation, give not the same confusion, as if they were all offered to the mind at once, without your observing the original and *formation* of them. *Watts.*

If a chair be defined a seat for a single person, with a back belonging to it, then a stool is a seat for a single person without a back; and a *form* is a seat for several persons, without a back. *Id.*

Windows and doors in nameless sculptures drest,
With order, symmetry, or taste unblest,
Forms like some bedlam statuary's dream
The crazed creation of misguided whim. *Burns.*

— So when ill-fated Orpheus tuned to woe
His potent lyre, and sought the realms below
Charmed into life unreal *forms* respired,
And listening shades the dulcet notes admired.
Darwin.

His Highness, the sublimest of mankind,—
So styled according to the usual *forms*
Of every monarch, till they are consigned
To those sad hungry jacobins the worms,
Who on the very loftiest kings have dined—
His Highness gazed upon Gulbeyaz' charms,
Expecting all the welcome of a lover,
(A 'Highland welcome' all the wide world over.)
Byron.

Some seek devotion, toil, war, good, or crime,
According as their souls were *formed* to sink or climb.
Id.

But Juan seasoned, as he might well be,
By *former* voyages, stood to watch the skiffs
Which passed, or catch the first glimpse of the cliffs.
Id.

FORM, among sportsmen, is the spot in which the hare takes her seat at the dawn of day, to secrete herself. When found sitting, she is said to be in her form. Hares vary their places of sitting according to the season, the sun, and the wind. Soon after harvest they are found in wheat, barley, and oat stubbles, and in rushy grass moors: when these become bare, they retire to coverts, banks, and hedges In the spring

months, dry fallows, particularly those lying towards the sun with an ascent, are seldom without hares.

Form, in law, the rules established and requisite to be observed in legal proceedings.—The formal part of the law, or method of proceeding, cannot be altered but by parliament: for if once these outworks were demolished, there would be an inlet to all manner of innovation in the body of the law itself.

Form is also used among mechanics for a sort of mould whereon any thing is fashioned or wrought. Thus, the

Hatter's form is a large block or piece of wood, of a cylindrical figure; the top thereof rounded, and the bottom quite flat. Its use is to mould or fashion the crown of the hat, after the matter thereof has been beaten and fulled.

Printer's form, a number of pages of types, few or many, according to the size of the book, laid in order, by the compositor, enclosed in an iron chase, and firmly locked by quoins of wood, so as the whole may at once be laid on the press, for printing. Two forms are required for every sheet; one for each side; but, in many of the sizes of books, both sides of a sheet may be printed on the same form, by laying the pages in a different order, so as those in one end or side of the chase may answer exactly those in the other, when the sheet is turned. This is called half sheet work, because each half of the sheet, when printed, contains a complete copy of the number of pages in the form.

Form, in physics, denotes the manner of being peculiar to each body; or that which constitutes it such a particular body, and distinguishes it from every other. Mr. Harris uses the term form likewise in another sense, as an efficient animating principle; 'These animating forms,' says he, 'are of themselves no objects either of the ear or of the eye; but their nature or character is understood in this, that were they never to exert their proper energies on their proper subjects, the marble on which the sculptor exercises his art would remain for ever shapeless, and the harp from which the harper calls forth sounds would remain for ever silent:' that is, in plain language, the former would have no peculiar form, and the latter no sound. Then why waste words and render language unintelligible, by such an ambiguous use of the word form? Philosophy, we humbly apprehend, can never be advanced by confounding cause and effect, as Mr. Harris seems to do in the following definition: 'The animating form of a natural body is neither its organisation nor its figure, nor any other of those inferior forms which make up the system of its visible qualities; but it is the power, which is yet able to produce, preserve, and employ these.' If words conveying so very different and opposite ideas, as form and power, are to be thus used synonymously, there will soon be an end of all accuracy in philosophical language. Philosophers generally allow two principles of bodies: matter, as the common basis or substratum of all; and form, as that which specifies and distinguishes each; and which, added to a quantity of common matter, determines or denominates it this or that; wood, or fire, or ashes, &c. Substantial forms seem to have been first broached by the followers of Aristotle, who thought matter, under different modes or modifications, not sufficient to constitute different bodies; but that something substantial was necessary to set them at a greater distance; and thus introduced substantial forms, on the footing of souls, which specify and distinguish animals. What led to this erroneous notion was the circumstances of life and death: for observing that, as soon as the soul was departed out of a man, all motion, respiration, nutrition, &c., immediately ceased, they concluded that all these functions depended on the soul, and consequently that the soul was the form of the animal body, or that which constituted it such: that the soul was a substance independent of matter, nobody doubted; and hence the forms of other bodies were concluded equally substantial. But to this it is answered, that though the soul be that by which man is man, and consequently is the form of the human body, as human; yet it does not follow, that it is properly the form of this body of ours, as it is a body; nor of the several parts thereof, considered as distinct from each other: for those several parts have their proper forms so closely connected with their matter, that it remains inseparable therefrom long after the soul has quitted the body: thus, flesh has the form of flesh, bone of bone, &c., long after the soul is removed, as well as before. The truth is, the body does not become incapable of performing its accustomed functions because the soul has deserted it; but the soul takes its leave because the body is not in a condition to perform its functions. The ancient and modern corpuscular philosophers, therefore, with the Cartesians, exclude the notion of substantial forms; and show, by many arguments, that the form is only the modus, or manner of the primary modes of matter, viz. figure, rest, and motion, with two others arising therefrom, viz. magnitude and situation, the form of all bodies they hold to consist therein; and suppose the variations these modes are capable of, sufficient to present all the variety observable in bodies. Forms are usually distinguished into essential and accidental.

Forms, accidental, are those really inherent in bodies, but in such a manner as that the body may exist in all its perfection without them. Such as whiteness on a wall, heat in water, a figure of a man in wax, &c.

Forms, essential. Though the five modes above mentioned, generally taken, be adventitious; yet to this or that body, e.g. to fire or water, they are essential; thus, it is accidental to iron to have this or that magnitude, figure, or situation, since it might exist in different ones; yet to a knife or hammer, the figure, magnitude, and position of parts which constitute it a hammer or knife are essential; and they cannot exist or be conceived without them. Hence it is inferred, that though there be no substantial, there are essential, forms, whereby the several species of bodies become what they are, and are distinguished from all others.

FORMA Pauperis, is when a person has just cause of suit, but is so poor that he cannot de-

fray the usual charges of suing at law or in equity; in which case, on making oath that he is not worth £5 in the world, on all his debts being paid, and producing a certificate from some lawyer that he has good cause of suit, the judge will admit him to sue in formâ pauperis; that is, without paying any fee to counsellors, attorneys, or clerk; the statute 11 Hen. VII. c. 12, having enacted, that counsel and attorneys, &c., shall be assigned to such poor persons gratis. Where it appears that any pauper has sold or contracted for the benefit of his suit, whilst it is depending in court, such cause shall be thenceforth totally dismissed; and a person suing in formâ pauperis shall not have a new trial granted him, but is to acquiesce in the judgment of the court.

FORMAN (Andrew), archbishop of St. Andrews, earl of Pittenweem, and of Cottingham in England, and primate of all Scotland. He was employed in 1501, along with archbishop Blackader, and Patrick, earl of Bothwell, to negociate a match between James IV. of Scotland, and Margaret, eldest daughter of Henry VII. of England; which was next year ratified by the Scottish ambassadors. He was afterwards employed as Scots ambassador to Rome, England, and France, upon the most important occasions. In 1502 he was appointed archbishop of Moray, and in 1514 archbishop of St. Andrew's. Previous to this last promotion, he was employed as mediator betwixt pope Julius II. and Louis XII. of France, and he succeeded in conciliating the difference. Having taken leave of the pope, he passed through France, where he was kindly received by Louis, who bestowed upon him the bishopric of Bourges, which brought him in 400 tons of wines, 10,000 franks of gold annually, besides other revenues. He was also liberally rewarded by Julius, who, besides the archbishopric, conferred on him the two rich abbeys of Dunfermline and Aberbrothic; and made him his legate a latere. In 1517 he was appointed by the states one of the lords of the regency, during the minority of James V., on occasion of the duke of Albany's going to France. Archbishop Forman died in 1521, and was buried at Dunfermline. According to Dempster, he wrote a book against Luther, another concerning the Stoic Philosophy, and a Collection out of Decretals.

FORMEDON, in law (breve de formâ donationis), a writ that lies for a person who has a right to lands or tenements, by virtue of any entail, arising from the statute of Westm. 2 Ch. II. This writ is of three kinds, viz.:—*Formedon in descender* lies where a tenant in tail infeoffs a stranger, or is disseised and dies, and the heir may bring this writ to recover the lands. *Formedon in remainder* lies where a man gives lands, &c. to a person in tail, and, for default of issue of his body, the remainder to another in tail: here if the tenant in tail die without issue, and a stranger abates and enters into the land, he in remainder shall have this writ. *Formedon in reverter* lies where lands are entailed on certain persons and their issue, with remainder over for want of issue; and, on that remainder failing, then to revert to the donor and his heirs: in this case, if the tenant in tail dies without issue, and also he in remainder, the donor and his heirs, to whom the reversion returns, may have this writ for the recovery of the estate, though the same be alienated, &c.

FORMENTERA, the ancient Pithyusa Minor, is the second of the Pithyusa Islands, situated to the south of Ivica, from which it is separated by a channel four miles wide. It belongs to Spain, and contains about 1200 inhabitants. Long. 1° 23′ 20″ E., lat. 38° 37′ 6″ N.

FOR'MER, *adj.* } 'From Sax. ꝑoꝛma, first;
FOR'MERLY, *adv.* } whence former, and formost, now commonly written foremost, as if derived from before. Foremost is generally applied to place, rank, or degree, and former only to time,' says Dr. Johnson: but both former and foremost are the degrees of Sax. ꝑoꝛe, anterior (either in time or place), and meaning respectively, more, and most fore. See FORE. Before another in time, or place; mentioned before another; past; as 'this was the custom in former times.'

Thy air,
Thou other gold-bound brow, is like the first:
—A third is like the *former*.
Shakspeare. Macbeth.

Counsel and conversation is a second education, that improves all the virtue and corrects all the vice of the former, and of nature itself. *Clarendon.*

The places were all of them *formerly* the cool retirements of the Romans, where they used to hide themselves among the woods and mountains, during the excessive heats of their Summer. *Addison.*

A bad author deserves better usage than a bad critick: a man may be the *former* merely through the misfortune of an ill judgment; but he cannot be the latter without both that and an ill temper. *Pope.*

As an animal degenerates by diseases, the animal salts, *formerly* benign, approach towards an alkaline nature. *Arbuthnot.*

The present point of time is all thou hast,
The future doubtful, and the *former* past. *Harte.*

FORMEY (John Henry Samuel), a celebrated Prussian writer, born at Berlin in 1711. He became pastor of a French church in that city, in which office he continued for several years, but resigned it on being chosen professor of philosophy in the French college; and, upon the restoration of the Royal Academy of Sciences at Berlin, hr was appointed secretary to the philosophical department, and afterwards made sole secretary. He was also chosen a privy counsellor. Formey, in conjunction with Beausobre, conducted the Bibliothéque Germanique; besides which he was the author of 1. Le Philosophe Chrétien; 2. Pensées Raisonnables; 3. Anti-Emile, against Rousseau; 4. The History of Philosophy Abridged; 5. An Abridgment of Ecclesiastical History; 6. Researches on the Elements of Matter; 7. Thoughts on the Tusculums of Cicero, &c. He died in 1797. Some of his works have been translated into English.

FORMIA, or FORMIÆ, in ancient geography, a maritime town of the Adjected, or New Latium, on the south-east of Cajeta; built by the Lacedemonians, called originally Hormiæ, on account of its commodious harbour. It was an ancient municipium, but is now in ruins, near Mola.

FORMIANI, the people of Formia, who were admitted to the liberty of the city the year in

which Alexandria was built, but not to the right of suffrage till long after the second Punic war.

FORMICA, in entomology, a genus of insects of the hymenoptera order, which have four feelers, with cylindrical articulations placed at the tip of the lip, which is cylindrical and membranaceous: antennæ filiform, a small erect scale between the thorax and the abdomen; males and females with wings; neuters wingless. See ENTOMOLOGY.

La Marck explains the genus somewhat differently, and by the adoption of his character, several of the Linnæan and Fabrician formicæ are excluded. This writer lays down the essential character as follows: antennæ filiform and broken, the first joint very long; feelers unequal, the anterior pair longer; mandibles strong; tongue short, concave and truncated. To this is added, as a secondary character, that the abdomen is attached to the corselet by a pedicle, bearing a small scale, or vertical knob; and that of each species there are three kinds, males, females, and neuters, which latter are without wings. The larva destitute of feet.

The species, accord ng to Fabricius, are above ninety. See ANT: where we have described at some length the habits of this well-known insect. We shall, however, here give a short account from Mr. Huber of the masonry and buildings of the brown ants:—Their nests are formed of parallel or concentric stories, each four or five lines in height; the partitions being about half a line in thickness, and built of such fine materials that the interior appears perfectly smooth. On examining each of these stories, we discover chambers of different sizes, having long galleries of communication. The ceilings of the larger species are supported by small pillars, sometimes by slender walls, and in other cases by arches. Some cells have but a single entrance; others have passages, which open from the story underneath. In other parts, still larger central spaces, or halls, are met with, in which a great number of passages terminate, like the streets and avenues to a market-place. The whole nest often contains twenty of these stories above the level of the ground, and at least as many below it. The use of this numerous series of rooms will appear in the sequel. The surface of the nest is covered with a thicker wall, and has several doors, admitting, in the day-time, free ingress and egress. This species of ant is unable to bear much heat. During the day, therefore, and particularly when the sun shines, their doors are closed; and they either keep at home, or venture out only through the subterraneous passages. When the dew has given freshness to the nest, and softened the earthy materials on its surface, they begin to make their appearance above ground. On the first shower of rain that occurs, the whole swarm are apprised of it, and immediately resume their architectural labors. While some are engaged in moving the earth below, others are employed in building an additional story on the top; the masons making use of the materials furnished by the miners. The plan of the cells and partitions is first traced in relief on the walls, which are seen gradually to rise, leaving empty spaces between them. The beginnings of pillars indicate the situation of the future halls; and the rising partitions show the form of the intended passages. Upon the plan thus traced, they continue building, till they have arrived at a sufficient elevation. Masses of moistened earth are then applied at right angles to the tops of the walls, on each side, and continued in a horizontal direction till they meet in the middle. The ceilings of the larger chambers are completed in the same manner; the workers beginning from the angle of the walls, and from the tops of the pillars which have been raised in the centre. The largest of these chambers, which might be compared to the town-hall, and is frequently more than two inches in diameter, is completed with apparently as much ease as the rest. This busy crowd of masons arriving in every direction, laden with materials for the building, hastening to avail themselves of the rain to carry on their work, and yet observing the most perfect order in their operations, must present the most interesting and amusing spectacle. They raise a single story in about seven or eight hours, forming a general roof as a covering to the whole; and they go on, adding other stories, so long as the rain affords them facility of moulding the materials.

FORMIC ACID. It has long been known that ants contain a strong acid which they occasionally emit; and which may be obtained from the ants, either by simple distillation, or by infusion of them in boiling water, and subsequent distillation of as much of the water as can be brought over without burning the residue. After this it may be purified by repeated rectifications, or by boiling to separate the impurities; or after rectification it may be concentrated by frost. The existence of this acid was first made known by Mr. Ray, in a correspondence with Dr. Hulse. The doctor informed him that these insects, when irritated, give out a clear liquid, which tinges blue flowers red; a fact which had been observed by others. Hence it was found to be an acid, which was obtained by bruising the insects, by distilling them, and by infusing them in water. The French chemists obtained the acid by bruising ants, and macerating them in alcohol. When the alcohol was distilled over, an acid liquor remained, which saturated with lime, mixed with sulphuric acid, and distilled, yielded a liquid that possessed all the properties of acetic acid This acid has been thought by some chemists, and especially by Margraaf, to be acetic acid, or at least to have a great analogy to vinegar; and by others to be a mixture of acetic and malic acid. A minute examination of it, however, sufficiently proves, that it differs very essentially from both, whether separate or in conjunction, quite as much, indeed, as these differ from each other; it differs in its specific gravity, its effects with alkalies, its metallic salts, and its affinities.

Thouvenel, on the contrary, contended, that it is very closely related to the phosphoric, or, as he calls it, the microcosmic; but he has not stated in what the relation or analogy consists. Lister affirmed that he had extracted a similar acid from wasps and bees; but Arvidson and Oehrn failed in making the attempt after him, nor has any one been able to succeed since.

This acid has a very sour taste, and continues liquid even at very low temperatures. Its specific gravity is 1·1168 at 68°, which is much denser than acetic acid ever is. Berzelius finds, that the formiate of lead consists of 4·696 acid, and 14 oxide of lead; and that the ultimate constituents of the dry acid are hydrogen 2·84 + carbon 32·40 + oxygen 64·76 = 100.

M. Dobereiner has recently succeeded (see Gilbert's Annales, xi. 107) in forming this acid artificially. When a mixture of tartaric acid, or of cream of tartar, black oxide of manganese and water is heated, a tumultuous action ensues, carbonic acid is evolved, and a liquid acid distils over, which, on superficial examination, was mistaken for acetic acid, but which now proves to be formic acid. This acid, mixed with concentrated sulphuric acid, is at common temperatures converted into water and carbonic oxide; nitrate of silver or of mercury converts it, when gently heated, into carbonic acid, the oxides being at the same time reduced to the metallic state. With barytes, oxide of lead, and oxide of copper, it produces compounds having all the properties of the genuine formiates of these metals. If a portion of sulphuric acid be employed in the above process, the tartaric acid is resolved entirely into carbonic acid, water, and formic acid; and the product of the latter is much increased. The best proportions are, two parts tartaric acid, five peroxide of manganese, and five sulphuric acid diluted with about twice its weight of water.

Formica-Leo, the ant-lion, in zoology, an insect so called from its devouring great numbers of ants. It is the caterpillar worm of a fly much resembling the libellulæ or dragon-flies. It has, in its general figure, somewhat of the appearance of the wood-louse, so that some have mistaken it at first sight for that animal. It is of a dirty grayish color, marked with black spots; and these also appear composed of many points when viewed with a microscope. Its body is composed of several rings, and has thence a wrinkled look. It has six legs; four are joined to the breast, and the other two to a longer part, which may be taken for its neck. Its head is small and flat, and it has two remarkable horns: these are about a sixth part of an inch long, and as thick as a hair: they are hard, hollow, and hooked at the end like the claws of a cat. At the origin of each of these horns, it has a clear and bright black eye, which sees very distinctly, and gives the creature notice to escape on sight of the smallest object. This creature is not able to hunt after its prey, nor to destroy large insects; it can only draw into its snares such as come near its habitation, and of these very few are such as he can manage: all the winged kind are able to escape by flight; and the beetle kinds, and others that have hard shells upon their bodies, are of no use, as his horns cannot pierce them. The smallness of the ant, and the want of wings in the neuters, make them the destined prey of this devourer. The manner in which he catches his prey is as follows:—He usually encamps under an old wall, that he may be sheltered from the injuries of the weather; and he always chooses a place where the soil is composed of a fine dry sand. In this he makes a pit of the shape of a funnel, or an inverted hollow cone. If he intends the pit to be but small, he thrusts down his hinder part into the sand, and by degrees plunges himself backwards into it; and, when he has got into a certain depth, he tosses out the loose sand which has run down with his head, artfully throwing it off beyond the edges of his pit. Thus he lies at the bottom of a small hollow, which is widest at the top, and comes sloping down to his body. But if he is to make a larger pit, more pains are required to bring it to perfection. He first traces, in the surface of the sand, a large circle, which is the erected base or mouth of the pit he is to make in form of an inverted cone. He then buries himself in the sand near the edge of this circle, and carefully throwing up the sand above him, with his head, tossing it out beyond the circumference of the circle. Thus he continues his work, running down backwards in a spiral line all the way, and carefully throws off the sand from above him, till he is come to the place of his rest, which is the point or reverted apex of the hollow cone he has formed by his passage. The length of his neck, and the flatness of his head, give him a power of using the whole as a spade, and throwing off the sand with great ease; and his strength in this part is so great, that he is able to throw off a quantity of it to six inches distance. This is a power he exerts oftener, however, in throwing away the remains of the animals he has fed upon, that his den may not become frightful to others of the same species, by seeing their fellows' carcases about it. When this insect forms its pit in a bed of pure sand, it is made and repaired with great ease: but where it meets with other substances among the sand, the labor becomes more embarrassing. If, for instance, when the creature has half formed its pit, it comes to a stone of some moderate size, it does not desert the work for this, but goes on, intending to remove that impediment at last. When the pit is finished, the creature crawls backward up the side of the place where the stone is, and, getting its back under it, takes great pains and time to get it on a true poise, and then begins to crawl backwards with it up the edge to the top of the pit, to get it out of the way. It is a very common thing to see a formica-leo in this manner laboring at a stone four times as big as its own body; and as it can only move backward, and the poise is hard to keep, especially up a slope of such crumbly matter as sand, which moulders away from under its feet, and necessarily alters the position of its body, the stone very frequently falls down when near the verge, and rolls to the bottom. In this case the animal attacks it again in the same way, and often is not discouraged by five or six miscarriages of this kind; but attempts again, and at length gets it over the verge of the place. When it has done this, it does not leave it there, lest it should roll in again; but always pushes it farther on, till it has removed it to a necessary distance from the edge of the pit. When he has finished his pit, he buries himself at the bottom of it among the sand, leaving no part above ground but the tips of his two horns, which he expands to the two sides of his pit. In

this condition he lies and waits for his prey. When an ant, or any other insect chances to walk over the edges of his pit, its steps throw down a little of the sand, which naturally running down to the bottom of the pit, gives the enemy notice of his prey; he then tosses up the sand which covers his head, to bury the ant, and bring him down with its returning force to the bottom; and as one such attempt cannot be sufficient to prevent the ant's escape, he throws more and more sand upon him, till he by degrees brings him down. All the endeavours of the ant to escape, when once it is within the verge of the pit, are in vain; for as it attempts to climb, the sand runs away from under its feet, it sinks the lower for every attempt. This motion of the sand also informs the enemy where it is, and directs him to throw up more sand in the right place; which it does, till the poor ant falls to the bottom between its horns. It then plunges the points deep into the ant's body; and, having sucked all the juice out of the prey, it throws out the empty skin as far from the hole as it can. This done, it mounts up the edges of its pit, and, if it has suffered any injury, repairs it with great care, and immediately buries itself again in the centre to wait for another meal. The horns of this creature are its only organs for receiving nourishment; it never brings any animal which it has seized near to its head, but always holds it at the tip of the horns. They therefore plainly serve as syringes, to draw into its stomach the juices of the bodies of the insects it feeds upon: neither is there any mouth or trunk, or any other organ to be discovered about its head, which could answer the purpose of eating; the head seeming only intended for throwing away the sand in forming the pit. The horns of this animal being so necessary to its life, nature has provided for the restoring them in case of accidents; and, if cut off, they are found to grow again.

When the formica-leo has lived a proper time in this state, it leaves its pit, and is only seen drawing lines and traces on the surface of the sand. After this it buries itself under the surface; and there encloses itself in a fine web, in which it is to pass its transformation into the winged state. This case is made of a sort of silk which the creature spins in the manner of the spider, and of a quantity of the grains of sand cemented together by a glutinous humor which flows from its pores. This case, however, would be too harsh and coarse for the body of the creature, and therefore it serves only for the outer covering to defend it from injuries; the creature spinning one of fine silk, of a beautiful pearl color within it, which covers its whole body. When the creature has lain some time in this manner, it throws off its outer skin, with the eyes, horns, and every other part necessary to its life before, and becomes an oblong nymph, in which a careful eye may trace the form of the fly into which it is to be transformed. There may be seen, through its transparent covering, new eyes, new horns, wings, and all the other parts of the animal in its perfect state. This nymph makes its way about half out of the shell, and remains in this condition, but without farther life or motion, till the perfect fly makes its way out at a slit in the back. In this last state it much resembles the libellulæ or dragon-flies, common about our waters. The male couples with the female in this state only; and M. Poupart, to whom the world is indebted for this curious description, is of opinion that the females lay only one egg; but this is very different from the course of nature in the other animals of the same class.

FORMICHE, a cluster of small fishing islands, between the coast of Florence and Corsica. They are in lat. 42° 40′ N., and long. 10° 25′ E.

FORMICATION, *n. s.* From Lat. *formica*, an ant. A sensation like that produced by the creeping or biting of ants.

One of the signs of this disorder (spasmus) is a sense of *formication*. *Hill's Medical Dictionary.*

FOR'MIDABLE, *adj.* } Fr. *formidable;* Lat.
FOR'MIDABLENESS, *n. s.* } *formidabilis*, à *formi-*
FOR'MIDABLY, *adv.* } *do*, to fear. Terrible; dreadful; tremendous; to be feared: the last is its most distinguishing meaning. It is applied to that which is apt to excite fear. The formidable acts neither suddenly nor violently: thus it differs from dreadful, which is usually considered as its synonyme; for the dreadful may act violently, but not suddenly: thus the appearance of an army may be formidable; that of a field of battle is dreadful.

Behold! e'en to remoter shores,
A conquering navy proudly spread;
The British cannon *formidably* roars.
Dryden

They seemed to fear the *formidable* sight,
And rolled their billows on, to speed his flight.
Id.

I swell my preface into a volume, and make it *formidable*, when you see so many pages behind.
Dryden's Æneid, Dedication.

They rather chuse to be shewed the *formidableness* of their danger, than by a blind embracing it, to perish.
Decay of Piety.

But let fancy muster up all the discouraging circumstances, and set them in the most *formidable* light, to bar your way to a supposed duty. *Mason.*

France continued not only powerful, but *formidable*, to the hour of the ruin of the monarchy. *Burke.*

ARNOLD.—Rival!
CÆSAR.—I could be one right *formidable*.
Byron. Deformed Transformed.

FORMOSA, or Taiwan, an island in the Pacific Ocean, about 100 miles east of Canton in China, separated from the province of Fokien by a strait about sixty miles broad. Its most productive portion is subject to the Chinese; who, however, knew not of its existence until 1430. It is about eighty leagues long, and twenty-five broad. A long chain of mountains, which runs from north to south, divides it into two parts, the east and west. The Dutch formed an establishment in the west part in 1634, and built the fort of Zealand, which secured to them the principal port of the island; but they were driven thence in 1659 or 1661, by a celebrated Chinese pirate, who made himself master of all the western part, which afterwards submitted in 1682 to the authority of the emperor Kang-He. This western part of Formosa is divided into three distinct governments, all subordinate to the

governor of Tai-wan, the capital of the island, who is himself subject to the viceroy of the province of Fo-kien. This island presents extensive and fertile plains, watered by a great number of rivulets that fall from the eastern mountains. The air is pure and wholesome, and the soil produces in abundance corn and rice, with other grain, and Indian fruits; such as oranges, bananas, pine apples, guavas, papawa, cocoa-nuts; as well as many of Europe. Tobacco, sugar, pepper, camphire, and cinnamon, are also common. The island has few wild animals, except deer and monkeys, and it is without horses, asses, or sheep. Bullocks are used in lieu of the former for labor. The woods abound in pheasants, heath cocks, wild pigeons, &c. The climate is healthy and temperate, but the island is subject to frequent earthquakes. One of these happened in 1782, that almost destroyed the island, and either sunk or damaged most of the ships that were in the harbour.

Tai-wan is on the west coast, and is very populous and rich, in all respects resembling the Chinese cities of the Continent. It is defended by a fortress built by the Dutch, and still in good repair. The harbour only admits vessels of eight feet, and in general the other ports are also shoal, and the navigation obstructed by sands. The Chinese have sometimes a garrison of 10,000 men on this island. The only natives who are allowed to live in the towns and villages, peopled by the Chinese, are either slaves or domestics. The native islanders of this western part have more than forty villages, mostly situated towards the northern extremity, built after the Chinese manner, while those in the southern parts are merely earthen huts. The inhabitants of the eastern side of the island are described as savages, without regular government. In their features and complexions they resemble the Malays, but speak a language that has no affinity to any other. Their cabins are of bamboo, without furniture; their cloathing only a piece of cloth wrapped round the waist, and their food what they procure by the chase. They raise ornamental cicatrices on the skin to resemble trees, flowers, and animals, and blacken their teeth. Their religion is an idolatrous polytheism. They dispose of their dead in the same manner as the islanders of the Pacific, exposing the bodies on stages. They are represented as courteous and honest, but very implacable. This latter quality the Chinese have experienced to their cost. Some of the earlier settlers of that nation massacred the inhabitants of a village for the sake of some ingots of gold they saw there, and though the natives set little value upon gold or silver, they could never be prevailed upon to forgive the atrocity. Their chief subsistence is derived from the cattle they breed on the mountains, and the fish they catch in the rivers and off the adjacent coasts. In 1805 some Ladrone pirates had acquired possession of a great part of the south-west coast of Formosa, which exported a great deal of grain to the province of Fo-kien in China.

Formosa, an island in the Atlantic, near the western coast of Africa, about thirty miles long, and eighteen broad, one of the Archipelago of the Bissagos. The soil is fertile, and covered with trees, but the island is deficient in water. Long. 16° 10′ W., lat. 11° 29′ N.

Formosa Bay, a bay on the eastern coast of Africa, immediately north of Melinda, and receiving a small river of the same name, in lat. 2° 45′ S.

Formosa, Cape, a cape on the coast of Malacca, thirty miles south-east of Malacca.

Formosa, Rio, one of the principal estuaries which open into the Gulf of Benin, has its mouth about four miles wide, but does not afford above twelve feet average depth of water. The country for some distance up is entirely intersected with its branches. The navigation is also often impeded by floating islands, covered with reeds. The banks are fertile, and covered with fine trees, but the air is extremely damp and unwholesome. The rise and early course of this river are unknown; according to Rechard, this stream is supposed to be the termination of the Niger. No vessel should venture into its mouth without a pilot. Long. 4° 20′ E., lat. 5° 40′ N.

FORMULA, or Formulary, a rule or model, or certain terms prescribed or decreed by authority, for the form and manner of an act, instrument, proceeding, or the like.

Formula, in church history and theology, signifies a profession of faith.

Formula, in medicine, imports the constitution of medicines, either simple or compound, both with respect to the prescription and consistence.

FORNELLA, a sea-port of Minorca, six miles from Mount Toro. The harbour is capable of containing the largest fleet of merchantmen, and is defended by three forts. In the neighbourhood is a small fishing place of the same name.

FOR'NICATE, *v. a.* Fornica'tion, *n. s.* Fornica'tor, *n. s.* Fornica'tress, *n. s.* } Fr. *fornicateur;* Lat. *fornicatio, fornix,* an arch or vault; the usual place of the ancient brothels. But some etymologists trace this word to the Gr. *πορνη, περναω,* to hire. To commit lewdness as distinguished from adultery; the one being committed with the unbetrothed, the other with the married. In the sacred writings the word fornication is metaphorically applied to idolatry.

Thou didst trust in thine own beauty, thou playedst the harlot, because of thy renown, and pouredst out thy *fornications* on every one that passed by.
Ezekiel xvi. 15.

Another circumstance is this, whether it be don in *fornication*, or in advoutrie, or no; in manner of homicide or non; a horrible gret sinne, or smal; and how long thou host continued in sinne.
Chaucer. The Persones Tale.

Bless me! what a fry of *fornication* is at the door.
Shakspeare.

See you the *fornicatress* be removed;
Let her have needful but not slavish means. *Id.*

A *fornicator* or adulterer steals the soul, as well as dishonours the body of his neighbour. *Taylor.*

The law ought to be strict against *fornications* and adulteries; for, if there were universal liberty, the increase of mankind would be but like that of foxes at best. *Graunt.*

It is a new way to *fornicate* at a distance. *Browne.*

Our Saviour warns us against these, as a kind of spiritual *fornication*, and inconsistent with that purity of heart which his gospel requires. *Mason.*

Fornication (Lat. fornicatio), from the fornices in Rome, where lewd women prostituted themselves for money. Formerly court-leets had power to enquire of and punish fornication and adultery; in which courts the king had a fine assessed on the offenders, as appears by the book of Domesday. In 1650 not only incest and wilful adultery were made capital crimes, but also the repeated act of keeping a brothel, or committing fornication, was (upon a second conviction) made felony, without benefit of clergy. But at the Restoration it was not thought proper to renew this law: and these offences have been ever since left to the feeble coercion of a spiritual court. In the Scriptures, as Dr. Paley observes, fornication is absolutely and peremptorily condemned. 'Out of the heart proceedeth evil thoughts, murders, adulteries, fornications, &c., these are the things which defile a man.' These are Christ's own words; and one word from him upon the subject is final. The apostles are more full upon this topic. One well-known passage in the Epistle to the Hebrews may suffice; because, admitting the authority by which the apostles wrote, it is decisive. 'Marriage and the bed undefiled is honorable amongst all men, but whoremongers and adulterers God will judge;' which was a great deal to say, at a time when it was not agreed even amongst philosophers that fornication was a crime.' 'The Scriptures gave no sanction,' adds this justly esteemed moralist, 'to those austerities which have been imposed upon the world under the name of Christ's religion, as the celibacy of the clergy, the praise of perpetual virginity, the prohibitio concubitûs cum gravidâ uxore; but with a just knowledge of, and regard to the condition and interest of the human species, have provided in the marriage of one man with one woman an adequate gratification for the propensities of their nature, and have restrained them to that gratification. The avowed toleration, and in some countries the licensing, taking, and regulating of public brothels, has appeared to the people an authorising of fornication, and has contributed, with other causes, so far to vitiate the public opinion, that there is no practice of which the immorality is so little thought of, or acknowledged, although there are few in which it can more plainly be made out. The legislators who have patronised receptacles of prostitution, ought to have foreseen this effect, as well as considered, that whatever facilitates fornication, diminishes marriages. And as to the usual apology for this relaxed discipline, the danger of greater enormities, if access to prostitutes were too strictly watched and prohibited; it will be time enough to look to that, after the laws and the magistrates have done their utmost. The greatest vigilance of both will do no more than oppose some bounds, and some difficulties to this intercourse. And, after all, these pretended fears are without foundation in experience. The men are in all respects the most virtuous in countries where the women are most chaste. If fornication be criminal, all those incentives which lead to it are accessary to the crime; as lascivious conversation, whether expressed in obscene, or disguised under modest phrases; also wanton songs, pictures, books; the writing, publishing, and circulation of which, whether out of frolic, or for some pitiful profit, are productive of so extensive a mischief from so mean a temptation, that few crimes within the reach of private wickedness have more to answer for, or less to plead in their excuse. Indecent conversation and by parity of reason all the rest, are forbidden by St. Paul, Eph. iv. 29. 'Let no corrupt communication proceed out of your mouth;' and again, Col. iii. 8. 'Put filthy communications out of your mouth.' The invitation, or voluntary admission of impure thoughts, or the suffering them to get possession of the imagination, falls within the same description, and is condemned by Christ, Matt. v. 28. 'Whosoever looketh on a woman to lust after her, hath committed adultery with her already in his heart.' Christ, by thus enjoining a regulation of the thought, strikes at the root of the evil.'—*Moral Philosophy*, vol. 1.

FORRES, a royal borough of Scotland, in the parish of the same name, which joins with Inverness, Fortrose, and Nairn, in electing a representative in parliament. It is a small well-built town, pleasantly situated on an eminence near the Findhorn, about a mile from Findhorn Bay, and commands an extensive prospect. Ancient records speak of Forres as a town of considerable note, so early as the thirteenth century. It is governed by a provost, two bailies, and dean of guild, annually elected; and contains 2400 inhabitants. It has a grammar-school of great repute, besides several private schools. About 300 barrels of salmon are annually exported. Linen yarn is the chief manufacture. Forres lies ten miles west of Elgin, and eight east of Nairn. About a mile from Forres, on the left hand side of the road, is a remarkable obelisk of the Gothic kind, and supposed to have been erected in memory of the treaty between Malcolm II. and Canute the Great, in 1008. Others have imagined that it was erected in memory of the assassination of king Duff; and this opinion is conceived to be strengthened by the discovery of eight human skeletons laid along a trench, in a little green mount close by the obelisk, supposed to be the assassins of the king. On the declivity of Cluny's Hill, looking towards Sweno's stone, there are obvious remains of extensive entrenchments. It is thus described by Mr. Cordiner, in a letter to Pennant:—'In the first division, underneath the Gothic ornaments at the top, are nine horses with their riders, marching forth in order: in the next is a line of warriors on foot, brandishing their weapons, and appear to be shouting for the battle. The import of the attitudes in the third division is very dubious, their expression indefinite. The figures which form a square in the middle of the column are pretty complex, but distinct; four serjeants with their halberts, guard a company, under which are placed several human heads, which have belonged to the dead bodies piled up at the left of the division: one appears in the character of executioner, severing the head from another body; behind him are three trumpeters sounding their trumpets, and before him two pairs of combatants, fighting with sword and target. A troop of horse next appears put to flight by infantry,

whose first line have bows and arrows; and the three following, swords and targets. In the lowermost division now visible, the horses seem to be seized by the victorious party, their riders beheaded, and the head of their chief hung in chains, or placed in a frame; the others being thrown together beside the dead bodies under an arched cover. The greatest part of the other side of the obelisk, occupied by a sumptuous cross, is covered over with a uniform figure, elaborately raised, and interwoven with great mathematical exactness. Under the cross are two august personages, with some attendants, much obliterated, but evidently in an attitude of reconciliation; and if the monument was erected in memory of the peace concluded between Malcolm and Canute upon the final retreat of the Danes, these large figures may represent the reconciled monarchs. On the edge below the fretwork are some rows of figures joined hand in hand, which may also imply the new degree of confidence and security that took place after the feuds were composed, which are characterised on the front of the pillar. But, to whatever particular transaction it may allude, it can hardly be imagined, that in so early an age of the arts in Scotland as it must have been raised, so elaborate a performance would have been undertaken, but in consequence of an event of the most general importance; it is therefore surprising that no more distinct traditions of it arrived at the era when letters were known. The height of this monument (called King Sueno's Stone) above the ground is twenty-three feet; besides twelve or fifteen feet under ground. Its breadth is three feet ten inches, by one foot three inches in thickness.'

FORSAKE', *v. a.* } Sax. ꝑoꝛꝛacan; Belg.
FORSA'KER, *n. s.* } *versaaken*; Swed. *forsaka*: preter. forsook; part. pass. forsook, or forsaken. Compounded of the negative for and sake, *seek*, *secan*, i.e. to seek no more. To leave that which has been pursued; to abandon that which has been chosen: to be forsaken is to be deprived of the company and assistance of others. Forlorn, and destitute, which are sometimes used as synonymous with forsake, are more comprehensive. To be forsaken, says Crabb, is a partial situation: to be forlorn and destitute, is a permanent condition.

Thou didst deliver us into the hands of lawless enemies, most hateful *forsakers* of God. *Apocrypha.*

The devils engins would me take,
If ever I Love would *forsake*
Or Bialacoil falsly betraie.
Chaucer. Romaunt of the Rose.

At his sight the sun hath turned,
Neptune in the waters burned;
Hell hath felt a greater heat,
Jove himself *forsook* his seat. *Ben Jonson.*

'Twas now the time when first Saul God *forsook*,
God Saul; the room in's heart wild passions took.
Cowley.

Truth, modesty, and shame, the world *forsook*;
Fraud, avarice, and force, their places took.
Dryden.

When even the flying sails were seen no more,
Forsaken of all sight she left the shore. *Id.*

Unwilling I *forsook* your friendly state,
Commanded by the gods, and forced by fate. *Id.*

Their purple majesty,
And all those outward shows which we call greatness,
Languish and droop, seem empty and *forsaken*,
And draw the wondering gazer's eyes no more.
Rowe.

Daughter of Jove, whose arms in thunder wield
The' avenging bolt, and shake the dreadful shield,
Forsook by thee, in vain I sought thy aid. *Pope.*

Orestes comes in time
To save your honour; Pyrrhus cools apace;
Prevent his falshood, and *forsake* him first;
I know you hate him.
A. Phillips's Distrest Mother.

Soon as these saints the treacherous Isle *forsook*,
Rushed in a false, foul, fiendlike, company,
And every fort and every castle took,
All to this rabble yield the sovereignty.
Fletcher's Purple Island.

This were the worst desertion:—renegadoes,
Even shuffling Southey, that incarnate lie,
Would scarcely join again the 'reformadoes,'
Whom he *forsook* to fill the Laureate's sty.
Byron

FORSKAL (Peter), a celebrated Swedish naturalist and traveller, born in 1736. He studied first at Gottingen, and afterwards at Upsal; at which last place he became a pupil of Linné. In 1761 he was requested by the king of Denmark to travel, with Niebuhr and others, for the purpose of making discoveries in Arabia; and died at Jerim, in that country, in 1763. He was the author of a tract entitled Thoughts on Civil Liberty, printed in 1759; and from his papers, which Niebuhr brought home with him, were published Descriptiones Animalium, &c. quæ in Itinere Orientali Observavit, 4to.; Flora Ægyptiaco-Arabica, 4to.; Icones rerum Naturalium quas in Itinere Orientali depingi curavit Forskal, 4to.

FORSKOHLEA, in botany, a genus of the pentagynia order, decandria class of plants; CAL. pentaphyllous, and longer than the corolla. There are ten petals spatulated, i. e. roundish before, with a linear base. Species three; natives of Egypt, Teneriffe, and the Cape.

FORSOOTH, *adv.* Sax. ꝑoꝛꝛoȝe, for, and sooth, truth. See SOOTH. In truth; certainly; very well. It is now used almost always in an ironical or contemptuous sense.

A thefe he was, *forsoth* of corn and mele,
And that a slie, and usant for to stele
His name hoten Deinous Simekin.
Chaucer. The Reve's Tale.

Wherefore doth Lysander
Deny your love, so rich within his soul,
And tender me, *forsooth*, affection?
Shakspeare.

A fit man, *forsooth*, to govern a realm, who had so goodly government in his own estate. *Hayward.*

Thou would'st *forsooth* be something in a state
And business thou would'st find and would'st create.
Cowley.

Unlearned persons use such letters as justly express the power or sound of their speech; yet *forsooth*, we say, write not true English, or true French.
Holder on Speech.

In the East Indies a widow, who has any regard to her character, throws herself into the flames of her husband's funeral pile, to shew, *forsooth*, that she is faithful to the memory of her deceased lord.
Addison's Freeholder.

s would cry out murder, and disturb the whole bourhood; and when John came running down airs to enquire what the matter was, nothing, th, only her maid had stuck a pin wrong in her . *Arbuthnot's History of John Bull.*

ne question the genuineness of his books, be- , *forsooth*, they cannot discover in them the flu- orationis that Cicero speaks of. *Baker.*

Upon his arm a tinsel scarf he wore,
rsooth his madam's favour, spangled fair
t as himself; a fan his helmet bore,
. ribbons, dressed, begged from his mistress' hair.
Fletcher's Purple Island.

ORSOO'TH, *n. s.* Goth. *fraushat*; of *frau*, a . A female title of honor or respect. This uite a different word to the foregoing.

ur old English word *forsooth* has been changed he French madam. *Guardian.*

'ORSTER (John Reinhold), a celebrated ssian naturalist, born in 1729. In his youth made great progress in the learned and mo- n languages; and in 1748 became a student he University of Halle, where he chiefly de- ed himself to those branches of learning con- ted with divinity. From Halle he removed Dantzic, where he commenced preacher; , being afterwards led to expect some consi- able preferment in Russia, he proceeded to t country. His expectations, however, proved itless, and he left Russia and came over to gland, where he for some time acted as tutor the French and German languages at War- gton. When captain Cook's second voyage s projected, in 1772, he was chosen to accom- ny that navigator round the world, and after s return, in 1775, the University of Oxford ho- red him with the degree of LL.D. But, con- ry to the engagements he had entered into with e government, he published a botanical account the plants discovered during the voyage, hich occasioned his being treated with such olness, that he left England and went to Halle, here he was appointed professor of natural his- ry. He died in 1798. He was the author of bservations made in a Voyage round the Vorld; History of Voyages and Discoveries in ie North; On the Byssus of the Ancients; everal Papers in the Philosophical Transac- ons, &c.

FORSTER (John George Adam), son of the bove, was born at Dantzic in 1754, and came to ngland with his father in 1766. He was edu- ated at Warrington, and, having accompanied is father in the voyage round the world, became, fter his return to Europe, professor of natural istory at Cassel; from which place he removed o Wilna, in Poland, and afterwards to Mentz, where he was appointed president of the Uni- ersity. At the beginning of the revolution, he was chosen by the inhabitants of Mentz as their representative at Paris; and died there in 1792. He wrote an account of his Voyage round the World, 2 vols. 4to.; a Defence of the same against Mr. Wales, 4to.; a Philosophical and Picturesque Journey along the Banks of the Rhine, 2 vols. 8vo. &c.

FORSTER (George), an English traveller sometimes confounded with the above, was in 1782 in the civil service of the East India Company, and one of the few servants in the Madras Establishment who had at that period studied the language of Hindostan. He commenced in this year a journey from Bengal to Persia and came through Russia to England, when he published an account of it, in 2 vols. 4to. He travelled chiefly in the character of a Mahommedan merchant. Mr. Forster died in India in 1792.

FORSTER (Nathaniel), a learned English divine, born at Plymstock in Devonshire, in 1717. He received the first part of his education at Plymouth, and afterwards at Eton; whence, in 1733, he proceeded to Corpus Christi College, Oxford, where he took his degree in arts, and was elected fellow. His first church preferment was the rectory of Hethe in Oxfordshire. In 1750 he became chaplain to bishop Burnet of Durham, who appointed him his executor. About this time he took his degree of D.D. After the death of bishop Burnet, in 1752, he was chosen by archbishop Herring as his chaplain: and in 1754 he obtained a prebend in the cathedral of Bristol, and the vicarage of Rochdale in Lancashire. In 1756 he was appointed chaplain to his majesty, and the following year preacher at the Rolls; he died the same year at Westminster. His writings are, 1. Reflections on the Antiquity, &c., of Egypt; 2. Platonis Dialogi quinque, &c., 1745; 3. Appendix Liviana, 1746; 4. Popery Destructive of the Evidence of Christianity, a Sermon; 5. A Dissertation on the Account given of Jesus Christ by Josephus; 6. Biblia Hebraica, sine Punctis; 7. On the Marriages of Minors, 8vo.

FORSTERA, in botany, a genus of the triandria order, and gynandria class of plants. CAL. double; the exterior one beneath three-leaved; the interior one above, and six-cleft: COR. tubular; berry inferior, one-celled and one-seeded. Species one; a climber of New Zealand.

FORSWEAR', *v. a.* & *v. n.* } Preterite for-
FORSWEAR'ER, *n. s* } swore; participle forsworn; Sax. ꝑoꝛꝑæꝛian. For, neg. and swear: to swear contrary to the truth; or to renounce an oath; to abjure. Forswearing and perjury, however, are not in use strictly synonymous. To forswear is applied to all kinds of oaths; to perjure is employed only for such oaths as have been administered by civil or ecclesiastical authorities.

Now drinke I not this yere clarre
If that I lie or *forsworne* be,
For of the goddes the usage is
That whoso him *forswereth* amis
Shall that yere drinken no clarre
Now have I sworne enough parde.
If I *forswere*, than am I lorne:
But I woll never be *forsworne*.
Chaucer. Romaunt of the Rose.

I firmly vow
Never to wooe her more; but do *forswear* her,
As one unworthy all the former favours
That I have fondly flattered her withal.
Shakspeare.

To leave my Julia, shall I be *forsworn?*
To leave fair Sylvia, shall I be *forsworn?*
To wrong my friend, shall I be much *forsworn?*
And even that power which gave me first my oath,
Provokes me to this threefold perjury. *Id.*

And that self chain about his neck,
Which he *forswore* most monstrously to have.
Shakspeare.

One says, he never shall endure the sight
Of that *forsworn*, that wrongs both lands and laws.
Daniel.

Observe the wretch who hath his face forsook,
How clear his voice, and how assured his look!
Like innocence, and as serenely bold
As truth, how loudly he *forswears* thy gold!
Dryden's Juvenal.

I too have sworn, even at the altar sworn,
Eternal love and endless faith to Theseus;
And yet am false, *forsworn*: the hallowed shrine,
That heard me swear, is witness to my falsehood.
Smith.

FORSYTH (William), an able modern horticulturist, was born at Old Meldrum in the county of Aberdeen, in 1737. He was a pupil of the celebrated Miller, gardener to the company of apothecaries, at Chelsea, and in 1771 succeeded him in that situation. In 1784 he was appointed superintendent of the royal gardens at Kensington and St. James's. Mr. Forsyth was a member of the Linnæan and other learned societies. He died in 1804; leaving Observations on the Diseases, Defects, and Injuries of Fruit and Forest Trees, and A Treatise on the Culture and Management of Fruit Trees. Mr. Forsyth discovered a composition to remedy the diseases of trees, for which he received a grant from parliament.

FORT, *n. s.*
FORTED, *adj.*
FORTIFI'ABLE, *adj.*
FORTIFICA'TION, *n. s.*
FOR'TIFIER,
FOR'TIFY, *v. a.* & *v. n.*
FOR'TILAGE, *n. s.*
FOR'TIN, *n. s.*
FORT'LET, *n. s.*
FOR'TRESS, *n. s.*

Fr. *fort*, *fortifier*, *fortresse*; Ital. and Teut. *fort*, from Lat. *fortis*, strong. A fort is a place or castle strengthened against attacks by walls or works. Built for strength and defence. Fortification is employed in the same sense; but also designates the science of military architecture. Fortin and fortilage signify a little fort; and the former is especially applied to a fort raised to defend a camp during a siege. To fortify, is used not only in its primary application, but metaphorically, to confirm; to encourage; to fix; to establish in resolution. Fortress is something more considerable than a fort; a strong-hold; a castle of defence.

He *fortified* the city against besieging. *Ecclus.* 1. 4.

Alas! I trowe, it woll nat ben;
For how should I ere more him sene?
He maie nat out, and that is wrong,
Bicause the touré is so strong:
How should he out, or by whose prowesse,
Out of so strong a *fortiresse*?
Chaucer. Romaunt of the Rose.

What warre so cruel, or what siege so sore,
As that which strong affection doe apply
Against the *forte* of reason evermore,
To bring the sowle into captivity?
Spenser. Faerie Queene.

Yet was the fence thereof but weak and thin,
Nought feared their force that *fortilage* to win.
Spenser.

In all straits and narrow passages there should be some little *fortilage*, or wooden castle set, which should keep and command the strait. *Spenser*

Breaking forth like a sudden tempest, he overran all, breaking down all the holds and *fortresses*.
Id. On Ireland.

Great Dunsinane he strongly *fortifies*.
Shakspeare.

Thou hast talked
Of palisadoes, *fortins*, parapets. *Id.*

God is our *fortress*, in whose conquering name
Let us resolve to scale their flinty bulwarks. *Id.*

Your desert speaks loud, and I should wrong
To lock it in the wards of covert bosom,
When it deserves with characters of brass
A *forted* residence, 'gainst the tooth of time
And rasure of oblivion.
Shakspeare. Measure for Measure.

To *fortify* the former opinions Tostatus adds, that those which dwell near the falls of water are deaf from their infancy; but this I hold as feigned.
Raleigh.

They erected a *fort*, which they called the *fort de l'or*: and from thence they bolted like beasts of the forest. *Bacon.*

Hence while unsettled here he fighting reigns,
Shut in a tow'r where thousand enemies
Assault the *fort*; with wary care and pains
He guards all entrance, and by divers spies
Searcheth into his foes' and friends' designs,
For most he fears his subjects wav'ring mind;
This tower then only falls when treason undermines.
Fletcher's Purple Island.

The trump of death sounds in their hearing shrill;
Their weapon, faith; their *fortress* was the grave.
Fairfax.

The *fortifier* of Pendeunis made his advantage of the commodity afforded by the ground. *Carew.*

He that views a *fort* to take it,
Plants his artillery against the weakest part.
Denham.

Thou us impowered
To *fortify* thus far and overlay
With this portentous bridge the dark abyss.
Milton.

It greatly *fortified* her desires, to see that her mother had the like desires. *Sidney.*

The hounds were uncoupled, and the stag thought it better to trust to the nimbleness of his feet, than to the slender *fortification* of his lodging. *Id.*

Excellent devices were used to make even their sports profitable; images, battles, and *fortifications* being then delivered to their memory, which, after stronger judgments, might dispense some advantage.
Id.

He was led forth by many armed men, who often had been the *fortifiers* of wickedness, to the place of execution. *Id.*

Now to their *fort* they are about to send
For the loud engines which their isle defend.
Waller.

But in-born worth that fortune can controul,
New-strung and stiffer bent her softer soul
The heroine assumed the woman's place,
Confirmed her mind, and *fortified* her face.
Dryden.

My fury does, like jealous *forts*, pursue
With death ev'n strangers who but come to view.
Id.

There is no such way to give defence to absurd doctrines, as to guard them round about with legions of obscure and undefined words; which yet makes these retreats more like the dens of robbers, or holes of foxes, than the *fortresses* of fair warriors. *Locke.*

Fortification is an art shewing how to *fortify* a place with ramparts, parapets, moats, and other bulwarks; to the end that a small number of men within

able to defend themselves, for a considerable against the assaults of a numerous army without. *Harris.*

Phœnicians, though an unwarlike nation, yet stood the art of *fortification.* *Broome.*

They battle it beyond the wall, and not
in late midnight conflict in the very
umbers: the palace has become a *fortress*
ce that insidious hour; and here within
very centre, girded by vast courts
d legal halls of pyramid proportions,
ich must be carried one by one before,
y penetrate to where they then arrived:
are as much shut in even from the sound
peril as from glory. *Byron. Sardanapalus.*

RT (Francis Le), a Russian military and commander, was descended from a noble y of Geneva, where he was born in 1656. ie age of fourteen he entered the French ce; but afterwards, in hopes of preferment, d a German colonel who was enlisting a of men for the czar Alexis. He returned him to Moscow, and became secretary to Danish resident there. The young czar, r, now made him a captain of foot and confidant. Le Fort suggested to this ori- l despot many of his plans for the improve- t of Russia. Being employed to raise a body 2,000 men intended to awe the Strelitzes, he made their general. Soon after created an iral; and, though previously unacquainted i maritime affairs, was very useful in form- the commencement of the Russian marine. 1696 his conduct at the seige of Asoph was admirable that the czar gave him the chief imand of his troops both by land and sea. was also appointed to the government of vogorod, and the first place in the ministry. the czar's determination to travel he created Fort his ambassador to the different courts intended to visit, and travelled in his train as private person. He retained his influence il his death, which happened at Moscow in 99.

Fort George, a fortress in the county of Inver- s, Scotland, situated on a low peninsula, pro- ting from the south side upwards of a mile o the Moray frith. It is an irregular polygon six bastions, constructed on the principles of uban, and mounting eighty pieces of ordnance. l the sides but one are washed by the sea: e one facing the land is defended by a ditch at may be kept wet or dry at pleasure, a velin, lunettes, a covered way, and glacis. ese communicate with the body of the fort by aw-bridges. Although the position is low, neighbouring ground commands it; and its ns ranging on the sea fronts, from shore to ore of the frith, protect the entrance of the bay ading to the Caledonian canal. Within the orks are barracks for 3000 troops, good quar- rs for a governor and staff, bomb-proof maga- nes, an armoury, chapel, storehouses, hospital, orkshops, excellent water, &c. In two of the urtains are bomb-proof casemates, where a con- iderable number of men could retire. This ort was begun in 1746, and completed in 1764. t has since been frequently garrisoned by High- and regiments. It is ten miles north of Culloden moor, twelve north-east of Inverness, and 165 north of Edinburgh.

Fort Augustine, and Fort William, were fortresses of Inverness, of some consequence in the last rebellion in favor of the house of Stuart. The former had accommodation for 400, the latter for 2000 troops: it was the garrison of Inverlochy in Cromwell's time. But orders were issued by government in 1818 to dismantle both these forts.

Fort St. David, a town of Hindostan, situated on the coast of the Carnatic, and on the river Tripapolore. Two other rivers of considerable size are found in this neighbourhood; and the town is the emporium of the country for fine dimitties and painted cottons. An English factory was established here as early as 1686 or 1691, when a small territory was purchased from a Mahratta rajah. When Madras was captured by the French in 1746, the English were besieged here, but made a successful resistance. The town was taken however in 1785, by M. de Lally, and the fortifications destroyed. It is fifteen miles S. S. W. of Pondicherry, and 100 S. S. W. of Madras.

Fort William. See Calcutta.

FORTALICE, in Scots law, signified anciently a small place of strength, originally built for the defence of the country; and which on that account was formerly reckoned inter regalia, and did not go along with the lands upon which it was situated without a special grant from the crown. Now, fortalices are carried by a general grant of the lands; and the word is become synonymous with manor place, messuage, &c.

FORTESCUE (Sir John), lord high chancellor of England, under Henry VI., was descended from an ancient family in Devonshire. He studied the municipal law in Lincoln's Inn, of which he was made a governor, in the fourth and seventh years of Henry VI. In 1430 he was made a serjeant at law, and, in 1441, king's serjeant. In 1442 he was made lord chief justice of the king's bench; and afterwards lord high chancellor. During the reign of Edward IV. he was many years in exile with queen Margaret and prince Edward her son. When they returned to England, Sir John Fortescue accompanied them, but soon after the decisive battle of Tewksbury, he was thrown into prison and attainted, with other Lancastrians; but was pardoned by Edward IV. He wrote, 1. A Commentary on the Politic Laws of England; to one edition of which Selden wrote notes. 2. The difference between an absolute and a limited Monarchy, as it more particularly regards the English constitution (which was published, with some remarks, by John Fortescue, afterwards lord Fortescue, in 8vo. in 1714; and a second edition was published with amendments, in 1719): and several works which still remain in MS. He died, nearly ninety years of age, and was buried in the parish church of Ebburton, where a monument was erected to his memory in 1677.

FORTEVENTURA, or Fuerteventura, one of the Canary Isles, and next to Teneriffe the largest of the group, is about fifty miles in length, and twenty-four in its greatest breadth; it con-

tains several large sandy plains, and is inferior in fertility and population to several others of this group. The camel has been introduced here, it is said, with advantage. In those spots which are sufficiently watered, vegetation is luxuriant, and corn is an object of exportation. The goats are numerous, and their flesh excellent: a great part of their milk is made into cheese. Of late years soda has been produced on the coast; and in 1798 49,373 quintals were exported to Teneriffe. The principal towns are Pajara, Oliva, and St. Maria de Betencuria, the last being so called from De Bethencourt, the first settler in the Canaries. The population is estimated by St. Vincent at 8600, by Humboldt at 9000. In 1745 it was only 7382. Long. 14° W. and lat. 28° S.

FORTH, *adv.* & *prep.* } Sax. ꝑoꝛþ, whence
FORTH'COMING, *adj.* } further and furthest.
FORTH'ISSUING, } The Saxon word is
FORTH'RIGHT, *adv.* } from old Fr. *fors*, says
FORTH'WITH. } Mr. Tooke, as that is from the Latin *foris*, the door. Forward, 'fore-out,' or out beyond the door; onward in time or place; abroad: hence beyond any limit or boundary of place or character; completely or thoroughly out; and as a preposition, out of. Forthcoming is coming, or ready to come; forward. Forthright, straight-forward. Forthwith, immediately; with promptitude, forwardness, or readiness: forward, onward in time.

For then the nightingale, that all the day
Had in laurer sete, and did hire might
The whole service to sing longing to May;
All sodainly, began to take hire flight;
And to the lady of the lefe *forthright*,
She flew, and set hire on hire hand softly;
Which was a thing I mervailed at gretly.
Chaucer. The Floure and the Leafe.

And when this prince, this lustie knight,
With his peple in armes bright,
Was comen where he thought to pas;
And knew, well, none abiding wos
Behind, but all were there present;
Forthwith anon, all his intent
He told them there. *Id. Boke of the Duchesse.*

From that day *forth* I loved that face divine;
From that day *forth* I cast in careful mind
To seek her out. *Faerie Queene.*

They will privily relieve their friends that are *forth*; they will send the enemy secret advertisements; and they will not also stick to draw the enemy privily upon them. *Spenser.*

Arrived there, they passed in *forthright*;
For still to all the gate stood open wide.
Faerie Queene.

Forthwith he runs, with feigned faithful haste,
Unto his guest; who, after troublous sights
And dreams, 'gan now to take more sound repast.
Spenser.

Few things are so restrained to any one end or purpose, that the same being extinct, they should *forthwith* utterly become frustrate. *Hooker.*

Look at the second admonition, and so *forth*, where they speak in most unchristian manner. *Whitgifte.*

We'll see your trinkets here *forthcoming* all.
Shakspeare. Henry VI.

Uncle, I must come *forth*. *Id. Othello.*

I have no mind of feasting *forth* to-night.
Shakspeare.

Attend you here the door of our stern daughter?
Will she not *forth*? *Id.*

Ev'n that sunshine brewed a shower for him,
That washed his father's fortunes *forth* of France.
Id.

You, cousin,
Whom it concerns to hear this matter *forth*,
Do with your injuries as seems you best. *Id.*

And here's a prophet that I brought with me
From *forth* the streets of Pomfret. *Id.*

Carry this mad knave to jail: I charge you see that he be *forthcoming*. *Id. Taming of the Shrew.*

Here's a maze trod, indeed,
Through *forthrights* and meanders. *Id. Tempest.*

Neither did the martial men dally or prosecute the service faintly, but did *forthwith* quench that fire.
Davies on Ireland.

Some *forth* their cabins peep,
And trembling ask what news, and do hear so
As jealous husbands, what they would not know.
Donne.

You may set *forth* the same with farmhouses.
Peacham.

Forthwith began these fury-moving sounds,
The notes of wrath, the musick brought from hell,
The rattling drums. *Daniel's Civil War.*

The winged heralds, by command
Of sov'reign power, throughout the host proclaim
A solemn council *forthwith* to be held
At Pandæmonium. *Milton's Paradise Lost.*

He ever going so just with the horse, either *forthright* or turning, that it seemed as he borrowed the horse's body, so he lent the horse his mind. *Sidney.*

The river not running *forthright*, but almost continually winding, as if the lower streams would return to their spring, or that the river had a delight to play with itself. *Id.*

But when your troubled country called you *forth*,
Your flaming courage, and your matchless worth,
To fierce contention gave a prosperous end. *Waller.*

Mad Pandarus steps *forth*, with vengeance vowed
For Bitias' death. *Dryden's Æneid.*

When winter past, and Summer scarce begun,
Invites them *forth* to labour in the sun. *Dryden.*

Thither *forthright* he rode to rouse the prey. *Id.*

In his passage thither one put into his hand a note of the whole conspiracy, desiring him to read it *forthwith*, and to remember the giver of it as long as he lived. *South.*

I repeated the Ave Maria: the inquisitor bad me say *forth*; I said I was taught no more.
Memoir in Strype.

Hence we learn, how far *forth* we may expect justification and salvation from the sufferings of Christ; no further than we are wrought on by his renewing grace. *Hammond.*

Forthissuing thus, she gave him first to wield
A weighty ax, with truest temper steeled,
And double edged. *Pope's Odyssey.*

I understand thee—thou would'st have me go
Forth as a conqueror. By all the stars
Which the Chaldeans read! the restless slaves
Deserve that I should curse them with their wishes,
And lead them forth to glory. *Byron. Sardanapalus.*

Since it must be, and this churl has checked
Thy gentle spirit, go; but recollect
That we must *forthwith* meet: I had rather lose
An empire than thy presence *Id.*

FORTH, in geography, one of the finest rivers of Scotland, and the largest of the island of Great Britain. It takes its rise in the Lomond hills; and, running from west to east, receives, in its passage, many considerable streams, deriving their waters from the eminences in the midland counties of Scotland. Between Stirling and

Alloa, it winds in a most beautiful and picturesque manner: so that, though it is but four miles by land, it is twenty-four by water between those two places. Below Alloa the river expands itself to a great breadth between the counties of Lothian and Fife, till at Queensferry it is contracted by promontories shooting into it from both coasts; so that, from being four to five miles broad, it becomes not above two miles. Here in the middle of the channel lies a small island called Inchgarvy, and, a little below that, those of Inchcolm and Inch-keith. The north and south shores receding, below Queensferry, the body of the water gradually enlarges till it becomes two or three leagues broad, affording several safe harbours on both sides, and excellent roads throughout, unembarrassed with latent rocks, shoals, or sands; and allowing secure anchorage to the largest ships within a league of the coast in almost any part of the Frith, and to vessels of a smaller size within a mile or less. The Forth was known to the ancients by the name of Bodotria, or, as Ptolemy calls it, Boderia, and has been ever famous for the number of its havens. It is navigable for merchantmen as high as Alloa, fifty miles from the sea; and, for coasters, as far as Stirling, twenty-four miles further by water, though only four by land in a direct line, as already observed. The tide flows only a full mile above Stirling. The direct course of this river is scarcely less than 100 miles, and its sinuosities do not occupy a shorter space than 200. Its depth is from three to thirty-seven fathoms, or more; the bottom, in many or perhaps most places, covered with sleach, especially above the ferries. The principal tributary rivers of the Forth are the Goodie, Teith, and Allan, above Stirling bridge; and, below it, the Devon, Carron, Avon, Almond, Leith, Esk, Leven, Tyne, and others: these chiefly flow into the river on the south shore. A navigable canal, commencing near Grangemouth, communicates with the Clyde.

In the Forth are found great variety and abundance of fish. Whales have frequented it during several centuries: the porpoise is common. At Stirling salmon are exceedingly plentiful; cod and haddocks are taken in great quantities; and it is frequented by myriads of herrings. At times these are so plentiful that they are sold at the cheap rate of sixpence a hundred. Crabs are caught in many places; lobsters are not rare, but bear a much higher price; and oysters and muscles are in great profusion. Valuable minerals are obtained from almost every part of the environing shores. The beds of coal are inexhaustible, apparently lying under the whole bed of the river between Culross and Borrowstowness. Lime is wrought on both sides, but chiefly at Charleston, in the county of Fife, about thirteen miles north-west of Edinburgh. Along the coast numerous petrifactions occur. Ironstone is plentifully obtained from pits, or collected in scattered nodules; and small portions of fine jasper are frequently seen. The Forth contains several islands, of which the chief are Inchgarvie, Inchcolm, Inchkeith, the Bass, and the isle of May. Light-houses are erected on Inchkeith and on the Isle of May; and the ruins of castles or religious houses appear on all the islands. The towns connected with the river, though they, in general, drive a brisk trade, are principally small; for, excepting Stirling, Alloa, and Leith, few of them contain 3000 inhabitants. Batteries have been erected on different parts of the banks, as also on the island of Inchcolm, for the purpose of protecting the channel. In the year 1774 it was proposed to render the Forth navigable from Stirling bridge to Gartmore, and to cut a canal in a straight line from Stirling to Alloa, whereby the navigation would be shortened from twenty-four miles to six. At a later period, namely, in 1806, a project was entertained of excavating a tunnel under the bed of the river, to obviate the interruption which passengers experience at the two ferries, and elsewhere, from occasional storms; but, after an elaborate survey, the plan was abandoned.

FORTIFICATION.

Fortification. The *origin* of fortification was doubtless that principle of rapacity, which has influenced too many of mankind in all ages and nations to invade the rights and properties of those whom they considered weak or defenceless. In the first ages of the world men were dispersed over the earth in separate families, as appears in the records of the Jews and Scythians, and they wandered from place to place in search of pasture for their cattle. But families soon became numerous, and formed large communities which settled in one place; even before the deluge 'the earth was filled with violence,' and towns and cities arose. It was now found necessary, for the common security, to surround these towns with walls, and the first, of course, were of the simplest construction; they were single, and perhaps perforated. Then they were built of more solid materials; the best arts of masonry were here called into exercise: they afforded sufficient space for the defenders to use them as stations for attack, and they were crowned by other and smaller works, through which they discharged missiles. Long before Rome was founded, the ancient Grecians used brick, and rubble stone, with which they built a vast wall, joining Mount Hymettus to the city of Athens. The Babylonian walls, built by Semiramis, or, as others state, by Belus, were thirty-two feet thick, and 100 feet high, with towers ten feet higher built upon them, cemented with bitumen or asphaltus. Those of Jerusalem seem to have come but little short of them, since, in the siege by Titus, all the Roman battering-rams, joined with Roman art and courage, could remove but four stones out of the tower of Antonia in the assault of a whole night.

The square towers at first used would sufficiently protect every part of the wall, adjacen to the sides of these towers. But, as there al-

ways remained one of the faces of the towers which fronted the field that could not be seen from any other part, the circular form was early preferred. This had also the recommendation of presenting a better resistance to battering engines. Still there remained parts of these towers unseen and incapable of being defended; which caused a second change in their figure, i. e. they made them square as before; but, instead of presenting a face to the field as formerly, they presented an angle, the origin of our modern *bastion*; and thus was effected such a disposition of the works, that no part could be attacked without being seen or defended from some other part. Ditches were added; and thus remained long stationary the art of fortification: indeed until the invention of that terrible assailant gunpowder. This entirely changed the mode of attack, and by consequence that of defence.

In the *history* of fortification we find this obvious division, and we need not take back the modern reader beyond the period of this celebrated invention.

When the besiegers began regularly to use artillery, it became requisite that the besieged should also employ it; and, to furnish room for this, a *rampart* was first raised behind and close to the main wall of fortresses: the towers were enlarged; and the smaller walls were thickened by *parapets* of earth behind, so as to secure the besieged from the fire of the enemy.

For a length of time fortified towns were placed, by these means, in a situation to take their full advantage of the new art of war. Sieges were by no means diminished in their ordinary length: a wall of Magdebourg is recorded to have received 1550 cannon-shot, in the early part of the seventeenth century, without injury to it. If the siege of an important place was not early successful, it generally terminated in the loss of the major part of those who assaulted it.

But the great modern proficient in this art, M. Vauban, now appeared, and effected at the end of the seventeenth century a complete revolution in it. He invented a method of attack, against which no mode of defence hitherto adopted has been able finally to stand; and though, during the latter part of his life, he applied his great talents also to a system of defence, upon which Coehorn, Cormontaingne, and others as we shall see have improved, nothing has as yet fully counteracted the mode of ricochet firing introduced by this celebrated commander at the siege of Ath. We shall not fail, in the sketch of this art that follows, to include every principal suggestion that has been made on this subject, and, among others, the plan of M. Carnot, so justly celebrated for his mathematical skill and military talents. But we have completely satisfied ourselves that the vertical fire on which he mainly relies is a chimera.

Modern fortification treats of the plan of defence now used, i.e. turning the walls into ramparts, and square and round towers into bastions, defended by numerous outworks; all which are made so solid that they cannot be beaten down, but by the continual fire of batteries. These bastions at first were small, and at a great distance from each other, as are those still to be seen at Antwerp, their gorges narrow, and their flanks and faces short. For the invariable practice then, and for some time after the introduction of them, was to attack the curtains and not the faces of the bastions. But since that time they have been considerably improved and enlarged, and are now arrived to that degree of strength, that it has been a received opinion, that the art of fortification is at its height, and incapable of being carried to greater perfection. This, however, Mr. Glenie, p. 9, Military Construction, disputes, and M. Carnot seemed resolved, a few years since, to confirm his opinions as to all past methods.

Offensive fortification is a term improperly applied to the besieging and taking fortified places; it is said further to teach a general how to take all advantages for his troops; the manner of encamping, and method of carrying on either a regular or irregular siege, according as circumstances may direct. It may with much greater propriety be called the war of sieges. See SIEGES.

Fortification has been sometimes treated of under the terms regular and irregular.

Regular fortification is that which is erected according to the rules of art, and is particularly applied to a construction made from a figure or polygon, which has all its sides and angles equal. The flanked or salient angles in such a fortification are equal to one another, equally distant from one another, and are each of them at the distance of about that of serious musket shot from the flanks which defend it. For an irregular fortification having the flanked angles, as also the flanks and lines of defence, unequal, may be constructed from the sides of a regular polygon, as well as from those of an irregular polygon, by drawing the perpendiculars to the regular polygon from points different from those of their bisections. See *Glenie's General Rule for Irregular Construction*.

Irregular fortification, on the contrary, is that where the sides and angles are not uniform, equi-distant, or equal; which is owing to the irregularity of the ground, valleys, rivers, hills, &c.

Most fortifications are a mixture of regular and irregular works. The position of waters, hills, and other principal geographical features of a site of ground, previous plans adopted, and various other considerations induce the ablest engineer to be content with arriving only at the utmost practical regularity. In this article, therefore, we shall pursue the main divisions of *permanent* and *field* fortification, as embracing all the principal topics we need discuss; and shall present under each a brief sketch of the most approved systems from that of M. Vauban downwards. We shall subjoin a few observations on the mode of attacking fortified places.

PART I.

OF PERMANENT FORTIFICATIONS.

SECT. I.—M. VAUBAN'S FIRST SYSTEM.

M. Vauban was clearly indebted to his predecessor in this art, the count de Pagan, for his general definitions and dispositions, especially in his first

system. The former has the same divisions of the art into little, mean, and great fortifications, &c. But his line of defence was too long to allow the musquetry fire of the flanks to bear properly, and his ravelins were too small. The large size of his orillons was also objectionable, and the faces of his cavaliers were not flanked. Vauban also materially improved his covert way. His first system adopted, as we said, Pagan's divisions of little, mean, and great fortification; by the first he intended the construction of citadels; by mean fortification, that of all sorts of towns; and by great, that of particular and important places. We shall give the construction of the mean as being most useful; and refer to the table hereafter inserted for those dimensions which are different in other fortifications.

Inscribe in a circle a polygon of as many sides as the fortification is designed to have fronts; let A B, fig. 1, FORTIFICATION, plate I. be one of the sides of half an hexagon, which bisect by the perpendicular C D; divide half of it A C into nine equal parts, and one of these into ten others; then these divisions will serve as a scale to construct all parts of the fortification, and each of them is supposed to be a toise or fathom, that is six French feet; and, therefore, the whole side A B is supposed to be 180 toises. As the dividing a line into so many equal parts is very troublesome, it is much easier to have a scale of equal parts by which the works may be constructed.

If, therefore, in this case, the radius is taken equal to 180 toises, and the circle described with that radius be divided into six equal parts, or the radius be carried six times round, we shall have an hexagon inscribed; A B being bisected by the perpendicular C D as before, set off thirty toises from C to D, and draw the indefinite lines A D G, B D F; in which take the parts A E, B H, each equal to fifty toises; from the centre E describe an arc through the point H, meeting A D in G, and from the centre H describe an arc through the point E, meeting B D in F; or, which is the same, make each of the lines E G, H F, equal to the distance E H; then the lines joining the points A, B, F, G, H, B, will be the principal or outline of the front.

If the same construction be performed on the other sides of the polygon, we shall have the principal or outline of the whole fortification. If, with a radius of twenty toises, there be described circular arcs, from the angular points, B, A, M, T, and lines drawn from the opposite angles, E, H, &c., so as to touch these arcs, their parts *a b*, *b c*, &c., together with these arcs, will represent the outline of the ditch.

It will be now necessary to attend to the following *Definition of Terms*:—1. The part, F E A L N, is called the *bastion*. 2. A E, A L, the *faces* of the bastion. 3. E F, L N, the *flanks*. 4. F G, the *curtain*. 5. F N, the *gorge* of the bastion. 6. A G, B F, the *lines* of defence. 7. A B, the exterior side of the polygon. 8. C D, the *perpendicular*. 9. Any line, which divides a work into two equal parts, is called the *capital* of that work. 10. *a b c*, the *counterscarp* of the ditch. 11. A, M, the *flanked angles*. 12. H, E, L, the *angles* of the shoulder, or the *shoulder* only. 13. G, F, N, the *angles* of the flank. 14. Any angle whose point turns from the place is called a *saliant angle*, such as A M: and any angle whose point turns towards the place, *re-entering angle*, such as *b*, F, N. 15. If two lines be drawn parallel to the principal or outline, the one at three toises distance, and the other at eight from it; then the space *y x* included between the principal one and that farthest distant, is called the *rampart*. And the space *x x*, contained by the principal line, and that near to it, and which is generally stained black, is called the *parapet*. 16. There is a fine line drawn within four feet of the parapet, which expresses a step called *banquette*.

N. B. All works have a parapet of three toises thick, and a rampart of eight to ten, besides their slopes.

17. The *rampart* is elevated more or less above the level of the place, from ten to twenty feet, according to the nature of the ground and the particular constructions of engineers.

18. The *parapet* is a part of the rampart elevated from six to seven feet and a half above the rest, in order to cover the troops which are drawn up there from the fire of the enemy in a siege; and the banquette is two or three feet higher than the rampart, or about four feet lower than the parapet; so that when the troops stand upon it, they may just be able to fire over the parapet.

19. The *body* of the place, is all that which is contained within the first rampart; for which reason it is often said to construct the body of the place; which means, properly, the construction of the bastions and curtains.

20. All the works which are constructed beyond the ditch before the body of the place are called *outworks*.

M. Vauban gives the following Table of Dimensions:—

	Forts.						Little fortification.				Mean.		Great.	
Sides of polygons .	80	90	100	110	120	130	140	150	160	170	180	190	200	260
Perpendiculars . .	10	11	12½	14	15	16	20	21	23	25	30	31	25	32
Faces of bastions .	22	25	28	30	33	35	40	42	45	47	50	53	55	60
Capital of ravelin .	25	28	30	35	38	40	45	50	50	52	55	55	60	70

In the first vertical column are the numbers expressing the lengths of the exterior sides from eighty to 260. In the second, the perpendiculars answering to these sides. In the third, the lengths of the faces of bastions; and in the fourth, the lengths of the capitals of the ravelins.

The forts are mostly, if not always, squares: for which reason, the perpendiculars are made one-eighth of the exterior sides; because, if they were more, the gorges of the bastions would become too narrow.

In the little fortification or citadels, chiefly pentagons, the perpendiculars are made one-seventh of the exterior side. In mean fortification, from any number of sides to an hexagon upwards is used; and the great is seldom used but in an irregular fortification, where there are some sides that cannot be made less without much expense; or in a town which lies near a great river, where the side next the river is made from 200 to 260 toises; and, as that side is less exposed to be attacked than any other, the perpendicular is made shorter, which saves much expense.

The faces of the bastions are all two-sevenths of the exterior sides, or nearly so, because the fractions are neglected.

In general, in all squares, the perpendicular is one-eighth of the exterior side, and all pentagons one-seventh, and in all the rest upwards of one-sixth.

Of the Construction of Orillons and retired Flanks.—Describe the front M P Q R S T as before, and divide the flank into three equal parts, of which suppose S *r* to be one; from the opposite flanked angle M draw a line M *r*, in which take the part *m r* of five toises; take likewise R *n* in the line of defence M R, produced equal to five toises, and join *n m*, upon which as a base describe the equilateral triangle *n p m*, and from the angle *p*, opposite to the base as centre, is described the circular flank *n m*. And if S *r* be bisected by the perpendicular 1, 2, and another be erected upon the face S T, at S, the intersection 2 of these two perpendiculars will be the centre of the arc which forms the orillon.

The orillons are very useful in covering the retired flanks, which cannot be seen but directly in the front; and, as these orillons are round, they cannot be so easily destroyed as they would be if they were of any other figure.

Of the Construction of Ravelins or Half-moons.—Fig. 2. Set off fifty-five toises, from the re-entering angle O of the counterscarp, on the capital O L, or on the perpendicular produced; and from the point L draw lines to the shoulder A B; whose parts L M, L N, terminated by the counterscarp, will be the faces, and M O, O N, the semi-gorges of the ravelin required. This is Mr. Vauban's method of constructing ravelins, according to some authors: others say the faces of the ravelin should terminate on those of the bastions within three toises of the shoulders; which seems to be the best way, for these ravelins cover the flanks much better than the others.

The ditch before the ravelin is twelve toises, its counterscarp parallel to the faces of the ravelins, and is made in a circular arc, before the saliant angle; as likewise all ditches are in general.

When the ravelins are made with flanks, as in plate I. fig. 3, the faces should terminate on those of the bastions, at least five toises from the shoulders. The flanks are made by setting off ten toises from the extremities of the faces, from *f* to *h*, and from *m* to *l*; and from the points *h*, *l*, the flanks *h k*, *l p*, are drawn parallel to the capital L O of the ravelin.

There are sometimes redoubts made in the ravelin, such as in fig. 2, which is done by setting off sixteen toises from the extremities of the faces on the semi-gorges from N to *h*, and from M to *a*; and from the points *b*, *a*, the faces are drawn parallel to those of the ravelin; the ditch before the redoubts is six toises, and its counterscarp parallel to the faces.

Of Tenailles.—A tenaille is a work made in the ditch before the curtains; the parapet is only two or three feet higher than the level ground of the ravelin. There are three different sorts; the first are those, as in fig. 4, which are made in the direction of the lines of defence, leaving a passage of five toises between their extremities and the flanks of the bastions, as likewise another of two in the middle for a bridge of communication to the ravelin.

The second sort are as those in fig. 5. Their faces are in the lines of defence, and sixteen toises long, besides the passage of three toises between them and the flanks of the bastion; their flanks are found by describing arcs from one shoulder of the tenaille as centre through the other, or on which are set ten toises for the flanks desired.

The third sort are those as in fig. 6. Their faces are sixteen toises, as in the second sort, and the flanks are parallel to those of the bastions.

The use of tenailles, in general, is to defend the bottom of the ditch by a grazing fire, as likewise the level ground of the ravelin, and especially the ditch before the redoubt within the ravelin, which can be defended from no where else so well as from them.

The first sort do not defend the ditch so well as the others, as being too oblique a defence; but, as they are not subject to be enfiladed, M. Vauban generally preferred them in the fortifying of places, as in the citadel of Lille, at Landau, New Brisac, and in many other places.

The second sort defend the ditch much better than the first, and add a low flank to those of the bastions; but, as these flanks are liable to be enfiladed, they have not been much put in practice. This defect might however be remedied, by making them so as to be covered by the extremities of the parapets of the opposite ravelins, or by some other work.

As to the third sort, they have the same advantage as the second, and are likewise liable to the same objections; for which reason they may be used with the same precautions which have been mentioned in the second.

Tenailles are esteemed so necessary, that there is hardly any place fortified without them; and with reason: for, when the ditch is dry, the part behind the tenailles serves as a place of arms

from which the troops may sally, and destroy the works of the enemy and the ditch, oppose their descent, and retire with safety; and the communication from the body of the place to the ravelin becomes easy and secure, which is a great advantage; for by that means the ravelin may be a much better defence, as it can be supplied with troops and necessaries at any time. And, if the ditch is wet, they serve as harbours for boats, which may carry out armed men to oppose the passage over the ditch whenever they please; and the communication from the tenailles to the ravelin becomes likewise much easier than it would be without them.

Of Lunettes.—Fig. 7, plate I. Lunettes are placed on both sides of the ravelin, such as B, to increase the strength of a place: they are constructed by bisecting the faces of the ravelin with the perpendicular L N; on which is set off thirty toises from the counterscarp of the ditch, for one of its faces; the other face, P N, is found by making the semi-gorge, T P, of twenty-five toises; the ditch before the lunettes is twelve toises, the parapet three, and the rampart eight, as in the ravelin.

There is sometimes anotner work made to cover the saliant angle of the ravelin, such as A, called the bonnet, whose faces are parallel to those of the ravelin, and when produced bisect those of the lunettes; the ditch before is ten toises.

There are likewise lunettes, such as D in fig. 8, whose faces are drawn perpendicular to those of the ravelin, within a third part from the saliant angle; and their semi-gorges are only twenty toises.

These kinds of works may make a good defence, at no very great cost; for, as they are so near the ravelin, the communication with it is very easy, and one cannot well be maintained till they are all three taken.

Of Tenaillons.—Fig. 9, plate I. Produce the faces of the ravelin beyond the counterscarp of the ditch, at a distance M N of thirty toises, and take on the counterscarp of the great ditch fifteen toises from the re-entering angle p to q, and draw N q; then q N M p will be the tenailles required; its ditch is twelve toises, that is, the same as that of the ravelin. Sometimes a retired battery is made in the front of the tenaillons, as in B; this battery is ten toises from the front to which it is parallel, and fifteen toises long.

Retrenchments are commonly made in the tenaillons, such as O; their parapets are parallel to the fronts M N, and bisect the side q N; the ditch before the retrenchment is three toises; and there is a banquette before the parapet next to the ditch of about eight feet, called berm; which serves to prevent the earth of the parapet which seldom has any revetment from falling into the ditch.

The ravelin, before which tenaillons are constructed, must have its saliant angle much greater than the former construction makes them; otherwise the saliant angles of the tenaillons become too acute; for which reason we made the capital of this ravelin forty-five toises, and the faces terminate within three toises of the shoulders.

Of Counterguards.—Fig. 10, 11. When the counterguard is placed before the ravelin, set off forty toises on the capital of the ravelin from the saliant angle A to the saliant angle B, of the counterguard; and ten from C to D, on the counterscarp of the ditch.

When the counterguard is before the bastion, such as in fig. 2, its saliant angle F is fifty toises from the saliant angle E of the bastion, and the breadth near the ditch of the ravelin ten toises as before.

The ditch before the counterguards is twelve toises, and its counterscarp parallel to the faces.

Counterguards are made before the ravelin on some particular occasions only; but are frequently constructed before the bastions, as covering the flanks wonderfully well. Some authors, as Mr. Blondel and Mr. Coehorn, will have them much narrower than they are here.

Of Horn-works.—Fig. 12, plate I. Produce the capital of the ravelin beyond the saliant angle A, at a distance A B of about eighty toises draw D B E at right angles to A B; in which take B D, B E, each equal to fifty-five toises; and on the exterior side, D E, trace a front of a polygon in the same manner as that of the body of the place, making the perpendicular B F ten toises, and the faces thirty.

The branches D a, E b, of the horn-work, when produced, terminate on the faces of the bastions, within five toises of the shoulders. The ditch of the horn-work is twelve toises, and its counterscarp parallel to the branches; and in the front terminates at the shoulders, in the same manner as the great ditch before the bastions.

The capital of the ravelin before the front of the horn-work is thirty-five toises, and the faces terminate on the shoulders, or rather two or three toises beyond them: and the ditch before the ravelin is eight toises.

Retrenchments are sometimes made within the horn-works, such as S, S; which are constructed by erecting perpendiculars to the faces of the ravelins, within twenty-five toises of their extremities. This retrenchment, like all others, has a parapet turfed only with a berm of eight feet before it; as likewise a ditch from three to five toises broad.

Fig. 13. When a horn-work is made before the bastion, the distance D L of the front from the saliant angle of the bastion is 100 toises, and the branches terminate on the faces of the adjacent ravelins within five toises from their extremities; all the rest is the same as before.

Of Crown-works.—From the saliant angle, A, fig. 1, plate II. of the ravelin, as a centre, describe an arc of a circle with a radius of about 120 toises, cutting the capital of the ravelin produced at C; from the point C, set off the cords C B, C F, each of them equal to 110 toises; and on each of which, as an exterior side, construct a front of polygon of the same dimensions as in the horn-work; that is, the perpendicular should be eighteen toises, the faces thirty, and the branches terminate on the faces of the bastions within twenty-five toises of the shoulders.

The ditch is twelve toises, the capital of the ravelins thirty-five, and its ditch eight; that is, the same as in the horn-work.

Sometimes the crown-work is made before the bastions, as in fig. 2. The arc is described from the saliant angle A of the bastion, with a radius of 120 toises as before; and the branches terminate on the faces of the adjacent ravelins within twenty-five toises of their extremities: the rest of the dimensions and constructions are the same as before.

Horn-works, as well as crown-works, are never made but when a large spot of ground falls beyond the fortification, which might be advantageous to an enemy in a siege, or to cover some gate or entrance into a town.

Of Covert-ways and Glacis.—These are esteemed some of the most essential parts of a modern fortification; and it is certain the taking the covert-way, when it is in good condition and well defended, is generally the most bloody action of the siege. After having constructed the body of the place, and all the outworks which are thought necessary, lines are drawn parallel to the utmost counterscarp of the ditches, at six toises distant from it; and the space *m n*, *m n*, included between that line and the counterscarp, will be the covert-way required.

Fig. 3. There is in every re-entering angle of the counterscarp a place of arms, *m*; which is found by setting off twenty toises from the re-entering and angle *a*, on both sides from *a* to *b*, and from *a* to *c*: and from the points *b c*, as centres, arcs are described with a radius of twenty-five toises, so as to intersect each other in *d*; then the lines drawn from this intersection to the point *b*, *c*, will be the faces of the places of arms.

If lines are drawn parallel to the lines which terminate the covert-way, and the places of arms, at twenty toises distant from them, the space *x*, *r*, *x*, between these lines and those which terminate the covert-way, will be the glacis.

At the extremities of the places of arms are traverses made, such as *v*, *v*, which serve to enclose them; these traverses are three toises thick, and as long as the covert-way is broad, and a passage is cut in the glacis round them, of about six or eight feet, in order to have a free communication with the rest of the covert-way.

There are also traverses of the same dimensions before every saliant angle of the bastion and outworks, and are in the same direction as the faces of those works produced; and the thickness lies at the same side as the parapets.

The passages round these last traverses are likewise from six to eight feet wide.

In each place of arms are two sally ports, *z*, *z*, which are ten or twelve feet wide, for the troops to sally out: in time of a siege they are shut up, with barriers of gates.

Of Arrows and Detached Redoubts.—An arrow is a work made before the saliant angles of the glacis, such as A, fig. 3. It is composed of a parapet of three toises thick, and forty long; and the ditch before it five toises, terminating in a slope at both ends. The communication from the covert-way into these arrows is four or five toises wide; and there is a traverse, *r*, at the entrance, of three toises thick, with a passage of six or eight feet round it.

A detached redoubt is a kind of work much like a ravelin, with flanks placed beyond the glacis, such as B; they are made to occupy some spot of ground which might be advantageous to the besiegers; likewise to oblige the enemy to open their trenches farther off than they would do otherwise. The distance from the covert-way ought not to exceed 120 toises, that it may be defended by musket-shot from thence.

The gorge, *a b*, is forty toises; the flanks, *a c*, *b f*, which are perpendicular to the gorge, ten; and the faces *c d*, *f d*, thirty: the ditch before it is six toises, ending in slopes at both ends; the covert-way four; the branches of the covert-way are forty-two toises long, or thereabouts; the faces of the places of arms *y*, *y*, which are perpendicular to the branches, ten; and the other, which is parallel to them, fourteen.

The communication from the covert-way into the redoubt, is five or six toises wide: a traverse is made just at the entrance, and another in the middle when it is pretty long. The parapets of this communication terminate in a slope or glacis.

If these redoubts are above fifty toises distant from the covert-way, the besiegers carry their trenches round, and enter through the gorge; by which means the troops that are in them are made prisoners of war, if they do not retire betimes; to prevent which some other outworks should be made to support them.

Of Second Ditches and Covert-ways.—Plate II. fig. 4. When the ground is low, and water to be found, there is often a ditch about ten or twelve toises made round the glacis; and opposite to the places of arms are constructed lunettes, beyond the ditch: such as D, whose breadth on the counterscarp of the ditch is ten toises, from *b* to *a*, and from *c* to *d*; and the faces *a* L, *d* L, are parallel to those of the places of arms; the ditch before them is from eight to ten toises wide.

The second covert-way is four toises, the semi-gorges of the places of arms, *m*, about fifteeen, and the faces perpendicular to the counterscrap; the second glacis is from fifteen to eighteen toises broad. This second covert-way has traverses every where in the same manner as the first.

Of Profiles.—A profile is the representation of a vertical section of a work; it serves to show those dimensions which cannot be represented in plans, and is necessary in the building of a fortification. Profiles are generally constructed upon thirty feet to an inch. It would be endless to describe all their particular dimensions; we shall, therefore, lay down the principal rules only, given by M. Vauban, on this subject.

1. Every work ought to be at least six feet higher than that before it, so that it may command those before it; that is, that the garrison may fire from all the works at the same time, with great and small arms, at the besiegers in their aproaches. Several authors, however, object against it. For, say they, if you can discover the enemy from all the works, they can discover, by the same reason, all the works from their batteries; so that they may destroy them without being obliged to change their situation, and thereby dismount all the guns of the place before they come near it. But, if all the works were of

the same height, those within cannot be destroyed till such time as those before them are taken: guns might be placed in the covert-way and outworks to obstruct the enemy's approach; and, when they come near the place, they might be transported into the inner works; and, as the body of the place would be much lower, the expense would be considerably diminished. It should not, however, be forgotten that, when works are low, they are easily enfiladed by the ricochet batteries, though this might be partly prevented by making the parapets near the saliant angles, for the space of eight toises on each side, five or six feet higher than the rest of the works.

2. The covert-way should be lower than the level ground, otherwise the body of the place must be raised very high, especially where there are several outworks: this is to be understood only when the works exceed each other in height, otherwise it need not be below the level.

3. The bases of all inward slopes of earth should be at least equal to the height, if not more.

4. The bases of all outward slopes of earth, two-thirds of their heights.

5. The slopes of all walls or revetments should be one-fifth of their height; or one-sixth might, perhaps, be sufficient; the height of a wall is estimated from the bottom of the ditch, and not from the beginning of its foundation.

6. The slopes of all parapets and traverses are one-sixth of their breadth; that is, three feet towards the field, or the inside, where the banquettes should be three feet higher than the outside.

7. When the revetment of a rampart goes quite up to the top, four feet of the upper part is a vertical wall of three feet thick, with a square stone at the top of it projecting six inches; and a circular one below, or where the slope begins, of eight or ten inches diameter; they go quite round the rampart, and the circular projection is called the cordon. Where the straight part of the wall ends, and the slope begins, the wall is always made five feet thick; and the counterforts or buttresses reach no higher than that place.

8. When the rampart is partly walled and partly turfed, then one-fifth of the height which is turfed must be added to five feet, to get the thickness of the wall above. And, having the thickness of any wall above, by adding one-fifth of its height from the bottom of the ditch, the sum will be the thickness of the wall at the bottom; but, if a sixth part is only taken for the slope, then a sixth part must be added.

For instance, suppose a rampart of thirty feet high from the bottom of the ditch, and that ten of these are to be turfed, then the fifth part of ten, which is two, added to five, gives seven for the wall above; and as this wall is twenty feet high, the fifth of which is added four, and four to the thickness seven above, gives eleven for the thickness near the foundation. Plate III. fig. 1, represents, in military perspective, the profiles of the body of a place, the ravelin and covert-way: which gives a clear idea of what is meant by a profile, and from which those of all other works may be easily conceived.

Sect II.—Of the Second and Third Systems of M. Vauban.

M. Vauban's Second and Third Systems were chiefly designed, as we have stated, to protect the besieged from the ricochet fire of his own invention, and to improve the near defence. To accomplish these and some minor purposes, he composed the body of the plan of works which resemble small bastions, and are called *tower-bastions*. His second method is thus exemplified. He begins his construction inwards, and fortifies outwards, which is found a very convenient plan for improving a place.

Let A B, Plate III. fig. 2, be the interior side of an hexagon of 120 toises, some authors will have it 130, and say that they are so at Landau; draw A C, B D, from the centre through the extremities of the sides; set off six toises from A to *b*, and from B to *c*; through the points *b* and *c*, draw lines at right angles to A B, from the point *b* set off six toises to *f* outwards, and four from *b* to *d* inwards; and from the points *f*, *d*, draw perpendiculars *f r*, *d n*, to the capital A C; then, if *r* E is made equal to *r f*, the point E will be the saliant angle of the tower bastion; and E *f d n* half that tower.

If in the capitals there be taken from the saliant angles of the tower-bastions, the distances E C, F D, each of forty toises, the points C and D will be the saliant angles of the counterguards before the towers; from the points C and D draw the lines of defence C *c*, D *b*, to the points where the flanks of the towers cut the curtain; and which set off fifty-six toises for the faces of the counterguards; the flanks are found as in the first method, and likewise the tenailles.

The ditch before the saliant angles of the towers is six toises, and its counterscarp drawn to the extremities of the flanks of the counterguards; the right line which joins the ends of these flanks will determine the inside of the tenailles.

The ditch before the counterguards is twelve toises at the saliant angles, and the counterscarp is drawn to the opposite shoulders in the same manner as in the first method.

The capital of the ravelin is forty-five toises; its faces, when produced, terminate on those of the counterguards, within ten toises of the shoulders; ten toises are cut off from the faces by the flanks which are parallel to the capital as usual.

The ditch before the ravelin is ten toises, the covert-way five, the semi-gorges of the places of arms twelve, the faces seventeen, and the glacis twenty.

The following is the construction of M. Vauban's third method, according to his plan of New-Brisach. This method is applied to an octagon, whose exterior side, A B fig. 3, is 180 toises; the perpendicular C D thirty; the faces A K, B L, of the counterguards sixty; the flanks L N, K M, are found by setting off twenty-two toises, as chords to the arcs described from the opposite shoulders as centres; from the extremities of the flanks a line is drawn, which will be parallel to the exterior side A B, meeting the capitals A F, B F, of the counterguards at G and H; this line terminates the inside of the tenaille, as

likewise the saliant angles G, H, of the tower-bastions.

If E F be drawn parallel to G H, and at nine toises distant from it, the intersections E, F, with the capitals of the counterguards, will be the centres of the towers; from which set off seven toises from E to *a* for the semi-gorges, and draw the flanks *b c* through the extremities of these semi-gorges perpendicular to the line E F; these flanks are four toises inwards from *a* to *c*, and five outwards from *a* to *b*; the faces *b* G are drawn from the point *b* to the point G, and the lines joining the inside of the flanks at the end of four toises will complete the towers.

The ditch is six toises before the saliant angle of the towers, and its counterscarp meets the line G H, within ten toises of the extremities M, N, of the flanks of the counterguards.

If from the point *n*, where the line E F intersects the perpendicular C D produced, you set off five toises to the point *r*, and the lines of defence are drawn from the extremities of the semi-gorges *a* of the towers through this point *r*: then the flanks of the counterguards produced will determine the little flanks *p*, *q*, of the inside rampart, and the extremities of these little flanks, being joined, will give the curtain between them.

The great ditch before the counterguards is fifteen toises, and its counterscarp parallel to the faces; the capital of the ravelin is fifty-five toises, and that of the redoubt within it twenty-three; the faces of the ravelin are drawn to the faces of the counterguards within fifteen toises from the shoulders, and those of the redoubt parallel to these: twelve toises are cut off from the faces of the ravelin, and six from those of the redoubt, by the flanks which are parallel to the capital; the ditch before the ravelin is twelve toises, and that before the redoubt six; the covert-way and glacis are the same as in the second method. It must be observed, that the parapets of the counterguards, on both sides of the saliant angles, are raised four feet higher, for the space of twenty feet, above the rest, to prevent the enfilades of the ricochet batteries.

Sect. III.—Of the Systems of M. Minno, Baron of Coehorn.

This officer, a contemporary with Vauban, was a lieutenant general in the Dutch service, and director general of all the fortified places belonging to the united provinces and along the Scheldt. He was the inventor of three systems of fortification, in which he chiefly attended to the means of flanking and covering the works as effectually as possible, whilst those parts of the fortifications which are advantageously situated for the besieger's batteries, would not afford sufficient space for them. He also had for his object to facilitate an active and obstinate defence to the garrison; for which purpose he contrived such dispositions as would, in his opinion, enable the besieged troops to oppose the besieged, within the fortifications, with forces superior to his, and upon a larger front; besides securing the retreat of these troops, and exposing those of the besieger to the fire of the casemated batteries, covered caponiers, crenelled galleries, and coffers, which are employed in the systems. Coehorn likewise disposed the covert-ways and dry ditches in such a manner that the besieger, not being able to dig the ground deeper than about one foot without finding water, may be obliged to convey to the spot the requisite materials for his lodgments and the passage of the ditches in question. But this disposition, as well as the combined use that Coehorn makes of wet and dry ditches, and which forms an essential part of his systems, evidently requires that the fortifications should be erected in aquatic ground, as he supposes them to be. We shall therefore only advert to their principal and more general features.

In his first system, Coehorn supposes the polygon to be a regular hexagon, and that the surface of the water is but four feet lower than the ground.

Let therefore the interior side, A B plate IV. fig. 1, of an hexagon be 150 toises, take A C, B D, each equal to thirty-nine, and the capitals A E, B F, each of eighty; and A G, B H, of forty; from the points E, F, draw the lines of defence through the points D, C; and through the points G, H, lines parallel to E D, F C; in which take G I, H K, each equal to forty toises, for the length of the higher faces of the bastions.

To determine the lower faces E M, F N, draw I O perpendicular to I G, equal to four toises; or parallel to I G, likewise equal to four; then *r* M perpendicular to E M will determine the lower face E M.

In order to determine the tower 3, see fig. 2, in *r* M, take *r* S of five toises; draw S *m* parallel to E M, and equal to fourteen; in O *r* produced take likewise *r n* equal to four, and in E M, M V, to eight; then if the points *n*, *m*, are joined by a right line, and *m*, V, by an arc of sixty degrees you will have the outline of the tower.

The lines I O, and O *r*, express two walls, the first has two embrasures, and the second three; by which the author intended to defend the dry ditch, and the approach to the tower.

If from the points C, D, fig. 1, there be set off on the lines of defence fourteen toises to the points Y, W, and upon each of the bases Y I, W K, be described an equilateral triangle, the angles opposite to these bases, will be the centres of the higher flanks Y I, W K.

And if R be the intersection of the two lines of defence, R M bisected at S, and R C at Q; by drawing S Q, *v* S Q R will be half the tenaille; and drawing from the point C, a line parallel to I Y, so as to meet the tower upon which the mean flank is described in the same manner as the former.

The parapets of the three flanks, and those of the parts *m* V, V M, of the towers, are twenty-four feet thick; the other parts M *r*, *r n m*, but sixteen; and all the other parapets in general are twenty feet.

There is a wet ditch before the mean flank of six toises broad, and another *z* behind the towers of the same breadth, over which are made two draw-bridges, parallel to the higher faces.

The space X between the higher and lower faces of the bastions is a dry ditch, whose bottom is but six inches above the surface of the water in the wet ditch.

Behind the lower parapet there is a banquette of three feet, and a rampart of five; and under this rampart a stone gallery, which runs from one end to the other, and is divided into several apartments, which are shut with doors; as likewise another, going from the saliant angle of the lower faces, to that of the higher, with loop-holes from distance to distance facing the dry ditch; there is likewise a row of palisades placed parallel to the higher faces, and at four toises distant from them.

There are three embrasures in O *r*, as has been said, to flank the ditch *s* behind the towers; and two in I O to flank the dry ditch near the higher faces.

The great ditch is twenty-four toises broad; and its counterscarp parallel to the lower faces of the bastions; the semi-gorges O L of the ravelin are twenty-nine toises, and the faces L P, forty-five; the dry ditch Y is sixteen toises, the rampart twenty-eight feet, and the lower faces *a* T are parallel to the higher ones; the parapet of which is twenty and the banquette three.

The level ground of the rampart in the ravelin near the saliant angle is twenty feet broad, for the length of twenty toises from that angle, and the rest but fifteen.

In the gorge of the ravelin is a small redoubt *a*, of about five feet high, and underneath a lodgment of stones, the walls being eighteen inches thick at the sides; the roof is made of planks, with three feet of earth over them.

There is a dry ditch going from the extremities of the faces to the redoubt, and round its angle, having a row of palisades before it, to secure the retreat from the ravelin into this redoubt; there is likewise another row going from the extremities of the faces, in a round form, turning towards the gorge of the ravelin.

In the dry ditch of the ravelin, within six toises from the great ditch, is a coffer, and a ditch *p* of six toises before it: this coffer has a wall on both sides, and the roof is planked and covered with a foot and a half of earth; above this is a stone parapet of five feet high, with a banquette behind it.

There runs a covered gallery under the rampart of the lower faces, and another joining the two saliant angles, together with a row of palisades, in the same manner as in the dry ditch before the bastions.

The wet ditch before the ravelin is eighteen toises; the counterguards *x*, which the author calls cover-faces, are twenty-five feet broad, and the ditch before them fourteen toises; the covert-way is twelve toises broad, and the glacis twenty; the semi-gorges *f g*, *g h*, of the places of arms, are twenty-two toises, and are taken from the point *g*, where the branches of the covert-way meet, and the faces *f k*, *h k*, are twenty-eight; within these places of arms are traverses of twenty feet thick and eighteen toises long, within ten or twelve feet from, and parallel to the faces.

The stone lodgments *b*, within the places of arms, are found by setting off twelve toises from the point *g*, for the semi-gorges, and the faces are drawn parallel to those of the places of arms.

At six toises from the places of arms are coffers *q* of eight feet broad, made with planks at the sides, and above with a foot of earth over and before them.

There are two banquettes all round the covert way, and before the traverses; as also two rows of palisades before the traverses, one of which joins them, and the other goes round the covert-way.

Lastly, the re-entering angles of the counterscarp next to the covert-way are made a little round as likewise that in the ravelin: but the contrary way, that is, they are made hollow.

His Second System he adapts to a heptagon whose interior side is 126 toises, and the level of the ground to be three feet above the surface of the water.

Let, therefore, the interior side, A B plate IV. fig. 3, of an heptagon be 126 toises; take in the capitals, A C, B D, each of seventy-two toises; at the extremities C, D, make the angles A C E, B D F, each of forty degrees; and set off sixty-six toises for the faces C E, D F, of the bastions; on the interior side, take A G, B H, each of thirty toises, and from the point D, as centre, describe an arc through the point G, on which set off a chord of thirty; and on this chord describe the mean flank G I, which is an arc of sixty degrees.

Draw a line from the saliant angle D through the extremity I of this flank, on which take I *a* of ten toises; join *a* E, on which describe the orillon as usual.

The outline of the higher flank is thirteen toises distant from that of the outline of the mean; this flank is an arc described from the the same centre as that of the former, the chord of which is forty toises.

From the points G, H, draw the broken parts of the curtain, perpendicular to the capital of the bastion, and make it nine toises long; the extremity of the higher flank is terminated by the inside line of the parapet of the curtain produced.

The tenaille is found by producing the faces of the bastions ten toises; through the extremity of which an arc is described from the opposite saliant angle of the bastion, as centre; on this arc is set off a chord of twenty toises; and this chord serves to describe the flank, upon which is an arc of sixty degrees; the curtain is a right line.

There is a wet ditch before the tenailles of ten toises broad, with two bridges at each end, near the orillons; the one directly over it, and the other along the faces of the bastion.

The dry ditch round the body of the place is twenty toises broad, before the faces of the bastion to which it is parallel, and the lower rampart, K L, twenty-nine feet; the semi-gorges M L are fifteen toises, and the flanks L N eighteen, and are described from the saliant angles K of the lower faces as centres.

The saliant angle of the ravelin is 125 toises distant from the curtain of the body of the place, and is seventy degrees; the faces are fifty toises long; the faces of the redoubt *x* are sixteen toises distant from those of the ravelin, and fourteen long.

The wet ditch round the lower faces of the ravelin is twenty-four toises broad: the work be-

yond this ditch, which the author calls the second counterscarp, is twenty, parallel to the ditch.

To find the broken part of this work, join the two re-entering angles, *m*,*r*; on which take *m r* of thirty toises, and draw *r t*, *r v*, parallel to the outline of the counterscarp, each equal to twelve; set off twenty-two from *t* to *s*, and from *v* to *q*; and upon these lines as chords describe the round flanks, which are arcs of sixty degrees.

The traverses in this counterscarp are drawn at ten toises from the flanks perpendicular to the parapet.

The redoubt *z*, in the re-entering angles, are found by setting off sixteen toises from the points *m* to *n*, for their capitals, and the faces are parallel to the broken curtain before them; those marked *y*, which are in the saliant angles, are found by producing the counterscarps of the great ditch, and setting off twelve toises from the points of their intersections for their faces; and the flanks are drawn parallel to their capitals.

The ditch before this work is fourteen toises; as to the covert-way and glacis, they are the same as in the author's first method.

Coehorn applies his third system to an octagon, and supposes the level of the water to be five feet below the horizontal ground. The exterior works of this system, that is, the detached bastions and the counterguards, ravelins, covert-ways, &c., alone present the same arrangement as that of the whole first system; with the exception, however, that independently of the detached bastions being not joined together by any curtains, they only have double flanks instead of treble ones. Each of these bastions also has a redoubt at its gorge, with a dry ditch in front and a crenelled gallery adapted to the counterscarp of this ditch. There is likewise a dry ditch before the redoubt at the gorge of every capital ravelin, which ditch is connected with the faces of the ravelin, as the dotted lines show, by means of coupures made in the direction of the coffers between the capital and the lower ravelins, or nearly in that direction. Besides, in addition to the coffers in front of the re-entering places of arms, Coehorn constructs a crenelled gallery along the faces of these works, on which account the palisades in this part of the covert-way are to be two toises distant from the crest of the glacis.

Behind the exterior works above mentioned is the body of the place, consisting of bastions with common orillons, a revetment, and double flanks. The curtains which connect the lower flanks are broken as in the first system, and at each of their extremities, between them and the principal curtains, a kind of harbour is constructed, by means of which, as well as of vaulted passages made under the lower curtains, the garrison is able to keep up a communication with the exterior works. There is also a kind of circular harbour at the gorge of these works.

Some of Coehorn's dispositions in his third system are certainly not below the high reputation of such an eminent engineer; but, independently of the great labor and quantity of masonry which this system requires, the communications with the exterior works, across wet ditches, are difficult; the arrangement of the system in question also has the inconvenience of occasioning several openings to be left, through which the besieger can see the exterior works and the body of the place from the crowning of the covert-way. Therefore, all engineers coincide in their opinion that it is inferior to the first system, and consequently to the second.

We shall not therefore detain the reader by a more particular description of it.

Sect. IV.—Cormontaingne's System.

This is, in fact, with some modifications, the modern bastion system of fortification. Upon Vauban's first or general system, this able engineer suggested the improvement, first of a much greater projection which he allowed to the ravelins, whereby he considerably augmented their action upon the attacks. Secondly, of constructing the ravelins without flanks, and directing their faces to a smaller distance from the flanked angles of the bastions, by which he covered the shoulders of these works still more effectually than Vauban had done, as well as the curtains, and the openings between the flanks of the bastions and the profiles of the tenailles. Thirdly, Cormontaingne's redoubts in the ravelins are better contrived than those of Vauban, and answer purposes much more important; whilst the larger size of his re-entering places of arms renders them also more beneficial to the defence, and particularly on account of their substantial redoubts, which, besides the other material advantages derived from them, have their faces so disposed as to secure them from enfilade, and allow their fire to have a direction close and nearly parallel to the prolongations of the capitals. This advantage, which none of Vauban's systems afford, is so much more important as the besieger generally advances in the direction of the capitals. Cormontaingne likewise concealed the masonry of all the revetments of the place from the view of the besieger previous to his gaining the glacis, and thereby secured it from the fire of his more distant batteries. Lastly, this engineer much improved the communications, although not to such a degree as would be requisite for attacking the besieger to advantage, in the works which he may have taken so as to drive him out of them.

Independently of the above improvements which Cormontaingne has made in Vauban's First System, he also illustrated the superior properties that a fortification acquires, from the exterior sides of the fronts which compose it either forming very obtuse angles with each other, or being all in the same straight line.

To describe Cormontaingne's system, with such alterations as have been since suggested and are at present most generally adopted, proceed as follows:—

The length of the exterior side being at least 130 toises, but not exceeding 180 toises, construct the bastions and curtains as in Vauban's First System: with the exception, however, that the length of the faces A C and B D (plate V.) of the bastions is to be one-third of the exterior side, and the direction of the flanks perpendicular to the lines of defence. It is here supposed

that the polygon is at least a hexagon; but in the square and the pentagon, the length of the faces should not exceed two-sevenths of the exterior side, so that the flanks may be sufficiently long. To construct the tenaille draw *b c* and H I parallel to the curtain, *b c* being five toises distant from it, and H I from twelve to thirteen toises, according to the length of the flanks of the bastions; and if, after making G *a* and K *d* parallel to these flanks, with an interval of five toises between them, *a b* and *c d* are drawn parallel to G H and I K, at a distance from them equal to that between *b c* and H I, the tenaille will be completed. Its nearest extremities to the shoulders of the bastions may be rounded off, and the interior side of the parapet broken for a length *e f* of about three toises, as the figure shows.

The principal ditch is fifteen toises broad opposite the flanked angles of the bastions; but may be made narrower to advantage, provided a proper depth can be allowed to it, as well as such a direction to the superior slope of the parapet of the bastions as will render the fire of the faces effectual upon the counterscarp in front.

Set off fifteen toises from C to *g*, as well as from D to *h*, and, supposing *g* and *h* to be joined by a line, construct upon it the equilateral triangle *g* M *h*, so as to have the principal line of the faces M L and M N of the ravelin; then draw P *k* and P *l* parallel to these faces, directing them towards the interior meeting *i* of the parapet of the face and the flank of the bastion contiguous to them, and they will give the direction of the principal line of the faces of the redoubt.

The gorge of the ravelin and its redoubt is to be determined by means of drawing, from the flanked angle of each collateral bastion, a line B *m n* passing through the extremity *m* of the opposite face of the ravelin; that is, of the interior side of the parapet. In this manner, the gorge will be entirely secured from the fire which the besieger might otherwise direct upon it from the crowning of the saliant places of arms in front of the bastions.

In respect to the flanks of the redoubt of the ravelin,—from *g*, where the principal line of the face M L of the ravelin meets the face of the bastion, draw an indefinite line through the intersection *k* of P *k* and the gorge of the redoubt; and, after setting off six toises and a half from *k* to *q* upon this line, describe the flank O *p* forming with *g q* the angle *g q* O of 100 degrees.

The ditch of the ravelin is nine or ten toises broad, and that of the redoubt five toises; the counterscarp of both these works is parallel to their faces, excepting that part in front of the saliants which is made circular: the breadth of the covert-way is five toises.

To describe the re-entering places of arms, measure off five or six toises from *r* to *s*, upon the interior side of the parapet of the face of the bastion; and from *s* draw the indefinite line *s u*, making with *r s* an angle of 100 degrees; take the distance *v t*, from the angle *v* to the intersection *t* of *s u* and the counterscarp, and set it off from *v* to *w*; then draw *w u* forming the same angle with the counterscarp of the ravelin, as *t u* with that of the bastion; and such parts of *w u* and *t u* as project beyond the covert-way will give the faces of the re-entering place of arms, allowing for the passages between the two contiguous traverses and the glacis.

For the redoubt of the re-entering place of arms, set off eleven toises upon the counterscarp from *t* to *x* and from *w* to *z*; as well as seven toises and a half from *a'* to *b'*, and from *c'* to *d'*, upon the collateral branches of the covert-way. Then draw the interior side *x g' z* of the parapet of the faces, in the direction of *z b'* and *z d'*, and cut off part of *g' z* in order to describe the small flank *f' e'*, the length of which should be three and a half or four toises, and its direction such as to allow it to see in reverse the breach of the ravelin. The escarp and counterscarp of the redoubt are to be made parallel to the faces, three toises being allowed for the breadth of the ditch; whilst its gorge, on the side next to the contiguous ravelin, should terminate upon the line M *h'* drawn from the saliant of this work through the extremity *e'* of the flank *f' e'*, so as not to be exposed to the fire of the besieger from the crowning of the saliant place of arms in front of the ravelin.

Eighteen feet are allowed for the thickness of the traverses at the re-entering places of arms; but those at the saliant places of arms, as well as the intermediate traverses, are only nine feet thick, the breadth of the passages *i'* between the latter and the counterscarp being six feet.

In regulating the inclination of any glacis, care should be taken that its superior surface, being indefinitely produced towards the works behind, may not pass above any of their lower lines of fire, which are those of the artillery. Therefore, this inclination depends upon the command of the said works, as well as upon their distance from the crest of the glacis; but, in general circumstances, it is regulated at the rate of about three inches to each toise of the breadth of the glacis.

It is materially important that the glacis should have a proper inclination; for, if it be too steep, the great depression which the fire of the garrison should have, in order to defend it will render this fire ineffectual; and if, on the contrary, the inclination of the glacis is too little, the besieger's cavaliers of trenches will only require a small height; on which account they will be less liable to be destroyed by the artillery of the place. Cavaliers of trenches are works which the besieger constructs upon the glacis, for the purpose of raising the troops who occupy them, so that these troops may plunge their fire into the covert-way.

Passages *c* (plate VI. fig. 1) called sally-ports, are cut in the glacis, which, as their name indicates, serve for the sallies; they form ramps twelve feet wide, having a gentle slope, so as to allow artillery and cavalry to pass conveniently through them. A curved direction is requisite for these ramps, because, if they were straight, the besieger would enfidale them, and destroy the double barriers that the garrison places across them, in the direction of the crest of the glacis, for the purpose of securing the opening into th.

covert-way, which they occasion, whilst the covert-way opposite this opening would also be much exposed. The sally ports are to be placed in the faces of the re-entering places of arms, and in the branches of the covert-way of the ravelins between the second and third traverses, as these situations will allow the sallies to be effectually protected in their retreat by the saliants of the covert-way of both the bastions and ravelins. Besides the sally-ports will be better secured than if they were in the saliant places of arms, or near them. In those parts of the fortifications where a road *d* is made across the glacis, in order to communicate with the country, it is commonly placed between the traverse of a re-entering place of arms (on the side towards the ravelin) and the contiguous traverse of the covert-way of the ravelin. The road is made winding, and from eighteen to twenty or twenty-one feet are generally allowed for its breadth, the profile of the glacis on each side being supported by a wall.

Supposing *a* to be the middle of that end of the sally-port (fig. 2, plate VI.), which is in the direction of the crest of the glacis, erect at *a*, the perpendicular *a b* to that crest, and make it equal to eighteen feet, or any other dimension which the requisite length of the sally-port, according to the greater or smaller elevation of the glacis above the covert-way, may render necessary. Set off one toise from *a* to *b*, as well as from *a* to *c*, for the breadth of the sally-port, and from *c* and *b* as centres, with *c b* as a radius, describe arcs, cutting each other in *e*; then from *e* describe the arc *c b*. Make *c f* equal to the base of the interior slope of the glacis, or a little longer, and describe from *f* and *b* as centres, with *f b* as a radius, arcs intersecting at *g*, from which point, as a centre, the arc *f b* is to be described.

In respect to the other profile of the sally-port, make *d h* equal to *a d*, and erect the perpendicular *h i* of the same length as *a b*. Next, from *d* and *i* as centres, with *d i* as a radius, describe arcs intersecting at *m*, and *m* describe the arc *d i*; set off the length of *c f* from *d* to *n*, and from *n* and *i* as centres, with *n i* as a radius, describe arcs cutting each other in *o*; then from *o* as a centre, describe the arc *n i*.

On the subject of the *communications* of this system, an able commentator upon it, colonel de Malortie, observes, the gates should as much as possible be placed on the least exposed fronts, as this situation will not only render them more secure, but allow sallies to be conveniently made, consisting either of cavalry or infantry, in order to attack in flank and in reverse the besieger's approaches towards some of the other fronts; and, whenever fronts having gates are liable to be attacked, it is proper that they should be flanked by works inaccessible to the besieger. Those parts of the principal roads leading to the gates, which are beyond the glacis, should also be enfiladed by the artillery of the place, so that they may not serve for any purposes useful to the enemy.

The gates nearest to the town are those which belong to the body of the place, and lead to the bridges constructed across the principal ditch, in order to gain the gorges of the redoubts in the opposite ravelins. These gates should be placed in the middle of the curtains, this part of the fortification being the best covered, and the least exposed to be breached; and they have a bomb-proof archway, which, at the exterior opening, is twelve feet high in the clear, or a little more, and about ten feet broad; wider spaces are contrived inside of it, from distance to distance, where people on foot may retire when any carriage happens to pass. The exterior of the entrances into the gateways generally has ornaments of masonry, but the architecture should be simple, as any superfluous decorations would augment the expense, without answering any useful purpose; and it is also to be observed, that the masonry should not be carried up higher than the top of the parapet, since, otherwise, it would become a mark for the besieger's artillery: nor should any buildings be constructed over the archway, although this has been formerly done.

In respect to the standing bridges they may be constructed wholly with stone, when the fronts where they are situated are neither liable to be attacked, or much exposed to the effect of the besieger's shells; provision should, however, be made, in two of the central piles, for placing a few mines to blow up the bridge, if, on account of any unexpected circumstances, it should become instantly necessary to destroy the communication. But it is preferable, under all suppositions, that the bridges should be so contrived as to allow them to be speedily taken to pieces, without encumbering the ditch with rubbish. In consequence, the upper part of the bridges should consist of timber, and be supported by piles of masonry fifteen feet distant from each other, from centre to centre. The length of the draw-bridges is in general twelve feet, and their breadth eleven feet.

From the redoubt of the ravelin, a gate constructed in one of its faces, with a bridge across the ditch in front, leads to the terreplein of the opposite face of the ravelin; whence another gate, also preceded by a bridge which is thrown across the ditch of the ravelin, serves to communicate with the covert-way, and from this work with the road cut through the glacis. But neither of these gateways is arched over, and each consists of an uncovered passage made through the rampart, the profile on each side being supported by a wall in which recesses are contrived for the security of people on foot, if any carriage should happen to pass.

The proper situations for the ramps depend on the nature of the works, and the localities; th are generally placed in the middle of the curtains at the gorges of cavaliers and full bastions, in the flanks and faces of empty bastions, in the faces of out-works, in barbet batteries, &c. In short, wherever this kind of communication may be usefully employed.

The arrangement of the posterns of each front is as follows: there is a postern underneath the curtain, which serves to communicate from the place with the principal ditch; and, when this ditch is dry, another postern is made under the tenaille, leading to the caponier in front. The communication from the redoubt of the ravelin

with its own ditch takes place by means of a postern situated under each flank, near the angle of the shoulder; and the redoubts of the re-entering places of arms have each two posterns forming the communication from the redoubt with its ditch.

Before explaining the usual distribution of the pas de souris, it is necessary that the following remarks, relating to the ditches and other objects should be premised.

When the principal ditch contains water, or is dry but very deep, a smaller depth is allowed to the ditch of the ravelin, as in both circumstances this ditch will be better seen from the faces of the bastions which flank it, and therefore more effectually defended; whilst, if the principal ditch is wet, that of the ravelin will be kept dry, which is another advantage.

The ditch of the redoubt in the ravelin is made less deep than that of the ravelin, so as to impede the besieger in his attempt to penetrate into it from the principal ditch, after gaining this ditch through that of the ravelin, in order to cut off the troops which defend the ravelin. And, as a further precaution for the security of these troops in their retreat, the ditch of the redoubt is sunk a little deeper opposite the flanks than along the faces, besides being covered by half-caponiers U, which, in addition to the coupures X in the ravelin, deprive the besieger of the means of plunging his fire, from the terreplein of the ravelin, into those parts of the ditch of the redoubt where the posterns are placed. Another advantage that is derived from allowing a smaller depth to this ditch than to the ditch of the ravelin, is to render more effectual the flanking defence which it receives from the faces of the bastions.

The ditch of the redoubts in the re-entering places of arms is still less deep than that of the redoubt in the ravelin, by which means its flanking defence from the bastion on one side, and the ravelin on the other, is improved. It has no communication with the ditch of the ravelin, so that the besieger cannot penetrate into it from this ditch.

The manner in which the pas de souris are generally distributed shall now be explained.

A double pas de souris is placed in the middle of the gorge of the tenaille, in order to mount upon its terreplein, and there is a double one also at the gorge of the redoubt of the ravelin, which serves to get up to the plane of site, whence the terreplein of this redoubt is mounted upon by means of ramps. A single pas de souris leads from the main ditch to that part of the ditch of the redoubt in the ravelin which is opposite each flank, and small ramps communicate from thence with the ditch along the faces. The communication with the ravelin, from the ditch of its redoubt, consists of a single pas de souris constructed near the extremity of each face of the ravelin, opposite the postern of the redoubt, besides a double pas de souris at the circular part of the counterscarp of this work; whilst the communication from the main ditch with the redoubts of the re-entering places of arms takes place by means of a pas de souris, either single or double, which is made at the re-entering angle of the gorge. From the ditch of these redoubts, two single pas de souris, one at each end of the counterscarp, lead to the terreplein of the re-entering places of arms, and double pas de souris are made in the circular parts of the counterscarp at the gorge of the saliant places of arms, in order to ascend upon their terreplein.

When the ditch of the ravelin is not so deep as the principal ditch, a communication from one to the other is established by means of a single pas de souris.

In respect to the caponiers and half-caponiers: besides the caponier Q, which secures the communication from the tenaille to the pas de souris at the gorge of the redoubt of the ravelin, a half-caponier R covers, on each side of the tenaille, the passage from the opening between its profile and the flank of the bastion, to the pas de souris leading to the ditch of this redoubt, opposite its flank. A half-caponier S also traverses the main ditch, perpendicularly to the face of the bastion, for the purpose of covering, on the side towards the saliant place of arms in front of the bastion, the communication with the pas de souris at the gorge of the redoubt in the re-entering place of arms; this communication is covered on the other side, by a half-caponier T, placed across the ditch of the ravelin. A half-caponier U is likewise constructed across the ditch of the redoubt of the ravelin, which, as has been previously said, serves to secure the postern, and the pas de souris situated in that part of the ditch which is opposite the flank.

In consequence of the manner in which the gorge of the ravelin and its redoubt is determined, the besieger can see in reverse, from the crest of the glacis in front of the bastions, not only the caponier Q, but also the half-caponiers R nearest to it; and as, according to the present method of constructing all these works, they merely consist of earth, the communications which they are intended to cover do not appear sufficiently secure. It has therefore been suggested that the caponier should form a permanent work consisting of a vaulted bomb proof gallery, A, seven feet six inches high internally, and ten feet wide; this gallery should be sunk at bottom about four feet six inches below the ditch, its sides, as well as the crown of the arch, being protected by a covering of earth. In this manner the caponier, besides forming a communication of itself, will secure from the besieger's reverse fire two common caponiers constructed near it, and which, being open at top, may be covered by means of blinds, when circumstances require it.

It has been said that Cormontaingne contrived a retrenchment V for the bastions, which also answers the purpose of a cavalier: in order to construct it, draw $i'k'$ and $i'l'$ parallel to the faces of the bastion, at the distance of eighteen toises from them; and, at the same distance from the flanks, draw $k'p'$ and $l'o'$, also parallel to them, which should be produced inwardly fifteen feet beyond their intersections m' and n' with the prolongations Fq' and Wq' of the lines of defence of the collateral bastions; then join p' and o', and $p'o'$ will represent the gorge of the retrenchment. The ditch is six toises broad, and the counterscarp parallel to $i'k'$ and $i'l'$.

In a line with the face M L of the ravelin, draw $g r'$, and, after making $r' t'$ equal to seven toises, draw $t' u'$ directed towards the extremity L of this face. For the *retirade*, $v' w' s'$, set off four toises from l' to v', and make $v' w'$ perpendicular to $i' l'$; then draw $i' w'$, and produce $g r'$ until it meets it.

The method of fortifying just explained, evidently has a great superiority over Vauban's first system, but is still liable to material defects, the principal of which are the following:—

First, with the exception of the superior polygons, and of the fronts disposed either in a straight line or on a concave-curve, the body of the place is not better secured than any other part of the fortification from the ricochet fire, which the besieger can use from the beginning of the siege; and no portion of the ground, within the sphere of the works, is sufficiently re-entering to render the attacks subject to a very effectual fire from them, in flank and in reverse; whilst the sallies are but feebly protected, and the besieger can crown at one time the whole covert-way of the front of attack, without much risk from this operation. Secondly, this system is as much deficient as that of Vauban, in places of security for the artillery and troops; the consequences of which are that no batteries can be preserved entire, for the most important period of the siege; whilst the troops after having felt the destructive effect of the ricochet fire, kept up by the besieger from the commencement of his operations, become still further exposed to such a vertical fire from his nearer batteries as must render the terrepleins almost untenable, if not entirely so.

Thirdly, although the larger size of the re-entering places of arms, besides their substantial redoubts, much improves the defence of the covert-way, yet this work can be stormed; and further improvements in its disposition are still requisite, to enable the garrison to defend it with great obstinacy.

Fourthly, the besieger can breach the body of the place through the ditch of the ravelin, even before he has taken this work; and after taking it he can execute the same operation through the ditch of the redoubt. The body of the place is also liable to be breached from the terreplein of the redoubts in the re-entering places of arms, through the openings between the profiles of the tenaille and the flanks of the bastions; and it is to be observed, likewise, that the besieger has it in his power to dislodge the garrison of the re-entering places of arms and their redoubts without making any direct attack upon these works, as, after taking the ravelin and destroying its coupures, he can advance in the rear of the above places of arms and redoubts, by means of a single sap which he constructs in the parapet of the ravelin, in order to keep up from this sap a plunging and reverse fire upon the troops stationed in them.

Fifthly, the flanking defence that the ditches of the ravelin and its redoubt receive from the faces of the bastions, is not so effectual as might be wished; and, as has been previously remarked, the ditch along the escarp of the tenaille is but imperfectly defended.

Lastly, this system has the same inconveniences as that of Vauban, with respect to the retrenchments in the bastions, the requisite quantity of timber during the siege, &c.

The duration of the defence which the system just described can afford, consists of thirty-six days in such inferior polygons as allow the besieger to carry on the attacks upon a ravelin and the two collateral bastions, but it may be extended to forty-two or forty-four days in the other polygons.

Besides the modifications which have been effected in Cormontaingne's original system, several engineers of eminence, amongst whom are Virgin, La Chiche, Montalembert, Bousmard, Mouzé, and Carnot, have some years since published methods of their own: but notwithstanding the great ingenuity, profound views and considerable degree of professional knowledge, which these engineers have displayed in their productions, yet they have not entirely solved the very difficult problem of contriving a system of fortification to which no well-founded objections can be made. The reader, however, will derive much benefit from making himself acquainted with the several systems, according to his professional or other connexions with this art, as well as with the reasonings of their authors in order to support them; and particularly, if not being yet sufficiently proficient in fortification to trust to his own discrimination, he consults the judicious analysis of those systems which men of experience have given.

As to irregular fortifications the great variety of combinations which they require evidently shows, as colonel Malortie observes, that any expectation of acquiring an effectual knowledge of it from such general explanations, accompanied by few plates, as might be given in an ordinary treatise, or in other works of the same moderate extent, would be visionary. 'Indeed, the best and even the only method of gaining real information on this subject, is to learn at first the general principles of fortification, together with the use of the works most commonly employed, and the proper method of disposing them in a fortress perfectly regular. The learner is then to examine attentively plans of irregular fortresses situated in various kinds of ground, particularly those of the most celebrated fortresses, and to avail himself of any verbal explanation which experienced professional men may give him, in respect to the intended purposes and the merits of the works composing the fortresses in question; he may undoubtedly also consult the publications of such authors as have treated of irregular fortifications; and, if circumstances should allow him to visit fortresses, he certainly will derive great advantage from viewing upon the spot the fortifications and the country round them.'

We refer to the few observations of this gentleman in his treatise on Permanent Fortifications, chap. x., as well worthy the learner's particular attention.

Sect. V.—M. Carnot's System.

But it is due to the reputation of Carnot, before we close this part of our subject, to notice

distinctly his New Principles of Fortification. His Treatise on the Defence of Fortified Places is in very general circulation; it has been translated into our language, and the unquestionable talents of the author as a mathematician and an engineer have powerfully patronised his theory, that a fortified place may be rendered impregnable by a general use of vertical fire.

M. Carnot tells us, that he had long been convinced of the vast advantages which would result from adopting vertical fire as the basis of defence, instead of using it as an accessory mean; but that he did not make his theory known, lest the discovery should be practised against the offensive operations of his countrymen. 'But now,' he observes, 'that our enemies have few places left to defend, I no longer hesitate to render my ideas public, since any improvement in the defensive art must turn, almost exclusively, to the advantage of the French frontiers.'

That is, as Sir Howard Douglas remarks, 'when France had succeeded in establishing almost universal dominion over the continent of Europe, M. Carnot promulgated his new doctrine, in obedience, as he informs us, to the commands of Buonaparte, to show the military intrusted with the defence of the bulwarks of the state, the importance of their functions, and the extent of their obligations—the glory which attends the faithful discharge of their duties, and the misfortunes which those, who either neglect or betray them, must draw upon themselves and upon their country. This appeal was particularly addressed to the troops occupying the fortresses which the French retained in foreign territory, and to the garrisons of their frontier and interior places, *at the time Napoleon began to prepare his mighty means for the Russian war.* To stimulate to the utmost the defensive energies of his garrisons, the work contains succinct and very partial accounts of memorable sieges, together with a code of imperial laws detailing the circumstances, and evidences of extremity, under which, only, governors or commandants of fortresses and places should be justified in capitulating, without incurring the severe and summary penalties denounced against those who should surrender their posts without full compliance with the terms of this decree.

'Before Napoleon entered on the remote enterprise which his insatiable ambition impelled him to undertake, it became essentially necessary to adopt every possible precaution to enforce the constancy of his allies, maintain the internal tranquillity of his empire, and stimulate elsewhere a defensive system, during the absence of the grand army; and to urge to the last extremity the defence of his frontier places, in the event of any failure in his external operations. These great objects, he rightly considered, would all be best promoted by giving to public opinion, from high professional authority, such impressions of the security in which these strong-holds were left, and of the impossibility of reducing them, as might deter enterprises of defection and conspiracy, and give enthusiastic confidence in the means of resistance. To effect this, it was necessary to assert the discovery of some fallacy in the well known balance which, since the days of Vauban, has remained decidedly, and with calculable certainty, in favor of attack; but as such a revolution in public opinion could not be established by any new arrangement of known or ordinary means, M. Carnot boldly and ingeniously proclaimed the discovery of a new mode of defence, by which fortresses might be rendered absolutely impregnable, and by means so simple as to be easily adapted to all places. In promulgating this new doctrine the author has filled-in some useful materials and observations calculated to excite protracted defence; but his general reasoning is quite delusive. He wrote as a political engineer; or rather he compiled the treatise which, he informs us, Napoleon sketched; and the deduction drawn from it is, perhaps, one of the most curious and interesting passages that has every emanated from the imperial press. 'From what we have just read,' says our author, 'results, I think, very evidently, this tranquillising truth, that the barriers of the French empire are absolutely inexpugnable by any power, or coalition of powers, whatever, if well defended.'

The chief recommendation of this writer is, that the besieged should begin to make use of vertical fire upon the commencement of the construction of the third parallel, and from that stage of the siege keep up an incessant discharge of musketry and four-ounce iron balls, at great elevation, upon the enemy's works, so as to form a rain (pluie) of shot upon the trenches. The iron balls to be discharged from a number of twelve-inch mortars, two of which are placed in the saliants of each bastion and ravelin in the front or fronts attacked: each mortar throwing 600 balls at every discharge. He introduces his theory of the effect of these balls by observing, that of any number which fall in the trenches, the number that take effect will depend upon the proportion which the unoccupied part of the trench bears to the part which is covered by the men posted and working in it. Thus, supposing a man standing upon an horizontal plane to cover a space of about a foot square, and a man in the attitude of working somewhat more, M. Carnot calculates that the projections of the bodies of the men usually working and posted in the trenches will occupy about $\frac{1}{180}$ part of their surface; from which he infers, that of every 180 balls that fall in the trench, one should, according to the doctrine of chances, hit a man; and he does not doubt that it will put him 'hors de combat.'

The distribution which M. Carnot proposes to make of his mortars and pierriers for vertical fire, on a front of fortification, is as follows:—

Three mortars in the saliant angle of each bastion and demi-lune.

Three to fire d'écharpe on each of the four branches of the covered way.

The mortars or pierriers are placed behind the ramparts in small bomb-proof casemates, each large enough to contain a mortar and two or three men. The casemates, or as M. Carnot calls them, 'petites cases blindées à l'épreuve,' for the defence of the capitals, are placed perpendicularly to the capitals of the bastions or

demi-lune; and those to defend the four branches of the covered way are placed parallel to the works behind which they are erected, forming a sort of interior enclosure at the foot of the interior slope of the rampart. A large port, or embrasure, is left in the end of each casemate to admit of the discharge of the mortar.

By this disposition the terre-plein of the rampart is left free for the reception of the ordinary artillery and musketry, which however, he says, should not be used at the same time with the 'batteries-blindées,' but, according to circumstances, in alternation with them. The artillery in the saliants are mounted en barbette, protected by merlons of sand-bags, until the ricochet batteries of attack are established; after which the ordnance of the place is to be withdrawn from the ramparts, until the fire of the ricochet batteries is masked by the advanced works of the attack. Thus, as soon as the enemy's ricochet batteries gain ascendancy over the artillery of the place, M. Carnot withdraws his ordnance and troops, and brings into action his 'batteries blindées,' two-thirds of which are, at this stage of the siege, furnished with guns or howitzers to fire à ricochet, and the other third armed with mortars. This arrangement of ordnance in the casemates is to continue until the third parallel be finished, when the guns and howitzers in the 'batteries blindées' are to be replaced by pierriers, which, together with the mortars, are then to discharge small iron balls, pieces of iron, case shot, shells, and stones, on the enemy's approaches.

This writer presses the importance of ricochet fire for defence, and says, it is not sufficiently practised. He recommends its more general application both from behind the ramparts and dry ditches: and thinks it even more important in defending than in attacking a place.

'The enemy's troops,' says he, 'are every night exposed, without shelter, in constructing their works and covering their parties. Now a bullet which grazes five or six times will be much more likely to do execution than a direct shot, which may either strike short of the mark, and in the next bound pass far beyond the trenches, or go over without touching at all.'

He also gravely recommends a revival of the ancient weapons, particularly the cross-bow, in the defence of fortified places, and quotes many instances of brilliant defence, in ancient and modern history, to support his doctrine of the efficacy of 'armes blanches.' 'A man,' says he, 'armed with a cross-bow, may easily discharge an arrow every minute, which is 1440 in twenty-four hours. Supposing then that the besieged employ 200 cross-bow men, there would be 288,000 arrows discharged from the ramparts in that time. But it has been shown,' he adds, 'that at least one arrow in every 180 will take effect, whence, of the whole number thrown, 1600 will do execution, from which it follows that 1600 men will be put hors de combat daily. Supposing this défense rapprochée to continue only ten days, the besiegers he calculates will have lost 16,000 men, and it would be easy to double the result by augmenting the number of cross-bowmen.'

M. Carnot has imbibed many of M. Follard's prejudices in favor of the defensive powers of ancient arms. The latter says 'all prejudice apart, this arm (the cross-bow) is infinitely more destructive than our musket, its force being at least equal, and its effect more certain.' But our author's assertion that 200 arbalétriers would put 1600 men of the besiegers 'hors de combat' daily, is going much further than ever the prejudiced Follard ventured to retrograde upon the path of improvement.

M. Guichard gives more correct readings of the practice and character of ancient sieges; and to all those on whom the reasoning of Carnot, supported by the fancies of Follard, have had any effect, we recommend the perusal of that work, as a sensible antidote, M. Guichard says, page 13, 'I have examined in the original language, the passages upon which he (M. Follard) appuys his system, and soon convinced myself that there is no authority for what he asserts, and that the authors express themselves very clearly upon the subjects they have undertaken to explain.' We might extract many other observations bearing with equal force upon the erroneous conclusions M. Follard has drawn; but it is quite idle to compare modern and ancient modes of warfare for any purpose of practical utility. The invention of gunpowder turned the balance in favor of attack, and the introduction of the ricochet system has confirmed this superiority. All M. Carnot's theory and ingenuity are insufficient to restore the equilibrium of this settled preponderance. His suggestions, if strictly followed, would on the contrary turn the scale more in the direction of their present inequality, from the little vigor he excites in the first stages of defence. The introduction of artillery gives a momentum, equal to that of a battering-ram, to a cannon ball which may be projected with such a degree of accuracy, as to enable us to injure defences at very considerable distances. The largest battering-ram we read of was 120 feet long, and, including a head of cast iron of one ton and a half, was about 35,000lbs. weight. Supposing it to be worked by 500 men, each exerting a force of 70lbs. the force of momentum produced by their action, when the ram moves one foot per second, is about 35,000lbs.—The momentum of a 24lb. shot, moving with a velocity of 1500 feet per second, is about 36,000lbs. The invention of gunpowder thus proved utterly destructive of all former modes of war; and the gradual improvements made in artillery, and in the science of attack, explain the causes of what M. Carnot considers so extraordinary, when he says, page 327, 'from what cause does it happen that the strongest places are commonly taken in sieges which rarely exceed six weeks, and generally last only twenty-two or twenty-three days. These are the causes which have produced the short duration of modern sieges: and it is quite useless and absurd, as colonel Douglas well observes, to attempt any comparison between the obsolete and the existing practices, with a hope of improvement.

M. Carnot closes this part of his treatise noticing, and certainly favoring (p. 349)

ular idea of a M. Flachon de la Jomarière, proposes to pour upon the besiegers, when are about to crown the covered-way, an mous quantity of water from powerful en- s, which, he says, will make the soil so id that it cannot be worked.

is New System of Improving Fortifications f course, grounded on these principles. 'The it,' says M. Carnot, 'of the new system of fication, consists in procuring, by the par- lar combination of the parts which compose umerous debouches on all the avenues of the e, so that the besiegers may not be able to blish themselves near it without being ex- d to be suddenly attacked, at all times, by he garrison. From this the enemy will not able to present himself any where, without ing troops constantly drawn out, ready to lse any sortie the besieged may unexpectedly e, and which they may renew whenever they se. The besiegers will therefore be obliged ccumulate troops on all parts of the immense umference which they must occupy, to em- e the defences of the place; and as in the nse raprochée all this development of force ithin the influence of vertical fire, showers projectiles will carry off some men every nent, and at length entirely crush the be- ers.'

his 'torrent of vertical fire' is thrown from mated mortar-batteries, the positions of ch are determined from an acknowledged ct in Vauban's systems, viz. the deficiency ire on the prolongations of the capitals of the ions, but which fault M. Cormontaingne has edied by constructing redoubts in the re- ring places of arms.

I. Carnot's ideas of the irresistible effect, exclusive advantage, of this profusion of ical fire in defence, are such, he asserts, 45, that it will change entirely the character he operations of a siege. 'According to the ting practice,' he says, 'the besiegers are ered, and the besieged exposed. In the new em, on the contrary, the besieged are covered, the besiegers exposed to a profusion of feux icaux, which will reach them behind their pets and lodgments, enabling the besieged to nd their out-works, without occupying them, ely by pouring upon them torrents of vertical when the assailants move forward to the ck.'

I. Carnot then arranges his new system; the mated mortar-batteries are placed in interior losures in the gorges of the bastions, so as to in the direction of their capitals. There nine casemates in each battery: of these, n contain mortars or pierriers, two in each; other two (the extreme casemates) are each ed with three guns, for the defence of the h of the retranchement général. The escarpe he retranchement général is a detached wall ed in front of the rampart, leaving a chemin rondes eighteen feet wide. The exterior es of the ramparts are all forty-five degrees. bastions are also covered by a detached wall ted near the base of the exterior slope of the part, leaving a chemin des rondes six feet le.

The ditch of the bastion is thirty-six feet wide. Counterguards are placed before the bastions. The demi-lunes are works of the same profile as the counterguards. Sometimes M. Carnot calls his counterguards and demi-lunes glacis coupés, and under this name recommends them for improving the defences of existing places. The cavaliers are placed in front of the tenailles, and communicate with them by caponnières.

The counterguards and demi-lunes have ditches thirty-six feet wide at bottom, the counter slopes forming a reverse glacis of forty-three yards which M. Carnot calls glacis en contrepente.

In old fortresses M. Carnot proposes to convert a portion of each bastion into a counterguard, by making a ditch, about thirty-six feet wide across the bastion, from the middle of each flank, in the directions of lines of defence; the two branches of the ditch meeting, consequently, on the capital. The part thus enclosed is formed into a bastion, by making parapets upon the interior lines of the ditch, which thus become the faces of a bastion so small that its flanks are but sixty feet long—sufficient only to receive three guns. The new ditch is consequently very little defended by flank-fire; but this, consistently with the principles already noticed, M. Carnot has here also sacrificed to the superiority of vertical fire.

For the purpose, chiefly, of being able to make sorties with facility, M. Carnot proposes to convert the glacis into a glacis en contrepente, and, with the earth furnished by the excavation, to form the upper part of the old glacis into a counterguard or glacis coupé, raised nearly as high as the body of the place. The interior slope of the new work occupies the greater part of the old covered-way. The traverses are removed; and, instead of palisades, a brick wall furnished with loop-holes is constructed very near the counterscarp. The exterior slope of the glacis coupé is so abrupt that no part of it can be seen from the body of the place; and the greater part of the advanced ditch formed by this alteration cannot be seen at all.

Colonel Sir Howard Douglas has published some spirited and scientific Observations on the Motives, Errors, and Tendency of M. Carnot's Principles. We have already quoted this writer, and it is but fair to add, that he seems to make a formidable attack upon the principles and constructions of that able engineer. We abstract a sufficient portion of his remarks and experiments to place the whole subject fairly before the reader.

'It is quite clear,' observes this writer, 'that M. Carnot has formed his theory upon the parabolic hypothesis, which, I must inform such readers as are not acquainted with these matters, is the theory of a projectile's flight in a non-resisting medium. This theory, considerably erroneous in all cases, is particularly and greatly so with small projectiles; and its deductions, as applied to the velocity of descent of small balls used in very elevated short ranges, are quite fallacious. The velocity of the ball in a horizontal direction (which by this theory would be constant, and to the projectile velocity as radius to the cosine

of the angle of elevation) being inconsiderable, it is evident that the effect of vertical fire must depend upon the velocity of descent in the direction of the curve. Estimating this according to the parabolic theory (as the secant of the angle of elevation), the motion would be slowest at the vertex of the curve, and the velocities of the projectile be equal at equal distances from that point. According to this supposition we should assign to the descent of small balls, discharged at an elevation of seventy-five degrees, or eighty degrees, such accelerated velocities, as would, if true, be quite sufficient to do good service in the way M. Carnot suggests; but the fact is, that there can be no acceleration beyond a limit which, with small balls, is very much less than is generally imagined. From the vertex of the curve, where all the vertical motion is lost, the ball begins to descend by an urging force which is nearly constant, viz. its own weight. This force would produce equal increments of velocity, in equal times in vacuo, but in air, the descent of the ball being resisted more and more as the velocity accelerates, the urging force will, at a certain velocity, be opposed by an equal resistance of air, after which there can be no further acceleration of motion, and the ball will continue to descend with a velocity nearly terminal.

'When I began to consider this interesting problem, as applied to vertical fire, I was soon satisfied that M. Carnot had entirely overlooked *terminal velocity;* and I shall show, from his own words, that this is the case. It is not necessary to exhibit here the investigations by which I have established the impotency of M. Carnot's vertical fire; I shall only state the results, not to embarrass the conclusions with abstruse matter. The solutions are computed from the theorems given in Dr. Hutton's tracts, and, although the results may differ a little from the truth, yet it is quite clear, that in the descent of the balls there can be no acceleration of motion beyond a certain limit; that with small balls this velocity is very much less than persons who have not investigated this curious problem would imagine; and that M. Carnot has evidently overlooked this circumstance.

'The velocity which a musket ball has acquired when the resistance becomes equal to the weight, or urging force of descent, is only about 180 feet in a second. The potential altitude, or the height from which the ball must descend in vacuo, to acquire a velocity equal nearly to the terminal velocity, is 523 feet. Hence, in the first place, it would be a waste of means to use the full charge; for a musket ball fired upwards, with the ordinary quantity of powder, would be projected to a greater height than 523 feet; and it is evident that all above this is unnecessary. The indentation which a musket ball, moving with a velocity of 180 feet per second, makes on a piece of elm timber, is about $\frac{1}{10}$ of an inch: this might, perhaps, be sufficient to knock a man down, if by great chance it were to fall upon his head; but in no other case would it put him 'hors de combat.'

'Now, as to the four-ounce balls. The diameter of a French four-ounce ball is one inch, two lines, five points, which, reduced to English measure, is 1·28038 inches.
Its content is 1·09909 inches.
The weight is 4·72247 ounces, if made of cast iron, and 4·8624 ounces if of wrought iron.
The terminal velocity of the cast-iron ball is about . . . . 201 feet
The terminal velocity of the wrought-iron ball is about . . . 204
The potential altitude of the cast-iron ball is about 631
Ditto ditto wrought ditto ditto . . 650

'M. Carnot recommends that the balls should be made of hammered iron; but adds, that, as the charge of powder for a mortar is small, balls of cast-iron may resist the explosion without breaking, and will answer as well. Now this observation shows that the author had not considered the effect of the air's resistance, nor doubted a sufficiency of force in his vertical fire: for the weight of a ball of hammered iron is greater than that of a ball of cast-iron of equal diameter, and the superior weight or urging force of the former would generate greater terminal velocity than a lighter ball of the same size could acquire; the momenta of the two balls in question would be as nineteen to eighteen.

'Four-ounce balls, discharged at elevations even considerably above forty-five degrees, to the distance of 120 yards, would not inflict a mortal wound, excepting upon an uncovered head. They would not have force sufficient to break any principal bone; there would be no penetration, but merely a contusion. This certainly would not oblige the besiegers to cover themselves with blindages, as M. Carnot imagines; for a strong cap or hat, and a cover of thick leather for the back and shoulders, would be sufficient protection from the effects of his vertical fire with small balls. As the quantity of balls required to feed mortars discharging 600 balls at a time would be very considerable, M. Carnot observes that cubes of iron of eight or ten lines side, cut from square bars of this dimension, may be substituted. These, he says, may be fired from mortars, howitzers, or stone mortars, and will produce the same effect as balls (page 491, Carnot).

'Let us consider this:
Ten lines French are equal to ·89523 in. English
The content of the cube is ·71746
Its weight is . . . 3·0822 ounces.

'Now take a ball of the same weight:
Its diameter is . . . 1·111 inches.
Its terminal velocity is . . 185 feet per sec.
Its potential altitude is . 534 feet

'We have no experiments from which we can ascertain the terminal velocity of square shot; but, from comparative experiments with round and flat surfaces, we know that the resistance of the air to the flat end of a cylinder is more than double the resistance to a ball of the same diameter. Thus, although the urging force of a ball and cube of the same weight be the same, yet the surfaces upon which the resistance acts (and very irregularly in regard to the cube) are very different:
The surface of the ball is . . . 3·870
——— the cube is . . . 4·805

)m this, together with what has been said ting the descent of balls, we know, and enough for our present purpose, that the al velocity of the cube must be much less 85 feet per second; and consequently its)r momentum inferior to that of a 3·08 ball. The motion of a cubical shot will, s, be quite irregular, descending sometimes n angle, then a face, then an edge foremost, ng over and over in oblique, irregular di- is, without any certainty, excepting that ocity and effect will be much less than)f a round shot of equal weight.'

author smiles at the preference of the writer for cross bows and ancient wea- f attack and defence; and compares the orter time in which Calais, Tournai, rs, Naples, &c., have fallen before fire- He contends that sieges became uniformly r as gunnery was improved. Upon the opic of this writer, he adds, 'I give the of some very careful experiments, made sely to ascertain the precise effects of those s of vertical fire, which M. Carnot pro- to adopt as the principal means of de-

iments with different charges of stones from ten-inch iron mortar. Elevation 45°.

Charge 10 oz. of powder, and fifty flint , each about 14 oz. The average range 107 yards; but most of the stones were to pieces.

Charge 12 oz. of powder, and forty stones d granite of about 1 lb. each. The nearest fell at forty, and the furthest at 120 yards; nsverse spread was thirty yards.

Charge 16 oz. of powder, and forty-six , as before. The nearest stones fell at and the furthest at 130 yards from the r: the spread was forty-five yards. One went off to the right in an angle of about five degrees, and fell at the distance of 100 in that direction, very near a spectator l, as he thought, in perfect safety.

iments with a brass pierrier. Diameter sixteen inches. Elevation 45°.

Charge 2½ lbs. of powder (which filled the ber), and 100 granite stones of 1 lb. each, up to the mouth of the pierrier in a basket a bottom of wood. The nearest effect was y-eight yards; the furthest 300: the spread eventy yards. Many of the stones broke.

Charge 1½ lb. of powder, and seventy-five e stones of 1½ lb. each. The nearest effect welve yards, and the furthest 180. The d was fifty yards.

both cases it could not well be ascertained the greatest effect was, on account of the dispersion of the stones, many of which even with the reduced charge.

plying these experiments to the new de- s of M. Carnot, Sir Howard found that the st effect would take place in the gorge of astion; and that the furthest effect, P, I., would not reach the crest of the glacis, with the full charge of powder. It appears, fore, says he, that neither the third parallel, nor the couronnement of the glacis, are within the reach of stones forced to the utmost, from pierriers in the casemated battery; and the horizontal area of all those parts of the attack which come within its influence is so small, compared with the vast magnitude of the oval surface upon which the stones fall, that, it may be relied upon, not one stone in 1000 would take effect upon the besiegers.

A substitution of large balls and grenades, adds this writer, fired from mortars, would be less uncertain and more formidable; but even with these the dispersion is very great. 100 iron balls, of one pound each, were discharged from a ten-inch iron mortar, at forty-five degrees elevation, with a charge of 1 lb. 4 oz. of powder. The spread was fifty yards; the nearest effect 150, and the furthest 210 yards: the longitudinal dispersion was therefore sixty yards, and consequently the area of the surface affected by the descent of the balls, supposing it to be an ellipse whose axes are sixty and fifty yards, was 20,476 square feet The chances of hitting would therefore be very remote, whilst the expenditure of iron would be immense. At the rate of discharge which M. Carnot mentions, page 231, it would require a provision of nearly 1,500,000 lbs. of iron for the seven casemates of one batterie de gorge.

'In regard to the display of vigor and resolution in personal conflict, which M. Carnot seems to think comparatively deficient in modern defences, it is clear,' says the above writer, 'that the invention of gunpowder has narrowed the opportunities of displaying those qualities in the operations of a siege, properly conducted, more than in any other military enterprise. There is no opportunity for personal conflict, excepting in sorties, which, we have already shown, prove too frequently but a waste of life and valor, and in the defence of breaches, where also there is that to encounter which the ancients were not exposed to. M. Carnot's object in quoting so many sieges, is, to show that the defence of places by 'armes blanches' has constantly been more brilliant, more efficacious, of longer duration than by armes à feu. What, he says (p. 239), has the invention of powder, or the new process of attack, to do with the vigor and resolution that were used by the ancients? These, he observes, may alter the means but not the principles of resistance.

'Now here we differ from M. Carnot; and to close properly with this assertion, we have, rather fully, compared the ancient with the modern means of attack, for the purpose of showing that the general principles as well as means of defence are altered, and that both are inferior to those of attack when directed by scientific intelligence, and furnished with sufficient means. What can personal vigor and resolution do against the establishment of the ricochet batteries, and all the process of attack, until it come near enough to be checked by sorties? The defence by 'armes blanches' can only be applied to the *defence of a breach;* but a breach may always be *made*, whatever be the vigor, resolution, or strength of the garrison. The only means to oppose and retard the opening of a breach are by a powerful fire of artillery in the

first instance, then by counter-mines, and occasionally by sorties. These may, at a great sacrifice, *retard* the operation, but cannot altogether defeat it. Do not these alter the principles as well as the means of defence? The sieges of the ancients gave occasion for a great many personal conflicts from the beginning of the enterprise; and so did modern sieges, until parallels or places of arms were applied to protect the approaches and repel sorties: but there is now no such field for personal prowess, and a place may certainly be breached, and exposed to the consequences of an assault, without giving the besieged any favorable opportunity of displaying personal exertion with 'armes blanches.' The operations of a siege, to this period, are chiefly what the French call 'par industrie,' which, instead of being secondary, as M. Carnot says, to the objects of personal valor, are the means which introduce the display of it; and we cannot see that his reasoning can attach to any thing but the defence of a breach. With this also gunpowder has, or at least ought to have, a great deal to do; for the guns that made the breach, can render it practicable; they can prevent the besieged from closing it by exterior obstacles, and the interior defences may be molested by shells, stones, &c. M. Carnot applies personal valor and determination less, in the first instance, to the defence of a breach than we should do. He proposes (p. 333, 4to. edition) to have fifteen or twenty 'pierriers blindés' ranged round the breach as a focus, and to keep near them, also under cover, a corps d'élite ready to march forth. When the besieger's troops put themselves in motion, to advance to the assault, M. Carnot recommends that the troops should be withdrawn from the rampart, in order to allow the stone-mortars to act. It is evident, he observes, that the enemy either will not arrive, or if he does, that it will be in disorder, after immense loss from the fire of the stone-mortars; 'upon which the fire should suddenly cease, the corps d'élite march forth, charge the enemy, and will very soon sweep them from the field of battle, whilst a good sortie will take them in flank and rear, destroy their epaulement,' &c. This is indeed a sweeping clause in M. Carnot's theory, and there needs no comment to show that it is the most fallacious part of his doctrine. The way to oppose an assault is undoubtedly to render the breach as inaccessible as possible, by every obstacle that can be applied, and to hurl upon the storming party quantities of stones, live-shells, grenades, combustibles, &c.; and some of the expedients proposed by M. Carnot for these purposes, and practised by the French in the Peninsula, are among the best parts of his elaborate treatise. He recommends, p. 310, that the breach should be strewed with crow's feet, harrows, chevaux-de-frise, &c.; and that when the assault is about to be made, or expected to take place, the besieged should form a barrier on the summit of the breach, of strong six-pointed crow's feet, made of wood armed with iron points, firmly fastened to each other: that when the storming party advances to the assault, they should be assailed with a prodigious quantity of combustibles and any other destructive missile that can be procured; and that a deep trench, previously dug and filled with tarred faggots, and other combustible materials, should be set on fire when the storming party is about to mount the breach. He also recommends (p. 297) cuts to be made into the parapet, on the flanks of the breach, from which the besieged can either fire, or drop shells upon the assailants;—an expedient which, after the breach is carried, will prevent the enemy from extending himself, by sapping in the parapet, towards the shoulders and gorge of the bastion to the attack of the retrenchments. But, whatever obstacles and expedients be applied to close the breach, they will inevitably be destroyed, broken, or deranged by the heavy fire from the breaching batteries established on the crest of the glacis, which is always the immediate prelude to an assault. Consequently little reliance should be placed on any other means than the personal valor and determination of the troops actually placed behind these obstacles, who should *there* use the most determined, devoted exertions to prevent the enemy from gaining a footing on the breach. According to M. Carnot's method of opposing an assault, a footing might be gained, and a lodgment partly formed, before the corps d'élite could be drawn out from their cover, and march forth to 'balayer' the rampart; and when once a footing is obtained, or a lodgment made, it is not easily recovered, if proper measures have been taken to support the assault; and the attempt is always very bloody and seldom successful.

'M. Carnot inserts a long quotation from the Sieur Antoine de Ville's Ingénieur parfait, published in 1629, which, he says, only requires some *modifications* which follow from the improvements that have been made in fire-arms since the period in which this work was written. This passage commences in the original (book iii. part ii. p. 372) with an enunciation (which M. Carnot suppresses, as he does several other parts of the passage), which shows how completely the author's directions must be considered, as indeed they are, obsolete. 'In proportion,' says M. de Ville, 'as the enemy make a breach, the besieged should endeavour during the following night to undo his work, restore, and throw it up again.' Whoever reads this passage in the original will perceive that very little of it can apply at all to the defence of a breach made by a battery established on the crest of the glacis, in a face which has been ricoched from the commencement of the siege, and whose acting flank is directly counter-battered, and also enfiladed from the third parallel. It were madness indeed to attempt to defend a breach made in this regular way, unless the besieged have a retrenchment. M. Carnot may adduce, and my readers may recur to, the sieges made in the Peninsula, in opposition to this assertion; but we have the public authority of a very distinguished British engineer (lieutenant-colonel Jones) to remark, that those sieges having been undertaken and executed under circumstances and deficiencies which did not admit of regular attacks according to established rule, cannot be received as cases which afford any reason for departing from

long-established practice; and that the defence of the breaches at Badajoz, which has thrown some *popular* lustre on M. Carnot's work, could not have succeeded against an attack conducted, throughout, according to regular process. M. Carnot may perhaps dispute illustrations from British talent and experience, or we should have presented him with other references to facts contained in colonel Jones's excellent work, in support of other parts of our reasoning.'

PART II.

OF FIELD FORTIFICATION.

Field, or temporary fortification, having the same general objects as more permanent works, only differs from them in the means that may be accessible for attacking or defending them.

Field works are thrown up, merely for a short time: often in haste, without either choice or preparation of the materials employed; with very few means at hand, and sometimes in presence, as it were, of the enemy; besides, there are many cases in which they are not intended to resist an attack supported by cannon, and, when they are, the nature of the guns which will probably be brought against them may be different, according to the importance of the works. Lastly, field-works are usually attacked by troops formed into columns; which, advancing rapidly in the direction of their capitals, threaten many points at once; therefore, the dispositions for their defence, ought to be different from those of permanent works, &c. The maxims or general rules that are to be observed in them are;

1. In general, a saliant angle should not be less than sixty degrees, especially when it is undefended by any flank fire.

2. The saliants being the most exposed points, particularly when they are not flanked, their defence ought to be carefully attended to; when the ground, and intended object of the work you construct, will allow you to direct the saliants towards some natural obstacles which prevent the enemy approaching them on the prolongation of the capitals, you ought to avail yourself of that advantage; but, if you cannot direct the saliants thus, they must be protected, if possible, by some artificial obstacles.

3. In tracing field-works, let there be as many flank defences as possible.

4. When one part of a fortification is to flank another, it must be so disposed as to make with it an angle not less than ninety degrees, and exceeding as little as possible ninety degrees; in order that the ditch and counterscarp of the part flanked, may be defended by a direct fire from that which flanks it.

5. The length of the lines of defence ought not to exceed eighty toises at most.

6. Avoid the second flank defence, unless you are obliged to have recourse to it.

7. Be careful not to suffer any cover in the vicinity of a work, under which the assailants may approach unperceived.

8. Dead angles are to be avoided as much as possible.

9. A fortification must always be proportioned to the number of men who are to defend it; and, the length of the parapet remaining the same, you ought to enclose within it the greatest possible surface.

10. Before you begin a work, you ought to ascertain whether you have sufficient means for completing it in time.

We can only find room for a sketch of the principal or out-line of field-works.

Of redans or flêches. As redans or flêches, plate VI. fig. 3, can be quickly and easily constructed, they are frequently used in the field, where few means are at hand; besides, in many circumstances, the intended object of a work does not require that it should be able to afford an obstinate defence. Weak indeed is that which a redan can make, particularly when isolated; for then, independent of being easily carried in front, owing to the undefended sector *f a g*, its gorge *b c* is also greatly exposed, and you ought not to rely on the defence of a redan, unless it is supported in its rear; such as, for instance, redans thrown up in front of an army you intend to intrench, and on the banks of a river to cover a bridge, or defend a ford.

Sometimes redans are placed in front of a main work, either to cover its communications with the country, or to defend some parts of the ground which cannot be seen from it, and would be of advantage to the enemy in directing their attacks: or in short to procure a cross fire on the capitals of the main work, and keep the enemy at a distance from it. Redans so disposed are called lunettes.

No fixed rules can be given with regard to the length and direction of the faces of a redan, since both vary according to the ground, the intended object of the work, and the strength of the detachment that it is to cover, &c.

Of redoubts.—Redoubts, as well as redans, are frequently used in the field; where, as isolated works, they are employed, when the post or detachment to be intrenched being abandoned to its own strength, and without any protection in its rear that may prevent its being turned, it becomes necessary to enclose it entirely, so as to secure it from the attacks which the enemy may make upon it on all sides. Redoubts are extremely proper for covering an advanced post, a grand guard, or a communication; for defending a defile, a height; for protecting a retreat, the passage of a river, ford, or bridge; for supporting the wings of an army, a line of frontiers, &c.; independent of being easily constructed, they have also the advantage of affording a very good defence when supported from without, and even of being sometimes effectually used instead of fortins or field-forts, which in general require more time and materials for their construction, and a more numerous garrison for their defence.

The requisite length of the sides of a redoubt depends, not only on the extent which the parapet must have, in order that the garrison may man it properly, but on the necessary interior space for containing the men. It should also be considered, whether the troops are to reside in the work, or to remain there for a short time; as it happens, for instance, when a work is sufficiently near a main body of troops to communicate easily with them, and receive reinforce-

ments, should an attack be expected; in this case, it will suffice to regulate the size of the redoubt in such a manner that the number of men intended for its defence can man the parapet properly, without being crowded and obstructed in their motions; but if the garrison is to reside in the work, its interior surface must be larger.

Various methods have been proposed for calculating the necessary length of the interior sides of a redoubt, according to the strength of its garrison; but most have the double defect of not being applicable to small detachments, as the redoubts would then be considerably too little, and to increase beyond measure the interior surfaces of those works, when their garrison exceeds a certain number of men.

The method proposed by Noizé de St. Paul, a French engineer, is better in general than any we have seen. We shall observe, however, that it is rather complicated, as it varies according to the strength of the detachments; it contains, besides, several inaccuracies; we point out the two following:—

This author says, No. 32, page 39, of his work on field-fortification, 'if the detachment which you intend to place in a redoubt, is composed of more than ninety men, and does not exceed 120, take one-fourth of the number of men for a reserve, which you may make equal to one-third of that number, if the detachment consists of 130 men or thereabout: then divide the remainder by eight, and the quotient will give the length in toises, &c., of each interior side.'—According to this rule, a detachment of 100 men requires that the length of the interior sides should be nearly nine toises and three feet; whereas it is proved by experience, that eight toises and three feet, or thereabout, are enough; thus Noizé de St. Paul's rule increases, without necessity, the size of the redoubt, which requires thereby more time, and a greater quantity of materials for its construction:—besides, the author is inconsistent with himself; for he says, p. 44, note *k*, in the same work, that a detachment of 100 men requires a redoubt, whose interior sides should have from eight to nine toises at most. But let us proceed further, and suppose that the detachment consists of 120 men; according to the same rule, the interior sides of the redoubt should be eleven toises one foot and six inches: but Noizé de St. Paul recommends the same length for those of a redoubt constructed for 180 men; since he says, p. 39, 'if the number of men exceeds 150, as they will be able to man in two ranks the parapet of a redoubt capable of containing them, the length of the interior sides will be found by dividing the detachment by sixteen. Now, why should a redoubt, calculated for 120 men, be exactly of the same size as a redoubt constructed for 180? And is it not evident, that Noizé de St. Paul's method, which may give satisfactory results in some other instances is very defective in these two? Indeed it appears that he was aware of its insufficiency with regard to certain detachments; for he says, No. 32, p. 40, 'that he proposes it as a scale of comparison, which should be used merely as a guide in practice, since it is very difficult, not to say impossible, to give a general rule of computing the necessary length of the interior sides of redoubts according to the strength of the detachments, and that trying is the only way.' This author's work, however, in which he has collected and generally exposed with perspicuity, most of the modern principles on which field-fortification is grounded, deserves no small degree of praise.

M. Malortie de Martimont proposes the following rule, supposing the redoubts to be square, and that the garrison is to reside within them:—

1. Multiply by ten the number of men of which the detachment is composed, and the product will give, in square feet, the necessary extent of the surface contained between the foot of the slopes of the banquettes.

2. Extract the square root of that product to one decimal, and it will give in feet and tenths of a foot, the lengths of one of the sides which enclose the above-mentioned surface.

3. Add to this length twice the number of feet which the base of the interior slope of the parapet, the breadth of the banquette, and the base of its slope, are to have, and the sum will be the length, in feet and tenths of a foot, of one of the interior sides of the redoubt.

Let us suppose, for instance, that you have to construct a square redoubt *a b c d*, plate VI. fig. 4, for ninety men: multiply ninety by ten, and the product 900 will show that the surface *i k l m*, which is contained between the foot of the slopes of the banquettes, ought to be 900 square feet: extract the square root, thirty, of that product for the length of feet in the side *i k*, which is represented by *a b* in the profile fig. 5. Now, supposing the base of the slope *c* of the banquette to be six feet, the breadth of the banquette *d* three feet, and the base of the interior slope *e* of the parapet one foot; multiply the sum of those dimensions by two, and add the product twenty to the square root thirty which you have found before; then will the sum fifty be the length in feet of the interior side *e e* fig. 5, and *c f* fig. 4. It is evident, that in all redoubts constructed by this simple method, every man of the detachment has for himself ten square feet of the clear surface which is contained between the foot of the slopes of the banquettes; and ten feet, in addition to the space afforded by the banquettes and their slopes, as this writer contends, will suffice in all redoubts, let their size and figure be what they may.

Square redoubts are more simple and easy to construct than any other; but the configuration of the ground, and the number and situation of the points which a redoubt may have to defend, &c., frequently require that its figure should not be square; in this case, plant staves at all the points, where, in your opinion, the vertex of the angles, formed by the interior sides of the work, can be placed to the greatest advantage; and after taking, with the plain table, or by any other means which you have at hand, the plan of the figure delineated by lines which you suppose to join those staves, consider it as representing the interior contour of the parapet: measure the angles formed by those lines, in order to ascertain whether they are sufficiently open, Max. 1,

and if some are not, rectify them: inside of the plan draw a parallel to its outline, and at a distance from it, equal to the number of feet which you intend to allow to the base of the interior slope of the parapet, the breadth of the banquette, and to the base of its slope: and, as the figure described by this parallel represents that of the space which is contained between the foot of the slopes of the banquettes, compute its area in square feet; if it appears from your calculations, that the redoubt will be considerably too large, according to its garrison and artillery, this defect may be remedied by shortening the interior sides, or diminishing their number when it exceeds four, or by giving a smaller opening to the angles: but, if the work is small beyond measure, the contrary should be done.

Should a redoubt be circular, compute the radius of the circle, bounded by the foot of the slope of the banquette, so that the enclosed surface may allow ten square feet to each man, and 324 square feet to each piece of cannon: add to this radius twice the base of the interior slope of the parapet, twice the breadth of the banquette, and twice the base of its slope; then drive a picket at the centre of the redoubt, and fasten to it one end of a cord equal to the radius thus increased; and with the other end, to which a pointed picket is fastened, describe a circumference upon the ground.

To ascertain how many men and guns a redoubt which is constructed can contain:—Compute the area in square feet of the surface contained between the foot of the slopes of the banquettes, and divide it by ten if no artillery is to be placed in the redoubt; the quotient will give the number of men that can be lodged in the work: but, should the redoubt be supplied with cannon, subtract 324 square feet for each piece from the above area, and divide the remainder by ten, which will give the number of men.

Of fortins or field-forts.—Two kinds of fortins or field-forts are most generally used, when the ground, the intended object of the work you have to construct, and the strength of its detachment, will allow you to make it regular, or nearly so; these are the forts with tenailles or star-forts, and the forts with bastions; but sometimes you are compelled to construct a fort which is composed of different figures at once, and in this case no particular name can be given to it.

Field-forts take a particular name also from their number of saliants; thus, a fort is said to be square, pentagonal, or hexagonal, &c., according as it has four, five, or six saliants.

Star forts, or forts à tenaille, are such as form a regular suite of saliant and re-entering angles. They are, in fact, polygons, whose sides are broken so as to form the re-entering angles. If possible, the saliant angles should never be less than seventy degrees, and the nearer they approach to ninety the better, as a rectangular defence is always the best. The brisures, or faces, forming the re-entering angle, should not be less than fifty feet, or more than 100. If they are longer they require a numerous garrison to defend them, and it would therefore be better, in such cases, to construct a small fortress, especially if you have guns to use. Star forts are seldom constructed either in the triangular or square form, a redoubt being almost always preferable to either. In a triangle there can be no brisures, in a square their angles are 150°. A pentagon is somewhat superior to both, the defence of its saliant angles being better, and the angles of the brisure 132°. The hexagon is still better than the pentagon, though its saliants are by no means well defended. The heptagon has saliant angles of 128°, and those of the brisures 112. This form might therefore be used with considerable advantage, were the construction not difficult; the most convenient, however, as well as the most advantageous polygon for works of this kind, is the octagon. The construction is made either upon the interior polygon, by placing equilateral triangles on its sides, or on the exterior side, by means of the perpendiculars from the saliant and re-entering angles.

Bastion forts have often been proposed, but are inferior to star forts; the triangular half bastion particularly. They are difficult to construct; the saliants are too acute and ill-defended; the faces of the demi-lunes are without cover, and the interior surface is too small. The square half-bastion is little better than the triangular, but it encloses a larger space. When the bastions are full, the work may sometimes be very advantageous, and the construction is the same as in permanent fortification. In bastion forts the sides should not be less than 100, nor more than 200 yards, that the flanked parts may be within musket shot: 130 yards is a good medium. The best form of the curtain is to break it twice, by which a very advantageous fire is obtained.

Têtes de pont are thrown up for covering a communication across a river, and favoring the movements of an army or detachment, either when advancing into the enemy's country, or retreating from it. The form, size, and strength of a tête de pont, ought to be regulated according to various circumstances, and before you fix upon them it is necessary to consider; 1. The importance of the communication which it is to cover, and the probable length of time, during which the communication is to be kept up; for its utility may be confined to a temporary movement of the troops, or extended to the sequel of operations for a long time: 2. The breadth and form of the river at the point where the tête de pont is to be thrown up; and, likewise, the nature of the country on both banks: 3. Whether the tête de pont can be supported by musketry from the opposite banks, or by artillery only, or by neither; 4. Whether the river has only one arm, or forms an island; and in this case, what is the breadth of its arms, and the form of the ground in the island itself, so that you may determine, with more certainty, the defensive dispositions which can be made to the greatest advantage: 5. When you are to construct a tête de pont for covering the retreat of an army, or strong detachment, you ought to consider, whether, according to their composition and the state of things, that retreat is likely to be executed with celerity or slowness; whether there is any fear that the retreating troops will be

closely followed up by considerable forces, or whether they can retire quietly, and without being exposed to any attack which may endanger them: 6, and lastly, you ought to examine what is the strength of the army, or detachment, its number of cannon, the quantity of stores, and equipage, &c., and regulate accordingly the size of the tête de pont, as well as the passages through it, in order that the whole may file off without stoppage and confusion; all these various circumstances oblige us to make a difference in the size, form, and strength of a tête de pont. If an army or considerable detachment, for instance, is closely pursued by a great force, and can retreat but slowly, either on account of its composition, or because it is compelled to take particular precautions, which require time, the tête de pont, which is intended to favor its passage across the river, ought to be of a certain extent, and capable of making a good defence; for then, not only the troops, artillery, &c., must file off through it without any obstruction or confusion, but it ought to check the enemy, should he attempt to approach it: on the contrary, if a tête de pont has to cover a communication of no great importance, or the passage across a river, of an army or detachment which is not closely pursued, and can retreat quietly and speedily, it will not require as much extent and strength as the former.

The bridge or bridges, which a tête de pont covers, should be concealed as much as possible from the enemy's sight, as he would batter and ruin them with his cannon; and that, in general, the most advantageous points for constructing those works are where the river bends inwards.

When a tête de pont is to cover only a communication of no great importance, and across a small river, a simple redan will suffice: provided, however, that the river is so shaped as to prevent the enemy perceiving the bridge from some point; but, if he can perceive it, a piece should be constructed, whose flank defends the ground from which the bridge can be seen. These small têtes de pont will acquire a greater strength, if the ground on the opposite bank allows us to construct small redans where fusileers are placed; these redans ought to be disposed in such manner, that their fire, after grazing the faces of the tête de pont, may cross in front of the saliant, and as near to it as possible; the redan is intended to graze the flank of the piece.

When the river is so broad as to prevent the musketry fire of the redans doing any execution for the defence of the tête de pont, batteries may be constructed and disposed in the same manner as the redans.

A tête de pont which is intended to cover a communication of importance, and necessary for the movements of large bodies of troops, requires a greater extent and strength than the preceding. That represented by fig. 6, plate VI. is capable of making a good defence, particularly when it can be supported by batteries *a*, placed on the opposite bank; its outline does not differ widely from that of a redan, except that the faces are broken, in order to procure the two flanks *b c* and *d e*, the direction of which ought, in general to be as perpendicular as possible, to *e f* and *d f*, which they defend. Care must be taken, however, that they are not exposed to be enfiladed, which depends, of course, on the configuration of the river, and the disposition of the surrounding ground.

Sometimes, also, a tête de pont may be composed of a horn work, the inside and branches of which are defended by batteries *a*, erected on the opposite bank. When the ground does not allow you to construct these batteries, the branches of the horn work may be broken.

Half a square fort, with bastions, makes a strong tête de pont, particularly when you can construct on the opposite bank batteries and intrenchments. Half a star-fort, or redoubts so disposed as to flank each other, may also be used for a tête de pont.

Of intrenchments of armies.—The whole of the works and obstacles by which an army or a considerable body of troops cover themselves, for their own defence, may be called intrenchments of armies. In general the object is, to interpose between themselves and the enemy a defensive line, whose protection may compensate for their inferiority in number; this line may be composed of parts so connected together, that no uncovered space is left between them, in which case it is called a continued line; or those parts may be isolated from each other, and uncovered intervals left between them; and then it is named a line with intervals.

Intrenchments of armies can seldom be composed of regular and similar works, nor even of works different in their nature, but symmetrically disposed, and so constructed, that all those of the same kind may have the same dimensions; for, on account of the ground, or because of a necessity to direct more fire to certain points than to others, some irregularities will be requisite; thus it is impossible to foresee all the variations that may occur in the tracing of intrenchments of armies; wherefore no particular rules can be given for every case; there are, however, general principles which ought to guide an engineer.

The works most commonly used for intrenchments of armies, in a continued line, are redans, tenailles, or queues d'hironde, cremaillères and bastions; hence intrenchments take the name of intrenchments with redans, intrenchments with tenailles, or queues d'hironde, intrenchments with cremaillères, and intrenchments with bastions; sometimes also lunettes are placed in front and to a certain distance from a main intrenchment, which is then called intrenchment with lunettes.

For the detailed construction of these works, we must refer the reader to the professional publications on the subject.

The following general principles should be observed, as much as possible, in the formation of intrenchments of armies.

1. Their flanks must be supported, and not exposed to be turned; for, of what avail would be the defence in front which intrenchments afford, could they be attacked in the rear?

2. Their extent should be proportionate to the

strength of the army which they cover, since they are to be defended by it.

3. In tracing those intrenchments, you ought to avail yourself of every natural accident of the ground which they traverse; a low and marshy spot, a stream whose banks may be overflowed, a ravine, a wood where an abatis may be formed, and other natural obstacles, frequently afford great advantages, when properly connected with the other defences; either by increasing the strength of some parts of the line, or, when they suffice to stop the assailants, by saving you the time and labor, which, without them, the construction of works would require.

4. The line formed by intrenchments of armies should occupy, as much as possible, the elevated parts of the ground which it crosses, and border the summits of the heights or hills in its direction; by which means the intrenchments will have a superiority over the assailants, who cannot approach them without passing through uneven and difficult ground.

5. Every point of the ground, in front of an intrenchment, must be seen and defended by some of its parts.

6. The habitations in front of the line should be occupied and fortified, when they are sufficiently near to be supported by it; but should they be too distant, and so situated as to conceal the movements of the enemy, they must be destroyed.

7. For the same reason, a wood, which the line can support, must be occupied; but should its distance prevent it, and its situation be such as to conceal the movements of the assailants, it requires to be cut down.

8. The line ought to cover all the habitations in its direction, so as to make them serve as points of support, and to reap advantage from their reverse fire.

9. The number and strength of the respective works, depend on the greater or less danger to which the part of the line where they stand may be exposed; if, for instance, the enemy could scarcely approach it, and should he not be able to bring his cannon against it, the works thrown up for its defence, would undoubtedly not require the same extent and strength as they would, in case the assailants could easily approach and batter it.

10. All obstacles which may obstruct the communications of the line, with such parts in its front as must be protected by it, or which may impede the retreat of the army, should the intrenchments be carried, must be removed.

Intrenchments with intervals are now preferred to those which form a continued line. The following are the reasons which are assigned for it; 1st, the former require less troops for their defence than the latter; so that, with an equal number of men, a greater force can be placed at the most exposed points, or stronger reserves kept; 2dly, the intrenched army can form in such order as will not impede its movements; wherefore it will be able to pass successively from the defensive to the offensive, and vice versâ, according as circumstances may require: whereas, on the contrary, an army placed behind continued intrenchments must be deployed; and, as it can scarcely execute any movements outside of them, it is reduced to defend passively, if I may use that expression, the works which cover it, and are sometimes very imperfect: 3dly, a line with intervals requires less labor than a continued line; therefore, the works which compose it can be constructed with greater care in the same time, and with the same number of workmen. Lastly, the former line is more easily adapted to the ground than the latter; as the engineer, who is not confined to a fixed tracing whose parts must all be connected, can place the works at the most essential parts of defence.

In the late continental wars *frontiers* of countries have been the frequent objects of attack and defence. They constitute important objects of field fortification. M. Malorti furnishes some excellent directions for forming the principal works of this kind.

i. *Of lines of frontiers.*—The works and obstacles disposed along some open parts of a frontier, to shut up the country from one place, or post, to another, are called lines of frontiers.

These lines may answer very useful purposes; first, they protect the army which defends the country behind them, and also to secure its movements; secondly, they prevent the incursions of the enemy's parties, and the devastation which they would occasion; thirdly, they remove the fears of the inhabitants, who then attend to agriculture. Lastly, they connect the defences of the frontier, and therefore increase the resistance which can be made. Indeed, a line of frontiers will not afford those advantages, unless it be considered in its proper light and used accordingly; for should the army consider it, as forming its own intrenchments, and actually defend it, as lines of frontiers have in general a greater extent than is proportionate to the strength of the army, it follows that the troops would be weak every where; and that they would undoubtedly be crushed by the columns which the enemy would march to several points at once; thus the line would be disadvantageous rather than useful; but on the contrary should the army support it only with a limited number of troops, and occupy a position behind, from which it could repair rapidly to all points, and take in flank the enemy's columns when they begin to advance, no doubt can be entertained, in this case, of the utility of the line, and particularly when its extent is not so great as to preclude the army from the possibility of supporting all its parts; for the enemy will be compelled to form partial attacks, and therefore to weaken himself by dividing his forces. The following are the general rules to be attended to, in the construction of lines of frontiers.

1. They require, like intrenchments of armies, that the extremities should be supported, and not exposed to be turned. Should a line of frontiers be very extensive, it must be directed from one fortress to another, when there are any on the frontier.

2. Their front ought not to present any unprotected openings, by means of which the enemy may penetrate into the country which they are intended to cover. The reason is evident,

since a line of frontiers is chiefly intended to shut up the country which it covers.

3. When you are to construct a line of frontiers, you should avail yourself of all the obstacles which the ground that it traverses may offer.

4. That the line may have points of support, the open towns and villages enclosed by it should be fortified; this is particularly requisite when they occupy important points, and when, by their situation, they can see in reverse some other parts of the line.

5. As all the points of a line of frontiers are not equally accessible to the enemy, the obstacles which form it do not all require the same degree of resistance; for instance, should some parts of the line traverse an open country, through which the enemy might easily penetrate, whilst others pass over a marshy or woody ground, &c., which scarcely allows him to approach, the former would undoubtedly require stronger defences than the latter.

6. Since a line of frontiers is chiefly intended to secure the country behind it from the enemy's parties, the works which it contains do not require a greater relief than that which field-works commonly have; not even in its most accessible points; and, according to circumstances, from three to eight feet at most will suffice for the thickness of their parapets. It is scarcely necessary to observe, that the former dimension is applicable to such works as are only to be secured from the fire of musketry; and the latter to those which may be attacked with cannon.

7. Great advantages may be derived from streams, and particularly when they are broad and deep and have steep banks, or when the ground on their banks is marshy; should they contain islands, those on the side of the army must be occupied, in order to prevent the enemy from throwing up defences within them, under the protection of which he could more easily pass the stream; with regard to those on the the other side, they ought to be observed by posts which are ordered to retreat when the enemy appears with a superior force; all thickets, brushwood, &c., which might favor and conceal his movements, should be cut down. It is less important to occupy those islands than the others; besides, should they be attacked, you could not keep them on account of the impossibility of conveying a sufficient force to defend them.

8. All fords must be guarded by strong posts, and no bridges suffered to remain, except those which are indispensably necessary to penetrate into the enemy's country, should circumstances require it; when they are not situated within a fortress, or protected by it, the place where they stand should be more or less strongly fortified, according to the importance of the passage, and to the greater or less facility which the enemy may have of approaching them.

9. A small stream may also be rendered serviceable, by means of dams thrown across its bed; so as to form small inundations which render the access to the low parts of the ground more difficult to the enemy. The sluices of the water mills, manufactories, &c., which are commonly found on the banks of such streams, may be used likewise to that purpose, and those buildings should be fortified. Morasses too, and even marshes, are a very good barrier, as the enemy cannot attempt to pass them without danger, and particularly with his cannon; therefore, when the disposition and direction of the line allow some parts of it to be protected by such obstacles, you ought to avail yourself of them.

10. A few redoubts placed near the most accessible points of a ravine, and on those whence a reverse fire can be most easily obtained, will suffice to defend such passages.

11. The woods which are in the direction of the line, may also procure advantages by means of abatis made within them, and supported by a few detached works. The ground in front of the abatis should be cleared to a certain distance, in order that the enemy may not conceal his movements and approach unperceived.

12. Should a mountain be in the direction of the line, its passages must be guarded by posts sufficiently strong to secure them.

13. Wherever the country is open, and unprotected by natural obstacles, works ought to be thrown up, whose requisite strength depends on the importance of the points which they cover, the facility which the enemy may have of approaching them, and on the advantages which the ground affords for his manœuvres.

ii. *Of Posts of Frontiers and other Posts.*—Posts of frontiers are intended to secure, with a limited number of troops, the principal points of a frontier which is not defended by an army, nor by fortresses, the number, situation, and extent of which, are properly adapted to localities: for, should it be protected by such fortresses, their garrisons would suffice to guard it. It happens frequently that a frontier is actually defended by fortresses, but that they are not properly adapted to localities: in which case, intermediate points must be occupied by posts, so as to rectify the defects in the defence.

In a mountainous country, the valleys are chiefly inhabited, as they are more fertile and better supplied with water, communications and accommodations of all sorts, than the elevated parts; wherefore the towns, or villages situated within them, or near their openings, and in the plains contiguous to them, are particularly suitable to the establishment of posts: those which defend the principal gorges, and serve as places of rendezvous and depôts, should be strongly fortified, and preceded by smaller posts, in order to watch the enemy's movements; with regard to the other gorges, they should be guarded by posts whose requisite strength depends on the facility which they may give to the enemy to penetrate into the country.

Flat and open countries are more difficult to guard than the preceding; in such countries, the chief towns should be occupied, and those placed on the communications be more or less strongly fortified, according to the importance of the points where they are situated; intrenched camps, of which we shall speak hereafter, may also be formed, where their position enables them to be of service for the general defence of the frontier. It is particularly requisite that those towns should be capable of a strong resistance, which

are situated in fertile plains, as armies attempt generally to advance through the most fruitful parts of a country.

No particular rule can be given, with regard to the method of fortifying posts of frontiers, since it depends on the configuration of the ground, the time which you can command, &c. But, as those posts are intended to serve instead of fortresses, particular attention must be paid to the dispositions for their defence; and that you should avail yourself of every advantage which localities may offer; a stream which allows an inundation to be formed, or whose passage may be rendered difficult to the enemy by other convenient means, an impassible morass which secures part of the post, or a marshy ground which obstructs the approach to it; a wood where an abatis, properly supported, can be made; or which must be entirely cut down, as it would conceal the enemy's movements, and expose the post to be surprised; buildings, which, being placed between two works, form a sort of curtain connecting their defences, and whose walls may be pierced with loop-holes; or which project in front of the post, and will flank part of it, after being secured by works, or by other practicable dispositions: some other buildings which must be pulled down, either because they would mask the fire of the post and render it less effective, or because they would favor the enemy's approach, and enable him to see into the post; a street, which should be barricaded, or cut across by trenches: some particular points, where works must be thrown up, as, on account of their situations, their fire will flank other works, or defend them in reverse: a ravine, a ditch, a steep ground, &c., which may strengthen the defence, or which would weaken it, should not proper precautions be taken: these, and other considerations, which circumstances may require, should fix the attention of an engineer, in forming his plan for the defence of a post, and, if he cannot depend upon sufficient time to complete all the dispositions which are requisite, he must attend, first, to the most essential; next, to those which are less important; and ultimately to the formation of such works and obstacles as will improve the defence of the post, although it may not indispensably require them. The first step to be taken, in such a case, is to secure the post from a coup de main. It is scarcely necessary to observe, that the defences thrown up for that purpose must be so disposed as not to prevent the addition of others, should circumstances permit it.

Let us suppose that an army intends to invade the territory of the enemy, and to remain therein; in this case, the march of the army requires particular precautions suitable to the nature of the frontier through which it proposes to penetrate: for instance, should the frontier be protected by fortresses well calculated in all respects for its defence, they must be taken as the army advances, and then be repaired, garrisoned, and supplied with stores and provisions, in order to keep in awe the invaded country, and afford points of support which may secure the army's retreat, should it be compelled to fall back, and supply all its wants; but if the country is open, and destitute of fortresses, posts strongly fortified must be established near the principal communications, and in the points most advantageously situated to defend it, and secure the army's retreat, if necessary; indeed, less precautions are requisite, when the army which invades such a country intends only to make a temporary stand, either to levy contributions, or to draw in the enemy and make a diversion; however, it should occupy, as it advances, the principal communications, and the positions which will secure its flanks and rear; as, otherwise, its subsistencies would be continually exposed to be burnt or taken away by the parties of the enemy; besides the rear of the army would be annoyed, and the army, perhaps, be cut off.

The winter quarters of an army, and particularly in a hostile country, should also be covered by posts so placed as to defend the principal communications; for without it the quarters will not be secure, nor will the troops enjoy any repose, as they may be attacked at every moment: nay, should the enemy take the field early, and attack the quarters before they have time to assemble, he might crush them, and thus destroy part of the army in the beginning of the campaign.

As all posts should be fortified according to the same general principles, we refer the reader to the hints which we have given, when speaking of posts of frontiers.

iii. *Of intrenched Camps of Frontiers.*—Some of the positions to be occupied along a frontier, for its defence, may not be inhabited, or the number of habitations which they contain may be too small for the troops, which in those two cases must be encamped; and then the positions take the name of intrenched camps of frontiers.

There are two sorts of intrenched camps of frontiers; namely, those which have a small extent, and are only intended to guard the points where they are placed; they differ from posts of frontiers, of which we have been speaking in the preceding section, merely because they are situated in an uninhabited place; and what we have explained, with regard to the former, is also applicable to the latter, with some modifications which the difference in their situation may require. The other intrenched camps of frontiers contain a considerable body of troops, and are intended not only to guard the points where they are established, but to cover the country; these camps, which are formed for the same purpose as flying camps, and only differ from them as they are fortified, afford great advantages, when properly disposed; they keep the enemy in check, and prevent him from penetrating through some weak points of the frontier, in order to advance in the country; for then his flanks and rear would be exposed to be attacked by the encamped troops, as they can march in all directions; his lines of communication would not be safe, and his retreat might be cut off. It is evident that camps of this sort require to be so fortified as to afford a resistance proportionate to their object, and to the importance of the points which they occupy; and that their situations must be such as not to expose them to be rapidly and unexpectedly surrounded; for the troops

could not march to the tnreatened points, nor make good their retreat when their safety required it; and therefore they would be exposed to no purpose.

The proper situation for an intrenched camp of frontiers requires, likewise, that it cannot be taken in reverse, nor the troops prevented from retreating or communicating with other parts of the frontier, according to circumstances; and that the enemy may not, by crushing some posts, oblige the encamped troops to withdraw from their intrenched position, for fear of their retreat being cut off. Lastly, it should be examined, whether the situation of the camp affords easy means to penetrate into the enemy's country, should such offensive movement be requisite, and whether it can be placed in a spot protected by some natural obstacles, as then it will require less time and labor in fortifying.

iv. *Of grand têtes de pont.*—When part of a frontier is covered by a river, it is necessary to secure the principal communications across it, so that an army may march to the enemy's country, or retreat from it, according to circumstances: grand têtes de pont are constructed for that purpose.

It is evident that grand têtes de pont ought to be capable of a great resistance; for, as their object is very important, the enemy has a material interest in destroying them; they require also a rather considerable extent, in order to contain a sufficient number of troops to check him, when the army is advancing or retreating through them. Lastly, they must be so disposed as to prevent him from perceiving the bridges which they encompass; otherwise he would attempt to destroy them from a distance, with his cannon.

When the communication to be secured is situated in a town, and not seen from without, the part of the town beyond the river must be fortified, and then it serves as a tête de pont.

But should the opening of the communication be outside of the town, and seen from the country, not only the town must be fortified, but the opening requires to be covered by works sufficiently extensive to hide the bridges; or the points from which the enemy can see and batter them must be fortified.

Lastly, if the communication is at a certain distance from the town, its opening towards the enemy should be fortified, and the requisite precautions taken to secure the bridges from being battered.

It happens frequently that these grand communications across rivers are only established in time of war; wherefore, the bridges which form them have no great solidity: in this case, stoccados should be constructed in the upper part of the river, so as to stop every thing which the enemy may let go with the current, to break open or destroy the bridges. When there are islands near a tête de pont, those whence the enemy could take it in reverse or batter the bridges should be fortified.

A *single house*, when it has no stone walls, may be fortified in the following manner: the walls may be strengthened by boards in the inside, or by rafters applied as in blockhouses, or, if these are wanting, by making a ditch round it, and using the earth to strengthen the wall. The doors and windows are fortified with boards, and barricadoed. Loop-holes are every where made, but in such a direction that the enemy cannot reach them with his firelocks, so as to fire into the inside of the house. If there is no ditch round it, other impediments are to be made use of, to hinder the enemy from approaching close to the wall. The roof is broken down, and all combustible matter covered with earth and rubbish, to defend the house from an attack from above, which might otherwise be executed by ladders. In a stone house, the walls will generally be strong enough, or, if not, they are to be prepared as above. The same is also to be observed respecting the windows and the roof; and, if possible, it is to be made shell proof from above. The doors are either barricadoed, or defended by a tambour constructed before them, to have a flanking fire.

A *church-yard*, a farm, or an estate, is fortified in a similar manner; but, if surrounded by a wall, either loop-holes are made through it, or, if too high, a kind of scaffolds, called echafaudages, are to be erected, serving for the soldiers to stand upon while firing. The church, or the building on an estate, are then generally used as a corps de garde, and made shell proof, by breaking down the roof and the uppermost story, and using it to cover the building. The doors, and particularly the corners of the walls round such a place, are generally covered by tambours; but, if time permits, caponniers, and other impediments to the advancing of the enemy, are made use of. The street and roads, leading towards them, are generally made impracticable by old or broken carts, harrows, boards with nails, wheels, &c. All the houses in the neighbourhood, which may be advantageous for the enemy, or which may favor or cover his approach, are levelled, and the rubbish of them used to strengthen the walls. The trees near such a place, if large, are hewed down or sawed off, that even not a single rifleman may approach covered by any of these parts.

A small, or *country town*, if surrounded by a wall, is fortified in a similar manner; but echafaudages are generally used behind its walls, and, if possible, two rows of soldiers are employed, one firing through loop-holes, and the other over the walls. Guns are placed wherever their fire is of the best effect. The gates are barricadoed, and covered by impediments which hinder the enemy from advancing; besides this, they are covered by traverses, and a flanking fire is established before them, if possible. Only such parts of the gates as are essentially necessary to be open for the communication are not barricadoed, but strongly defended, while every thing is to be done that may render the interior communication better and more easy, by means of sufficient passages.

PART III.

ON THE ATTACK OF FORTIFIED PLACES.

It has been suggested that our treatise on the above art requires some detailed mode of *attack*, as one of the best exemplifications of the doc-

trine of fortification or defence. We do not hesitate to avail ourselves of that suggested by colonel Douglas, and which he insists will overcome all the obstacles opposed as well by the ordinary modes of fortification, as by the new method of M. Carnot.

The ordnance required for the attack shown in plate VII. is as follows:—

No. of Battery.	Guns.	Mortars.	Howitzers.	Pierriers.
1	7	2		
2	4	2		
3	4	2		
4	7	2		
5	10	4		
6	10	4		
7			3	
8			3	
9			7	3
10			7	3
11	4			
12	4			
13	5			
14	5			
15		8		4
	60	24	20	10
16	5	Brought forward from the other batteries.		2
17	5			2
18	5			2
19	5			2
20	5			2
21	5			2
22	5			
	35			

This proportion of ordnance is about the same as that usually estimated for the attack of a front of Vauban's first system, calculated at the lowest rate.

The attack (plate VII.) is made upon a bastion and its collateral demi-lunes.

The first parallel is traced, as usual, about 300 toises from the most advanced points of defence, and extended sufficiently to embrace the prolongations of all the works which have influence on the attack.

The inward faces of the adjoining bastions, and their counterguards, are ricoched by the batteries 1 and 4 at the extremities of the parallel; and the batteries 2 and 3 are established to ricocher the inward faces of the two demi-lunes and their ditches.

At the same time that these batteries are constructing, approaches are pushed forward on the three capitals; and the second parallel commenced as soon as the ricochet batteries, 1, 2, 3, and 4, are in activity, which should be in thirty-six hours after their commencement.

M. Carnot despises so completely all the early operations of attack, that we may presume upon being very little opposed in constructing these works; and consequently that they may easily be finished in the usual manner and time. The barbet batteries in the saliants of the demi-lunes would soon be destroyed and the guns dismounted, if not removed upon the completion of the batteries 2 and 3, by which the inward faces of the demi-lunes are ricoched. The faces of the two collateral bastions and their counterguards would also be ravaged and swept by the batteries 1 and 4; and, if necessary, batteries might also be placed in the first parallel, to ricocher the faces of the bastion attacked, and its counterguard; but the importance of throwing a more powerful fire upon these works should induce us to reserve this battery for position in the second parallel, satisfied that it may be constructed without establishing more ricochet batteries in the first place of arms. The battery marked in dotted lines in the plan, may, however, be constructed, and should be armed with heavy mortars and howitzers, to fire, at low elevations, to ruin the circular portion of the escarpe-wall opposite to the casemated battery of the gorge; and to injure or break in the casemates. If eight-inch mortars are placed in this battery, they should use, occasionally, sixty-eight pound shot, or shells filled with lead; but heavy iron howitzers, or carronades, will do better: there can be no doubt that with such means the escarpe-wall and casemates would sustain very considerable injury.

As soon as the second parallel is completed, the batteries 5 and 6 are established to ricocher the faces, chemins-des-rondes, ditch, and counterguard of the bastion attacked; and the outward faces of the adjoining demi-lunes with their ditches. The ends of the parallel are secured by redoubts, armed with field artillery.

When batteries 5 and 6 are in activity, the demi-places-d'armes are commenced: they are run out from the flank branches of batteries 5 and 6, until the prolongations of the inward faces of the demi-lunes are intercepted, and there the howitzer-batteries 7 and 8 are constructed.

The batteries made in the second parallel, to ricocher the faces of the bastion attacked will be so effectual in ruining their defences, that it does not appear necessary to construct half-parallels and howitzer-batteries against them, as has been done against the faces of the demi-lunes.

The zig-zags upon the capital of the bastion are pushed forward, from the second parallel, simultaneously with the construction of the half parallels; and, as soon as the batteries 7 and 8 are in activity, the third parallel is commenced, traced, in a right line nearly, joining the three saliants of the glacis en contrepente.

The half-parallels are now extended outwards from batteries 7 and 8 to embrace the prolongations of the flanks of the adjoining bastions, and the batteries 11 and 12 there constructed. The extremities of the half parallels are connected with the second parallel by trenches or places of arms, which are thus flanked by the adjoining faces of the redoubts, and cover the batteries in the half-parallels from being turned by sorties. At the same time that this is doing, the howitzer-batteries 9 and 10 are established in the third parallel, to ricocher the faces of the bastion attacked, its ditch and counterguard, if no half-parallel and

howitzer-batteries have been constructed for these purposes.

The objects of the mortar-howitzer-battery, No. 15, are to endeavour to ruin as much as possible the escarpe-wall of the bastion, and the casemated batteries; also to ricocher, and shell, the communications, chemins-des-rondes, and retranchement générale.

An attentive inspection of the plate will show, that the besieged must suffer greatly from this battery, particularly at that advanced period of the siege which will oblige them to keep their defences manned: for the entrances to the chemins-des-rondes of the bastion being in its gorge at the base of the interior slope, the troops entering and returning will be continually passing, close to the back-wall of the detached casemates which flank the ditch, in directions parallel to the capital of the work, and consequently exposed to ricochet fire from battery No. 15; and the ramp leading to the interior of the bastion, being constructed exactly upon its capital, will be much ravaged by the continual ricochets fired in that direction. The seven casemates à pierriers being open at the ends, all well directed shot or shells which do not pass more than fifteen feet over the top of the escarpe-wall, will either enter a casemate, or, striking the piers, or the ends of the arches, knock off splinters of stones that cannot fail to commit great destruction among the troops lining the wall immediately in front.

Nor will the battery itself remain in a perfect state to this period of the siege. It is not too much to expect that eight heavy mortars, or howitzers, in action since the opening of the batteries, will have done very material damage to the escarpe-wall by which the ends of the casemates are covered; and it is evident that, wherever a breach or fracture is made in it, the interior of the adjoining casemate will be completely exposed to direct fire, whenever a lodgment on the saliant of the bastion is established: and it should be remarked that the escarpe-wall is only four feet six inches thick, in the recesses made for receiving troops.

As soon as the third parallel is finished, lodgments should be made on the crest of the glacis, by saps branching outwards from the three capitals, in circular directions round the saliants, and thence parallel to the edge of the glacis; constructing traverses and parades wherever it may be necessary to *defilade* the interior of the trenches from any of the works of the place.

Double-saps are pushed forward at the same time from the third parallel, and an advanced parallel worked right and left to join the lodgments, or couronnement, of the glacis.

At the same time that these works are commenced, trenches are worked from the half-parallels near batteries 11 and 12, to obtain prolongations upon which to construct the batteries 13 and 14, which have very important objects to accomplish, viz. to ricocher the faces of the cavaliers, and the retranchement général. It appears by measurement and calculation obtained from the difference of command of the cavalier and demi-lune, together with the distance between their sections on the line of this prolongation, that the cavalier may be seen at the point marked by the right of battery number 13; and terms taken from the respective commands and distances of the retrenchment and other works on the line of its prolongation show that it may be seen at the places marked for batteries 13 and 14 and consequently that it may be ricoched in both directions. The prolongations of the retrenchment are obtained, as the plate will show, clear of the cavaliers; for the command of these works is such as to cover batteries 13 and 14 from all the intercepted portions of the retrenchment. It is only therefore from the parts most remote to the bastion attacked, that these batteries can be seen, and that very obliquely:—they cannot be counterbattered. Thus the portion of the retrenchment from which battery 13 may be seen, would be ravaged by the alternate ricochet battery 14; and the part affecting it, be ricoched by battery 13. The *apparent* exposure of batteries 13 and 14 to several stages of fire, renders it necessary to notice these circumstances, in order to meet here any observation that might occur as to difficulty in constructing and using these batteries. The nature of the polygon affects some of these circumstances, and would require some modification in the plan of attack; but we must confine our reasoning to the case before us. The batteries 13 and 14 are connected, by trenches, with the couronnement of the glacis, and armed with five twenty-four pounders each.

The trenches, saps, and parallels, should be defiladed from the fire of the place, by making their terrepleins parallel to the plane in which the crests of the enemy's works, and the besieger's trenches lie, so that the lines of direct fire, passing close over the parapets of the trenches, parallel to the plane of their interior spaces, do not command them any more than if both were in the same horizontal plane. This only requires the additional labor of taking out the prism of earth necessary to slope the bottom of the trench in a plane parallel to that of the command (which, in the present case, is very trifling), and to make the parapets of the batteries a little higher than usual. If this be carefully executed, it will effectually cancel the advantages which M. Carnot dwells so much upon, as arising from this effect of command.

We are now come to that part of the operation at which M. Carnot says the besiegers will find themselves exposed to the full effect of sorties.

Before parallels were introduced, sorties, it appears, were very generally successful. This has furnished M. Carnot with many facts calculated to show the good effect of these enterprises of valor before the science of attack received its vast improvement from the experience of its great master, Vauban; and there is no want of examples to show that sorties may always be made with success from places attacked with insufficient force. But if approaches and batteries be well protected by parallels, and these *intrenched positions* be properly occupied, vigilantly guarded, and gallantly defended, sorties will be so severely punished, whatever degree of

rary, transient success may attend them, erhaps, a siege cannot commence with a nstance more auspicious to the besiegers, hat of meeting an attack of this nature with r means and prudent dispositions. The ience gained during the wars of Louis , in which the science of attack was ted to its present state; and the opinion the great military authorities, of which that as so prolific, are condensed in the maxims nstruction given in the eighth volume of the ary History of that period, by the marquis uincy, who observes, 'Sorties are dangerous prises when the attacks are supported by lels; and generally produce little advan- and always sustain great loss. We are tempted to estimate the character of a de- by the sorties d'éclat made during the ; but these contribute more to the reputa- of the governor for gallantry, than to the ntage of the prince; since it is certain that etardation they may occasion to the enemy, no comparison to the loss which the be- d always sustain on such occasions.' Similar ions may be traced in every work of charac- iat has been written upon this subject, from late of the authorities just mentioned, to the irable record of our practice, which, together corrective observations for future guidance, enant colonel Jones has given in his Journal ieges. If the example set by the publica- of that work be followed by officers who be charged with similar duties hereafter, we reasonably hope that the British service will always remain dependent on foreign works ystems for its guidance

ow if it appear that the attack marked upon plan, be as well supported and covered by es of arms; as little exposed to be taken in k; in short, as capable of opposing and de- ing sorties as that disposition of parallels, ches, &c., upon which the opinions and max- just mentioned have been formed, then it only ains for us to consider, whether the facilities ch M. Carnot has contrived for bringing out troops should overturn what has been so erally experienced, and taught, as to the or- ary failure, and disadvantageous results of h enterprises—a question which resolves itself o this: Whether the expediency of making ties depends upon the mere convenience, or ility, in bringing out the troops; or, with atever ease they may get out, upon the de- sive measures and force opposed to them; the spects of success; the consequences of fai- e;—the loss likely to be sustained;—and the cumstances of the garrison as to being strong ough in force, to afford that loss, and good ough in quality, to resist the moral effects of lefeat, which M. Vauban justly observes is so rtful to the spirit of the garrison. If *these* be governing considerations which should deter- ine the propriety of undertaking sorties, then e accessibility of all M. Carnot's outworks, and nsequently their exposure to be assaulted when eakly garrisoned, is a sacrifice made to that on hich the issue does not essentially depend, and ie that would oblige the besieged to keep bodies troops continually posted in works of such plain, unbroken capacity, as to suffer dreadfully from the very nature of fire which M. Carnot had intended only to inflict.

When a garrison is so numerous, or when the besieging force is so inadequate to the enterprise, as to justify the measure of making sorties in force, there is no difficulty in filing out troops for this purpose through the numerous debouches provided in an ordinary covered-way. If a sortie is to be made against the second parallel, the troops and workmen composing the main-body, move out in eight columns (immediately afterwards formed into four), from eight different outlets in the four re-entering places of arms, each passage admitting easily four men abreast, and consequently of the transit of 320 men per minute, if moving at the rate of eighty paces of thirty inches each in that time. Two flanking parties to cover the operation move out, each in two columns, from the passages in the more remote places of arms of the adjoining fronts. These debouches altogether admit of filing out, and forming in line at the foot of the glacis, a body of 2560 men, exclusive of the flanking parties, in about seven minutes; and the time required for this operation may be shortened by placing a number of step-ladders to mount over the palisades in the three saliant places of arms of the front attacked. If a sortie is to be made against the third parallel, eight or ten step-ladders should be placed in each of the three saliant places of arms, and the eight communications from the four re-entering places of arms used besides.

It does not appear then that there is any such difficulty in filing out troops for sorties from existing places, as should induce us on this account to abandon obstacles which are absolutely necessary to prevent the besiegers from easily getting in. The new system of glacis coupés may be calculated to admit some brilliant, though generally rash exploits, from a place provided with a numerous garrison, or attacked with insufficient means; but it will prove most alarmingly defective when the places to which such works may be added come to fulfill the true purpose for which fortifications are erected—to enable a small force to oppose seven or eight times their number. When this occurs, the very facilities of egress, which under such circumstances the the besieged cannot use, will give facility of ingress which the besiegers will not fail to avail themselves of; and it appears to me that the purely defensive qualities of these works are so defective, that a small garrison, capable enough of defending for a time ordinary works of equal development, would be insecure in this; and that a weak garrison would be utterly incapable of defending such a place at all: and perhaps these works are more defective in partial application to old systems, than in a full adoption of the whole scheme of defence.

M. Carnot is so well aware of the impossibility of defending his glacis coupés de pied-ferme, and of using vertical fire at the same time, that he says 'these works should not be occupied lest the enemy should take them by assault, and, getting mixed with the troops posted in them, take prisoners in the mêlée, and thus prevent the besieged from firing upon the assailants.'

M. Carnot here again asserts the efficacy of vertical fire, to answer this obvious inference—that if the counterguard is not occupied, the besiegers may easily carry it by assault, and establish themselves upon it. He says that this cannot be done, on account, chiefly, of vertical fire; but we have shown that if he resorts to this mode of defence, he cannot occupy the escarpe-wall or saliant of the bastion either; and if so, the besiegers may not only take the counterguard, but proceed, without loss of time, to the attack of the bastion. We shall here say no more on the subject of sorties, but refer the reader to the plan.

All the works—all the exterior debouches and ditches from which sorties can proceed, are, at this stage of the siege, under all sorts of fire. The passages between the ends of the demi-lunes and the faces of the counterguards are enfiladed and flanked from the different lodgments on the saliants of the glacis. The flanks of the attack are well secured against sorties from the adjoining fronts. The second parallel is appuyed upon redoubts, and covered from being turned, by being outflanked by the first place of arms. The third parallel is connected with the second by trenches of defence, or places of arms, flanked by the adjoining faces of the redoubts. The couronnement of the glacis is also covered in flank by the places of arms connecting batteries 11 and 13 at one extremity, and 12 and 14 at the other; and there is absolutely nothing in the proposed attack, bearing upon the question of making sorties, that should overturn the general principles already established by long experience as the governing considerations which should be consulted, and which it has been shown are not at all connected with any principles of construction.

When the couronnement of the glacis is completed, and the counterbatteries established, the position of the besiegers would be found still more capable of defeating and punishing the sorties; for the counter-slope forms a good old-fashioned glacis to the besieger's trenches on its crest, and gives them all the advantages of a covered-way and glacis *opposed* to the place;—advantages surrendered to them for a very defective, and, in some cases, dangerous substitution, which saves the monstrous difficulties and labor attending the descent into the ditch, and enables the besiegers to cover the passage of it from batteries placed on the crest of (to them) a *glacis proper*.

M. Carnot mentions repeatedly, the defence of Grave, in 1674, as a brilliant instance of protracted defence arising entirely from the effects of continual sorties; and supports his opinion of the advantages of a glacis en contrepente by stating, that 'the chief cause which contributed to the success of those enterprises of active defence which took place at Grave, was, precisely, that the place had nether counterscarp revetment, traverses, nor other obstacles in the covered-way;' and consequently that sorties were made with facility. It is proper therefore that we should look narrowly into the circumstances attending this siege, to see how far they confirm the theory which M. Carnot has endeavoured to establish upon it.

M. Rabenhaupt was detached by the prince of Orange, with about 11,000 men, to besiege Grave, in which there was a garrison of 4000 men commanded by M. Chamily, an officer already distinguished by his conduct at Candia and in Portugal.

The investing force required to attack a place such as Grave, containing a garrison of 4000 men, should not be under 21,000 men, at the very least. This is the very lowest calculation that can be made consistently with the number of troops required to furnish working parties, guard the trenches, and provide for camp and line duties.

The force required for guarding the trenches should not be less than three-fourths of the strength of the garrison, and unless this be observed the works of attack will be continually exposed to interruption, and perhaps to destruction, by sorties. Now, what sufficient appropriation of force to these several duties could M. Rabenhaupt have made with 11,000 men? The proportion required for line, camp, and other duties, is generally rated at, and cannot well be under, one-tenth of the whole. This

taken at three reliefs is . . .	3300
Working parties, at least 1200 men, taken at three reliefs, is . .	3600
	6900
Which taken from	11,000
Leaves, for guarding the trenches, &c. .	4100

This, taken at three reliefs, only furnishes 1366 men to oppose sorties which, no doubt, were made with 3000 men; and in the above calculation no allowance is made for sickness or casualties, and all the duty taken at three reliefs, which no troops could stand but for a very short service, in very fine weather.

It appears, therefore, that M. Rabenhaupt attacked the place with means so insufficient as necessarily to expose himself to all that occurred, even had he been opposed to a less enterprising officer. This, indeed, is admitted as the cause of the protracted defence, by the very historian who celebrates the event. M. Quincy, in his Histoire Militaire de Louis XIV., vol. i. page 387, says that 'from the frequency of the sorties it was difficult to pronounce whether M. Rabenhaupt was the assailant or the defender; which showed the general the error he had committed in having flattered himself that he could reduce the place with the small force which had been given him.'

M. Carnot is in error as to what he advances respecting there having been no traverses in the covered-way, or other exterior obstacles at Grave. The Histoire du Corps Impérial du Génie informs us, page 114, 'that M. de Chamilly, certain of being attacked, had perfected all the works—thickened and reveted the parapets—made bomb-proof magazines under the ramparts —*placed a double row of palisades, barriers, and traverses, in the covered-way;*' and that he opposed all sorts of exterior obstacles to the 'cheminemens de l'ennemi.' This differs very materially from M. Carnot's account. It shows that the usual defensive obstacles of a regular covered-

way do not prevent active defence by sorties, when circumstances of relative force and other considerations, justify their being undertaken; and so far are the real circumstances of this siege from holding it up as a splendid example to show, generally, the vast advantages, and enforce the propriety, of making continual sorties, it appears, that the attack was a very condemnable attempt with a force that could not hold out any fair prospect of success. It is well known that, when the prince of Orange was obliged to raise the siege of Oudenarde, he marched to Grave with the Dutch contingent, and that M. Chamilly's garrison had been so much reduced in the sorties it had made, that the place soon surrendered, although its defences were not much injured. The terms granted to the garrison were such as were due to brave men who had done their duty in chastising, with vigor and spirit, a rash attempt made upon their fortress, but who surrendered to a force which made any further resistance vain and hopeless.

We now proceed with the attack. Batteries 17 and 18 are constructed to counterbatter the faces of the collateral bastions; 16 and 19, against the faces of the bastion attacked: batteries 20 and 21 counterbatter the acting faces of the cavaliers, which it must be recollected have already been ricoched by batteries 13 and 14.

Without ascribing any superior degree of efficacy to the fire of the batteries by which the faces of the demi-lunes will have been ricoched, there can be no doubt that they may easily be taken by assault. We have, indeed, the admission of the author for asserting that troops occupying them would suffer so dreadfully as to be incapable of defending them.—He admits, expressly, page 492, 'that the demi-lunes are so much exposed to stones and ricochets, that troops cannot remain in them.' The form given to the cavaliers for the purpose of strengthening their saliants, shows that they are designed to prevent lodgments from being established on the demi-lunes; but the batteries 13 and 14 counterbatter these saliants, whilst 20 and 21 take them in flank and in reverse; and, as the command of the cavalier prevents the salients of the demi-lunes from being seen from the intercepted parts of the retrenchment and fausse-braye, we may assert that the besiegers will not experience much difficulty in establishing themselves on the saliants of the demi-lunes, as shown in plate VII.

These lodgments should not be much extended at present;—it will be sufficient to occupy the saliant of the rampart with a good, solid, lodgment, commanding the interior of the work; and particularly observing the spaces between the ends of counterguards, and the faces of the cavaliers, by which only the troops for the retours offensifs can come forth.

It will now be necessary for the besieged to show which mode of defence he means to adopt for the counterguards and bastions;—whether he intends to defend them de pied ferme, or by vertical fire—both he cannot use. If he prefer the latter, the besiegers should assault the counterguard and form a lodgment on it, as soon as the trenches and epaulements are made across the ditch. These trenches should be fitted as places of arms to oppose sorties. The progress of the attack is not marked on the plan, further than the occupation of the counterguard and the passage of the ditch, not to deface the fortifications.

A mine will then be made in the saliant of the counterguard. If it be countermined, as M. Carnot suggests, then 'a war of mines' will ensue; but the result will be, that the saliant of the work will be demolished by one, or other, or both parties; and thus the main obstacle removed which M. Carnot admits, page 480, 'is so indispensable to cover the escarpe-wall of the bastion.' If a war of mines should not be resorted to, the besiegers should drive a gallery perpendicularly through one of the faces of the counterguard, on a level with the ditch, as soon as a lodgment is made on the crest of the work. The labor attending this operation is much less than in making the usual galleries of descent into a ditch. The length of a *gallery* through M. Carnot's counterguard is about ten toises: the *galleries* of descent into the ditch of an ordinary place are about eighteen toises each.

When the counterbatteries and epaulements in the ditches are finished, the position of the besiegers on the crest of the glacis en contrepente would be so formidable, that we do not see how it is possible for the besieged to make sorties. The only debouches from which they can issue to attack, directly, the works of the besiegers, are exposed to two double tiers of enfilade and flank fire: for batteries 20 and 21 look directly into the spaces between the ends of the demi-lunes and the faces of the counterguard; and the countersloped glacis enables these batteries to fire over the epaulements in the ditch, and to combine their fire with that of the troops lodged in these works; for a shot fired from battery 20 to the bottom of the exterior slope of the cavalier, passes eight feet over the crest of the epaulement. A sortie issuing from either of these debouches would also be exposed to batteries 16 or 19, and to the epaulements in front of them, as soon as the enemy's troops appear; so that no sortie can come forth from these debouches without being exposed to a quadruple line of fire, under a continuation of which they would then have a very formidable line of connected places of arms, to attack.

The debouches from the other sides of the demi-lunes are under fire of the batteries 17 and 18, and the corresponding epaulements respectively; and the position of the besiegers opposite to these outlets is no less formidable than the other.

From the counterguard the besiegers proceed into the ditch of the bastion, in which strong epaulements are constructed to cover the passage, and to oppose sorties from the opposite debouche. If the saliant of the counterguard has been destroyed, or even much lowered, the saliant of the escarpe-wall may be wholly or partially breached by the battery 22. If the counterguard be entire, the saliant of the escarpe-wall will be destroyed by mine. M. Carnot

asserts, that should the besiegers even succeed in opening the counterguard, and in breaching the escarpe-wall, it would nevertheless be impossible for them to assault the bastion, because the columns of attack would be taken in both flanks by sorties from the ditch of the bastion, and by the chemin-des-rondes;—turned and cut off by great sorties issuing from the glacis en contrepente. But it is evident that, whenever the saliant of the escarpe-wall is breached, both branches of the chemin-des-rondes may be enfiladed from the lodgments on the counterguard; or, if only a few feet of the top of the wall were knocked down, that the remote ends of the chemin-des-rondes would be so much exposed as to prevent the besieged from re-occupying them, when, ceasing their vertical fire, they send forth their 'corps d'élite,' as M. Carnot states, to chase away the *debris* of the assailant's columns. It may indeed reasonably be expected that, when the lodgments on the counterguards are formed, the escarpe-wall will be found to have received very material injury from the ricochet batteries; and the chemin-des-rondes be much encumbered, and perhaps rendered impassable in many places, by fragments of masonry, and rubbish from the slopes of the work, which the ricochet fire will have beaten off, and rolled down into the hollow space. With respect to the sorties to be made in the main ditch, 'to take the columns of assault in both flanks,' the attack has provided against such enterprises, by lodgments and epaulements which oppose them with double tiers of fire, and against which the troops would have to advance in narrow columns, presenting their alinements to these batteries. As to the large sorties issuing from the glacis en contrepente, to turn or cut off the assailants, M. Carnot must have aimed this observation at such assaults as might be imprudently made before a complete lodgment should be established on the crest of the covered-way; and to have fancied, throughout, that his system would be attacked in the same spirit of rash bravery and 'brute force,'—disregard of science and human life, as that in which the defensive scheme has been conceived.

A lodgment should now be made on the saliant of the bastion, either by assault, or by sapping up the exterior slope. Battery 15 will cover this operation by throwing shells into the interior of the work; and the howitzer-batteries 9 and 10 will participate, first by a heavy fire on the saliant and faces of the bastion; and, during the assault, by throwing shells into the interior of the bastion and upon the battery on the circular portion of the retrenchment général. According to M. Carnot's doctrine, the actual assault of the breach will be opposed by vertical fire: so long therefore as the batterie de gorge continues to throw vertical fire, the assailants are safe from 'coups de main;' for no part of the interior of the bastion can then be occupied by the besieged. When the fire ceases, they may be expected. This is what M. Carnot calls reversing the character of the operations of a siege: it does so; and brings the alternation to this—that the besieged must now move forward, à découvert, from the gorge of the bastion, under a great profusion of all sorts of vertical fire, to attack the besiegers lodged on its saliant; for it is clear that the batteries which we have enumerated may play upon the interior of the bastion during the assault, and also whilst the besiegers are establishing and defending their lodgment on its saliant. This lodgment being formed, the mode of further proceeding will depend upon the condition in which the besiegers find the circular portion of the escarpe-wall. If, as may reasonably be expected, it is much ruined, there will be little to apprehend from the batteries blindées. The most formidable battery is that on the circular portion of the retrenchment, against which therefore every piece of ordnance that can be brought to bear should be directed. The mortar-howitzer-battery 15—all the guns of 13 and 14—the howitzer-batteries 7, 8, 9, and 10, may all combine in various degrees; and under the influence of such a mass of fire there can be no doubt that a lodgment may be formed in the saliant of the bastion; when the guns of battery 22 will be brought up to arm a battery established there. This will soon complete the ruin of the scarp-wall: the interior of the casemates will then be completely exposed; and the barricades in the postern, being seen through the central casemate, may then be broken open and destroyed. But it is evident that the place can oppose no further effectual resistance, after a lodgment in the bastion is established: for, as soon as the escarpe-wall is ruined, the casemates become untenable, and may then prove extremely useful to the assailants in the assault of the retrenchment, by the cover they afford to preparatory dispositions: and the chemins-des-rondes being gained from the back of the casemates, columns of attack may circulate in them, to turn the troops opposing the direct assault of the saliant.

ɪRTIFIED ISLAND, an island in the Eastern lying about a mile from the coast of Canara, y opposite to Onore. Its name is derived its fortifications, which were greatly gthened by Tippoo Saib, from whom it was ı, in 1792, by three British frigates, when it ıined a garrison of 200 men, and mounted y-four pieces of cannon. Cocoa-nut trees, ıs and plantations, are produced here. It out a mile in circuit. Long. 74° 27′ E., lat. 16′ N.

ɔR'TITUDE, *n. s.* Lat. *fortitudo*, à *fortis*, ıg. Courage; bravery; magnanimity; great- of mind; power of acting or suffering well. ngth, force; not in use.

He wrongs his fame,
Despairing of his own arm's *fortitude*,
To join with witches and the help of hell.
Shakspeare.

The king-becoming graces,
Devotion, patience, courage, *fortitude*,
I have no relish of them. *Id. Macbeth.*

The better *fortitude*
Of patience and heroick martyrdom
Unsung. *Milton. Paradise Lost.*

ortitude is the guard and support of the other ıes; and without courage, a man will scarce keep dy to his duty, and fill up the character of a truly hy man. *Locke.*

hey thought it reasonable to do all possible ho- to the memories of martyrs; partly that others ht be encouraged to the same patience and *forti-*, and partly that virtue, even in this world, ht not lose its reward. *Nelson.*

'O'RTNIGHT, *n. s.* Contracted from four- ı nights, Sax. ꝼeoꝼꝼeꝛẏne nigħꝛ. It was the tom of the ancient northern nations to count e by nights: thus we say, this day seven- ht. So Tacitus, Non dierum numerum, ut , sed noctium computant.—Johnson. The ce of two weeks.

ınd certes, Lord! to abiden your presence,
e in this temple of the goddesse Clemence
han ben waiting all this *fourtenight*;
w helpe us Lord! sin it lieth in thy might.
Chaucer. The Knightes Tale.

Hanging on a deep well, somewhat above the water, some *fortnight's* space, is an excellent means of king drink fresh and quick. *Bacon.*

She would give her a lesson for walking so late, t should make her keep within doors for one *fort- ht.* *Sidney.*

About a *fortnight* before I had finished it, his ma- y's declaration for liberty of conscience came oad. *Dryden.*

He often had it in his head, but never, with much rehension, 'till about a *fortnight* before. *Swift.*

FORTROSE, a town of Scotland, in Ross- ıre, on the Frith of Moray, nearly opposite to ırt George. It is composed of the ancient yal borough of Rosemarkie, and Chanonry, ıere the bishop of Ross resided; now the seat the presbytery. Though the latter of these is out a mile west from the former, they were ıited by a charter from king James II. in 1444, ıder the common name of Fort Ross, now ftened into Fortrose; and this charter was ra- ied by James VI. in 1592, who again confirmed with greater immunities in 1612. These char- rs entitled the borough to the 'privileges, erties, and immunities, heretofore granted to the town of Inverness.' It is now but a small town, and owes its consequence principally to an academy, under the direction of a rector and two masters. The salaries arise from the accumulation of a bequest of 1800 marks Scots in 1669, by a Mr. Thomas Forbes, bailie of Fortrose. Here are still some small remains of the ancient cathedral; part of it being used as a court-house, with the vaulted prisons below; and another part as the burying place of the family of Mackenzie. There is a regular ferry between this place and Fort George. Fortrose lies six miles south-west of Cromarty, and nine north-east of Inverness.

FORTU'ITOUS, *adj.*
FORTU'ITOUSLY, *adv.*
FORTU'ITOUSNESS, *n. s.*
Fr. *fortuit*; Lat. *fortuitus*. Accidental; casual; happening by chance.

A wonder it must be, that there should be any man found so stupid as to persuade himself that this most beautiful world could be produced by the *fortuitous* concourse of atoms. *Ray.*

It is partly evaporated into air, and partly diluted into water, and *fortuitously* shared between all the elements. *Rogers.*

If casual concourse did the world compose,
And things and acts *fortuitous* arose,
Then any thing might come from any thing;
For how from chance can constant order spring?
Blackmore.

FOR'TUNATE, *adj.*
FOR'TUNATELY, *adv.*
FOR'TUNATENESS, *n. s.*
Goth. *fortu*; Lat. *fortunatus*. Lucky; happy; successful; not subject to miscarriage. Used of persons or actions.

I am most *fortunate* thus accidentally to encounter you: you have ended my business, and I will merrily accompany you home. *Shakspeare. Coriolanus.*

O me, said she, whose greatest *fortunateness* is more unfortunate than my sister's greatest unfortunateness. *Sidney.*

He sighed; and could not but their fate deplore,
So wretched now, so *fortunate* before. *Dryden.*

No, there is a necessity in fate
Why still the brave bold man is *fortunate*:
He keeps his object ever full in sight,
And that assurance holds him firm and right:
True, 'tis a narrow path that leads to bliss,
But right before there is no precipice;
Fear makes them look aside, and so their footing miss. *Id.*

Bright Eliza ruled Britannia's state,
And boldly wise, and *fortunately* great. *Prior.*

FORTUNATE ISLANDS, in ancient geography, certain islands, concerning the situation of which authors are not agreed, famous in mythology for the golden apples of the Hesperides. The common opinion is, that they are the Canary Islands.

FOR'TUNE, *n. s.* & *v. n.*
FOR'TUNED, *adj.*
FOR'TUNE-BOOK, *n. s.*
FOR'TUNE-HUNTER, *n. s.*
FOR'TUNETELL, *v. n.*
FOR'TUNETELLER, *n. s.*
Fr. *fortune*; Lat. *fortuna*; from *fors*, chance. The power supposed to distribute the lots of life according to her own humor; the good or ill that befalls man; success good or bad; estate; possessions. To fortune, to befall; to fall out; to come to pass casually. Fortuned, lucky; supplied by fortune. The word as used in composition cannot

be misunderstood. Fortunetell, is to foretell events in the lives of individuals: a fortune-teller is one who pretends to this power: a fortune-book is the book which contains the art of fortunetelling, or that is consulted by the impostor who undertakes the task of unveiling futurity. A fortune-hunter means, in common parlance, a man whose employment is to enquire after women with great portions, to enrich himself by marrying them.

Lo! who may trust on *Fortune* any throw?
For him that folweth all this world of pres,
Or he be ware, is oft ylaid ful lowe:
Ful wise is he that can himselven knowe
Beth ware; for whan that *Fortune* list to glose,
Than waiteth she hire man to overthrowe,
By swiche a way as he wold lest suppose.
Chaucer. The Monkes Tale.

It *fortuned*, as fair it then befel
Behind his back, unweeting, where he stood,
Of ancient time there was a springing well,
From which fast trickled forth a silver flood.
Spenser. Faerie Queene.

Fortune, that arrant whore,
Ne'er turns the key to the poor.
Shakspeare. King Lear.

If thou do'st,
And this instructs thee, thou do'st make thy way
To noble *fortunes*. *Id.*

Not the' imperious shew
Of the full *fortuned* Cæsar ever shall
Be brooked with me.
Id. Antony and Cleopatra.

I'll conjure you, I'll *fortunetell* you.
Shakspeare.

I'll tell you as we pass along,
That you will wonder what hath *fortuned*. *Id.*

They brought one Pinch, a hungry lean-faced villain
A thread-bare juggler, and a *fortuneteller*. *Id.*

A Welchman being at a sessions-house, and seeing the prisoners hold up their hands at the bar, related to some of his acquaintance that the judges were good *fortunetellers*; for if they did but look upon their hand, they could certainly tell whether they should live or die. *Bacon's Apophthegms.*

Fortune is like the market, where many times, if you can stay a little, the price will fall; and, again, it is sometimes like a Sibylla's offer, which at first offereth the commodity at full, then consumeth part and part, and still holdeth up the price.
Lord Bacon.

An alchemist spends his *fortunes* to find out the philosopher's stone forsooth, cure all diseases, make men long-lived, victorious, fortunate, invisible, and beggars himself, misled by those seducing impostos (which he shall never attain) to make gold.
Burton. Anat. Mel.

Thrice, oh, thrice happy shepherd's life and state,
When courts are happiness, unhappy pawns:
His cottage low, and safely humble gate
Shuts out proud *Fortune*, with her scorns and fawns:
No feared treason breaks his quiet sleep:
Singing all day, his flocks he learns to keep;
Himself as innocent as are his simple sheep.
Fletcher's Purple Island.

Thou knowest a face, in whose each look
Beauty lays ope love's *fortunebook*;
On whose fair revolutions wait
The obsequious motions of love's fate.
Crashaw.

Here, while his canting drone-pipe scanned
The mystick figures of her hand,
He tipples palmestry, and dines
On all her *fortunetelling* lines. *Cleaveland.*

You who mens *fortunes* in their faces read,
To find out mine, look not, alas, on me:
But mark her face, and all the features heed:
For only there is writ my destiny. *Cowley's Mist.*

The gypsies were to divide the money got by stealing linen, or by *fortunetelling*. *Walton's Angler.*

Of many who say they do not believe in *fortunetelling*, I have known few on whom it had not a very sensible effect. *Mackenzie.*

This terrestrial globe has been surrounded by the *fortune* and boldness of many navigators. *Temple.*

No, he shall eat, and die with me, or live;
Our equal crimes shall equal *fortune* give.
Dryden.

Rejoice, said he, to day;
In you the *fortune* of Great Britain lies:
Among so brave a people you are they
Whom heaven has chose to fight for such a prize.
Id.

But tell me, Tityrus, what heavenly power
Preserved your *fortunes* in that fatal hour? *Id.*

The fate which governs poets thought it fit
He should not raise his *fortunes* by his wit. *Id.*

We must, however, distinguish between *fortune-hunters* and fortunestealers. *Spectator.*

The adequate meaning of chance, as distinguished from *fortune*, is that the latter is understood to befal only rational agents, but chance to be among inanimate bodies. *Bentley.*

He was younger son to a gentleman of a good birth, but small *fortune*. *Swift.*

When Miss delights in her spinnet,
A fiddler may a *fortune* get. *Id.*

His father dying, he was driven to London to seek his *fortune*. *Id.*

Long ago a *fortuneteller*
Exactly said what now befell her. *Id.*

My lord, I am no boaster of my love,
Nor of my attributes; I have shared your splendour,
And will partake your *fortunes*.
Byron. Sardanapalus.

Fortune, Τυχη, a name which among the ancients seems to have denoted a principle of fortuity, whereby things came to pass without being necessitated thereto: but what and whence that principle is, they do not seem to have ever precisely defined. Hence their philosophers often intimate that men only framed the phantom Fortune to hide their ignorance, and that they call Fortune whatever befals a man without his knowing for what purpose. Hence Juvenal, Sat. x., affirms, they were men who made a deity of Fortune:

Nullum numen abest si sit prudentia. Nos te
Nos facimus, Fortuna, Deam, cæloque locamus.

And Mr. Spence says, that he has seen an ancient gem in which Cybele, the mother of the gods, is represented as turning away her head from Fortune, in attitude of disowning and rejecting her. In the opinion of the heathen, therefore, fortune was only the arrival of things in a sudden and unexpected manner, without any apparent cause or reason: so that the philosophical sense of the word coincides with what is vulgarly called chance. But in religion it had a farther force; altars and temples in great numbers were consecrated to Fortune, as a deity. Hence that beautiful ode of Horace beginning

O diva, gratum quæ regis Antium
Præsens vel imo tollere de gradu
Mortale corpus, vel superbos
Vertere funeribus triumphos,
Lib. i. carm. 35.

where he recommends Augustus, then preparing for a visit to Britain, to her protection. From these different sentiments it may be inferred that the ancients at one time took Fortune for a peremptory cause bent upon doing good to some, and persecuting others; and at others for a blind inconstant cause, without any view or determination at all. Horace represents Fortune preceded by Necessity, holding nails and wedges in her hands, with a cramp-iron and melted lead to fasten it; rarely accompanied with Fidelity, unless when she abandons a family; for in that case Fidelity never fails to depart with her. She is disrespectfully spoken of by most of the Roman writers, and represented as blind, inconstant, unjust, and delighting in mischief. Hor. lib. iii. carm. 29, ver. 49. Juvenal alludes to a statue of Fortune, which exhibited her as the patroness of the poor infants that were exposed by their parents in the streets. Sat. vi. ver. 605. The painters represent her in a woman's habit, with a bandage before her eyes, to show that she acts without discernment; and standing on a wheel, to express her instability. The Romans, says Lactantius, represented her with a cornucopia, and the helm of a ship, to show that she distributes riches and directs the affairs of the world. It is with such characters that we see her represented on so many medals, with the inscriptions, FORTVNA AUG. FORTUNA REDUX. FORTUNÆ AUG. or REDUCIS, &c. Sometimes she is pointing at a globe before her feet, with a sceptre in one hand, and holding the cornucopia in the other. They borrowed the worship of her from the Greeks, in the reign of Servius Tullius, who dedicated the first temple to her in the public market. Nero also built a temple to Fortune. The Fortune worshipped at Antium was probably of the most exalted character of any among the Romans. But the most celebrated temple of Fortune was at Præneste. Statius speaks of several Fortunæ there, and calls them the Prænestinæ sorores.

FORTUNE BAY, a bay on the south-west coast of Newfoundland, having considerable depth of water, and numerous islets.

FORTUNE ISLAND, or GOOD FORTUNE ISLAND, an island in the Indian Sea, near the south-west coast of the island of Sumatra. Long. 90° 25′ E., lat. 1° 35′ S.

FORTUNE ISLAND, a small island in the Eastern Indian Sea, near the north coast of the island of Celebes. Long. 123° 48′ E., lat. 0° 50′ N.

FORTY, *adj.* } Sax. ꝼeoꝑeꞃtiȝ. Four times
FORTIETH, *adj.* } ten. The fourth-tenth; next after the thirty-ninth.

Thanne Jhesus was led of a spirit into desert, to be temptid of the feend. And whanne he han fastid *fourti* daies and *fourti* nights, aftirwarde he hungride.
Wiclif. Matt. 4.

Lo, Moises *forty* daies and *forty* night
Fasted, er that the high God ful of might
Spake with him in the mountagne of Sinay.
Chaucer. The Sompnoures Tale.

On fair ground I could beat *forty* of them.
Shakspeare.

What doth it avail
To be the *fortieth* man in an entail? *Donne.*

He that upon levity quits his station, in hopes to be better, 'tis *forty* to one loses. *L'Estrange.*

Burnet says, Scotland is not above a *fortieth* part in value to the rest of Britain; and, with respect to the profit that England gains from hence, not the four-thousandth part. *Swift.*

——— Methinks I see amongst you
A face I know not—Senator! your name,
You, by your garb, Chief of the *Forty*!
Byron. The Two Foscari.

FORTY-FEET WAY, a part of the Roman road from Castor to Stamford, Northamptonshire.

FO'RUM, *n. s.* Lat. Any public place.

Close to the bay great Neptune's fame adjoins,
And near a *forum* flanked with marble shines,
Where the bold youth, the numerous fleets to store,
Shape the broad sail, or smooth the taper oar.
Pope.

The *forum* was a publick place in Rome, where lawyers and orators made their speeches before their proper judge in matters of property, or in criminal cases, to accuse or excuse, to complain or defend.
Watts on the Mind.

FORUM, in Roman antiquity, was a public place, within the city, where causes were judicially tried, and orations delivered to the people. Forum was also used for a place of traffic, answering to our market place. These were generally called fora venalia; in contradistinction to the former, which were called fora civilia. The Grecian Αγοραι exactly correspond with the Roman fora, being places where courts and markets were held. At Athens they had many fora, but the chief of them were the old and the new. The fora venalia were very numerous. The chief of them were—the forum boarium, for oxen or beef; suarium for swine; pistorium for bread; cupidinarium for dainties; olitorium for garden stuffs. The fora civilia were public courts of justice, very magnificent in themselves, and surrounded with porticoes and stately edifices.

At first there were only three principal fora, viz. Romanum, Julianum, and Augustum; but there were afterwards added Transitorium, Trajanum, and Sallustii. The first or most eminent of these was the forum Romanum, often called the Forum, on account of its antiquity and its general use in public affairs. The Comitium, used for holding the COMITIA (which see), was a part of this forum, in which stood the rostra, a sort of pulpit, adorned with the beaks of ships taken in a sea-fight from the inhabitants of Antium.

The 'Julian forum,' called also Cæsar's, was built by Julius Cæsar with the spoils taken in the Gallic war. Its area alone, as Suetonius informs us, cost 100,000 sesterces; and Dio affirms, that in size it much exceeded the Roman forum.

'Augustus's forum' was built by Augustus Cæsar, and was reckoned by Pliny among the wonders of the city. The most remarkable curiosity it presented was the statues in the two porticoes on each side of the main building. In one were all the Latin kings, beginning with Æneas; in the other all the kings of Rome, be

ginning with Romulus; most of the eminent persons in the commonwealth, and Augustus himself among the rest; with an inscription upon the pedestal of every statue, expressing the chief actions and exploits of the person it represented. This forum was restored by the emperor Adrian.

Forum is also used among casuists, &c., for jurisdiction; as In foro legis, &c. The following metaphorical uses of the word are also common in the classics, as Cicero, Suetonius, Florus, &c.

Forum Agere denoted the bringing on causes out of Rome, in a Roman province; signifying the same with agere conventum.

Forum Indicere was the act of the prætor appointing the place in Rome where causes were to be tried.

Forum, in ancient geography, prefixed to a proper name, denoted a market town or borough. Of these there were many; as,

Forum Alieni, a place mentioned only by Tacitus; and, from his account of it, thought to be Ferrara in Italy.

Forum Appii, a town of the Volsci, in Latium, on the Via Appia, a little beyond the Tres Tabernæ, mentioned by St. Luke, as well as by Cicero. It is set down in the Jerusalem Itinerary as situated near the river Nymphæus; now entirely desolate.

Forum Domitii, a town of Gallia Narbonensis; probably built by Ahenobarbus Domitius, who commanded in those parts: now Frontigniac, in Languedoc, near the Mediterranean.

Forum Fulvii, a town of Liguria, surnamed Valentinum; from which it is conjectured that it is now Valenza, in the duchy of Milan; which is confirmed by Peutinger's distances.

Forum Gallorum, a small town of the Cispadana, on the Via Æmilia, eight miles from Mutina, beyond the Scultenna. Here Antony defeated Pansa, and was in his turn defeated by Hirtius.

Forum Julium, a town of Gallia Narbonensis; or Forojulium: now Frejus in France.

Forum Julium Carnorum, a town north of Aquileia, in Transpadana.

Forum Tiberii, a town of Gallia Belgica, in the Pagus Tigurinus, on the left or west side of the Rhine; literally the tribunal of Tiberius, which he held there when commander in the Rhetian war.

Forum Vulcani, the Campi Phlegraei of Pliny, a place in Campania, encompassed with rocky eminences, near Puteoli, and distant from it two miles towards Naples, emitting smoke, and in some places flame, like a large extensive furnace, and yielding sulphur.

FORWA'NDER, *v. a.* For and wander. To wander wildly and wearily.

Than, dismayd, I—left all sole,
For-werie—*for-wandred*, as a fole;
For I ne knewe no cherisaunce.
Chaucer. Romaunt of the Rose.

The better part now of the lingering day
They travelled had, when as they far espied
A weary wight *forwandering* by the way.
Faerie Queene.

FOR'WARD, *adv.*, *adj.* & *v. a.*
For'warder, *n. s.*
For'wardly, *adv.*
For'wardness, *n. s.*
For'wards, *adv.*
Sax. ꝼoꞃꝼeaꞃꝺ, formerly written forthward. See Forth. Towards; to a part or place before; onward; progressively. Crabb says, 'Onward is taken in the literal sense of going nearer to an object; forward is taken in the sense of going from an object, or going further in the line before one; progressive has the sense of going gradually, or step by step before one.' Thus it also signifies anterior; antecedent; not behind hand; not inferior; premature; early; ripe too soon. Applied to the mind, it means warm; earnest; ardent; eager; violent, ready; confident; presumptuous; impudent; quick; hasty. A forwarder is one that promotes an object, or facilitates the execution of any thing. To forward, is to hasten; to quicken; to accelerate in growth or improvement; to patronise; to advance.

Only they would that we should remember the poor; the same which I also was *forward* to do.
Gal. ii. 10.

First and *forward*, ye han erred in the assembling of youre conseillours; for ye sholde first han cleped a fewe folk to your conseil, and after ye mighte han shewed it to mo folk if it hadde be nede: but certes ye han sodeinly cleped to your conseil a gret multitude of peple, full chargeant and full anoyous for to here. *Chaucer. Tale of Melibeus.*

From smaller things the mind of the hearers may go *forward* to the knowledge of greater, and climb up from the lowest to the highest things. *Hooker.*

Absolutely we cannot discommend, we cannot absolutely approve either willingness to live, or *forwardness* to die. *Id.*

Is it so strange a matter to find a good thing furthered by ill men of a sinister intent and purpose, whose *forwardness* is not therefore a bridle to such as favour the same cause with a better and sincere meaning. *Id.*

When fervent sorrow slaked was,
She up arose, resolving him to find
Alive or dead, and *forward* forth doth pass.
Faerie Queene.

'Tis a perilous boy,
Bold, quick, ingenious, *forward*, capable;
He's all the mother's from the top to toe.
Shakspeare.

Let us take the instant by the *forward* top;
For we are old, and on our quickest decrees
The inaudible and noiseless foot of time
Steals, ere we can effect them. *Id.*
Short Summer lightly has a *forward* Spring. *Id.*

My good Camillo,
She is as *forward* of her breeding, as
She is i' th' rear o' our birth.
Id. Winter's Tale.

You'll still be too *forward*.
Id. Two Gentlemen of Verona.

The great ones were in *forwardness*, the people in fury, entertaining this airy fantasm with incredible affection. *Bacon.*

He that is used to go *forward*, and findeth a stop, falleth off his own favour, and is not the thing he was. *Id. Essays.*

As we house hot country plants, as lemons, to save them; so we may house our own country plants to *forward* them, and make them come in the cold seasons. *Id. Natural History.*

He had such a dexterous proclivity, as his teachers were fain to restrain his *forwardness*: that his bro-

who were under the same training, might hold
with him. *Wotton.*

Old Butes' form he took, Anchises squire,
w left to rule Ascanius by his sire;
d thus salutes the boy too *forward* for his years.
Dryden.

e mind makes not that benefit it should of the
nation it receives from civil or natural historians,
ing too *forward* or too slow in making observa-
on the particular facts recorded in them.
Locke.

d they, who would persuade us that there are
e principles, considered separately the parts out
ich these propositions are made, they would not
ps have been so *forward* to believe they were
e. *Id.*

hen in the sweet and pleasant month of May,
ee both leaves and blossomes on the tree;
view the meadowes in their best array,
opeful are a joyfull spring to see;
ft before the following night be past,
anceth that a vapor, or a frost,
all those *forward* bloomings wholly waste,
then their sweetnesse and their beautie's lost.
Geo. Withers.

France it is usual to bring their children into
any, and to cherish in them, from their infancy,
d of *forwardness* and assurance. *Addison.*

Unskilled to dart the pointed spear,
Or lead the *forward* youth to noble war. *Prior.*

ie sudden and surprising turns we ourselves have
should not suffer us too *forwardly* to admit pre-
tion. *Atterbury.*

ie Rhodian ship passed through the whole Roman
, backwards and *forwards* several times, carrying
ligence to Drepanum. *Arbuthnot.*

Whenever I shine,
I *forward* the grass and I ripen the vine.
Swift.

he troops have long arrears of pay oft promised,
murmur deeply—any hope of change
draw them *forward*. *Byron. Doge of Venice.*

'OSSA, in our ancient customs, was a ditch
of water, where women committing felony
e drowned; as men were hanged: nam et
in omnibus tenementis suis omnem ab anti-
legalem habuere justitiam, videlicet ferrum,
um, furcas, et similia. In another sense it
aken for a grave, as appears by these ancient
ses:

lic jacent in fossa Bedæ venerabilis ossa;
lic est fossatus, qui bis erat hic cathedratus.

'OSSA, Foss, in anatomy, a kind of cavity in a
ne, with a large aperture, but no exit or per-
ation. When the aperture is very narrow, it
called a sinus. Foss is particularly used for
cavity or denture in the back part of the
k.

FOSSANO, a town of Italy in Piedmont,
ted on the Stura; famed for its medicinal
ings, whence its ancient name Fons Sanus,
ce corrupted into its modern one. It was
rounded with walls in 1236. It contains a
hedral, three parish churches, three convents,
d about 900 souls. It lies five miles east of
vigliano, seven south-west of Cherasco, and
north-east of Coni. Long. 7° 56′ E., lat.
° 45′ N.

FOSSARII, in antiquity, officers in the
stern church, whose business was to inter the
ad. Ciaconius relates, that Constantine cre-
ated 950 fossarii, whom he took out of the companies of tradesmen; he adds, that they were exempted from taxes, services, burdensome offices, &c. F. Goar, in his notes on the Greek Euchologion, insinuates that the fossarii were established in the times of the apostles; and that the young men who carried off the body of Ananias, and those who interred St. Stephen, were of the number. St. Jerome assures us, that the fossarii held the first place among the clerks, who had the direction of the interment of the devout.

FOSSE, *n. s.* Lat. *fossa*; Welsh *fos*. A ditch; a moat.

If a second ditch is made before the glacis, it is called the advanced *fosse*. *Muller on Fortification.*

Fosse, a military way in South Britain, begins at Totness, and passes through Exeter, Ivelchester, Shipton-Mallet, Bath, Cirencester, Leicester, the Vale of Belvoir, Newark, Lincoln, to Barton upon the Humber, being still visible in several parts, though of 1400 years standing. It derived its name from the fosses or ditches made by the sides of it.

FO'SSET. See Faucet.

FO'SSIL, *adj.* & *n. s.* Fr. *fossile*; Lat. *fossilis*. Literally that which is dug out of the earth.

In this globe are many other bodies, which, because we discover them by digging into the bowels of the earth, are called by one common name *fossils*; under which are comprehended metals and minerals. *Locke.*

The *fossil* shells are many of them of the same kinds with those that now appear upon the neighbouring shores; and the rest such as may be presumed to be at the bottom of the adjacent seas.
Woodward's Natural History.

Fossil or rock salt, and sal gemm, differ not in nature from each other; nor from the common salt of salt springs, or that of the sea, when pure. *Id.*

It is of a middle nature, between *fossil* and animal, being produced from animal excrements, intermixed with vegetable salts.
Arbuthnot on Aliments.

Many *fossils* are very oddly and elegantly shaped.
Bentley.

Those bodies which will melt in the fire are called minerals, the rest *fossils*. *Pemberton.*

By the word *fossil*, used as a denomination of one of three general divisions of natural productions, we understand bodies formed usually within the earth, sometimes on its surface, and sometimes in waters; of a plain and simple structure, in which there is no visible difference of parts, no distinction of vessels and their contents, but every portion of which is similar to and perfect as the whole.
Hill's Materia Medica.

Fossil Alkali. See Alkali.

Fossil Pitch. See Petroleum.

Fossils, in natural history, have been divided into native or extraneous. *Extraneous Fossils* are bodies of the vegetable or animal kingdoms accidentally buried in the earth by some extraordinary means, as earthquakes, the deluge, &c. Of the vegetable kingdom there are principally three kinds; trees or parts of them, herbaceous plants, and corals; and of the animal kingdom, sea shells, the teeth, or bony palates, and bones of fishes, complete fishes, and the bones of land

animals. These adventitious or extraneous fossils, thus found buried in great abundance in various parts of the earth, have employed the curiosity of several of our naturalists, who have each their different systems to account for these surprising appearances. Some consider these shells, &c. to be real stones, and stone plants, formed after the usual manner of other figured stones; of which opinion was the learned Dr. Lister. Another opinion is, that these fossil shells, with all their foreign bodies found within the earth, as bones, trees, plants, &c. were buried at the time of the universal deluge; and that, having been penetrated either by the bituminous matter abounding chiefly in watery places, or by the salts of the earth, they have been preserved entire, and sometimes petrified. Others think, that those shells, found at the tops of the highest mountains, could never have been carried thither by the waters, even of the deluge; inasmuch as most of these aquatic animals, on account of the weight of their shells, always remain at the bottom of the water, and never move but close along the ground.

Dr. Woodward, in his Natural History of the Earth, pursuing and improving the hypothesis of Burnet, maintains that the whole mass of earth, with every thing belonging to it, was so broken and dissolved at the time of the deluge, that a new earth was formed on the bosom of the water, consisting of different strata, or beds of terrestrial matter, ranged over each other usually according to the order of their specific gravities. By these means, plants, animals, and especially fishes, and shells not yet dissolved among the rest, remained mixed and blended among the mineral and fossil matters; which preserved them, or at least assumed and retained their figures and impressions either indentedly, or in relievo. See farther under the articles DELUGE, ORGANIC REMAINS, and PETRIFICATION.

Native Fossils are substances found either naturally existing in the earth, or lying on its surface; of a plain simple structure, and showing no signs of containing vessels or circulating juices. These Dr. Hill subdivides into *essentially and naturally simple fossils*. Of these some are neither inflammable nor soluble in water; as simple earths, talcs, fibrariæ, gypsum, selenitæ, crystal, and spars: others, though simple and uninflammable, are soluble in water; as all the salts; and others, on the contrary, are inflammable, but not soluble in water; as sulphur, auripigmentum, zarnich, amber, ambergris, asphaltum, ampelites, lithanthrax, naphtha, and pissasphalta. 2. *Naturally compound, but unmetallic fossils*. Of these some are neither inflammable nor soluble in water, as compound earths, stones, septariæ, siderochita, semipellucid gems, &c.; others are soluble in water, but not inflammable; as all the metallic salts; and, lastly, some are inflammable, but not soluble in water; as the marcasites, pyritæ, and phlogonia. 3. *Fossils of a metallic nature*. These are bodies naturally hard, remarkably heavy, and fusible in fire. Of these some are perfectly metallic, as being malleable when pure; such are gold, lead, silver, copper, iron, and tin; others are imperfectly metallic, as not being malleable even in the purest state; such are antimony, bismuth, cobalt, zinc, and quicksilver, or mercury. Of all these substances, descriptions will be found under their respective heads; as well as under CHEMISTRY, METALLURGY, &c.

FOSSIL COPAL, or Highgate resin. A mineral of a pale yellowish-brown color. It occurs in irregular roundish pieces. Lustre resinous. Semitransparent. Brittle. Yields easily to the knife. Specific gravity 1·046. When heated it gives out a resinous aromatic odor, melts into a limpid fluid, takes fire at a lighted candle, and burns entirely away before the blowpipe. Is soluble in potash lie. Found in the beds of blue clay at Highgate near London.

FOS'TER, *v. a.* } Sax. ꝑoꝛtꝛian, ꝑoꝛtꝛeꝛa, bꝛoðeꝛ, ꝑoꝛtꝛeꝛa, ꝑoꝛtꝛeꝛe, teꝛꝛaðeꝛ; Goth. Swed. and Icel. *fostra*; Belg. *voedsteren* (from *voed*, father.—Minshew) to nurse; to feed; to nourish; to support; cherish; train up; to pamper; to encourage. Fosterer is one that undertakes the charge of nourishing and bringing up. Fosterage is the charge itself, and all the words in composition speak for themselves.
FOS'TERAGE, *n. s.*
FOS'TERER,
FOS'TER-BROTHER,
FOS'TER-CHILD,
FOS'TER-DAM,
FOS'TER-EARTH,
FOS'TER-FATHER,
FOS'TER-MOTHER,
FOS'TER-SON,
FOS'TERER.

Fader! she said, thy wretched child Custance
Thy yonge doughter, *fostered* up so soft;
And ye, my moder! my soveraine plesance
Over all thing (out take Crist on loft);
Custance your child hire recommendeth oft
Unto your grace; for I shal to Surrie,
Ne shal I never seen you more with eye.
Chaucer. The Man of Lawes Tale.

I am a man of little sustenance:
My spirit hath his *fostring* in the Bible;
My body is, ay so ready and so penible
To waken, that my stomak is destroied.
Chaucer. The Sompnoures Tale.

She was *yfostered* in a nonnerie.
Id. The Rees Tale.

Fostered she was with milk of Irish breast;
Her sire an Earl; her dame of Princes blood.
From tender years in Britain did she rest,
With a king's child, who tasteth ghostly food.
Surry.

Come forth, your *fostress* bids!
Ben Jonson.

Some say that ravens *foster* forlorn children.
Shakspeare.

Our kingdom's earth should not be soiled
With that dear blood which it hath *fostered*.
Ib.

That base wretch,
Bred but on alms, and *fostered* with cold dishes,
With scraps o' the court.
Id. Cymbeline.

Some one adjoining to this lake had the charge and *fosterage* of this child.
Raleigh's History.

The duke of Bretagne having been an host and kind of parent or *fosterfather* to the king, in his tenderness of age and weakness of fortune, did lend him aid this time from king Henry.
Bacon.

In Ireland *fosterchildren* do love and are beloved of their *fosterfathers*, and their sept, more than of their own natural parents and kindred.
Davies.

In Ireland they put their children to *fosterage*, the rich men selling, the meaner sort buying the charge

r children: in the opinion of the Irish, *fostering* ays been a stronger alliance than blood.
Id. on Ireland.

more let Ireland brag her harmless nation
no venom since that Scots plantation.
Cleaveland.

rince of great courage and beauty, but *fostered* blood by his naughty father. *Sidney.*

The son of Mulciber,
nd in the fire, and *fostered* in the plains,
hepherd and a king at once he reigns.
Dryden.

re, by the wolf, were laid the martial twins:
id on her swelling dugs they hung;
sterdam lolled out her fawning tongue. *Id.*

Tyrrheus, the *fosterfather* of the beast,
hen clenched a hatchet in his horny fist. *Id.*

lature in years, to ready honours move;
f celestial seed! O *fosterson* of Jove!
Id. Virgil.

In vain the nursling grove
ms fair a while, cherished with *fosterearth*;
when the alien compost is exhaust,
native poverty again prevails! *Philips.*

The goddess thus beguiled,
With pleasant stories, her false *fosterchild.*
Addison.

Ye *fostering* breezes blow;
softening dews, ye tender showers, descend.
Thomson.

th him his nurse, went careful Acoe;
e hands first from his mother's womb did take him,
ver since have *fostered* tenderly:
ever might, she never would, forsake him.
Fletcher's Purple Island.

My father was your father's client, I
His son's scarce less than *foster-brother.*
Byron. Doge of Venice.

OSTER (James), D.D., a distinguished and lar dissenting minister, born at Exeter in , and educated there under Mr. Hallet. began to preach in 1718, but he became ob- ous on account of his opinions concerning rinity. His talents were hid among obscure try congregations until 1724, when he was en to succeed Dr. Gale, in Barbican, where bored as pastor above twenty years. The lay evening lecture, which he began in the Jewry meeting-house in 1728, he conducted within a short time of his death, and persons ll persuasions and ranks in life flocked to him. His eloquence as a preacher was of first order, and Pope has honored him with following commendatory couplet in the ogue to his Satires:

Let modest Foster, if he will, excel
Ten metropolitans in preaching well.

1748 the Marischal College of Aberdeen ferred on him the degree of D.D. He pub- ed, in 1720, an Essay on Fundamentals, a particular regard to the ever blessed nity, &c.; in 1731 a valuable work, entitled Usefulness, Truth, and Excellency of the ristian Revelation against the objections con- ed in a late book, called Christianity as old he Creation, &c.; several volumes of sermons 1734 and 1744; and in 1746 an account of behaviour of the late earl of Kilmarnock, after his sentence, and on the day of his execution. His attendance upon this nobleman at the scaffold, is said to have deeply affected his health and spirits. Dr. Foster afterwards published, by subscription, Discourses on all the Principal Branches of Natural Religion and Social Virtue; the first volume of which came out in 1749, and the second in 1752. There were 2000 names subscribed for these volumes, many of them those of persons of distinguished eminence and literary abilities. Before the appearance of the second volume of these discourses his health had been much impaired, and he died in 1753.

FOSTER (Mark), an eminent English mathematician, of the seventeenth century, who published a Treatise on Trignometry.

FOSTER (Samuel), another ingenious mathematician of the seventeenth century, and astronomical professor in Gresham College, was one of that learned association which met for the cultivation of philosophy, during the political confusions under the commonwealth, and which Charles II. afterwards established into the Royal Society. He died, however, in 1652, before this incorporation took place; but wrote a number of mathematical and astronomical treatises.

FOSTER (William), a third eminent English mathematician of the seventeenth century, was a disciple of Mr. Oughtred, and afterwards taught mathematics in London. He distinguished himself by a work, entitled The Circles of Proportion, and the Horizontal Instrument; published in 1633 in 4to., and dedicated to Sir Kenelm Digby.

FOSTER (Sir Michael), an eminent English lawyer, born at Marlborough in Wiltshire, in 1689. He received the early part of his education at the free school of Marlborough, from whence he was removed to Exeter College, Oxford, in which he was a commoner. In 1707 he was entered of the Middle Temple, and in regular course called to the bar. In 1735 he was chosen recorder of Bristol; and the same year he published a pamphlet, entitled An Examination of the Scheme of Church Power, laid down in the Codex of Bishop Gibson. In 1745 he was appointed one of the justices of the King's Bench, on which occasion he had the honor of knighthood conferred upon him. In 1762 he published a Report of some Proceedings on the Commission of the Trial of the Rebels in the year 1746, in the county of Surrey. He died in 1763.

FOTHERGILL (George), D D., was born in Westmoreland, 1705, where his ancestors had enjoyed a competent estate for several generations. He studied at Queen's College, Oxford, of which he became a fellow; and in 1751 was elected principal of St. Edmund's Hall, and vicar of Bromley in Hampshire. He died in 1760 of an asthma. He was author of a collection of much esteemed sermons, in 2 vols. 8vo. The first volume was published by himself, the second was printed from his MSS.

FOTHERGILL (John), M. D., an eminent physician, was born in 1712, at Carr-End in Yorkshire; his parents being Friends or Quakers. He was the second of five children, and educated under his grandfather. He afterwards served

his time to Mr. Bartlett an apothecary at Bradford; thence he removed to London, and became a pupil to Dr. Wilmot at St. Thomas's Hospital. He then went to the university of Edinburgh to study physic, and took his degree. From Edinburgh he went to Leyden; whence, after a short stay, he returned to London, and began to practise about 1740, in a house in Lombard-street, where he acquired most of his fortune. In 1746 he was admitted a licentiate of the college of physicians in London; and, in 1754, a fellow of that of Edinburgh. He afterwards became a member of the Royal Medical Society at Paris, and of the Royal and Antiquarian Societies. He continued his practice with uninterrupted success till 1778, when disease obliged him to give up a considerable part of it. Besides his application to medical science, he had imbibed an early taste for natural history and botany. He was for many years a valuable contributor to the Gentleman's Magazine; where his observations on the weather and diseases, begun in April 1751, and discontinued in the beginning of 1756, became the exemplar of similar periodical reports, that have since appeared in various publications. His pamphlet on the ulcerous sore throat, is esteemed the best of his publications; but owes much of its merit to the late Dr. Letherland. It was first printed in 1748, on the re-appearance of that fatal disorder, which in 1739 had carried off Mr. Pelham's only two sons. In 1762 Dr. Fothergill purchased an estate at Upton in Essex; and formed a botanic garden there. In 1766 he began regularly to withdraw, from Midsummer to Michaelmas, from the fatigues of his profession, to Lee Hall, in Cheshire. He took no fees during this recess, but prescribed gratis at Middlewich once a-week. He was the patron of Sidney Parkinson, and drew up the preface prefixed to his account of the voyage to the South Seas. Dr. Fothergill was also the associate of Mr. Howard, in his attempt to alleviate the condition of poor prisoners. He was likewise zealous for the political interests of the country, and interfered to prevent that fatal breach with the colonies, which produced the final separation of America from the mother country. His public benefactions, his encouragements of science, the instances of his attention to the health, the police, and the convenience of the metropolis, are too numerous to be particularised. The fortune which he had acquired amounted to £80,000, near £7000 per annum. In the influenza of 1775 and 1776, he is said to have had sixty patients on his list daily. The disorder which hastened his death was a scirrhus of the prostata, and an obstruction in the bladder, which had been gradually coming on him for six years. He died December 26th, 1780; and his remains were interred in the Quakers' burying-ground at Winchmore Hill. His character is thus summed up by Dr. Franklin, in a letter to their common friend Lettsom:—'If we may estimate the goodness of a man by his disposition to do good, and his constant endeavours and succession doing it, I can hardly conceive that a better man has ever existed.' His works, consisting of medical pieces and pamphlets, of two elegant pieces of biographical eulogy on Dr. Alexander Russel and Peter Collinson, and of some political and miscellaneous essays and letters, were published, with memoirs of his life, by Dr. Lettsom, in 3 vols. 8vo, 1784.

FOTHERGILLA, in botany, a genus of the digynia order, and polyandria class of plants: CAL. lobed, most entire: COR. none; the germen bifid: CAPS. bilocular; cells two-valved: SEEDS solitary and bony. Species one only, a Carolina somewhat resembling the alder.

FOTHERING, a peculiar method of endeavouring to stop a leak in the bottom of a ship while she is afloat, either under sail or at anchor. A basket is filled with ashes, cinders, and chopped rope yarns, and loosely covered with a piece of canvas; to this is fastened a long pole, by which it is plunged repeatedly into the water, as close as possible to the place where the leak is conjectured to lie. The oakum or chopped rope-yarns being thus gradually shaken through the twigs, or over the top of the basket, are frequently sucked into the hole along with the water, so that the leak becomes immediately choked; and the future entrance of the water is thereby prevented.

A superior method of fothering is now practised, which is performed in the following manner:—fasten a sail at the four corners, let it down under the ship's bottom, and then put a quantity of chopped rope-yarns, oakum, wool, cotton, &c., between it and the ship's side: by repeating the latter part of this operation several times, the leak generally sucks in a portion of the loose stuff, and thereby becomes partly, and sometimes wholly stopped. Some persons prefer thrumming the sail, instead of letting down the loose stuff; but in this mode the sail is soon chafed through by the hole if the leak is considerable, without affording sufficient substance to stop it.

FOTHERINGAY, a town of Northamptonshire, about four miles from Stamford, situated on the river Nen. Edmund, duke of York, in the reign of Henry V. founded and endowed a fine collegiate church here, in which he was interred. At the dissolution the college and the choir were pulled down, and the bodies of the founder and his family left exposed, till queen Elizabeth ordered them to be interred, and the present monuments to be erected. The remains of Richard duke of York, slain at Wakefield, and of his wife Cecilia Neville, are also buried in this church; their monuments were re-built by queen Elizabeth. The windows contain some handsome painted glass. Near the church is a free-school. On the north side of the church is a free-school, founded by Henry VIII. Edward VI. or, as some say, by queen Elizabeth, and endowed with £20 per annum for a master, payable out of the exchequer by the receiver of the county. The bridge over the river was first built by queen Elizabeth in 1573, of timber, with three pillars upon the foundation. Daniel, first earl of Nottingham, and the other trustees for the marquis of Halifax, re-built it in 1722, of free-stone from King's Cliff. On the south-east side of the Cliff stood the castle, which was of great antiquity and strength. Mary queen of Scots, who had been in the custody of Sir Amias Powlet here, was tried and beheaded in the hall; and her son James so completely de-

ed the castle, that nothing but the earth now remain.

JGETTE, in military affairs, a species of rk frequently used by the Indians who in- ne western peninsula of the Ganges. A military writer makes the following ob- ons relative to advantages which might be d from this weapon against cavalry, and e defence of fortified places or entrench-

He observes, that the tougette, in shape, les a sky-rocket, whose flight is brought along an horizontal direction. By throw- veral fougettes into parks of artillery, and the caissons, &c., considerable damage be occasioned from the fire which would ably be communicated to some part. A te forces itself immediately forward cuts penetrates, by the formation of its sides, are filled with small spikes, and becomes ustible and on fire at all its points at once.

)UGHT. The preterite and participle of See FIGHT.

)UL, *adj.* & *v. a.*)ULFA'CED, *adj.*)UL'LY, *adv.*)UL'MOUTHED, *adj.*)UL'NESS, *n. s.* } Sax. ful; Goth. and Swed. *ful*; Gr. φαυλος. Not clean; filthy; dirty; miry; nasty. Through most of its significations opposed to fair. Crabb observes of this its kindred words, that they differ only as ees of comparison. Dirtiness, he says, is mon to these terms, but in different degrees with different modifications. Whatever dirt ffensive to any of the senses, renders that g nasty which is soiled with it: the filthy eds the nasty not only in the quantity, but ie offensive quality of the dirt: and the foul eds the filthy in the same proportion. It is aphorically applied to what is impure, pol- d, and unchaste; to whatever is wicked, stable, abominable; the reverse of fair play onflict or controversy; hateful; ugly; loath- e; disgraceful, coarse, and gross; not bright; serene; dishonesty; want of candor.

My face is *foul* with weeping. *Job* xvi. 16.

eemeth it a small thing unto you to have eaten up good pasture, but ye must tread down with your the residue of your pastures? and to have drunk he deep waters, but ye must *foul* the residue with r feet? *Ezek.* xxxiv. 18.

When Jesus saw that the people came running ther, he rebuked the *foul* spirit. *Mark* ix. 25.

'or cerstes outrageous wrathe doth all that ever the 'e fende willeth or commandeth him.

Chaucer. The Persones Tale.

A lord is lost if he be vicious;
And dronkennesse is eke a *foule* record
Of any man, and namely of a lord.

Id. The Sompnoures Tale.

All things that seem so *foul* and disagreeable in ure, are not really so in themselves, but only rela- ely. *More.*

The other half did woman's shape retain,
st loathsome, filthy, *foul*, and full of vile disdain.

Spenser's Faerie Queene.

He hates *foul* leasings and vile flattery,
Two filthy blots in noble gentery.

Hubberd's Tale.

It is no vicious blot, murder, or *foulness*.
No unchaste action, or dishonoured step,
That hath deprived me of your grace and favour.

Shakspeare.

Hast thou forgot
The *foul* witch Sycorax, who with age and envy
Was grown into a hoop? *Id. Tempest.*

He's fallen in love with your *foulness*, and she'll fall in love with my anger. *Id. As You Like It.*

Not to affect many proposed matches
Of her own clime, complexion, and degree,
Whereto we see in all things nature tends:
Foh! one may smell, in such, a will most rank,
Foul disproportion, thoughts unnatural.

Id. Othello.

With *foul* mouth,
And in the witness of his proper ear,
To call him villain.

Id. Measure for Measure.

Kill thy physician, and the fee bestow
Upon the *foul* disease. *Id. King Lear.*

It's monstrous labour when I wash my brain,
And it grows *fouler*. *Id. Antony and Cleopatra*

My lord, he speaks most vilely of you, like a *foul-mouthed* man as he is, and said he would cudgel you. *Id. Henry IV.*

If black scandal, or *foulfaced* reproach,
Attend the sequel of your imposition,
Your mere enforcement shall acquittance me
From all the impure blots and stains thereof.

Shakspeare.

You perceive the body of our kingdom,
How *foul* it is; what rank diseases grow,
And with what danger near the heart of it. *Id.*

Thou play'dst most *foully* for't. *Id.*

Who's there besides *foul* weather?
One minded like the weather, most inquietly. *Id.*

There is not so chaste a nation as this, nor so free from all pollution or *foulness*: it is the virgin of the world. *Bacon.*

Foul sights do rather displease, in that they excite the memory of *foul* things than in the immediate objects; and therefore, in pictures, those *foul* sights do not much offend. *Id.*

The letter to the protector was gilded over with many smooth words; but the other two did fully and *foully* set forth his obstinacy, avarice, and ambition. *Hayward.*

Consul, you are too mild:
The *foulness* of some facts takes thence all mercy.

Ben Jonson.

Piety is opposed to hypocrisy and insincerity and all falseness or *foulness* of intentions; especially to that personated devotion, under which any kind of impiety is wont to be disguised. *Hammond.*

In his sallies their men might fall *foul* of each other. *Clarendon.*

Too well I see and rue the dire event,
That with sad overthrow and *foul* defeat
Hath lost us heaven. *Milton's Paradise Lost.*

In Sion also not unsung where stood
Her temple on the offensive mountain, built
By that uxorious king whose heart though large
Beguiled by fair idolatresses fell
To idols *foul*. *Id.*

This is the grossest and most irrational supposition, as well as the *foulest* atheism, that can be imagined. *Hale.*

So in this throng bright Sacharissa fared,
Oppressed by those who strove to be her guard:
As ships, though never so obsequious, fall
Foul in a tempest on their admiral. *Waller.*

He that can trave' in deep and *foul* ways, ought not to say that he cannot walk in fair. *Tillotson.*

The fury laid aside
Her looks and limbs, and with new methods tried
The *foulness* of the infernal form to hide. *Dryden.*

Satire has always shone among the rest,
And is the boldest way if not the best,
To tell men truly of their *foulest* faults,
To laugh at their vain deeds, and vainer thoughts.
Id.

Be fair or *foul*, or rain or shine,
The joys I have professed, in spite of fate are mine.
Id.

Sweep your walks from autumnal leaves, lest the worms draw them into their holes, and *foul* your garden. *Evelyn.*

It is the wickedness of a whole life, discharging all its filth and *foulness* into this one quality, as into a great sink or common shore. *South.*

The stream is *foul* with stains
Of rushing torrents and descending rains.
Addison.

It was allowed by every body, that so *foulmouthed* a witness never appeared in any cause. *Id.*

O brother, brother! Filbert still is true;
I *foully* wronged him: do, forgive me, do. *Gay.*

My reputation is too well established in the world to receive any hurt from such a *foulmouthed* scoundrel as he. *Arbuthnot.*

You will have no notion of delicacies if you table with them: they are all for rank and *foul* feeding, and spoil the best provisions in cooking. *Felton.*

Now singing shrill, and scolding oft between,
Scolds answer *foulmouthed* scolds; bad neighbourhood I ween. *Pope.*

The first born man still in his mind he bore,
Foully arrayed in guiltless brother's gore,
Which for revenge to Heaven, from earth did loudly roar. *Fletcher's Purple Island.*

While Traulus all his ordure scatters,
To *foul* the man he chiefly flatters. *Swift.*

She *fouls* a smock more in one hour than the kitchen-maid doth in a week.
Id. Direction to Servants.

Reason half extinct,
Or impotent, or else approving, sees
The *foul* disorder. *Thomson's Spring.*

However the poor jackalls are less *foul*
(As being the brave lion's keen providers)
Than human insects, catering for spiders. *Byron.*

Foul, in sea-language, is used when a ship has been long untrimmed, so that the grass, weeds, or barnacles, grow on her sides under water. It is also used for the running of one ship against another. This happens sometimes by the violence of the wind, and sometimes by the carelessness of the people on board, to ships in the same convoy, and to ships in port by means of others coming in. The damages occasioned by running foul are of the nature of those in which both parties must bear a share. They are usually made half to fall upon the sufferer, and half upon the vessel which did the injury; but in cases where it is evidently the fault of the master of the vessel, he alone is to bear the damage.

Foul, in husbandry, a disease of cattle, proceeding from blood, and a waterish rheum that falls down into the legs, and makes them swell.

Foul Water. A ship is said to make foul water, when, being under sail, she comes into such shoal water, that though her keel do not touch the ground, yet it comes so near it, that the motion of the water under her raises the mud from the bottom.

FOULA, or Foul Island, one of the Shetland Isles, lying between six and seven leagues west from the main land. It is about three miles long; narrow, and full of rough, steep, and bare rocks; one of which is so large, and runs up to such an height, that it may be clearly seen from Orkney. This, therefore, may be reckoned with the greatest probability to be the Thule of Tacitus, whatever might be the Thule of the Phœnicians and Greeks. It affords good pasturage for sheep, though very little arable land; but that, however small in extent, is very fertile, out of the produce of which, with fowl and fish, the poor inhabitants (about twenty-six or twenty-seven families), subsist. They have nothing that can be called a port; and their only commodities are stock-fish, train-oil, and feathers; but they are much attached to their situation.

FOULAHS (Arab. *falaha*, tillage, this people being principally agriculturists), the name of a race of negroes, very widely diffused throughout Western Africa. Their original seat has been thought to be that mountainous tract near the sources of the Senegal, bearing the name of Fooladoo; and their most powerful existing kingdom is that of Foota Jallo, situated to the south of Gambia; but they also possess Brooks, situated on the higher parts of the Senegal, conterminous with Fooladoo; Bondou and Foota Torra, between the Senegal and Gambia; the kingdom of the Seratic, on the lower part of the Senegal; Masina, on the Niger, between Bambarra and Tombuctoo; and Wassela, to the south of the upper part of the Niger. They likewise hold detached districts of various kingdoms in this part of Africa, and often pay to the sovereign a rent or tax for their use of the land. Their employment, as we have intimated, is chiefly pasturage, and they are usually in some degree migratory; during the wet season, driving their herds to the top of the mountains, and when it becomes dry and parched, bringing them to the side of the rivers. For the defence of their herds against wild beasts, they collect the cattle at night, within a circle of tents or huts, and light fires all round. In the districts where they do not rule, their villages form a kind of independent republic, governed by their own chiefs. If they are oppressed or encroached upon, they quietly remove themselves to another territory; and as no people in Africa bear a higher character, 'to have a Foulah town in the neighbourhood,' says Moore, 'is by the natives reckoned a blessing.' They apply occasionally to trade, and sometimes to hunting. There is no known instance of a Foulah selling one of his countrymen as a slave; on the contrary, if any of them is found in that condition, they will unite in raising a sum sufficient for his redemption. The hospitality of the Foulahs is also much celebrated. The passion for dancing they share with all the negro tribes, and are extremely fond of music, a proficiency in which is deemed an accomplishment in their chiefs: their airs are said to be very pleasing and tender. Their complexion is a dark olive; they have a thin face, small, high, but expressive features, and long soft hair. Their hue varies with the districts they inhabit; in the vicinity of the Moors it approaches to yellow; while among the Mandingoes it deepens into a muddy black. They are of the middle size, of a graceful form, and of a pe-

culiarly insinuating air. Mahommedans in religion, they still do not observe the rules of the prophet with any strictness; nor do they exhibit that intolerance which prevails among the Moors. They speak a language of their own; but the Arabic is their only written one. Such is the general account which travellers have given of the Foulahs.

M. Mollien, the last writer and observer of the habits of this race, delineates their character, however, in darker shades. He represents them as very intolerant and haughty, encroaching and treacherous; while he allows them many of the good qualities we have mentioned. As, however, he says, that all the Foulahs are engaged in trade, his descriptions may apply to the trading class near the banks of the Senegal, and it is impossible to say how far the odious parts of their character may have been produced by their intercourse with Europeans.

A difference in the forms of government, religion, and other circumstances, in the nations with whom the original Foulahs have united, must also have produced a greater variety in the present race of Foulahs than in any of the other negro tribes. Respecting those of Foota-Jallo, this traveller observes, 'The native of Foota-Jallo is in general ugly; his look is as ferocious as that of a tiger; his nose is broad and flat, his teeth bad, his stature low, and his clothes, which hang in rags, and the manner in which he arranges his hair, naturally very long, by dividing it into small braids, according to the custom of the ancient Egyptians, give a savage appearance calculated to alarm the traveller: however, he is not cruel, but very irascible; the least trifle offends and irritates him, he rarely leaves an injustice unpunished, hence revolutions are frequent in Timbo. They are often attended with the death of the sovereign. The inhabitant of Foota-Jallo is proud of his country; he is incessantly asking strangers if they do not think it beautiful. Among the Foulahs fanaticism is carried to phrenzy; every moment they draw their daggers, and looking furiously at them exclaim, 'I will plunge thee into the heart of a pagan.''

The Foulahs are said to be superior workmen in many of the mechanical arts. Every village has its weavers, smiths, and shoe-makers. Their domestic concerns are all managed by the females, respecting whom, M. Mollien says, 'The women are pretty, and well shaped, have oval faces, and delicate features; their hair is long, and they braid it round their heads; their feet are small, but their legs somewhat bowed; they are seldom so stout as the negresses. They load their hair with ornaments of yellow amber and coral, and their necks with gold or glass beads; over the head they throw a muslin veil; some wear a jacket with sleeves; like the negro women, they have a cloth fastened round the waist. Lively and warm, they always wear a smiling look, and they seem to sigh for nothing but pleasure; their virtue rarely resists a grain of coral, but the senses alone are concerned in the passion of these females; they are by no means susceptible of a delicate or lasting attachment; very malignant, they employ their charms to shake off their yoke, and to obtain a share in the empire of the hut; they are not slaves like the Jaloff women, but wives, and in reality mistresses of the house.'

Foulweather Cape, a conspicuous and very singular promontory on the north-west coast of North America. A high round bluff point projects abruptly into the sea; a remarkable table hill is situated on the north, and a lower round bluff to the south of it. Vancouver places it in long. 236° 4′ W., lat. 44° 49′ N.

FOUND. The preterite and participle passive of *find*. See Find.

Found, *v. a*. } Fr. *fonder*; Lat. *fundare*. To lay the basis of any building; to build; to raise; to establish; to erect; to begin; to originate; to fix firmly; to raise upon a principle or ground. The derivatives are applied in all these senses: the agent, the subject, and the action, stand in each of these relations to the verb, and in no other.
Founda'tion, *n. s.*
Found'er, *n. s.*
Found'ress, *n. s.*

He is lyk to a man that bildith an hous that diggide depe, and sette the *foundement* on a stoon.
Wiclif, Luk. vi.

It fell not; for it was *founded* upon a rock. *Matt.*

He hath *founded* it upon the seas, and established it upon the floods. *Psalm* xxiv. 2.

For of their order she was patroness,
Albe Clarissa was their chiefest *foundress*.
Faerie Qveene.

Throughout the world, even from the first *foundation* thereof, all men have either been taken as lords or lawful kings in their own houses. *Hooker.*

The stateliness of houses, the goodliness of trees, when we behold them, delighteth the eye; but that *foundation* which beareth up the one, that root which ministereth unto the other nourishment, is in the bosom of the earth concealed. *Id.*

Fleance is escaped,
—Then comes my fit again: I had else been perfect,
Whole as the marble, *founded* as the rock
Shaksveare.

That is the way to make the city flat,
To bring the roof to the *foundation*,
To bury all. *Id. Coriolanus.*

O Jove, I think,
Foundations fly the wretched; such I mean,
Where they should be relieved. *Id.*

These tunes of reason are Amphion's lyre
Wherewith he did the Theban city *found*.
Davies.

—Come no more,
This is mere moral babble, and direct
Against the canon-laws of our *foundation*.
Milton's Comus.

This also shall they gain by their delay
In the wide wilderness; there they shall *found*
Their government, and their great senate chuse,
Through the twelve tribes, to rule by laws ordained.
Milton.

And the rude notions of pedantic schools
Blaspheme the sacred *founder* of our rules.
Roscommon.

Of famous cities we the *founders* know;
But rivers, old as seas to which they go,
Are nature's bounty: 'tis of more renown
To make a river than to build a town. *Waller.*

If we give way to our passions, we do but gratify ourselves for the present, in order to our future disquiet; but if we resist and conquer them, we lay the *foundation* of perpetual peace in our minds.
Tillotson.

The wanting orphans saw with wat'ry eyes
Their *founder's* charity in the dust laid low.
Dryden.

For zeal like hers, her servants were to show;
She was the first, where need required to go
Herself the *foundress* and attendant too.
Id.

I draw a line along shore;
I lay the deep *foundations* of a wall,
And Enos, named from me, the city call. *Id.*

When Jove, who saw from high, with just disdain,
The dead inspired with vital breath again,
Struck to the centre with his flaming dart
The unhappy *founder* of the godlike art. *Id.*

Nor was Prœneste's *founder* wanting there,
Whom fame reports the son of Mulciber. *Id.*

They Gabian walls, and strong Fidenæ rear.
Nomentum, Bola with Pometia *found*,
And raise Colatian towers on rocky ground. *Id.*

That she should be subject to her husband, the laws of mankind and customs of nations have ordered it so; and there is a *foundation* in nature for it.
Locke.

A right to the use of the creatures is *founded* originally in the right a man has to subsist. *Id.*

Power, *founded* on contract, can descend only to him who has a right by that contract. *Id.*

King James I. the *founder* of the Stewart race, had he not confined all his views to the peace of his own reign, his son had not been involved in such fatal troubles. *Addison's Freeholder.*

This hath been experimentally proved by the honourable *founder* of this lecture in his treatise of the air. *Bentley.*

Ne'er to these chambers where the mighty rest,
Since their *foundation*, came a nobler guest. *Tickel.*

The reputation of the Iliad they *found* upon the ignorance of his times. *Pope's Preface to the Iliad.*

Nor can the skilful herald trace
The *founder* of thy ancient race. *Swift.*

He had an opportunity of going to school on a *foundation*. *Id.*

The first *foundation* of friendship is not the power of conferring benefits, but the equality with which they are received, and may be returned.
Junius's Letters.

Gregory the Seventh, who may be adored or detested as the *founder* of the Papal monarchy, was driven from Rome, and died in exile at Salerno.
Gibbon.

FOUNDATION, in architecture. See ARCHITECTURE, Index. Palladio allows a sixth part of the height of the whole building for the hollowing or under-digging, unless there be cellars under ground, in which case he would have it somewhat lower.

FOUNDATION, in law, denotes a donation or legacy, either in money or lands, for the maintenance and support of some community, hospital, school, &c. The king only can found a college, but there may be a college in reputation founded by others. If it cannot appear by inquisition who founded a church or college, it shall be intended that it was the king, who has power to found a new church, &c. The king may found and erect an hospital, and give a name to the house upon the inheritance of another, or license another person to do it upon his own lands; and the words fundo, creo, &c., are not necessary in every foundation, either of a college or hospital, made by the king; but it is sufficient if there be words equivalent; the incorporation of a college or hospital is the very foundation; but he who endows it with lands is the founder: and to the erection of an hospital, nothing else is requisite but the incorporation and foundation. Persons seised of estates, in fee-simple, may found hospitals for the poor by deed enrolled in chancery, &c., which shall be incorporated, and subject to such visitors as the founder shall appoint, &c. stat. 39 Eliz. c. 5.

FOUND, *v. a.* } Fr. *fondre, fondeur*; Lat.
FOUND'ER, *n. s.* } *fundere*. To form by melt-
FOUND'RY, *n. s* } ing and pouring into moulds; to cast. A founder is the agent, and foundry is the casting-house or place of his operation.

A second multitude
With wondrous art *founded* the massy ore,
Severing each kind, scummed the bullion dross.
Milton.

Founders add a little antimony to their bell-metal, to make it more sonorous; and so pewterers to their pewter, to make it sound more clear like silver.
Grew's Museum.

FOUNDERS, persons who cast metals in various forms and for different uses; as guns, bells, statues, printing characters, candlesticks, buckles, &c., whence they are denominated gun-founders, bell-founders, figure-founders, letter-founders, founders of small works, &c. The company of founders was incorporated in 1614. Their arms are *azure*, an ewer between two pillars, *or*, as in the annexed diagram.

FOUND'ER, *v. a.* & *v. n.* Fr. *fondre*; It. *fond*, the bottom. To cause such a soreness and tenderness in a horse's foot, that he is unable to set it to the ground. To sink to the bottom; to fail; to miscarry.

Out of the ground, a fury infernal sterte,
From Pluto sent, at requeste of Saturne;—
For which his hors for fere gan to turne,
And lepte aside, and *foundred* as he lepe.
Chaucer. The Knightes Tale.

Phœbus' steeds are *foundered*,
Or night kept chained below.
Shakspeare Tempest.

In this point
All his tricks *founder*; and he brings his physick
After his patient's death. *Id. Henry VIII.*

New ships, built at those rates, have been ready to *founder* in the seas with every extraordinary storm.
Raleigh's Essays.

EL. BR. For certain,
Either some one, like us, night-*foundered* here,
Or else some neighbour woodman, or at worst
Some roving robber calling to his fellows. *Milton.*

Brutes find out where their talents lie:
A bear will not attempt to fly;
A *foundered* horse will oft debate,
Before he tries a five-barred gate. *Swift.*

The roar
Of breakers has not daunted my slight trim,
But still sea-worthy skiff, and she may float
Where ships have *foundered*, as doth many a boat.
Byron.

To FOUNDER, in sea language, is used, when a ship, by an extraordinary leak, or by a great sea breaking in upon her, is so filled with water that she cannot be freed of it; so that she can neither veer nor steer, but lies like a log; and not being able to swim long, will at last sink.

FOUNDING.

Founding, in the mechanical arts, will strictly include castings in brass and bronze, the founding of cannon, all the other operations of the iron foundry, and bell and type founding. But some of these are of sufficient importance to require distinct treatment.

For the founding of cannon, see Gunnery.

For the operations of the iron foundry, see Iron Foundry.

For type-founding, see Type.

This paper will be confined to founding in brass and bronze; and to bell founding.

Brass is a compound of copper and zinc, which become, by being fused together, a homogeneous malleable yellow metal, of great utility in various articles of our domestic economy, and in the arts, in which it is also employed in the founding of statues, &c. &c. See Brass.

Founders of brass articles of a general description require an exact model, in wood or otherwise, of the article to be founded; and this is most frequently required to be in two parts, exactly joined together, and fitted by small pins: the casting, in such a case, is performed by two operations, that is, one half at one time and one half at another, and in manner following, viz. The founder provides himself with a yellowish sharp sand, which is required to be well washed, to free it of all earthy and other particles. This sand is prepared for use by a process called tewing, which consists in working up the sand in a moist state, over a board about one foot square, which is placed over a box to receive what may fall over in the tewing. A roller about two feet long and two inches in diameter is employed in rolling the sand about until it is brought into that state which is deemed proper for its business: a long-bladed knife is also required to cut it in pieces. With the roller and the knife the tewing is finished for use, by being alternately rolled and cut. When the sand is so far prepared, the moulder provides himself with a table or board, which in size must be regulated by the castings about to be performed on it. The edges of the table or board are surrounded by a ledge, in order to support the tewed stuff; the table so previously prepared is filled up with the sand as high as the top of the ledge, which is in a moderately moistened state, and which must be pressed closely down upon the table in every part. When the operation has so far advanced, the models must be all examined, to see that they are in a state to come nicely out of the mould, and if not found so, they must be cleaned or altered till the founder is satisfied with them. All models require the greatest accuracy in their making, or it will be vain to suppose any thing good can be performed by the founder.

When the models are found to be in a state to be founded, one half, generally longitudinally, is taken first, and this is applied on the mould, and pressed down into the tewed stuff or sand, so as to leave its form completely indented in it: this must be very carefully looked to, to see that there are no small holes; as every part in the indented sand must be a perfect cameo of the models submitted and pressed into it. If it should not be found perfect, new sand must be added, and the model re-indented and pressed, till it leaves its impression in a state proper to receive the metal. In the same manner, other models intended to be founded on the same table, must be prepared and indented into the sand. When the table is completely ready for the metal, it is carried to the melter, who himself examines its state, and also the cameos, and who lays along the middle of the mould the half of a small wire of brass, which he presses into the sand, so as to form a small channel for the melted brass to flow in, and which he terms the master-jet or canal. It is so disposed as to meet the ledge on one side, and far enough to reach the last pattern on the other; from this are made several less jets or branches, extending themselves to each pattern on the table, and by which means the fluid metal is conveyed to all the different indented impressions required to be cast on the table. When the work is so far forwarded, it is deemed ready for the foundry; previously to which, however, the whole is sprinkled over with mill-dust, and when it is so sprinkled, the table is placed in an oven of moderate temperature till it gets dry, or in a state which is deemed proper to receive the melted brass.

The first table being thus far completed, it is either turned upside down and the moulds or patterns taken out, or the moulder begins to prepare another table exactly similar to the one he has just completed, in which he indents and presses the other half of the mould, or he turns the table already finished and containing the first half of the patterns upside down; previously, however, to doing which, it will be necessary for him to loosen the pattern which is fixed in the sand a little all round, with any small instrument that will just open away the sand from its edges, in order to its coming from out of the table more easily. This economy in founding, of making one-half of each pattern to be cast answer the purpose of the whole pattern, is a very common practice in brass founding, and enables the manufacturer to sell his goods at a much cheaper rate than he would otherwise be enabled to do, if he were obliged to have a full pattern of all goods to be founded. When he has loosened the sand from about the pattern, and taken it out of the first table, the work is proceeded in, of preparing the counterpart or other half of the mould with the same pattern, or otherwise, and in a frame exactly corresponding with the former, excepting only that it is prepared with small pins, to enter holes which are made in the first half of the model, and into which the pins enter, and secure the two halves together. It is obvious, that the accuracy in the joining will depend wholly upon the neatness and truth of fixing and boring for the pins.

When the table containing the counterpart is finished, the patterns are all properly indented

in the sand, which is done as has been before described for the first table, and when completed, it is carried away to the melter, who, after enlarging the principal jet of the counterpart, and making the cross jets to the various patterns, sprinkles them as before with mill-dust: it is then set in the oven till it has received a sufficient drying to be ready for the melted metal; after which, and when both parts of the model are deemed sufficiently dry, they are joined together by means of the pins and holes, previously prepared in the upper and under model: and to prevent their rising up or slipping aside by the force of the melted brass, which is to come in flaming with heat, and through a small hole contrived in the principal or master-jet, the precaution is taken of locking the two tables down in a kind of press made with screws; or, if the mould be too large to admit of being screwed easily, wedges are had recourse to, to fix the tables together, to prevent accidents. The moulds thus fixed in the press, or wedged, are placed near the furnace, and every arrangement is made for it to receive the melted brass as it comes out of the crucible.

All being so far arranged, and the moulds ready, the metal is prepared, by being heated to a complete fusion in an earthen crucible, commonly about ten inches high and four inches in diameter. The furnace for promoting the fusion of the brass is similar to a smith's forge, having bellows of large dimensions operated upon by a lever, and a chimney over the furnace. The hearth is of masonry or brick-work, secured by an outer rim of iron, in the centre of which is the fire-place, and which consists in making a void or cavity, from twelve to eighteen inches square, and reaching quite down to the bottom or floor of the foundry. The void or cavity is divided into two parts by an iron grating, on the upper side of which is placed the fuel, and in the midst of it the crucible containing the metal; the lower part of the cavity is appropriated to admit the air to the fire, and also to receive the waste or cinders falling from the fire. The fuel consists of dry beechen wood cut into small billets, and previously baked, to make them more readily combustible, and which are, when a fire is required, put into the cavity in the hearth, and well lighted. The crucible, when full of brass, should be placed down in the centre of the fire, so that it may play all round it, and it should be covered with an earthen cover, or tile, to promote the heat of the fire upon the metal. All the time the metal is preparing, the attendant keeps blowing up the fire; and in order to keep the heat from escaping through the chimney, or in flame, a piece of tile is placed over the fire and aperture of the furnace. As the heat operates in melting the metal, it sinks nearer to the bottom of the crucible, when fresh metal is added till the crucible is quite full. The brass is previously prepared for melting, by being broken into small fragments in a mortar, and, when sufficiently beaten and broken for use, it is put into the crucible by an iron ladle, which has a long hollow arm or shank of small diameter, but sufficiently large to admit the fragments of metal rolling through it into the crucible, into which the fresh brass is dropped from out of the cylindrical arm of the iron ladle. As the crucible is filled with metal, preparation must be made, when it is deemed ready to be removed for the purpose of running it into the moulds, to remove it easily from out of the fire, which is done by a pair of iron tongs with their feet bent inwards. The crucible is taken hold of by these tongs, and carried away to the mould, into which the melted brass is poured, through the aperture communicating to the master-jet of each mould; the metal is carried round to each jet, and poured in till the crucible is emptied, or the moulds filled. It is usual to fuse rather more brass than is required for the casting; as, by having too little, the work could not be at that time finished, which would occasion delays in opening the tables. As soon as the moulds are run, water is sprinkled over the tables, to cool and fix the metal; after which the presses or wedges are removed from the frames, and the works just founded are removed out of the sand, to be cleaned and finished for sale. The tewing-stuff or sand is afterwards taken out of the frames to be worked up again for another casting. The sand, by a repetition of use, becomes quite black, by reason of the charcoal that it collects from the foundry; but its blackness does not render it unfit to be employed in other tables for moulding or casting.

In foundings of brass in which the models are large, an expedient is had recourse to, of rendering them lighter and more economical, by performing the casting hollow. This is done by making a core or heart, roughly resembling the pattern, and composed of clay and white crucible dust well kneaded and mixed together with water, and which is covered with wax, exactly representing the article to be cast; or the core may be suspended in the centre of the indents made in the sand. When the article is required to have but one perfect side, as is common in most cabinet articles, the melted metal, in such a case, is prevented from filling the indent by the space occupied by the core, and it will be in thickness corresponding to the size which the heart or core takes up, in proportion to the size of the work to be founded. In the former case, when the article is to have both or all round of a full pattern, wax is employed, and is so adjusted to the core, that the metal may, in passing the jet, displace it, and leave its resemblance, and also its thickness, of brass, in the indent in the table. If it be a pattern of a complicated form, there would arise a difficulty in getting the core out after it was founded. The pattern must then be performed or moulded in two separate ones, and also the foundings; the part left out of the first pattern must be performed in a second; and afterwards fitted and soldered to the first. This mode is common at Birmingham, in making handles for locks, and shutter fastenings, which are commonly round. The plain knobs, for locks, &c., are made in halves and soldered together: the wrought ones, (as they are called from being ornamented) are cast with a solid shank and spindle, and the bell or handle part of the knob is hollow, and open at its opposite

ıich is afterwards supplied by a separate
r cap. The cores of many of these Bir-
m brass-works are made to occupy so
f the pattern, that the brass is not thicker
ıhilling.

y of the brass-manufacturers who work
rge scale, employ a steam-engine to punch
from sheet metal, from dies previously
. By this operation almost all the com-
ass goods, (such as hand-plates to doors,
o door and cabinet furniture, and many
ıods) are now made. The punched goods
y cheap, but of very little strength or du-
, as may be noticed in many of the brass
employed in our domestic economy.
mouldings, plain or wrought, are gene-
ıst solid, and in moderate lengths; a pat-
ı wood, clay, or wax, is required, and the
recautions previously to founding them
ıt they be carefully indented in the sand-
If the mouldings be large and much
, a core may be used for these also, taking
leave the metal sufficiently thick to allow
ıhing up afterwards, without injuring the
ıf the pattern.

brass, as well as other foundings, require,
taken out of the sand, to be cleaned up
ade complete; as they seldom come out
. This is done in brass-founding, by fil-
the cores, and filling up the small holes
ıelted metal or solder. Some brass-works
ıt to a rough pattern, for instance, all those
are cylindrical in shape; and such kind of
are put into a lathe and turned, and
ıed up afterwards. Articles in brass which
ulptured, are generally left in a mat-state
ir grounds, and the raised parts burnished
hand; the mat-state refers to such parts
ıhich are left without polish, or in a state
ich the brass is found when it first comes
the sand, with the addition of cleaning
erfecting only.

burnishing consists in making the raised
quite complete, and afterwards laying them
tight upon a bench, or in a vice, whichever
ıt convenient; and working up the face of
ıass with a bent tool composed of a shaft
el, about half an inch wide and eight or
inches in length, fixed firmly in a handle
od. The end of the tool is turned up
a quarter of an inch, and ground away on
ıer edge. With this tool the workmen rub
ırt to be heightened, as it is termed. They
these heightening tools of various widths,
one-eighth of an inch wide only, and others
ıch as three-quarters of an inch. With
tools they operate upon all the various sized
to be heightened; and, as the part is thus
ed, the workman dips his tool in a lacker,
ı is standing near him in an earthenware
This lacker is commonly prepared from
ıric dissolved in spirits of wine, and which
be afterwards explained under the head of
ıring.

ıasing, or enchasing as it is called, is also
oyed in brass works. It is a similar opera-
to heightening, except that it is employed
e more delicate works of sculpture to give
greater sharpness and effect. The French excel in chasing, as their numerous small ornaments used as decorations to chimney-pieces time-pieces, vases, &c. &c., fully demonstrate; many of which are in brass as well as in or molu.

Brass castings which are plain are cleaned up for sale by being filed smooth or turned so by the turner, and afterwards polished by being rubbed with emery till the surface becomes regular and tolerably even, after which they are finished with tripoli. To keep brass works from tarnishing and getting black, by exposure to the air, the brass-workers have recourse to lacker ing. This consists in covering the brass, moderately heated over a stove containing an open charcoal fire, with a liquid, also moderately warm, composed of saffron and Spanish annotta, each two drams, put into a bottle with a pint of highly rectified spirits of wine, which when together should be placed in a moderate heat and often shaken: from this a very strong tincture will be obtained, which must be afterwards strained through a coarse linen cloth to take out the dregs of the annotta and saffron; it is then to be returned to the bottle, and three ounces of seed-lac powdered must be added to it, and the whole again heated till the seed-lac be completely dissolved; after which it is fit for use, and will form a good and pale-colored lacker, which will prevent the brass from changing color by exposure to the air. It is laid on the brass by a camel's-hair pencil as thin as it can be spread, and requires nothing to be done to it after it is so spread but a moderate rubbing. If the brass be required to be of a redder color, increase the proportion of annotta in the lacker, and it will be accomplished. All the best kinds of brass-works are gilt to prevent their changing color, and this constitutes the desideratum in the works in or molu.

The more important part of casting in brass consists in founding *statues*, busts, basso-relievos, vases, &c. The Greeks and Romans practised it to an immense extent, as may be seen from the vast number of statues and other works which have come down to us of both these people. The Greeks also formed most of those instruments of brass, which we make of iron and steel. Thus Homer describes the arms offensive and defensive, in his poems, as brazen. He calls the Greeks by the general epithet of brass-coated, and seldom mentions steel. In Herculaneum, Pompeii, Stabea, &c., were found many arms and instruments formed of brass or bronze, while very few of iron were discovered. Those of brass were adapted to the purposes of agriculture, mechanics, mathematics, architecture, &c. In Pompeii was found a complete set of surgeons' instruments formed of bronze, which shows that a preference was given to that metal.

In the founding of statues, busts, &c., three things in particular require attention: namely, the mould, the wax, and shell or coat, the inner mould or core, so called from being in the middle or heart of the statue. In preparing the core, the moulder is required to give it the attitude and contour of the figure intended to be founded. The use of the core is to support the

wax and shell, to lessen the weight, and save the metal. The core is made and raised on an iron grate sufficiently strong to sustain it, and it is farther strengthened by bars or ribs of iron. The core is made of strong potter's-clay tempered with water, and mixed up with horse-dung and hair, all kneaded and incorporated together; with this it is modelled and fashioned previously to the sculptor's laying over it the wax; some moulders use plaster of Paris and sifted brick-dust mixed together with water for their cores. The iron bars which support the core are so adjusted, that they can be taken from out of the figure after it is founded, and the holes are restored by solder, &c.; but it is necessary in full-sized figures to leave some of the iron bars affixed to the core to steady its projecting parts. After the core is finished and got tolerably firm and dry, the operation of laying on the waxen covering to represent the figure is performed, which must be all done, wrought and fashioned by the sculptor himself, and by him adjusted to the core. Some sculptors work the wax separately, and afterwards dispose and arrange it on the ribs of iron, filling up the void spaces in the middle afterwards with liquid plaster and brick-dust, by which plan the core is made as, or in proportion to, the sculptor's progress in working the wax-model. Care must be taken, however, in modelling the wax in both cases to make it of a uniform substance, in order to the metal being so in the work, of which the wax is its previous representative. When the waxen model is finished to the core, or adapted and filled afterwards, small tubes of wax are fixed perpendicularly to it from top to bottom, to serve not only as jets to convey the melted metal to all parts of the work, but as vent-holes to allow a passage to the air generated by the heated brass in flowing into the mould, and which, if not admitted readily to escape, would occasion so much disorder in it as would much injure the beauty of the work. Sculptors adjust the weight of the metal required in this kind of founding by the wax taken up in the model. One pound of wax so employed will require ten pounds of metal to occupy its space in the casting. The work having advanced in progress so far, will now require covering with a shell. This consists of a kind of coat or crust laid over the wax, which, being of a soft nature, easily takes and preserves the impression which it afterwards communicates to the metal, upon its occupying the place of the wax, which is between the shell and core. The shell is composed of clay and white crucible dust, well ground, screened, and mixed up with water to the consistence of paint, like which it is used. The moulder applies it by laying it over the wax with a camel's-hair or other soft pencil, which will require eight or nine times going over, allowing it time to dry between each successive coat. After this coating is firm upon the wax, and which is used only to protect it from those which are to follow, the second part, or coating, is made up of common earth, mixed with horse-dung: this is spread all over the model, and in such thickness as to withstand, in some measure, the weight of the intended metal. To this coating or impression is added a third, composed almost wholly of dung, with a proportion of earth sufficient only to render it a little more tough and firm when used. When this is tolerably dry, the shell is finished by laying on several more coats or impressions of the same composition, made strong and stiff by successive workings with the hand. When this is finished, and is deemed adequate to support the heated metal, it is farther secured and strengthened by several bands or hoops of iron, bound round it at about six inches from each other, and fastened at bottom to the grate on which the statue stands. Above the head of the statue is made an iron circle for the purpose also of confining the shell and statue, to this circle the hoops are fastened at top. It may be considered when the moulding has arrived at this state, to be in a condition to receive the melted metal; but it is not so exactly, as will soon appear. The mould, as has been before observed, is made upon an iron grate: under this grate is a furnace and flue, in which at this period of the work a moderate fire is to be made, and the aperture of communication therewith stopped up so as to keep in the heat. As the heat increases, and begins to operate on the mould, preparation must be made to allow of the wax running freely from out of the shell: for this purpose, pipes are contrived at the base of the mould, so that it may run gently off and through these pipes. As soon as it is all run off, the pipes are nicely stopped up with earth to prevent the air entering them, &c. When this is done, the shell is surrounded by any matter that has non-conducting properties, for instance, pieces of brick put round and piled up of good thickness, secured by earth, will answer the end; and the whole should be finally coated outside with loam as a farther protection to keep in the heat.

After the shell is adequately surrounded with materials to keep off the effect of the air, the fire in the furnace is augmented, till such time as both the matter surrounding the shell and it also become red-hot, and which in ordinary circumstances will take place in twenty-four hours' time; the fire is then extinguished, and the whole allowed to cool: after which, the matter which has been packed round the shell is taken away, and its place occupied with earth moistened and closely pressed to the mould in order to make it more firm and steady. It will, when having advanced so far, be in a state to receive the melted metal; to prepare which for the casting, a furnace is made a few feet above the one employed to heat the mould: it is formed like an oven, having three apertures, one of which is for a vent, the other to admit the fuel, and the last to let the melted metal flow through and out of the furnace. This last aperture should be kept very close whilst the metal is fusing, when it has arrived at that state which is deemed proper for running it into the shell, and which is known by the quick separation and escape of the zinc of the brass. A little tube is laid to convey it into an earthenware basin, which is fixed over the top of the mould. Into this basin all the large branches from the jets

enter, and from which is conveyed the metal into all the parts of the mould. The jets are all stopped up with a kind of plugs, which are kept close till the basin which is to supply the metal be full. When the furnace is first opened for this purpose, the melted brass gushes forward like a torrent of fire, and is prevented from entering any of the jets by the plugs, till the basin is sufficiently full to be ready to begin with the mould, and which is esteemed so when the brass it contains is adequate to the supply of all the jets at once, upon which occasion the plugs from all of them are withdrawn. The plugs consist of a long iron rod, with a head at one end capable of filling the whole diameter of each tube. The hole in the furnace in which the melted metal is contained, is opened with a long piece of iron, fitted on the end of a pole to allow of the furnace-man keeping at a distance from it, as many accidents occur by the red-hot metal coming in contact with the air, particularly if it be damp, in which case the most violent explosions take place. The basin is filled almost in an instant after the furnace-plug is withdrawn, and the metal is then let into the several jets communicating with the model, which when they have emptied themselves into the shell or mould, the founding is finished, in as far as the casting is concerned. The rest of the work is completed by the sculptor, who takes the new brass figure from out of the mould and earth in which it was encompassed, saws off the jets, and repairs and restores the parts where required. His tools for this purpose consist of chisels of various sizes, gravers, puncheons, files, &c.

In casting colossal statues a somewhat different mode is pursued than the one already described: this arises wholly from the size, it being found difficult to remove the moulds of such works; they are therefore worked and prepared upon the spot where they are to be cast. There are two ways of performing this. By the first plan a square hole is dug into the earth somewhat larger than would be required for the mould, and its sides are hemmed up with brick-work: at its bottom is formed a hole below the bottom of the one already prepared, as a furnace, and which must be built up with brick-work, having an aperture made outwards into another pit prepared near it, from which the fuel is put into the furnace. The top of the furnace in the first hole is covered by a grating of iron, and on this is moulded and placed the case of the statue to be cast, and also its waxen coating; in doing which the same process is observed by the sculptor as that already described. Near the edge of the large pit, in which the model is placed, is erected the furnace to melt the metal, and which is similar to the one already described for common figure-casting, except being of larger dimensions; it has like that three apertures, one for putting in the wood, another for vent, and a third to run the metal out at. By the second plan of founding colossal figures, it is thought sufficient to work the mould above ground, adopting the same mode with respect to a furnace and grate underneath it. For, whether under ground or above it, to keep in the heat when drying the core and melting the wax, is that which is more particularly sought for; to do which, in the most effectual way, four walls of brick-work are built up round the model, in the middle of which is fixed the grate and furnace; and on one side above is formed the mass of building intended for the furnace, which is to be appropriated to the melting of the metal. When the whole is finished and ready, a fire is made in the fire-place under the core of the model, and kept up so as to produce a moderate heat to dry the core, and also to melt away the wax from off it, which runs down by tubes as has been before remarked upon, and indeed no difference whatever takes place in such founding, except every thing being on a larger scale. When the wax is run off, and the fire extinguished in the furnace, bricks are filled in at random, either into the hole, if founding under ground, or into the area between the walls if above ground; after this is done the fire in the furnace is again lighted, and blown up and augmented, till such time as both the core and bricks are of a red-heat; when the fire is again extinguished, and the whole is left to cool; and when cooled the bricks are again removed, and all is cleared away, and the space again occupied by moistened earth to secure and steady the model. Nothing now remains but running in the metal, which is performed as has been before described for smaller foundings of statues.

All the principal cities of ancient Greece and Rome, boasted of their wealth by enumerating their statues of brass. Athens, Delphi, and Rhodes, are each reported to have had in and about their temples 3000 brass statues. And Marcus Scaurus, though an edile only, adorned the circus at Rome with upwards of that number of statues of brass, during the time of the celebrating of the Circensian shows. It afterwards, in consequence of this taste continuing to prevail at Rome, of forming and collecting works in brass, used to be a proverb among the visitors of that celebrated city, 'that in Rome the people of brass were not less numerous than the Roman people.'

Bronze, by the Italians called Bronzo, was well known to the ancients. Egyptians, Greeks, and Romans all made use of it, and that in most cases to their important works as connected with sculpture and the ornamental parts of architecture. Bronze was selected by these people as bearing a finer edge, and not so likely as either of its component parts to oxydate by exposure to the air: hence they made statues of it to adorn the approaches to their cities and public edifices, affixed it in beautiful and highly relieved ornaments to the friezes of their temples, cast it in basso-relievos to represent the paraphernalia of their games and festivals, which were retained in compartments about their works dedicated to their gods; and, finally, wrought it into baths, tripods, vases, lamps, and other purposes of utility and ornament; specimens of many of which have by its indestructibility come down to us, as may be seen exhibited in the numerous public galleries on the continent, at Rome, Naples, Florence, and Paris, with some in our own Museum.

The Egyptian bronze consisted, according to Basari, of two-thirds brass, and one-third copper. Pliny says, 'the Grecian bronze was formed by adding one-tenth lead, and one-twentieth silver, to the two-thirds brass and the one-third copper of the Egyptian bronze,' and this was the proportion afterwards made use of by the Roman statuaries. The Greek bronzes very obviously appear to possess a difference of composition to any that have been founded among the moderns. The famous Venetian horses (four in number), said to have been the work of Lysippus, exhibit at once, to bronzists, that the ancient metal of that name was, in its composition, very different from that which is now made and called after that designation:—the modern bronze is commonly made of two-thirds copper, fused with one-third of brass; and very lately, from the great demand for all kinds of ornaments in this metal, in forming the decorative parts to our apartments, and supports to our articles of furniture, lead, with zinc in small proportions, have been added to the copper and brass. These variations have been one cause of the greater brilliancy and compactness to be observed in modern castings of this metal, in comparison of those founded a few years since. So common is bronze-work become at this time, that every petty brass-worker pretends to be an adept in founding of this metal; however, nothing is to be feared in the attempt, as the efforts of such bronzists will not carry them beyond the work of the furnace.

The alloying of the several metals to form bronze is found to promote in it a readier fusibility than is possessed by either of its component parts in their pure metallic state; and this is a property very much to its advantage in the castings of large works. Modern works in bronze become numerous in proportion to the advancement in the arts. Bronze-casting is employed in forming equestrian statues, colossal and other figures in alto-relievo, to set off and adorn public places. It is competent, when in the hand of an artist, of giving a zest to architecture; inasmuch as by its tint, as well as by the great variety of the forms it is susceptible of being made into, it is able to add richness by its opposition, and at the same time it finishes the forms of those parts of architecture requiring it. See Bronze. In that article we have noticed Macqueir's mode of casting large works.

Bronze-casting is also performed in the following manner, viz. 1. The figure or pattern to be cast must have a mould, and this is prepared and laid on a plaster cast, previously wrought and finished by the sculptor. The mould is made of plaster of Paris, rendered moist by being mixed up with water; to this preparation is added brick-dust, in the proportion of one-third of the former to two-thirds of the latter. This is carefully laid on the mould, with strength in proportion to the weight of metal intended to be used in the founding. In its joints small channels should be cut tending upwards, and from different parts of the internal hollow, to allow of vent for the air to escape through, as the heated metal runs in upon the mould. A thin layer of clay should be spread over the inside of it, and of the thickness which it is intended the bronze should be. Within-side the clay, a filling up of plaster and brick-dust, in the proportions as before described, will be required to compose the core: but, if the work to be cast be large, before the plaster and brick-dust are poured into the mould to form the core, a skeleton composed of iron bars, as a support for the figure, should be prepared and fixed; after which the filling up of the core may be proceeded in. When this is done, the mould must be opened again, and the layer of clay taken out of it, and the core thoroughly dried, and even burned with a charcoal fire, or with straw; for, if the least damp remain, the cast will be blown to pieces when the hot metal comes in contact with it, in running it into the mould, and the workmen employed about the work be maimed or killed by the dispersion of the heated bronze. After the core, &c., has been properly dried, and is deemed ready for the work, it should be laid in the mould, and supported in its place by short rods of bronze, which should run through the mould into the core. All being so far advanced, the mould should be clad and bound round with iron, of strength proportionate to the size of the work to be cast; after which, the mould should be laid in a situation for running in the metal, and must be supported for the purpose by bricks, &c. Great care should be taken that every part be perfectly dried, before any metal be run into the mould; or, as has been before observed, the most fatal consequences will arise to those who may be about the work. A channel must be made from the furnace in which the melted metal is, in order to its running to the principal jet of the mould, and with a descent, to promote its flowing rapidly. The jets, furnace, &c. &c., are all contrived, as has been before described, for casting figures in brass. In Vesaris's Lives is a chapter on brass-founding; and there are also some very useful observations in the Life of Beivenuto Cellin; vide Pliny's Natural History.

The smaller works in bronze are founded by previously being modelled in wax, to which a coating of clay is adapted and dried.

Bronze works are cleaned up and repaired after being founded, in a similar manner to what figures in brass are, and with the same kind of tools; but this last touch of perfecting what may have been left imperfect by the mould, should invariably be done by the statuary or modeller himself; as no one is so competent to keep up the spirit of the original work, as he who invented it, and gave effect to his invention, by making the model.

The principal works executed in London in bronze, claiming particular notice, are, the equestrian statue at Charing Cross, of Charles I.; the colossal statue of his late majesty, in the square of Somerset Place, by the late Mr. Bacon; the statue of Francis, duke of Bedford, on the south side of Russell Square: the equestrian statue of William III., in the centre of St. James's Square, the work of Mr. J. Bacon, jun.; and the 'Achilles,' in commemoration of Lord Wellington's victories, in Hyde Park. There

are also many bronzes of great merit in the provinces.

The manner of casting BELLS is similar to that of statues, except that the metal is different, there being in bell-metal about one fifth of tin, whereas there is no tin in the brass of statues. The dimensions of the core and wax in modelling a bell, if it be to be one of a ring of several, must be formed on a kind of scale or diapason, which will give the height, aperture, and thickness of the shell necessary to the several tones required. The exterior of the bell is formed into rings fashioned into mouldings, and sometimes inscriptions, mottos, and figures are also added to adorn its exterior; all these are previously modelled and afterwards moulded in wax upon the core. The clapper or tongue is not properly a part of the bell, and is furnished by other hands; with us it is usually of iron, and is suspended in the middle of the bell. The Chinese make it of wood, leaving a hole under the cannon of the bell to increase its sound. Our proportions of bells consist in making the diameter fifteen times as thick as the brim, and its length twelve times. The bell itself consists of its sounding bow, which is terminated by an inferior circle, which diminishes thinner and thinner as it approaches to the brim or that part on which the clapper strikes, and which is required to be left rather thicker than the rest both above and below; also the outward sinking or properly the waist of the bell, or the point under which it grows wider to the brim; and the upper vase, or top or dome of the bell, or that part which is above the waist. The pallet is the inside of the vase or dome to which the clapper is suspended. The vent and hollowed branches of metal which unite with the cannon to receive the iron keys by which the bell is hung to its beam of support, where it must be exactly counterpoised. The height of a bell is in proportion to its diameter as twelve is to fifteen, or in the proportion of the fundamental sound to its third major, from which it follows that the sound of a bell is principally composed of the sound of its extremity or brim as a fundamental of the sound of the crown, and which is an octave to it, and that of the height, which is a third.

To mould a bell for casting, the following preparations must be made. Earth must be collected, and that which is most cohesive is the best, and it must be well ground and sifted. Brick or stone must be obtained for the mine, with which it must be stained. Horse-dung, hair, and hemp, must be mixed with the earth, to render the composition for moulding more firm and binding. The wax to mould the inscriptions, coats of arms, and other insignia about the outer surface of the bell: also tallow must be mixed with the wax in equal proportions, to make it mould more freely; when mixed, a slight layer of the compound is put upon the model or outer mould, previously to any of the ornaments being applied to it. A scaffold is raised upon tressels round the mine, upon which is placed the earth grossly diluted with water, to make it mix better with the dung; and, last of all, shelves are to be placed, on which the models, &c., of the different ornaments or inscriptions to be cast upon the bell are put. A hole is now dug of an adequate depth to contain the mould of the bell, together with the case of it, or cannon, under ground, and about six inches below the level of the ground of the foundry. It must be wide enough to allow of a free passage between the mould and walls, or between one mould and another when several bells are to be cast. At the centre of the hole a stake is erected, which is fixed firmly in the ground; this supports an iron peg, on which the pivot of the second branch of the compasses of construction turns: these compasses are the chief instruments for making the mould, and consist of two legs joined to a third at its apex. The stake is surrounded by solid brick-work, of about six inches in height and of the diameter of the bell; this is called the mill-stone. The parts of the mould consist of the core, the model of the bell, and the shell.

When the outer surface of the core is formed, it is raised up with bricks, which are laid in courses of equal height upon a layer of earth; as each brick is laid the work is brought near to the branch of the compasses on which the curve of the core is shaped, so as that there may remain between it and the curve the distance of a line, to be afterwards filled up with layers of cement. The building of the core is continued to the top, leaving only an opening for the coals to be put in to bake the core. This work is covered with a layer of cement made of earth and horse-dung, and on which is moved the compass of construction, to make it of an even smoothness every where. Having finished the first layer in this way, the fire is put into the core by filling it half with coals through an opening kept shut during the baking, and with a cake of earth which has been separately baked. The first fire consumes the stake, and it is left in the core a half and sometimes a whole day: the first layer having become thoroughly dry, it is covered with a second, also a third and fourth, each being surrounded with a board and also the compasses, and also thoroughly dried before another is proceeded on. The core being thus finished, the compasses are taken to pieces with the intention of cutting away the thickness of the model, which when done they are again put in their places to begin another piece of the mould. This piece consists of a mixture of earth and hair applied with the hand upon the core in several cakes, these all close together if properly applied. This part of the work is finished afterwards in several additional layers of cement of the same matter smoothed by the compasses, and thoroughly dried before another is laid on. The first layer of the model is a mixture of wax and tallow, which is spread over the whole.

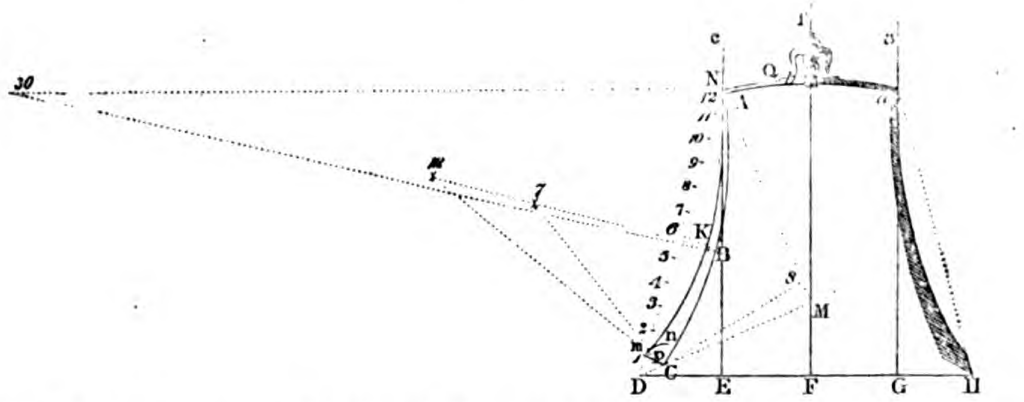
When the work has so far proceeded, the inscriptions or other insignia intended to be cast upon the bell are applied, for doing which a pencil is used dipped in a vessel of wax melted in a chafing dish; this is done for every letter, or figure intended to be upon the bell. Before the shell is begun, the compasses are taken to pieces, in order to cut away all the wood that fills the place of the thickness which is intended to be given to the shell. When this is done and

all is clear, the shell is begun, the first layer of which is the same earth sifted very fine. While it is tempering with water, it is mixed up with cow-hair to make it cohere; the whole, being a third cullis, is gently poured on the model, and fills exactly all the sinuosities of the figures; and this is repeated till the whole is two lines in thickness upon the model; when these layers are properly dried they cover it with a second of the same matter, but somewhat thicker than those previously laid on; the compasses are now tried and a fire is lighted in the core, so as to melt off the wax of the inscription, &c.; after which the layers of the shell are proceeded in by means of the compasses. There is now to be added to the composition a quantity of hemp, which is spread upon the layers and afterwards smoothed upon the board of the compasses. The shell varies from four to five inches lower than the mill-stone before observed, but surrounds it quite close, and prevents the extravasation of the metal. The wax should be taken out before melting the metal. The case of the bell requires a separate work, which is done during the drying of the several incrustations of the cements. It has seven rings; the last is called the bridge, and united to the others, it being a perpendicular support to strengthen the curves. It has an aperture at its top to admit an iron peg and bent at its bottom, and this is introduced into two holes in the beam fastened with two strong iron keys. The rings are modelled with masses of beaten earth, that are dried in the fire in order to have them hollow. The rings are gently pressed upon a layer of earth and cow-hair to about one half of their depth, and then taken out, and care should be taken not to break the mould. This operation is repeated twelve times for twelve half moulds, that is, two and two united make the hollow of the six rings; the same is done for the hollow of the bridge. They are all united together upon the open place left for the coals to be put into the oven. The rings which are to form the ears are put first into this open place, with the iron ring to support the clapper of the bell. After which a round cake of clay is make to fill up the diameter of the thickness of the core. This cake after having been baked is placed upon the opening, and fastened by a thin mortar spread over it, which binds the cover close to the core. The hollow of the mould is filled with an earth sufficiently moist to fix itself on the place which is strewed at several times upon the cover of the core; it is then beaten gently with a pestle, and afterwards smoothed by a workman at top with a wooden trowel dipped in water. Upon this cover, which is afterwards to be taken off, is assembled the hollow of the rings; and, when every thing is in its proper place, the outside of the hollows are strengthened with mortar, in order to bind them to the bridge and keep them steady, and at the bottom by means of a cake of the same mortar, and which fills up the whole aperture of the shell. This is left to dry, that it may afterwards be removed without breaking. To make room for the heated metal, the rings are taken out of the hollows in the mould, as it is in these hollows that the metal is to pass as it enters into the voids in the mould. The shell being thus unloaded of its rings, the mill-stone is arranged by having placed under it five or six pieces of wood of about two feet long, and thick enough to reach almost to the lower part of the shell; between these and the mould wooden wedges are driven, in order to shake the shell from off the model, so as to be pulled away and removed up out of the pit. When this and the wax are removed, the model and layer of earth are arranged for the founding, as it is through these the melted metal must pass into the hollows made by the rings, and which are between the shell and core. The inside of the shell is last of all dried by burning straw under it, this helps to smooth the surface of the bell. The shell is put in the place so as to leave the same interval between it and the core as was before; and before the hollows of the rings on the cap are put on again two vents are made, which are united to the rings, and also to each other, by a mass of baked cement; after which this mass of the cap is put on, the rings and the vent over the bell are soldered to the cap by cement; which is dried by gradual heat by covering it with burning coals. So much having been done, the pit surrounding the whole is filled up with earth, being pressed strongly all the time of putting in close round the mould.

The furnace has a place for the fire and another to contain the metal; the fire-place has a large chimney with a spacious ash-hole. The furnace which contains the metal is vaulted, and its bottom is made of earth rammed down, the rest is built of brick-work. It has four apertures, the first of which admits the flame projected by the fire to reverberate, the second is closed by a stopple, which is opened for the metal to run through; the other two are to separate the dross and scoriæ by allowing the attendant of the furnace to introduce a wooden rake through it for the purpose. These apertures also pass the thick smoke. The ground or floor of the furnace is built sloping for the metal to run down. When the metal is fused and ready to fill the shell, which should be examined minutely in every part to see if it be dry and ready to receive it; when all is deemed ready, the metal is suffered to run into the shell by the apertures prepared to admit it, after which it is allowed to fix and cool. It is then taken out, examined, and cleaned, in a similar manner to what has been before explained for brass and bronze castings.

The theory of the sound of bells is noticed in our article of that name; together with several curious facts of their history. See Bell.

The method of forming the profile of a bell, previous to its being cast, in which the proportion of the several parts may be seen, is as follows: the thickness of the brim C 1, of the diagram, is the foundation of every other measure, and is divided into three equal parts. First, draw the line H D, which represents the diameter of the bell; bisect it in F, and erect the perpendicular F *f*; let D F and H F be also bisected in E and G, and two other perpendiculars E *e*, G *a*, be erected at F and G; G E will be the diameter of the top or upper vase, i. e. the diameter of the top will be half that of the bell; and it will, therefore, be the diameter of a bell



which will sound an octave to the other. Divide the diameter of the bell, or the line H D, into fifteen equal parts, and one of these will give C 1 the thickness of the brim: divide again each of these fifteen equal parts into three other equal parts, and then form a scale. From this scale take twelve of the larger divisions or 2-15ths of the whole scale in the compass, and setting one leg in D describe an arc to cut the line E*e* in N; draw N D, and divide this line into twelve equal parts; at the point 1 erect the perpendicular 1 C = 10, and C 1 will be the thickness of the brim = 1-15th of the diameter; draw the line C D; bisect D N; and at the point of the bisection 6, erect the perpendicular 6 K = 1½ of the larger divisions on the scale. With an opening of the compass equal to twice the length of the scale, or thirty brims, setting one leg in N, describe an arc of a circle, and with the same leg in K, and the same opening, describe another arc to intersect the former: on this point of intersection as a centre, and, with a radius equal to thirty brims, describe the arc N K; in 6 K produced take K B = ⅓ of the larger measure of the scale or one-third of the brim, and on the same centre with the radius 30⅓ brims describe an arc A B parallel to N K. For the arc B C, take twelve divisions of the scale or twelve brims in the compass; find a centre, and from that centre, with this opening, describe the arc B C, in the same manner as N K or A B were described. There are various ways of describing the arc K*p*, some describe it on a centre at the distance of nine brims from the points *p* and K; others, as it is done in the figure, on a centre at the distance only of seven brims from those points. But it is necessary first to find the point *p*, and to determine the rounding of the bell *p* 1. For this purpose, on the point C as a centre, and with the radius C 1, describe the arc 1 *p n*; bisect the part 1 2, of the line D *n*, and, erecting the perpendicular *p m*, this perpendicular will cut the arc 1 *p n* in *m*, which terminates the rounding 1 *p*. Some founders make the bendings, K, a third of a brim lower than the middle of the line D N; others make the part C 1 D more acute, and instead of making C 1 perpendicular to D N at 1, draw it out one-sixth of a brim higher, making it still equal to one brim; so that the line 1 D is longer than the brim C 1. In order to trace out the top part, N *a*, take in the compass eight divisions of the scale or eight brims; and on the points N and D as centres, describe arcs to intersect each other in 8: on this point 8, with a radius of eight brims, describe the arc N *b*; this arc will be the exterior curve of the top or crown; on the same point 8 as a centre, and with a radius equal to 7⅔ brims, describe the arc A *e*, and this will be the interior curve of the crown, and its whole thickness will be one-third of the brim. As the point 8 does not fall in the axis of the bell, a centre M may be found in the axis by describing, with the interval of eight brims on the centres D and H, arcs which will intersect in M; and this point may be made the centre of the inner and outer curves of the crown as before. The thickness of the cap, which strengthens the crown at Q, is about one-third of the thickness of the brim; and the hollow branches or ears about one-sixth of the diameter of the bell. The height of the bell is in proportion to its diameter as twelve to fifteen, or in the proportion of the fundamental sound to its third major; whence it follows that the sound of a bell is principally composed of the sound of its extremity or brim, as a fundamental, of the sound of the crown which is an octave to it, and of that of the height which is a third.

FOUND'LING, *n. s.* From found, of find. A child exposed to chance; a child found without any parent or owner.

A piece of charity, practised by most of the nations about us, is a provision for *foundlings*, or for those children who are exposed to the barbarity of cruel and unnatural parents. *Addison.*

The goddess long had marked the child's distress,
And long had sought his sufferings to redress;
She prays the gods to take the *foundling's* part,
To teach his hands some beneficial art. *Gay.*

FOUNT, *n. s.*
FOUN'TAIN, *n. s.*
FOUN'TAINLESS, *adj.*
FOUNT'FUL, *adj.*

Lat. *fons*, from *fundo*, to pour out, and signifies the spring which is visible on the earth. A well; a spring; whether natural or artificial: a jet; a spout of water: the head or first spring of water; hence, metaphorically, original; first principle; first cause. The adjectives are in direct opposition as to meaning.

Unkindnesse past they gan of solace treat,
And bathe in pleasaunce of the joyous shade,

Which shielded them against the boyling heat,
And with greene boughes decking a gloomy glade,
About the *fountaine* like a girlond made.
Spenser's Faerie Queene.

Proofs as clear as *founts* in July, when
We see each grain of gravel.
Shakspeare. Henry VIII.

Fountains I intend to be of two natures; the one that sprinkleth or spouteth water; the other a fair receipt of water, without fish, or slime, or mud.
Bacon.

But when the *fountful* Ida's top they scaled with utmost haste,
All fell upon the high-haired oaks. *Chapman.*

Oh *fountains!* when in you shall I
Myself eased of peaceful thoughts espy?
Oh fields! oh woods! when, when shall I be made
The happy tenant of your shade? *Cowley.*

Can a man drink better from the *fountain* finely paved with marble, than when it swells over the green turf? *Taylor.*

He set before him spread
A table of celestial food divine,
Ambrosial fruits, fetched from the tree of life;
And from the *fount* of life, ambrosial drink.
Milton.

So large
The prospect was, that here and there was room,
For barren desert *fountainless* and dry. *Id.*

Near this a *fountain's* liquid bell
Tinkles within the concave shell. *Marvell.*

All actions of your grace are of a piece, as waters keep the tenor of their *fountains:* your compassion is general, and has the same effect as well on enemies as friends. *Dryden.*

This one city may well be reckoned not only the seat of trade and commerce, not only the *fountain* of habits and fashions, and good breeding, but of morally good or bad manners to all England.
Sprat's Sermons.

Narcissus on the grassy verdure lies;
But whilst within the crystal *fount* he tries
To quench his heat, he feels new heat arise.
Addison.

For the eye
In love drinks all life's *fountains* (save tears) dry.
Byron.

FOUNT, or FONT, among printers, &c., a set or quantity of characters or letters of each kind, cast by a letter-founder, and sorted. When we say, a founder has cast a fount of bourgeois, of long primer, of brevier, &c., we mean that he has cast a set of characters of these kinds. A complete fount not only includes the running letters, but also large and small capitals, single letters, double letters, lines, numeral characters, points, commas, &c. Founts are large and small, according to the demand of the printer, who orders them by the hundred weight, or by sheets. When the printer orders a fount of 400, he means that the fount should weigh 400 pounds. When he demands a fount of eight sheets, it is understood, that with that fount he should be able to compose eight sheets, or sixteen forms, without being obliged to distribute; and the founder-takes his measure accordingly. The letter founders have a kind of list, or tariff, whereby they regulate their founts; some letters being in much more use, and oftener repeated than others, their cells or boxes should be better filled and stored than those of the letters which do not return so frequently. Thus the *o* and *i*, for instance, are always in greater quantity than the *k* or *z*. This difference will be best perceived from a proportional comparison of those letters with themselves, or some others.

FOUNTAIN. Among the ancients, fountains were generally esteemed sacred; but some were held to be so in a more particular manner. The goods effects received from cold baths gave springs and rivers this high reputation: for the salutary influence was supposed to proceed from some presiding deity. Particular accidents might occasion some to be held in greater veneration than others. It was customary to throw little pieces of money into those springs, lakes, or rivers, which were esteemed sacred, to render the presiding divinities propitious; as the touch of a naked body was supposed to pollute their hallowed waters. For the phenomena, theory, and origin of fountains or springs, see SPRING.

FOUPE, *v. a.* To drive with sudden impetuosity. A word out of use.

We pronounce, by the confession of strangers, as smoothly and moderately as any of the northern nations, who *foupe* their words out of the throat with fat and full spirits. *Camden.*

FOUQUIERES (James), an eminent painter, born at Antwerp in 1580. He received his chief instructions from Velvet Brughel; and applied himself to the study of landscapes, and visited Rome and Venice to improve himself in coloring. His works are said to be nearly equal to those of Titian. He was much caressed at the elector Palatine's court, and afterwards spent several years in France; where his works met with universal approbation, and where he painted several pictures in the gallery of the Louvre, for which Louis XIII. conferred on him the honor of knighthood. This mark of distinction made him insolent, and his conduct was so bad to Nicolo Poussin, as to compel that incomparable artist to leave France. Fouquieres himself fell afterwards into disgrace, and died in poverty at Paris, in 1659.

FOUR, *adj.* } Sax. ꝼeoꝼeꞃ. Twice
FOURFOLD, *adj.* } two: fourfold is four times
FOURFOOTED, *adj.* } told: fourfooted, applied to quadrupeds having four feet.

He shall restore the lamb *fourfold*, because he had no pity. 2 *Sam.* xii. 6.

And thou shalt understond, that a man suffereth *foure* maner of grevances in outward thinges; ayenst the whiche *foure*, he must have *foure* maner of patiences. *Chaucer. The Persones Tale.*

Augur Astylos, whose art in vain
From fight dissuaded the *fourfooted* train,
Now beat the hoof with Nessus on the plain.
Dryden.

Just as I wished, the lots were cast on *four*;
Myself the fifth. *Pope's Odyssey.*

FOURBE, *n. s.* Fr. A cheat; a tricking fellow. Not in use.

Jove's envoy, through the air,
Brings dismal tidings; as if such low care
Could reach their thoughts, or their repose disturb!
Thou art a false impostor, and a *fourbe.* *Denham.*

RCROY (Antoine François de), was born on the 15th of June, 1755. His family g resided in the capital, and several of estors had distinguished themselves at His father, however, was a poor apothe- d he was at length even compelled to give ousiness by the corporation of apothecaries. e of an elder sister preserved the subject memoir with difficulty till he reached the vhich it was usual to be sent to college. : was unlucky enough to meet with a master, who treated him with cruelty. ısequence was a dislike to study; and he the college at the age of fourteen, scarcely nstructed than when he went to it. His now was such, that he was under the ne- of endeavouring to support himself by ncing writing-master. He had even some ts of going upon the stage; but, while un- what plan to follow, the advice of Viq. induced him to commence the study of ne. This to a man in his situation was means an easy task. Fourcroy, however, with so much zeal and ardor that he soon well acquainted with the subject of me-

It was now necessary to get a doctor's ; and all the expenses, at that time, ted to £250 sterling. Viq. d'Azyr was ılarly obnoxious to the faculty of medicine ris; and Fourcroy was unluckily the ac- edged protegée of this eminent anatomist. ras sufficient to induce the faculty of me- to refuse him a gratuitous degree; and he have been excluded in consequence from ıg upon the career of a practitioner, had e friends of d'Azyr, enraged at this treat- formed a subscription, and contributed the ary expenses. But above the simple de- f doctor, there was a higher one, entitled, ur Regent, which depended entirely upon otes of the faculty; and this was unani- y refused to M. de Fourcroy. Fourcroy thus entitled to practise in Paris, his suc- epended entirely upon the reputation which ıld contrive to establish. For this purpose evoted himself to the sciences connected medicine, as the shortest and most certain by which he could reach his object. His writings showed no predilection for any ular branch of science. He wrote upon istry, anatomy, and on natural history. He shed an Abridgment of the History of In- and a Description of the Bursæ Mucosæ e Tendons. This last piece seems to have him the greatest celebrity; for in 1785 he admitted, in consequence of it, into the emy of Sciences as an anatomist; but the tation of Bucquet, which at that time was high, gradually directed his particular at- on to chemistry, and he retained this predi- on during the rest of his life. Bucquet was at time professor of chemistry in the medical ol of Paris, and was then greatly celebrated ccount of his eloquence. Fourcroy became e first place his pupil, and soon after his icular friend. One day, when illness pre- ed him from lecturing as usual, he entreated le Fourcroy to supply his place: he at last ented; and acquitted himself to the satisfac- tion of his whole audience. Bucquet soon after substituted him in his place; and it was in his laboratory and in his class-room that Fourcroy first made himself acquainted with chemistry. There was a college established in the king's garden, which was at that time under the superintendance of Buffon, and Macquer was the professor of chemistry in this institution. On the death of this chemist, in 1784, though Lavoisier stood candidate for the chair, Fourcroy was appointed; and continued professor at the Jardin des Plantes during the remainder of his life, which lasted twenty-five years; and such was his eloquence, that his celebrity as a lecturer continued always upon the increase. We must now notice the political career of Fourcroy during the progress of the revolution. In the autumn of 1793 he was elected a member of the National Convention. The National Convention, and France herself, were at that time in a state of abject slavery; and so sanguinary was the tyrant who ruled over that unhappy country, that Fourcroy, notwithstanding his reputation for eloquence, and the love of eclat which appears all along to have been his domineering passion, had sufficient wisdom never to open his mouth in the convention till after the death of Robespierre. During this unfortunate and disgraceful period, several of the most eminent literary characters of France were destroyed; among others, Lavoisier; and Fourcroy has been accused of contributing to the death of this illustrious philosopher, his former rival, and his master in chemistry. How far such an accusation is deserving of credit, there are no means of determining; but Cuvier, who was upon the spot, and in a situation which enabled him to investigate its truth or falsehood, acquits Fourcroy entirely of the charge. 'If in the rigorous researches which we have made,' says Cuvier, in his Eloge of Fourcroy, 'we had found the smallest proof of an atrocity so horrible, no human power could have induced us to sully our mouths with his Eloge, or to have pronounced it within the walls of this temple, which ought to be no less sacred to honor than to genius.' Fourcroy began to acquire influence only after the ninth thermidor, when the nation was wearied with destruction, and when efforts were making to restore those monuments of science, and those public institutions for education, which, during the wantonness and folly of the revolution, had been overturned and destroyed. Fourcroy was particularly active in this renovation, and it was to him chiefly that almost all the schools established in France for the education of youth are to be ascribed. The convention had destroyed all the colleges, and universities, and academies, throughout France. The effects of this ridiculous abolition soon became visible. The army stood in need of surgeons and physicians, and there were none educated to supply the vacant places. Three new schools were founded for educating medical men. They were nobly endowed, and still continue connected with the university of Paris. The term schools of medicine was proscribed as too aristocratical. They were distinguished by the ridiculous appellation of schools of health. The Polytechnic School

was next instituted, as a kind of preparation for the exercise of the military profession, where young men could be instructed in mathematics and natural philosophy, to make them fit for entering the schools of the artillery, and of the marine. Fourcroy, either as member of the convention, or of the council of ancients, took an active part in all these institutions, both as far as regarded the plan and the establishment. He was equally concerned in the establishment of the Institute, and of the Museum d'Histoire Naturelle. This last was endowed with the utmost liberality, and Fourcroy was one of the first professors; as he was, also, in the School of Medicine, and the Polytechnic School. The violent exertions which M. de Fourcroy made in the numerous situations which he filled, and the prodigious activity which he displayed, gradually undermined his constitution. He himself was sensible of his approaching death, and announced it to his friends as an event which would speedily take place. On the 16th of December, 1809, after signing some despatches, he suddenly cried out, Je suis mort, and dropped lifeless on the ground. He was twice married: first to Mademoiselle Bettinger, by whom he had two children; a son, an officer in the artillery, who inherits his title; and a daughter, Madame Foucaud. He was married a second time to Madame Belleville, the widow of Vailly, by whom he had no family. He left but little fortune behind him; and two maiden sisters who lived with him, depended for their support upon his friend M. Vauquelin. The character of M. de Fourcroy is sufficiently obvious. It was exactly fitted to the country in which he lived, and the revolutionary government, in the midst of which he was destined to finish his career. Vanity was his ruling passion, and the master-spring of all his actions. It was the source of all the happiness, and of all the misery of his life; for every attack, from what quarter soever it proceeded, was felt by him with equal acuteness. The changes which took place in the science of chemistry were brought about by others, who were placed in a different situation, and endowed with different talents; but no man contributed so much as Fourcroy to the popularity of the Lavoisierian opinions, and the rapidity with which they were propagated over France, and most countries in Europe. He must have possessed an uncommon facility in writing, for his literary labors are exceedingly numerous. Besides those essays which have been already noticed, he published five editions of his System of Chemistry; the first edition being in two volumes, and the fifth in ten. It contains a vast quantity of valuable matter, and contributed considerably to the general diffusion of chemical knowledge. Perhaps the best of all Fourcroy's productions is his Philosophy of Chemistry, which is remarkable for its conciseness, its perspicuity, and the neatness of its arrangement. Besides these works, and the periodical work called Le Medecin Eclairé, of which he was the editor, there are above 160 papers on chemical subjects, with his name attached to them as the author, which appeared in the Memoirs of the Academy of the Institute, in the Annales de Chimie, or the Annales de Museum d'Histoire Naturelle, of which last work he was the original projector. As in most of these papers the name of Vauquelin is associated with his own, as the author; and as during the publication of those which appeared with his own name alone, Vauquelin was the operator in his laboratory, it is not possible to determine what part of the experiments were made by Fourcroy, and what by Vauquelin.

FOURMONT (Stephen), professor of the Arabic and Chinese languages, was born at Herbelai, a village twelve miles from Paris, in 1683. He studied in Mazarine College He was at length appointed professor of Arabic in the Royal College, and was made a member of the Academy of Inscriptions. In 1738 he was chosen F. R. S. of London, and of Berlin in 1741. He was often consulted by the duke of Orleans, who greatly esteemed him, and made him one of his secretaries. He wrote a great number of works. The chief of which are, 1. The Roots of the Latin Tongue, in verse. 2. Critical Reflections on the Histories of ancient Nations, 2 vols. 4to. 3. Meditationes Senecæ, folio. 4. A Chinese Grammar, in Latin, folio. 5. Several Dissertations printed in the Memoirs of the Academy of Inscriptions, &c. He died at Paris in 1745.

FOURNESS, a track in Loynsdale, Lancashire, between the Kent, Leven, and Dudden Sands, which runs north parallel with the west sides of Cumberland and Westmoreland, and on the south runs into the sea as a promontory. Here, as Camden expresses it, 'the sea, as if enraged at it, lashes it more furiously, and in high tides has even devoured the shore, and made three large bays; viz. Kent-sand, into which the river Ken empties itself; Leven-sand and Dudden-sand, between which the land projects in such a manner that it has its name thence; Foreness and Foreland, signifying the same with us as promontorium anterius in Latin.' Bishop Gibson, however, derives the name of Fourness, or Furness, from the numerous furnaces that were there anciently, the rents and services of which, called bloomsmithy rents, are still paid. Here are several cotton mills; and in the mosses of Fourness much fir is found, but more oak: the trunks in general lie with their heads to the east, the high winds having been from the west. Fourness produces all sorts of grain, but principally oats, of which the bread is generally made: and there are veins of a very rich iron ore, which is not only melted and wrought, but exported in great quantities. The three sands above-mentioned are very dangerous to travellers, by the tides and the many quicksands. There is a guide on horseback appointed to Kent or Lancaster-sand at £10 a year, to Leven at £6 out of the public revenue; but to Dudden-sands, which are most dangerous, none; and it is no uncommon thing for persons to pass over in parties of 100 at a time like caravans, under the direction of the carriers, who pass every day. The sands are less dangerous than formerly, being much more frequently passed and better known, and travellers who are strangers, never going without guides.

Fourness Abbey, or '**Furnis Abbey** up in the mountains,' was begun at Tulket in Amounderness, in 1124, by Stephen earl of Boulogne, afterwards king of England, for the monks of Savigny in France, and three years after removed to the valley, then called Bekangesgill, or 'the vale of night-shade.' It was of the Cistertian order, endowed with above £800 per annum. Out of the monks of this abbey, Camden says, the bishops of the Isle of Man, which lies over against it, used to be chosen by ancient custom; it being as it were the mother of many monasteries in Man and Ireland. Some ruins, and part of the fosse which surrounded the monastery, are still to be seen at Tulket. The remains at Fourness breathe the plain simplicity of the Cistertian abbeys; the chapter-house was the only piece of elegant Gothic about it. Part of the painted glass from the east window, representing the crucifixion, &c., is preserved at Winder-mere church in Bowlness, Westmoreland.

FOURSCORE, *adj.* Four and score. Four times twenty; eighty. It is used elliptically for fourscore years in numbering the age of man.

When they were out of reach, they turned and crossed the ocean to Spain, having lost *fourscore* of their ships, and the greater part of their men.
Bacon's War with Spain.

In the mean time, the batteries proceeded,
And *fourscore* cannon on the Danube's border
Were briskly fired and answered in due order.
Byron.

And so all ye, who would be in the right,
In health and purse, begin your day to date
From day-break, and when coffined at *fourscore*,
Engrave upon the plate, you rose at four. *Id.*

FOURSQUARE, *adj.* Four and square. Quadrangular; having four sides and angles equal.

The temple of Bel was environed with a wall carried *foursquare*, of great height and beauty; and on each square certain brazen gates curiously engraven.
Raleigh's History.

FOURTEEN, *adj.* Sax. ꝑeopeŋtyn. Four and ten; twice seven.

I am not *fourteen* pence on the score for sheer ale.
Shakspeare.

FOURTE'ENTH, *adj.* From fourteen. The ordinal of fourteen; the fourth after the tenth.

I have not found any that see the ninth day, few before the twelfth, and the eyes of some not open before the *fourteenth* day. *Browne's Vulgar Errours.*

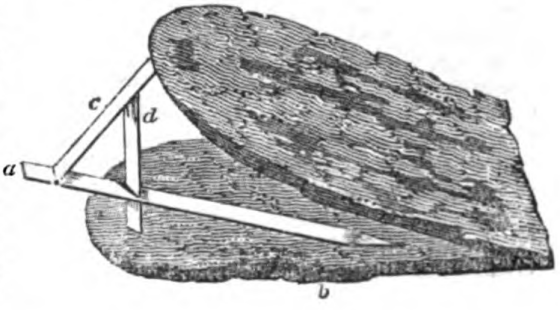
FOURTH, *adj.* From four. The ordinal of four; the first after the third.

A third is like the former: filthy hags!
Why do you shew me this? A *fourth?* start eye!
What! will the line stretch out to the crack of doom?
Shakspeare.

Fourth Figure Trap, the trap generally used in gardens, plantations, &c., to catch the mice which devour the seeds. It is composed of three pieces of wood in the shape of a figure 4 (see diagram) supporting a piece of slate. The following is the account given of it in Nicholls's Planter. The longest of these pieces of wood, or the *bait-stick (a)*, should be seven inches in length, half an inch broad, and one-sixteenth thick; the outward end on the upper side is notched to one-fourth of its thickness, at half an inch from the end. Two inches and a half inwards from the last mentioned notch, holding the above end from you, there is a cut made on the right side to half the breadth of the stick, quite through; from which, towards the outer end on the same side, a little within the first mentioned notch, the wood is cut out in a circular manner. The inner end is tapered and left rough, in order to make the bait at *(b)* hold the latter upon it. The *upper piece* (*c*) is three inches long, half an inch broad, and one-sixteenth of an inch thick. At half an inch from what is to be the highest part of the trap, it is to be notched, like the outer end of the bait-stick, to one-fourth of its thickness: the other end is made sharp like the face of a chisel. The third piece is of the same thickness and breadth, and four inches long, sharpened at one of its ends like the above, and cut square at the other. This piece is called the *pillar* (*d*).

There are two slates required; one to lie upon the ground, and this must be pressed so deep into it as to cause its upper side to be equal with the general surface; because, if access to the bait is any way difficult, the mice will take the seeds as the readiest food, although not perhaps the most palatable. Having laid the above slate, and being provided with another, from six to seven inches square, and from one and a half to two pounds weight, take the *upper piece* (*c*) into the left hand, holding the sharp end towards you, and the notch downwards. Next place the sharpened end of the pillar into this notch, forming an acute angle; hold these two pieces in this position with the fingers and thumb of the left hand, and place the under end of the pillar upon the lower slate, and the outer edge of the upper slate near the extremity of the upper part of the trap; then take the bait-stick (previously baited) with your right hand, and place it so as that the notched part near the extremity may receive the sharpened end of the upper stick, and let that place of it which was cut half through hold the pillar, but so as that the baited end of the bait-stick may slightly rest upon the slate; and the trap is set.

A very little practice will enable any person who is a stranger to this kind of trap to use it with facility; and a great number may be placed in the nursery grounds at no expense. Bricks are sometimes used in place of slates. The best bait is oatmeal made into dough by butter, and tied on the bait-stick with a little flax: after being tied on, it will be of use to burn the bait a little, to make it smell. Such a quantity of bait must not be used as may prevent the mouse from being killed by the fall of the slate.



FO'URTHLY, *adv.* From fourth. In the fourth place.

Fourthly, plants have their seed and seminal parts uppermost, and living creatures have them lowermost. *Bacon's Natural History.*

FOURWHE'ELED, *adj.* Four and wheel. Running upon twice two wheels.

Scarce twenty *fourwheeled* cars, compact and strong,
The massy load could bear, and roll along. *Pope.*

FOU-TCHEOU, a city of China of the first rank in the province of Fo-Kien. It carries on a great trade, and has a good harbour and a most magnificent bridge, which has more than 100 arches, constructed of white stone, and ornamented with a double balustrade throughout. It is the residence of a viceroy, and has under its jurisdiction nine cities of the third class. It lies 870 miles south of Pekin. Long. 136° 50′ E. of Ferro, lat. 26° 4′ N.

FOU-TCHEOU, a city of China of the first rank, in the province of Kiang-si; formerly one of the finest cities in the empire, but almost ruined by the Tartar invasion. It lies 735 miles east of Pekin. Long. 133° 42′ E. of Ferro, lat. 27° 55′ N.

FO'UTRA, *n. s.* Fr. *foutre.* A fig; a scoff; a word of contempt. Not used.

A *foutra* for the world, and worldlings base.
Shakspeare.

FOWEY, FAWEY, or FOY, a populous and flourishing town of Cornwall, with a commodious haven on the British Channel. It extends above a mile on the east side of the river, and has a spacious market-house, with a town-hall above it, erected by the then representatives of the borough, Philip Rashleigh, Esq., and lord viscount Valletort. It has also a fine old church, a free-school, and an hospital. It rose so much formerly by naval wars and piracies, that, in the reign of Edward III., its ships refusing to strike when required, as they sailed by Rye and Winchelsea, were attacked by the ships of those ports, but defeated them; whereupon they bore their arms mixed with the arms of those two cinque ports, which gave rise to the name of the Gallants of Fowey. And Camden informs us that this town quartered a part of the arms of all the other cinque ports with their own; intimating that they had at times triumphed over them all. In the same reign they rescued certain ships of Rye from distress, for which this town was made a member of cinque ports. Edward IV. favored Fowey so much, that when the French threatened to come up the river to burn it, he caused two towers, the ruins of which are yet visible, to be built at the public charge for its security: but he was afterwards so provoked at the inhabitants for attacking the French, after a truce proclaimed with Louis XI., that he took away all their ships and naval stores, together with a chain drawn across the river between the two forts, which was carried to Dartmouth. For the present defence of the harbour three batteries have been erected at the entrance, which stand so high that no ship can bring her guns to bear upon them. The market-house is large and spacious, over which there is a neat town-hall. Here are also two free-schools, an excellent poor-house, and an alms-house for eight decayed widows. No wheeled carriages can come into this town, owing to the narrowness and sudden turnings of the streets. Most of the inhabitants are in the pilchard fishery, which employs a great number of vessels. About 28,000 hhds. of fish are annually brought into this port. The corporation consists of a mayor, recorder, eight aldermen, a town clerk, and two assistants: the market is on Saturday. The tolls of the market, fairs, and harbour, were vested in the corporation on the payment of a fee-farm rent of about 40*s*. It has sent two members to parliament since the 13th of queen Elizabeth. Fowey lies twenty-two miles E. N. E. of Truro, and 239 W. S. W. of London.

FOWL, *n. s.* & *v. n.* } Sax. ꝼuȝel, ꝼuhl;
FOW'LER, *n. s.* } Belg. *vogal;* Goth.
FOW'LING-PIECE, *n. s.* } *fugl;* from *flyga*, to fly. A winged animal; a bird. It is colloquially used of edible birds, but in books, of all the feathered tribes. Fowl is used collectively; as, we dined upon fish and fowl: to kill birds for food or game: a sportsman who pursues birds; a gun for birds.

———, the *foules* of ravine
Were highest set; and, then, the *foules* smale,
That eten as hem nature would encline,
As worme or thing, of whiche I tell no tale;
And water *foule* sate, lowest, in the dale;
And *foules* that liveth by sede, sat on the greene,
And that so fele, that wonder wos to sene.
Chaucer. Assemble of Foules.

The *fowler* we defy
And all his craft. *Id. Legend of Good Women.*

The beasts, the fishes, and the winged *fowls*,
Are their males' subjects, and at their controuls.
Shakspeare.

Lucullus entertained Pompey in a magnificent house: Pompey said, this is a marvellous house for the Summer; but methinks very cold for Winter. Lucullus answered, Do you not think me as wise as divers *fowls*, to change my habitation in the Winter season? *Bacon's Apophthegms.*

'Tis necessary that the countryman be provided with a good *fowlingpiece*. *Mortimer.*

The *fowler*, warned
By those good omens, with swift early steps
Treads the crimp earth, ranging through fields and glades,
Offensive to the birds. *Philips.*

With slaughtering guns the' unwearied *fowler* roves,
When frosts have whitened all the naked groves.
Pope.

This mighty breath
Instructs the *fowls* of heaven.
Thomson's Spring.

FOWL, among zoologists, denotes the larger sorts of birds, whether domestic or wild: such as geese, pheasants, partridges, turkeys, ducks, &c. Tame fowl make a necessary part of the stock of a country farm. See POULTRY. Fowls are again distinguished into two kinds, viz. land and water fowls, these last being so called from their living much in and about water; also into those which are counted game, and those which are not. See GAME.

FOWLING PIECES are reckoned best when they have a long barrel, from five feet and a half to six feet, with a moderate bore. But every fowler should have them of different sizes suitable to

the game he designs to kill. The barrel should be well polished and smooth within, and the bore of an equal size from one end to the other; which may be proved by putting in a piece of pasteboard cut to the exact roundness of the top, for if this goes down without stops or slipping, you may conclude the bore good. The bridge-pan must be somewhat above the touch hole. As to the locks, choose such as are well filled with true work, whose springs must be neither too strong nor too weak. The hammer ought to be well hardened, and pliable to go down to the pan with a quick motion.

FOX, *n. s.* Sax. ꝑox; Belg. *vos*, *vosch*, from Goth. *fox*. A wild animal of the canine kind, with sharp ears and a bushy tail, remarkable for his cunning, living in holes, and preying upon fowls or small animals; by way of reproach, applied to a knave or cunning fellow.

The sely widewe, and hire daughtrer troo,
Her len these hennes crie and maken wo;
And out at the doors sterten they anon;
And saw the *fox* toward the wode is gon,
And bare upon his back the cok away;
They crieden, out harou and wala wa!
A ha the *fox*!" and after him they ran
And eke with staves many another man.
Chaucer. The Nonnes Preestes Tale.

The *fox* barks not when he would steal the lamb.
Shakspeare.

He that trusts to you,
Where he should find you lions, finds you hares;
Where *foxes*, geese. *Id. Macbeth.*

These retreats are more like the dens of robbers, or holes of *foxes*, than the fortresses of fair warriours.
Locke.

Fox, in zoology. See CANIS. The fox is a great nuisance to the husbandman, by taking away and destroying his lambs, geese, poultry, &c. The common way to catch him is by gins; which being baited, and a train made by drawing raw flesh across in his usual paths or haunts to the gin, it proves an inducement to bring him to the place of destruction. The fox is also a beast of chase, and is taken with greyhounds, terriers, &c. See HUNTING.

Fox (Charles James), an illustrious statesman, who took a large and important share in all the public business of the British empire, from 1768 to 1806. The period of Mr. Fox's political life was filled with measures of such interest and magnitude as would have conferred celebrity on a meaner agent; while his talents were so considerable as to exalt and dignify even the ordinary course of affairs. His era and character, therefore, mutually aid each other's immortality; and, when taken together, command a double portion of that historical interest which either of them would have separately possessed. Another accessary circumstance, which serves to augment his natural and intrinsic claims to fame, was the distinguished eminence of his chief political opponent. The mind, like the body, is generally disposed to exert no more of its power than the occasion reqnires; and, from the want of a sufficient stimulus, many have allowed their intellectual vigor to degenerate by inaction, and its extent to remain unknown both to others and themselves. But the co-existence and competition of Fox and Pitt tasked the faculties of each to their full strength, and revealed to the world the ultimate resources of two of the most distinguished men that ever struggled for superiority, by eloquence and wisdom. The nearness of their deatns, too, secures the complete coincidence of their histories; so that, in all future periods, the name of the one must naturally suggest that of the other, and each communicate to his rival a portion of his own renown. It is fair, however, to observe that, if their comparative merit is to be weighed by their celebrity alone, the balance must incline towards the claims of him who, without place or power, and acting more as a commentator on great national measures, than as their author, created for himself a splendor of reputation equal to that of an opponent, who enjoyed nearly through life the most eminent and efficient station. No antagonist of Godolphin or Harley, of Walpole or Pelham, fills so large a space in the eye of the historian, as these long established dispensers of profit and preferment: and even of the great Chatham it is the glorious administration, not the animated opposition, that is most frequently in the mouths of his admirers. If Fox, therefore, contrary to all former example, contrived, during a life of political adversity, to acquire an equal name with his more fortunate competitor, it is natural to ascribe to him a superiority of that genius which captivates popular attention.

Mr. Fox was born on the 13th of January, 1749. He was the second son of Henry lord Holland, who, by a public career in an opposite direction to that of his son, at once ennobled and enriched his family. The former was as zealous in maintaining, as the latter in resisting, the principles of the court; yet, notwithstanding this contrariety of conduct, some features of a family likeness may be traced between the father and the son. We find in both a certain masculine vigor of character, united with a kind, indulgent, and affectionate temper; political activity with domestic indolence; and an equal ardor in public enmities and private friendships. The more pleasing qualities in lord Holland's character were remarkably displayed towards his favorite boy, whose genius he had sufficient penetration very early to discern. To its growth he is reported to have given the fullest scope, by freeing him from every species of restraint; conversing with him on state affairs; and, at times, even profiting by his suggestions. His mother was lady Georgina Caroline Lennox, sister to the late duke of Richmond, through whom he inherited the blood, and even the features, of the royal house of Stuart; but in character, as has been observed by Mr. Burke, he bore a much closer resemblance to Henry IV. of France, another of his royal progenitors. He enjoyed the full advantage of a public education, having been sent to Eton, during the mastership of Dr. Barnard, and under the private tuition of Dr. Newcome, the late primate of Ireland. Pitt spent his boyhood at home, and it is amusing to remark how complete a contrast, in every particular, these illustrious men have been destined to exhibit to the world; since they even assist us to appreciate, in minds nearly of equal force, the comparative benefits of public and private education. Fox,

by mingling with society, and acting in that little world, where all the principles and passions, which are afterwards to operate in the great one, are exercised and disciplined on a narrow scale, acquired, together with literary accomplishments, a wider knowledge of human nature and human conduct, than his rival ever attained. There, he was formed to that companionable cordiality; that open and friend-making benignity; and that skill to manage, to attach, and to act with others, which distinguished him through life; and probably also to that love of dissipation and profuseness, which can be indulged only in society. In Pitt, on the contrary, were seen that sobriety and caution, that backwardness and reserve, that deficiency in interestingness, attraction, and power of popular captivation, and perhaps that high sense of his own sufficiency, which are too often the effect of privacy and seclusion, and of the want of an early necessity to conciliate and compare ourselves with others. His attachments, we have reason to believe, had more steadiness than enthusiasm; his manner was more unexceptionable than engaging; and his conduct more guarded by discretion, than the strength of his passions appeared to require. Fox passed through all the gradations of boyhood, youth, and maturity, with that change of character which is naturally created by each; but Pitt, like the northern year, in which summer commences without any spring, seemed to leap at once from infancy to manhood, without any intervening period of adolescence. Nature had, no doubt, laid the foundation of this difference; but what nature began was consummated by education.

Though, in the traditionary history of Eton, Mr. Fox is better remembered for his extravagances than for his literary industry, yet he by no means neglected the proper business of the place. His active and elastic mind found no enjoyment in idleness. Dissipation requires frequent intervals: and every pause in its pursuit was occupied by the acquisition of knowledge. He was not the first scholar of his day, but certainly, parvo intervallo proximus. As a specimen of his boyish talents, we shall quote from his school exercises the concluding lines of his address to the dove:—

Quis cæli tibi claudet iter? dum lumina fallens
Vana virûm, scindis tuta sub astra fugam.
Sævit unda maris, moveant insana tumultus
Æquora, et eversas concitet Eurus aquas.
Tu fugis incolumis, volucri pernicior Euro,
Carpis et aërias inviolata vias.
Garrulitas nostræ quondam temeraria linguæ
Indicio prodit multa tacenda levi:
At tibi vox nulla est; nec, si loquereris, amoris
Furta Cytheriacæ lingua loquatur avis.
Hoc Venus ipsa vetat, te sæpe experta fidelem,
Usa ministeriis in sua furta tuis:
Nempe alis invecta tuis, tibi semper amores
Fidit in amplexus Martis itura Venus.
Nunc quoque (dilectam docet hoc Cytherea volucrem)
Nunc quoque amatori, fida columba, fave.
I, pete per cœlos nostram festina Susannam,
Sic mihi, sic Veneri grata futura tuæ.

From Eton he was removed to Oxford, where his associates and mode of life continued nearly the same. At both places he was so lavishly supplied with money, that similar supplies became necessary to the companions who wished to keep pace with him in his amusements; and larger sums were, about that period, risqued at the gaming table, than was ever previously known to be the case, either at school or college. It is reported that one member of this dissipated circle demanded of another, in after life, a debt of £10,000, which had been contracted while they were fellow students. And though the latter declared that he never believed this sum to have been seriously staked, yet the rate of the frolic may serve, in some measure, as a standard by which we may estimate the rate of their play.

From Oxford Mr. Fox, according to the fashionable plan of education, set out on a tour to the continent, during which his expenses were supplied by his father with an injudicious indulgence, which betrayed him into habits of unbounded extravagance. The present writer is enabled to give some idea of the prodigious sums which he carelessly squandered, having been personally informed by an eminent banker, that in the house, of which he was a partner, £100,000 had been paid, by lord H's order, to discharge the debts contracted by his son before he was of age! On his return to England, and at the age of nineteen, he was elected into parliament for Midhurst. Here he was the advocate, under the duke of Grafton, and afterwards under lord North, of the unpopular proceedings against Wilkes, and against the liberty of the press; and drew upon himself the distinction of a sarcasm from Junius. As his talents gave him early importance, he was placed, in 1770, on the board of admiralty; and, in 1772, promoted to the Treasury. But on the death of his father in 1774, finding himself possessed not only of a patrimonial independence, but perhaps too of more freedom of action than he had before enjoyed, he attached himself to the opposition. Whether the minister, as has been affirmed, had disappointed his ambitious solicitations, or was himself disappointed with Mr. Fox's support in some favorite design, it is now almost impossible to discover: but, on the 12th of March, a new commission of treasury was issued; in which, as lord North laconically informed him, his name was not observable. It was fortunate for his future consistency, that this happened before he had been called upon to deliver any decided opinion on the controversy with America: as he was thus left free to reprobate, with all his natural vehemence, the conduct of his former colleagues through the whole of that unhappy contest. Leagued in the same cause with Mr. Burke, his penetration enabled him immediately to perceive and justly to estimate the vast intellectual superiority of that accomplished senator. Under his tuition he, in a manner, recommenced and new-modelled his political studies; and declared afterwards that, 'if all he had learned from other sources were put in one scale, and what he had been taught by Burke in the other, the latter would preponderate.' The brilliancy of his parliamentary course, during the American war, was attended with more public curiosity than public favor. We are old enough to remember

that he was then less talked of as a statesman, who could occasionally be a dissolute wit, than as a dissolute wit who could occasionally be a statesman. Business appeared to be a subordinate object of his attention: and he was represented as one of those intellectual prodigies, in whom singular extremes were united; whose powers a life of irregularity could neither cloud nor enfeeble; and who, issuing from the orgies of Brookes's, or the squabbles of Newmarket, could drop, as if accidently into the senate, and astonish the world by unpremeditated invectives, far surpassing the eloquence of those who had devoted their days and nights to laborious study. This procured him universally the familiar and companionable appellation of Charles Fox, and to this idol of the sprightly and unscrupulous, every epigrammatic sally, every gambling anecdote, and every humorous subterfuge to disarm importuning creditors were at that time ascribed. Towards the end of the war, however, whether from the effect of time, of disgust at dissipation, or of connecting himself with a female companion, which rendered his habits more domestic, he seemed to apply his mind more assiduously to public affairs, and his parliamentary exertions increased both in frequency and force. In November, 1779, in a debate on the address, having used some expressions, which were interpreted by Mr. Adam into a personal insult, he was challenged by that gentleman; and, on the 27th, received a wound, by which he was for some time confined. On his recovery, however, he renewed his attacks with unabated vigor.

The ministry at last, beginning to give way, his ardor increased with the prospect of success; and he pressed them so powerfully and unceasingly by his logical invectives, that, in March 1782, they were driven from their stations.

On the arrangement of a new administration, the office generally held by the premier was given to the marquis of Rockingham; but Mr. Fox, and lord Shelburne, the secretaries of state, were understood to be the efficient ministers. The cabinet had no sooner begun their deliberations for restoring peace, than a considerable difference of opinion, however, was found to exist, particularly with regard to the acknowledgment of American independence: Mr. Fox judging that it should be made without delay or solicitation, and the States afterwards treated with, as an independent power; and the earl of Shelburne that it should be granted as part of the concessions, necessary to purchase peace. On the 1st of July, the marquis of Rockingham died, and Mr. Fox, foreseeing that he would be outvoted in the cabinet, resigned his office. Of his motives for this step, which was blamed by several of his friends, as inexpedient and precipitate, he gave a full account, both to parliament and to the electors of Westminster, who had chosen him their representative in 1780.

The present period was an important one, on many accounts, to Mr. Fox; and more so on none, than by introducing to public notice his future antagonist, Mr. Pitt. This gentleman took his seat, in his twenty-second year, for the borough of Appleby, in 1780, and his first conspicuous exertion was on the 19th of February, 1781, when he was highly complimented by Mr. Dundas, then opposing him, but probably foreseeing, with his usual sagacity, the possibility of their future concurrence. When the Shelburne administration was formed, Mr. Pitt became chancellor of the exchequer, and having thus embraced a party, which Mr. Fox had just indignantly abandoned, an opposition began between these two conspicuous statesmen, which never ceased during the remainder of their lives. As the latter found himself now embarked in the same interest, and contending on the same side, with his former opponent, lord North, a daily agreement in argument began to blunt the remembrance of their past animosity. A cordial alliance, indeed, was gradually formed; and they united their power, to accomplish another revolution in the cabinet. From the number and attachment of their respective adherents, whom lord Shelburne had not thinned, by the usual expedient of a dissolution, this was an easy achievement; and, on April 1783, the new allies took their seat on the treasury bench, Mr. Fox occupying his former office of foreign secretary. By a step so unexpected, this gentleman lost a portion of the popular favor, which he never afterwards recovered. It was thought an indecent violation and public mockery of his previous professions; induced suspicions of the apparent simplicity and sincerity of his conduct; and cherished a comfortless belief that the attachments and aversions of statesmen are always guided by their interest and convenience. Its defenders pleaded the necessity of constituting a vigorous government, which could be effected by no other means; but those who censured it were more numerous, and seemed only on the watch for a favorable occasion, to make the effects of their censure substantially felt. Such an occasion was soon presented, by the first business of national importance which occupied the attention of the coalition, as this administration was significantly named. It was a plan for the better government of India. The affairs of the company had, under their own uncontroled direction, fallen into great disorder; and had been conducted with such disregard, both to policy and justice, as was extremely hurtful, not merely to the national interests in that quarter of the empire, but to those of the mercantile sovereigns themselves. It was absolutely necessary, therefore, that government should interfere; and a bill, prepared, as is supposed, by Mr. Burke, was brought into parliament by Mr. Fox, soon after its meeting in the end of 1783. By this bill, the rights and property of the company, and the management of their affairs, were to be vested in a board of commissioners named by the legislature. It was certainly a bold, direct, and unequivocal measure; and was supported by its advocates on the plea that the company, having become insolvent, were disqualified for the direction of their own affairs, and that no palliative, nothing short of a radical remedy, could be of any avail. The suspicion, however, was very general that its authors, finding themselves neither the personal favorites of the crown, nor firmly established in the ap-

probation of the country, wished to augment their strength by seizing a portion of the executive power, and a patronage so valuable as would soon have enabled them to purchase popular support. Though opposed in parliament, as a breach of faith with the company, and as creating an imperium in imperio, prejudicial to the constitution, the bill passed the lower house: but the king, if we may credit the universal whisper, being alarmed at the prospect of seeing his servants possess themselves of a power which might render them independent of his prerogative, communicated his apprehension through lord Thurlow to some members of the upper house, by whose influence the bill was rejected. With the failure of this bill, the second short administration of Mr. Fox unexpectedly expired: and though still supported by a majority of the commons, by the family interest of the highest and wealthiest nobles, and by associates of the most splendid and diversified genius, he was forced by the union of royal and popular displeasure, to retire into an opposition, which he subsequently continued to direct for more than twenty years.

To assume the reins of government, in defiance of such an opposition, required a character of no ordinary force. Such a one, however, was found in Mr. Pitt, who immediately succeeded to the premiership, and who, contrary, as it was contended, to the spirit, though not to the letter, of the constitution, maintained his place, in contradiction to the will of the commons, expressed by repeated reprehensory votes. But as the national business could not proceed, under such circumstances, and as Mr. Pitt relied securely on the favor of the people, parliament was dissolved in March 1784. At the general election, Mr. Fox, standing again for Westminster, had to combat the whole influence of government, over which, however, after a tumultuous contest, and tedious scrutiny, he finally prevailed. During the time when the issue of the election was undecided, he sat for the boroughs of Orkney and Caithness.

For some years after, the history of his political life must chiefly be traced by the measures which he resisted. The first of these was the new India bill, by which the property and concerns of the company were left in their own hands, but their appointments to office subjected to the control and correction of a board, to be named by the crown. This plan differed little, in some points, from that of Mr. Fox; but, in form, was more palateable both to the company and the public; and was certainly exempted from the charge of a tendency to give undue preponderance to any particular party. Mr. Fox also, during 1785 and 1786, opposed the propositions for regulating trade with Ireland, and the treaty of commerce concluded with France: but expressed, with a candor which does him the highest honor, his approbation of the measures pursued by the ministry in 1787, for re-establishing the Stadtholder, and destroying the French ascendancy in Holland. But the attention of Mr. Fox and his colleagues in opposition, was now, and for some succeeding years, principally directed to the impeachment of Mr. Hastings; a measure which was acquiesced in by administration, but of which the execution fell upon the proposers Mr. Fox displayed his usual ability, and an unexpected extent of legal erudition, during the course of this trial, which lasted seven years; and began now to acquire that graver character, essential to the abiding influence of a public man. He appears to have divided his time between political business and domestic retirement. For this change he was probably, in part, indebted to the embarrassment of his affairs, and partly to his connexion already alluded to, with a lady whom he is supposed privately to have married in 1780. He is likewise said to have had a son, though not by this lady, on whom he bestowed an affectionate attention.

In the summer of 1788 Mr. and Mrs. Fox made an excursion to the Continent, and were enjoying the charms of Switzerland, when he was recalled by notice of the king's indisposition, and travelled with a rapidity which evinced the ardor of his expectations on this occasion. On his arrival, a few days previous to the meeting of parliament, he found a doctrine prepared by his party for its promulgation and support, which we think would scarcely have suggested itself to his own mind; but which he adopted with that indolent facility, and at the same time with that zeal, which, from constitutional temperament, were equally natural to him. This was, that there belonged to the Prince of Wales a right, on the incapacity of the king being declared, to assume the exercise of the royal authority, in the same way as if the crown had actually demised. On the statement of this proposition, Mr. Pitt having whispered to a friend that he would now unwhig his opponent for ever, instantly seized the more constitutional ground of asserting that, in a case so unprecedented and unprovided for, it belonged solely to parliament to decide upon the means by which the deficient part of the legislature should be supplied. Mr. Fox immediately perceived, from the general opinion, both within and without the house, that he had advanced with too much impetuosity, and was obliged, next day, to declare, that, though the existence of this right was not retracted, its assertion at present should be waived. But Pitt would not suffer him to escape, without taking farther advantage of his error; and, on the 16th of December, brought the question to a debate, at which the narrator had the felicity of being present, and of thus seeing the powers of the two greatest men of his age fairly matched and fully exerted. Seldom indeed has such a contest been presented to the world; whether we consider the splendid theatre in which it was exhibited—the importance of its consequences—the greatness and novelty of the subject—the eminence and equality of the combatants—or the numbers whose eyes were anxiously fixed on its result.

In Mr. Pitt, who opened the discussion, and whose mind was elevated by the popularity of his cause, were to be admired the clearness and precision with which he stated the principles of the constitution; the extent and exactness of his historical knowledge; the luminous arrangement, the consecutive relation, and the increasing force of his arguments; the aptness and beauty

of his illustrations; the classical purity of his expression; the stately richness and magnificent swell of his periods; the distinct and syllabic emphasis of his articulation; the mellow and majestic sublimity of his tones; the dignified energy, and commanding animation of his manner; and the disciplined co-operation of all these concentrated powers, to overwhelm the mind with complete and permanent conviction. Mr. Fox, on the other hand, was no less distinguished for the masterly skill with which he repaired by eloquence the faults of indiscretion; and for appearing with as much splendor, in managing a retreat from aukward and impracticable ground, as his rival in conducting an attack under every propitious circumstance. By rising late, he gave himself credit for having wished to decline a contest, which his previous explanation had rendered unnecessary, and of being forced up only by the wretched and provoking sophistry of his opponent. Adopting a looseness of method, which seemed excusable, when thus starting under an involuntary impulse into the debate, he began, not with the first, nor the last, but with the weakest and most questionable of the opposite positions, exposing its absurdity, stating it in a variety of ridiculous shapes, challenging a vote upon it under these corrected statements, and artfully passing, with slighter notice, or with a happy sarcasm, all that was more invulnerable. With a repetition of his departure from the claim of right, he had the address to blend the best arguments for its truth; and to discuss every part of the subject, in an argument against the propriety of the discussion. Confounding, with imperceptible subtlety, the question of superior pretension with that of absolute right, and giving the mind, by his vehemence, no time to make the distinction, he hurried it on to a belief that Pitt had mistaken the nature of the constitution, and had uttered sentiments the most indecent, and offensive, if not actually seditious. We felt our ideas, as if under the influence of sorcery, become dim and confused, by a change in the position of their objects, and by the intervention of new ones; seemingly as substantial as those which they eclipsed. We were conscious, for the moment, of two co-existent, yet contradictory, impressions; a conviction of Pitt's doctrine, and astonishment that it could have been produced, by arguments so false, so absurd, and so detestable. Deception, we knew, must somewhere have existed, but we were unable to detect it, while undulating on the line between two parallel but contrary currents. In his satire, Pitt kept at a dignified distance from his adversary, seldom applying harsh or contemptuous epithets to his reasonings, but contenting himself with showing what they deserved by their refutation; and contriving, with a proud forbearance from personal severity, not as unworthy of his opponents, but of himself, to involve in general remarks the most galling censure of their principles. Fox, on the contrary, grappled closely and familiarly with his foe; frequently introducing with objurgatory epithets the argument by which they were to be justified. For this he was peculiarly qualified, by his concise and pointed style; of which the poignancy delighted the violent, in every rank as much as the graver and more solemn reprehensions of Pitt were applauded by the lofty. Better stored than his rival with general knowledge, and practised in the compression of his thoughts into verse, Fox was richer in allusion, wider in his range of analogy, and more able to give power to his sarcasms, by drawing them to a focus. On the present occasion, almost every sentence was a stinging epigram, and, like a Parthian, he inflicted the severest wounds while he retired. In Fox all the parts were separately excellent, though ungraced by formal connexion. In Pitt the happy connexion gave artificial excellence to the parts. Fox charmed by a caustic brevity; Pitt by a finished rotundity. 'Densior ille, hic copiosior: illi nihil adjici potuit, huic nihil detrahi.' Their exertions continued equally brilliant and characteristic, during the further progress of the regency bill, which was rejected in the upper house on the king's recovery. In this affair, the adherents of Fox applauded his reverence for the monarchical principles of the constitution; and those of Pitt his respect for the supremacy of parliament. It was, however, triumphantly observed by those who disbelieve the existence of political integrity, that the personal interest of each was on the side which he embraced: and it may be presumed, without any harsh impeachment of their sincerity, that they, like other men, were partly influenced by this coincidence. Quod volumus, says Tacitus, facile credimus.

In 1791 the powerful remonstrances of Mr. Fox prevented a war with Russia, to which the minister was disposed, for the purpose of checking the aggrandisement of that extensive empire; and, by preserving Turkey still formidable on her southern frontier, to counteract any design, she might afterwards entertain, of making new aggressions towards the west. The danger of Poland was, we believe, not specified in the discussion, because that kingdom had not been particularly threatened; but we know, on the best authority, confirmed by the distinct declaration of Mr. Dundas on the 13th of December, 1792, that it was what chiefly influenced the minister in proposing an armed interference. From this affair we may learn the shortness of political foresight. Mr. Fox, by preventing the embarrassment of Russia, promoted the final partition of Poland, an event which took place almost immediately after, and which he never ceased to deplore: while, if Mr. Pitt had been indulged in his project, he would have weakened, with a view to maintain the balance of Europe, that power which, with the same view, it soon became his object to strengthen to the utmost.

The French revolution had now taken place, and Mr. Fox, on the 9th of February, 1790, pronounced its unqualified panegyric, declaring that this event was 'the most glorious effort of human wisdom, for the promotion of human happiness;' Mr. Burke, if not more wisely, more warily remarked, 'I do not rejoice to hear that men may do what they please, unless I know what it pleases them to do' On this topic Mr. Fox had ultimately the disappointment of drawing on himself the bitter censure of his friend

and preceptor, Mr. Burke, and it terminated, on the next mention of the subject (5th of May, 1791), in a total breach. This event, by which Fox was affected even to tears, formed a crisis of no small importance in the history of his life. Having withstood all the endeavours that were privately made by Burke to bring him over to his opinions, having even undergone the mortification of hearing that gentleman publicly renounce his friendship, he seemed, after so painful a sacrifice, to breathe more freely, and to feel more at liberty to patronise and protect the advocates of reform, even those whose regard for the constitution was thought at least equivocal.

In 1792, when the French Jacobins had destroyed the monarchy, and were gaining importance by foreign conquests, the zeal of their British imitators kept exact pace with their success; and after the battle of Jemappes, a deep anxiety for the public safety was excited, by the boldness of their language, and the freedom with which they avowed their immediate expectation of a new order of things. They acted, in short, precisely as the insurgents in France at the commencement of the revolution. About this period the eyes of all men were anxiously turned on Mr. Fox: those who, to preserve the constitution, clung to the ministers of the crown, hoping that in the moment of danger he would suspend political hostility, and support their measures; and those who wished to imitate the example of France, eagerly expecting that he would throw off all reserve, and openly take his station at their head. He declared against the former, but by no means in favor of the latter. It commonly happens, however, that those who contend against the same foe are supposed to be friends: and as he united with the second party in condemning the first, their agreement being public, and their difference less attended to, he was very generally involved with them in the charge of republican or revolutionary views. To obviate the effects of this charge on his constituents, he joined the Association of St. George's parish, in defence of the constitution, and published a Letter to the Westminster Electors, explaining and vindicating the part which he had acted. The composition of this letter was generally admired.

On the 1st of December, ministers began to arm for the double purpose of preventing insurrection at home, and repelling aggression abroad: and on the 10th, when parliament met, Mr. Fox took the lead in condemning their conduct; but had the mortification of finding himself bereaved of his usual support. Many of his oldest friends, and almost all the new ones whom he had gained by his coalition, partaking of the general alarm, gave their concurrence to the precautionary steps adopted by the minister.

In 1794 the duke of Portland, and others of Mr. Fox's former adherents, who had separated from him partially in 1792, completed their separation by the acceptance of offices. About the same period a number of his friends, considering with regret the lowness of his circumstances, made a private subscription for the purpose of providing him with a comfortable annuity. Among the chief contributors to this design were some of those who had recently quitted his party, but still retained their attachment to his person; and who thus gave the most unequivocal testimony of its constancy and warmth.

It is unecessary to follow Mr. Fox through the detail of his parliamentary conduct, which consisted in a regular condemnation of the war, and in combating the measures by which it was conducted. In the course of these discussions, he seemed uniformly to act on a conviction that the war, having originated from no call for self-defence, but from the folly or ambition of the minister, might be terminated at his discretion; and we cannot wonder that, under this conviction, he lavished the charges of weakness, infatuation, and profligacy, against one who persisted in a criminality so desolating and destructive. We are surprised, however, that the opinion which he entertained, at the commencement of the contest, should not have been corrected by the conduct of the French during its progress; a conduct too plainly evincing that the lust of dominion, the restlessness of foreign intrigue, and the insolence of national vanity, by which they had been actuated for a century and a half, were rather increased than abated, by such a change in their institutions, as gave the popular sentiment a freer expression, and more efficient sway. In the early part of Mr. Fox's life, he appeared to think that, if these vices, so pernicious to Europe, could not be restrained by physical coercion, no other means, no expedients of policy, management, or conciliation could be of any avail: and the cause is not very apparent, why, in 1796, confidence in the justice and amity of France should have been the favorite recommendation of one, who, ten years before, made the speeches, from which the following passages are extracted. In 1786 Mr. Fox, while strenuously opposing the commercial treaty, after he had dwelt on the danger of cultivating the friendship of a power, so hostile to Britain, added, 'that he might possibly be misrepresented, as a man prepossessed by vulgar and illiberal prejudices. But, be that as it might, he could not easily forget, that those prejudices had been productive of no ill consequences to this country, and that the wars, in which they had engaged us, had contributed more than any other circumstance to make us great and glorious. He condemned the conduct of the present ministers as resembling that of the tory administration of queen Anne, who had endeavoured to represent all apprehensions of the inordinate power of France as a bugbear.—France, he maintained, was the inveterate and unalterable enemy of Great Britain. No ties of affection or mutual interest could possibly eradicate what was so deeply rooted in her constitution. Was not her whole conduct to this country an unwearied and systematical series of measures distinguished either by their sinister intrigue, or their declared hostility? The incessant object of her ambition was universal monarchy, and it was from us she feared to be traversed in her pursuit. From us alone did the other powers of Europe hope for protection, to maintain that balance of power, which could preserve their respective liberties from her incroachments.—He would

he first minister from the charge he was ing to make: but he believed there were this country, so lost to the memory of its greatness, so sunk in their own base dency, as to think it right for us, diminished splendor was, to seize the earliest opporof making terms with our rising neighbour, ing an intimate connexion with her, and t means artfully securing her favor and ion.' When we read these sentences, we o be looking at a picture in a mirror, the sides change places. We can scarcely elieving them to be some of those proed by Pitt, and indignantly rebuked by uring the war of 1793: and the consistf their author can be maintained, only by g, that the principles, the policy, and the ces of the French were by that time re-; a task which in the face of facts, we not attempt. We are far, however, from ting, that this inconsistency, of which we e Mr. Fox to have been wholly unconsciproceeded from any unworthy motive, or e ever uttered, what he did not, at the mothink. The eagerness of his party attach- and aversions, operating on his sensibility magination, often impeded the movements s comprehensive and philosophical mind. ade him see things, as he wished to see , in order that he might draw from them s of accusation. Disgusted at length with some and unavailing opposition, Mr. Fox, 97, took the resolution of discontinuing his dance; and the loss of popularity which he rred by this proceeeding was increased, g the mutiny of the fleet, in 1797, by his forc- parliamentary discussion of the subject (for d at this time renewed his attendance) and by ng an opportunity to impute the evil to his gonists, at the risk of exasperating and proing it to the country.

r. Fox, during his secession, and in the sses of parliament when he attended, resided h at St. Ann's Hill, a pleasing retreat near rtsey, where he indulged himself in pursuits ural or classical elegance. Devoting part of day to study, as we have been informed was custom through life, he about this time began perusal of the best Greek writers. About time, also, he projected a history of the early of the reign of James II., which he did not to complete. In 1798 Mr. Fox having at a nerous meeting of the Whig club, proposed a toast 'The sovereignty of the people of gland,' a certain disrespect which this seemed mply towards the actual sovereign made the er strike his name from the list of his Privy nsellors. We are too little versed in the s of ministerial discipline, to judge of the priety of this punishment. It was probably much felt; for the consequence which Fox oyed was of a species not to be impaired by frowns of a court; and he would, as usually pens, become more wedded to tenets, which exposed him to what he would term minisial persecution, and to associates who, having plauded the fault, would think him honored the censure. But it was perhaps the only method by which the royal displeasure could be signified.

In March 1801, Mr. Addington having become minister, preliminaries of peace with France were signed in September, and a definitive treaty, in March 1802. During a debate on this event, Mr. Fox gave offence to some, by letting exultation in his foresight of the issue of the war hurry him into a declaration, that he 'rejoiced in the peace, because its terms were glorious to France.' If he thought the object of the war unjust, a high-strained and stoical morality might lead him to triumph in its failure, though this country was the sufferer. But, since few can keep pace with a sentiment so exalted, it would certainly have been more congenial to the general feeling, had this romantic sense of political justice been subdued by the infirmity of filial partiality, even for a mistaken or misguided country. About this time Mr. Fox lost a valued friend and powerful supporter, in Francis duke of Bedford, and on the next meeting of parliament, pronounced a Eulogy on his virtues, which, for eloquence and pathos, might have done honor to Pericles.

No sooner had access to France been facilitated by peace, than Fox repaired to Paris, and was honored with the public and particular notice of Buonaparte. Soon after his return, the offensive measures of France, and particularly her insisting on our instant performance of a contract, of which her own stipulations were to remain unperformed, occasioned a renewal of the war. This Mr. Fox resisted, and his opposition can be imputed to no sinister motive; when we consider that his great opponent was no longer minister, and that the power of Mr. Addington was likely to be more precarious in war than in peace.

Mr. Addington remained in office for a year after the commencement of the war, but Mr. Pitt at length in May, 1804, concurred with our statesman in censuring the feebleness of administration. Encouraged by this unusual agreement, a number of their friends, who had no other object than to secure to the country, at an hour of unexampled danger, the union and exertion of all the ability it possessed, strongly urged the formation of a cabinet including both of these favorite statesmen, and they are said to have signified their willingness to act together. Mr. Pitt accordingly proposed this plan to the king, but finding his majesty averse from employing Mr. Fox, and feeling himself under no engagement, on account of this aversion, to forego his own pretensions to serve his country, he yielded to the royal pleasure, and again accepted of his former offices.

Soon after this great minister found himself again established in power, he bent all his endeavours to form a third coalition of the continental powers against France, a measure which Mr. Fox condemned, from the despair which he entertained of its success. His predictions, in the present case, unfortunately received almost instant completion; for the war, which began on the 8th October 1805, was terminated, in less than two months, by the total discomfiture of the

allies. The health of Mr. Pitt was at this time declining, and the force of his disease was probably augmented by disappointment and chagrin at the immediate failure of a scheme, from which he had formed considerable expectations. He died on the 23rd January 1806; and, like Aristides, who had been treasurer of confederated Greece during the lavishment of a long and expensive war, did not leave money sufficient to pay his debts, or the expenses of his funeral.

Immediately after this event, Mr. Fox and lord Grenville, with their respective friends, were called into office, the former again holding the seals of foreign secretary, and much was expected by their friends from an administration supported by such a weight of senatorial talents, and family influence. As Mr. Fox had strongly and uniformly recommended peace, it was natural that he should lose no time in accomplishing his favorite object. He accordingly seized a singular occasion, suspected by some to have been thrown in his way by the subtlety and shrewdness of Talleyrand, to engage in a private correspondence with that minister, which gradually terminated in a public negociation. The abolition of the slave trade was another object for which he had strenuously contended, and to this he enjoyed the pleasure of obtaining the full and final consent of parliament. So far was he, however, from succeeding in his pacific measures, that, within a few weeks after his accession to office, he found himself constrained to extend hostilities to Prussia, who had taken forcible possession of Hanover; and, in the course of the negociation at Paris, he had the mortification to discover that France was not actuated by that desire of peace, and that readiness to treat on fair and equal terms, for which he had always given her credit. But, though he saw the negociation assume a hopeless aspect, he was not destined to outlive its actual rupture.

In the middle of June he made his last appearance in parliament, being immediately after confined by a dropsical complaint, the progress of which was too rapid for medical aid to resist. Towards the end of August he was with difficulty removed to the villa of the duke of Devonshire, at Chiswick, where, undergoing repeated operations, he breathed his last on the 13th September, having lived exactly fifty-seven years and eight months. His last words, addressed to his nephew and others, who were around him, are reported to have been, 'I die happy, but I pity you.' He was buried on the 10th October, with a magnificent attendance of illustrious mourners, in a vault of Westminster Abbey, adjoining to that, where the ashes of his celebrated rival repose. We conclude our memoir, with a character of its subject, from the able and elegant pen of Sir James Mackintosh. 'Mr. Fox united, in a most remarkable degree, the seemingly repugnant characters of the mildest of men, and the most vehement of orators. In private life he was gentle, modest, placable, kind, of simple manners, and so averse from parade and dogmatism, as to be not only unostentatious, but even somewhat inactive, in conversation. His superiority was never felt but in the instruction which he imparted, or in the attention which his generous preference usually directed to the more obscure members of the company. The simplicity of his manners was far from excluding that perfect urbanity and amenity which flowed still more from the mildness of his nature than from similar intercourse with the most polished society in Europe. His conversation, where it was not repressed by modesty or indolence, was delightful. The pleasantry perhaps of no man of wit had so unlabored an appearance. It seemed rather to escape from his mind than to be produced by it. He had lived in the most intimate terms with all his contemporaries, distinguished by wit, politeness, or philosophy, or learning, or the talents of public life. In the course of thirty years he had known almost every man in Europe whose intercourse could strengthen or enlighten or polish the mind. His own literature was various and elegant. In classical erudition, which by the custom of England is more particularly called learning, he was inferior to few professed scholars. Like all men of genius, he delighted to take refuge in poetry, from the vulgarity and irritation of business. His own verses were easy and pleasing, and might have claimed no low place among those which the French call vers de societé. The poetical character of his mind was displayed in his extraordinary partiality for the poetry of the two most poetical nations, or at least languages, of the West, those of the Greeks and of the Italians. He disliked political conversation, and never willingly took any part in it. To speak of him justly, as an orator, would require a long essay. Every where natural, he carried into public something of that simple and negligent exterior which belonged to him in private.—When he began to speak, a common observer would have thought him awkward: and even a consummate judge could only have been struck with the exquisite justness of his ideas, and the transparent simplicity of his manners. But no sooner had he spoken for some time, than he was changed into another being. He forgot himself and every thing around him. He thought only of his subject. His genius warmed and kindled, as he went on. He darted fire into his audience. Torrents of impetuous and irresistible eloquence swept along their feelings and conviction.—He certainly possessed above all moderns that union of reason, simplicity, and vehemence, which formed the Prince of Orators. He was the most Demosthenean speaker since Demosthenes. 'I knew him,' says Mr. Burke, in a pamphlet written after their unhappy difference, 'when he was nineteen; since which time he has risen by slow degrees to be the most brilliant and accomplished debater that the world ever saw.' The quiet dignity of a mind roused only by great objects, the absence of petty bustle, the contempt of show, the abhorrence of intrigue, the plainness and downrightness, and the thorough good nature which distinguished Mr. Fox, seem to render him no very unfit representative of that old English national character, which, if it ever changed, we should be sanguine indeed to expect to see succeeded by a better. The simplicity of his character inspired confidence, the ardor of his eloquence roused enthusiasm, and

entleness of his manners invited friendship. mire,' says Mr. Gibbon, 'the powers of a ior man, as they are blended,—his attrac- character, with all the softness and sim- y of a child: no human being was ever free from any taint of malignity, vanity, or ood.'

erhaps nothing can more strongly prove the impression made by this part of Mr. Fox's cter, than the words of Mr. Burke, who, in ary, 1797, six years after all intercourse be- n them had ceased, speaking to a person red with some degree of Mr. Fox's friend- said, 'To be sure he is a man made to be ! !' and these emphatical words were uttered a fervour of manner which left no doubt of sincerity.'

r. Fox is said to have written a few num- of a paper entitled The Englishman, but ished nothing separate during his life-time pt a Letter to the Electors of Westminster 3. Lord Holland gave to the world his humous publication entitled, The History ie early part of the Reign of James II. with ntroductory chapter, which was intended to a commencement of the History of the olution of 1688. There have also been pub- d since his death some elegant and able let- of this statesman, on Greek Literature, ad- sed to the late Gilbert Wakefield.

ox (George), the founder of the society of nds or Quakers, was a native of Leicester- e, and born at Drayton some time in 1624. father was a weaver, and apprenticed him grazier, by whom he was much employed ie keeping of sheep. At the age of nineteen ffirmed that he had received a divine com- d to forsake every thing else, and devote self to a religious mission. He accordingly ook his relations, equipped himself in a hern doublet, and wandered from place to e. Being discovered in the metropolis, his nds for a time induced him to return home; he quickly resumed a life of itinerancy, in ch he fasted much, walked abroad in retired es, studying the Bible, and sometimes sat in ee for a day together. He began in 1648 to pro- ate his opinions publicly at Manchester, and he neighbouring counties, where he preached he people in the market-places. At Derby followers of Fox were first denominated kers, in consequence of their trembling mode delivery, and calls on the magistracy to trem- before the Lord. See FRIENDS. In 1635 was sent a prisoner to Cromwell, who, how- r, set him at liberty, and from time to time tected him from the country magistracy. He uld often interrupt the church services; and occasion of a fast appointed on account of persecution of the protestants abroad, he dressed a paper to the heads of the nation, in ich he forcibly describes the inconsistency of nilar practices at home. In 1666 he was li- rated from prison by Charles II. and im- diately set about forming the people who d followed his doctrines into a society. In 69 he married the widow of judge Fell, and on after went to America, where he remained o years. On his return he was thrown for a short time into Worcester gaol, after which he went to Holland. In 1684 he again visited the continent, where he did not long remain; and, his health becoming impaired, he lived more retired until his death in 1690. The writings of Fox are collected into 3 vols. folio; the first of which contains his Journal; the second his Epistles; and the third his Doctrinal Pieces. Penn speaks in high terms of his humility, meekness, and temperance.

Fox (John), the martyrologist, was born at Boston, in Lincolnshire, in 1517. At sixteen he was entered a student of Brazen-nose College, Oxford; and in 1543 he proceeded M. A., and was chosen fellow of Magdalen College. He discovered an early genius for poetry, and wrote several Latin comedies, on scriptural subjects. He now applied himself with uncommon assiduity to theology and church history; and, discovering a preference for the doctrines of the Reformation, was expelled the college as a heretic. His distress on this occasion was very great; but he soon found an asylum in the house of Sir Thomas Lucy, of Warwickshire, who employed him as a tutor to his children. Here he married the daughter of a citizen of Coventry. He next came to London, where, finding no immediate means of subsistence, he was reduced to the utmost degree of want; but was at length taken into the family of the duchess of Richmond, as tutor to the earl of Surrey's children. In this family he lived, at Ryegate in Surrey, during the latter part of the reign of Henry VIII. the entire reign of Edward VI. and part of that of queen Mary I.: but at length, persecuted by bishop Gardiner, he was obliged to seek refuge abroad. Basil, in Switzerland, was the place of his retreat, where he subsisted by correcting the press. On the death of Mary he returned to England; where he was graciously received by his former pupil, the duke of Norfolk, who retained him in his family as long as he lived, and bequeathed him a pension at his death. Cecil also obtained for him the rectory of Shipton near Salisbury; and he might have had considerable preferment, had he been willing to subscribe to the canons. He died in 1587, aged seventy; and was buried in the chancel of St. Giles's, Cripplegate. He was a man of great industry and considerable learning; a zealous, but not a violent nonconformist. He left two sons; one of whom was bred a divine, the other a physician. He wrote many pieces: but his principal work is, the Acts and Monuments of the Church, &c., commonly called Fox's Book of Martyrs.

Fox (Richard), an English prelate, born about the end of the reign of Henry VI. at Grantham, was a student at Magdalen College, Oxford, whence he removed on account of the plague to Pembroke Hall, Cambridge. He afterwards travelled about, and we find him at Paris with Dr. Morton, bishop of Ely, who introduced him to Henry VII., then earl of Richmond. Dr. Fox soon acquired the favor of the latter, and was admitted into his most secret councils. In 1485, when, by the victory of Bosworth field, Henry became king of England, he appointed him a privy counsellor, and in 1486 and 1487 he was created bishop of Exeter, keeper of the

privy-seal, and principal secretary of state. He was subsequently employed on various embassies, and translated in 1492 to the bishopric of Bath and Wells, whence in 1494 he was again removed to that of Durham. In 1508 he was finally removed to the see of Winchester, where he passed the rest of his life. In the reign of Henry VIII. his influence greatly declined. Howard, earl of Surrey, by accommodating himself to the passions of his master, became the favorite; and Wolsey, whom Fox introduced to counteract his influence, grew more powerful than either. He was the founder of Corpus Christi College, Oxford, and of the free-schools of Taunton and Grantham: and is said to have been a generous patron of literature, though he never published any thing himself. He died in 1528.

Fox (Stephen), a distinguished statesman, was born at Farley in Wiltshire in 1627, and entered first into the service of the earl of Northumberland, who was abroad with Charles II. At the Restoration he was made clerk of the green cloth, paymaster of the forces, &c. In the next reign he was dismissed, but was restored after the Revolution. By opposing the bill for a standing army, he lost the favor of William III., but on the reign of Anne was replaced. He built a new church at Farley, founded several almshouses, and first projected Chelsea College. He died at Farley in 1716. Sir Stephen Fox married twice; the second time when near eighty, and had issue by both wives, being father, by his first wife to the first earl of Ilchester, and by his second, to the first lord Holland.

FO'XCASE, *n. s.* Fox and case. A fox's skin.

> One had better be laughed at for taking a *foxcase* for a fox, than be destroyed by taking a live fox for a case. *L'Estrange.*

FO'XCHASE, *n. s.* Fox and chase. The pursuit of the fox with hounds.

> See the same man, in vigour, in the gout;
> Alone, in company; in place or out;
> Early at business, and at hazard late;
> Mad at a *foxchase*, wise at a debate. *Pope.*

FO'XEVIL, *n. s.* Fox and evil. A kind of disease in which the hair sheds.

FO'XFISH, *n. s.* Vulpecula piscis. A fish.

FO'XGLOVE, *n. s.* Digitalis. A plant. See DIGITALIS.

FO'XHUNTER, *n. s.* Fox and hunter. A man whose chief ambition is to show his bravery in hunting foxes. A term of reproach used of country gentlemen.

> The *foxhunters* went their way, and then out steals the fox. *L'Estrange.*
>
> John Wildfire, *foxhunter*, broke his neck over a six-bar gate. *Spectator.*
>
> The world may be divided into people that read, people that write, people that think, and *fox hunters*. *Shenstone.*

FOX ISLANDS. See ALEUTIAN ISLANDS.

FOX ISLANDS, a cluster of small islands on the south side of the gulf of St. Laurence. Long. 59° 10′ W., lat. 51° N.

FOX RIVER, a river of Canada, which runs into the gulf of St. Laurence, nine miles N.N.W. of Cape Rosieres. 2. A river of North America, which runs through lake Winnebago, and falls into Green Bay in lake Michigan. Long. of the mouth 87° 53′ W., lat. 43° 48′ N. 3. A river of the western territory of America, which runs into the Theakiki. Long. 87° 58′ W., lat. 41° 28′ N. 4. A river of the western territory of America, which runs into the Wabash. Long. 88° 31′ W., lat. 38° N.

FO'XSHIP, *n. s.* From fox. The character or qualities of a fox; cunning; mischievous art.

> Had'st thou *foxship*
> To banish him that struck more blows for Rome,
> Than thou hast spoken words.
> *Shakspeare. Coriolanus.*

FO'XTAIL, *n. s.* Alopecurus. A plant.

FO'XTRAP, *n. s.* Fox and trap. A gin or snare to catch foxes.

> Answer a question, at what hour of the night to set a *foxtrap?* *Tatler.*

FOY, *n. s.* Fr. *foi*. Faith; allegiance. An obsolete word.

> He Easterland subdued, and Denmark won,
> And of them both did *foy* and tribute raise.
> *Faerie Queene.*

FOYLE, LOUGH, a large bay of Ireland, at the mouth of a river of the same name, four miles below Londonderry. It is twelve miles long and seven broad, and is well sheltered by land on all sides; the entrance not exceeding half a mile wide, having only one deep channel in the middle between sands and shallows.

FRACASTOR (Jerome), an eminent Italian poet and physician, born at Verona in 1482. He was eminently skilled in the belles lettres, and in the arts and sciences. Pope Paul III. made use of his authority to remove the council of Trent to Boulogne, under the pretext of a contagious distemper, which, as Fracastor deposed, made it no longer safe to continue at Trent. He was intimately acquainted with cardinal Bembo, Julius Scaliger, and others of the great men of his time. He died of an apoplexy at Casi near Verona, in 1553, and in 1559 the town of Verona erected a statue in honor of him. All that remains of his works are three books of Siphilis, or of the French disease; a book of Miscellaneous Poems; and two books of a poem, entitled, Joseph, which he began towards the end of his life, but did not live to finish. His medical pieces are, De Sympathiâ et Antipathiâ; De Contagione et Contagiosis Morbis; De Causis Criticorum Dierum; De Vini Temperaturâ, &c. His works, which are all in Latin, have been printed separately, and collectively. The best edition is that of Padua, 1735, in 2 vols. 4to.

FRACHES, in the glass trade, are the flat iron pans into which the glass vessels already formed are put when in the tower over the working furnace, but by means of which they are drawn out through the leers, that they may be taken gradually from the fire, and cool by degrees.

FRACT, *v. a.* } Latin *frango*, to break, applied to the breaking of hard substances, or the fracture of a bone. Fractional is applied to numbers that are imperfect or broken. A fraction is a
FRAC'TION, *n. s.*
FRAC'TIONAL, *adj.*
FRAC'TURE, *n. s.* & *v. a.*

broken part of an integral. In short, fraction denotes different kinds of breaking according to the objects to which the action is applied.

His days and times are past,
And my reliance on his *fracted* dates
Has smit my credit. *Shakspeare. Timon.*

The *fractions* of her faith, arts of her love,
The fragments, scraps, the bits and greasy reliques
Of her o'er eaten faith, are bound to Diomede.
Shakspeare.

But thou wilt sin and grief destroy,
That so the broken bones may joy,
And tune together in a well-set song,
Full of his praises,
Who dead men raises;
Fractures well cured make us more strong.
Herbert.

We make a cypher the medium between increasing and decreasing numbers, commonly called absolute or whole numbers, and negative or *fractional* numbers.
Cocker's Arithmetick.

That may do it without any great *fracture* of the more stable and fixed parts of nature, or the infringement of the laws thereof. *Hale.*

The surface of the earth hath been broke, and the parts of it dislocated; several parcels of nature retain still the evident marks of *fraction* and ruin.
Burnet's Theory of the Earth.

Fractures of the scull are dangerous, not in consequence of the injury done to the cranium itself, but as the brain becomes affected. *Sharp's Surgery.*

The leg was dressed, and the *fractured* bones united together. *Wiseman's Surgery.*

FRACTION, in arithmetic and algebra, a part or division of a unit or integer; or a number which stands to a unit in the relation of a part to its whole. The word literally imports a broken number. Fractions are usually divided into decimals, sexagesimal, and vulgar. See ALGEBRA and ARITHMETIC.

FRACTURES. See SURGERY.

FRÆNUM, or FRENUM, Bridle, in anatomy, a name given to divers ligaments, from their office in retaining and curbing the motions of the parts they are fitted to; as,

FRÆNUM LINGUÆ, or Bridle of the Tongue, a membranous ligament, which ties the tongue to the os hyoides, larynx, fauces, and lower parts of the mouth. In some subjects, the frænum runs the whole length of the tongue to the very tip; in which cases, if it were not cut, it would take away all possibility of speech. See SURGERY.

FRAGA, a strong town of Spain, in the kingdom of Arragon. It is situated among the mountains, having the river Cinca before it, whose high banks are difficult of access; and at its back a hill which cannot easily be approached with large cannon. Alphonso VII. king of Arragon, and I. of Castile, was killed by the Moors in 1134, in besieging this town. It is fifty-three miles E. S. E. of Saragossa, and thirty south of Balbastio. Long. 0° 23′ E., lat. 41° 27′ N.

FRAGARIA, the strawberry. A genus of the polygynia order, and icosandria class of plants: natural order thirty-fifth, senticosæ: CAL. decemfid; the petals five; the receptacle of the seeds ovate, in the form of a berry, and deciduous. There are seven species—The principal is F. **vesca**, the common strawberry, of which the F. **vesca moschata**, the hautboy, is the finest. All these varieties are hardy, low perennials, durable in root, but the leaves and fruit-stalks are renewed annually in spring. They flower in May and June, and their fruit comes to perfection in June, July, and August; the Alpine kind continuing till the beginning of winter. They all prosper in any common garden soil, producing abundant crops annually without much trouble. They increase exceedingly every summer, both by off-sets or suckers from the sides of the plants, and by runners or strings, all of these rooting and forming plants at every joint, each of which separately planted bears a few fruit the following year, and bears in great perfection the succeeding summer. Those of the Alpine kind will even bear fruit the same year that they are formed. All the sorts are commonly cultivated in kitchen gardens, in beds or borders of common earth, in rows lengthwise fifteen or eighteen inches distance; the plants the same distance from one another in each row. Patches of the different sorts, disposed here and there in the fronts of the different compartments of the pleasure ground, will appear ornamental both in their flowers and fruit, and make an agreeable variety. Strawberries, eaten either alone, or with sugar and cream, are universally esteemed a most delicious fruit. They are grateful, cooling, subacid, and juicy. Though taken in large quantities, they seldom disagree. They promote perspiration, impart a violet smell to the urine, and dissolve the tartareous incrustations on the teeth. People afflicted with the stone have found relief by using them very largely; and Hoffman says, he has known consumptive people cured by them. The bark of the root is astringent. Sheep and goats eat the plant; cows are not fond of it; horses and swine refuse it.

FRA'GILE, *adj.* } Fr. *fragile*; Lat. *fragilis.*
FRAGIL'ITY, *n. s.* } Brittle; easily snapped or broken; frail; uncertain; easily destroyed.

Fear the uncertainty of man's *fragility*, the common chance of war, the violence of fortune. *Knolles.*

To ease them of their griefs,
Their pangs of love, and other incident throes,
That nature's *fragile* vessel doth sustain
In life's uncertain voyage. *Shakspeare. Timon.*

The stalk of ivy is tough, and not *fragile*. *Bacon.*

To make an induration with toughness, and less *fragility*, decoct bodies in water for two or three days.
Bacon's Natural History.

All could not be right, in such a state, in this lower age of *fragility*. *Wotton.*

When subtle wits have spun their threads too fine,
'Tis weak and *fragile*, like Arachne's line. *Denham.*

Much ostentation, vain of fleshly arms,
And *fragile* arms, much instrument of war,
Long in preparing, soon to nothing brought,
Before mine eyes thou'st set.
Milton's Paradise Regained.

FRAG'MENT, *n. s.* } Lat. *fragmentum.* A
FRAG'MENTARY, *adj.* } part broken from the whole; an imperfect piece. The adjective not in use.

She, she is gone; she's gone: when thou knowes this,
What *fragmentary* rubbish this world is,
Thou knowest, and that it is not worth a thought;
He knows it too too much that thinks it nought.
Donne.

He who late a sceptre did command,
Now grasps a floating *fragment* in his hand.
Dryden.

If a thin or plated body, which, being of an even thickness, appears all over of one uniform colour, should be slit into threads, or broken into *fragments* of the same thickness with the plate, I see no reason why every thread or *fragment* should not keep its colour. *Newton's Opticks.*

Some on painted wood
Transfixed the *fragments*, some prepared the food.
Pope's Odyssey.

Cowley, in his unfinished *fragment* of the Davideis, has shewn us this way to improvement.
Watts on the Mind.

FRA'GOR, *n. s.* Lat. A noise; a crack; a crash. Not used.

Pursued by hideous *fragors*, as before
The flames descend, they in their breaches roar.
Sandys.

FRA'GRANCE, *n. s.* }
FRA'GRANCY, *n. s.* }
FRA'GRANT, *adj.* } Lat. *fragrans, fragrantia.* Sweetness of smell; grateful odor; odorous; with sweet smell.
FRA'GRANTLY, *adv.* }

Eve separate he spies,
Veiled in a cloud of *fragrance*, where she stood
Half spyed. *Milton's Paradise Lost.*

And first behold this cordial julep here,
That flames and dances in his crystal bounds,
With spirits of balm and *fragrant* syrups mixed.
Milton's Comus.

As the hops begin to change colour, and smell *fragrantly*, you may conclude them ripe. *Mortimer.*

Not lovelier seemed Narcissus to the eye;
Nor, when a flower, could boast more *fragrancy*.
Garth.

I am more pleased to survey my rows of coleworts and cabbages springing up in their full *fragrancy* and verdure, than to see the tender plants of foreign countries kept alive by artificial heats.
Addison's Spectator.

The nymph vouchsafed to place
Upon her head the various wreath:
The flowers, less blooming than her face;
Their scent less *fragrant* than her breath. *Prior.*

Such was the wine; to quench whose fervent steam
Scarce twenty measures from the living stream
To cool one cup sufficed: the goblet crowned,
Breathed aromatick *fragrancies* around.
Pope's Odyssey.

See in the rear of the warm sunny shower
The visionary boy from shelter fly;
For now the storm of summer-rain is o'er,
And cool, and fresh, and *fragrant*, is the sky.
Beattie.

FRAIL, *adj.* & *n. s.* }
FRAIL'NESS, *n. s.* } Lat. *fragilis.* Weak; tender; soon injured and destroyed: a fragile basket made of rushes; a rush for weaving baskets: liable to error or seduction; instability; weakness of resolution: infirm of purpose: applied to sins of infirmity it has a plural.
FRAIL'TY, *n. s.* }

Though Page be a secure fool, and stands so firmly on his wife's *frailty*, yet I cannot put off my opinion so easily. *Shakspeare.*

I know my body's of so *frail* a kind,
As force, without fevers within, can kill.
Davies.

The truly virtuous do not easily credit evil that is told them of their neighbours; for if others may do amiss, then may these also speak amiss: man is *frail*, and prone to evil, and therefore may soon fail in words.
Taylor's Guide to Devotion.

Nor should'st thou have trusted that to woman's *frailty*:
Ere I to thee, thou to thyself wast cruel. *Milton.*

But you invert the covenants of her trust,
And harshly deal, like an ill borrower,
With that which you received on other terms.
Scorning the unexempt condition,
By which all mortal *frailty* must subsist,
Refreshment after toil, ease after pain,
That have been tired all day without repast,
And timely rest have wanted. *Id. Comus.*

Love did his reason blind,
And love's the noblest *frailty* of the mind.
Dryden.

God knows our *frailty*, pities our weakness, and requires of us no more than we are able to do.
Locke.

There is nothing among all the *frailnesses* and uncertainties of this sublunary world so tottering and unstable as the virtue of a coward. *Norris.*

When with care we have raised an imaginary treasure of happiness, we find, at last, that the materials of the structure are *frail* and perishing, and the foundation itself is laid in the sand. *Rogers.*

Death, only death, can break the lasting chain;
And here, even then, shall my cold dust remain;
Here all its *frailties*, all its flames resign,
And wait, 'till 'tis no sin to mix with thine.
Pope.

That Christians are now not only like other men in their *frailties* and infirmities, might be in some degree excusable; but the complaint is, they are like heathens in all the main and chief articles of their lives.
Law.

A man of superior rank and character, that knows himself, knows that he is but a man; subject to the same sicknesses, *frailties*, disappointments, pains, passions, and sorrows, as other men. *Mason.*

And that's enough, for love is vanity,
Selfish in its beginning as its end,
Except where 'tis a mere insanity,
A maddening Spirit which would strive to blend
Itself with Beauty's *frail* inanity,
On which the passion's self seems to depend.
Byron.

FRAI'SCHEUR, *n. s.* Fr. Freshness; coolness. A word innovated by Dryden.

Hither in Summer-evenings you repair,
To taste the *fraischeur* of the purer air.
Dryden.

FRAISE, *n. s.* Fr. The caul of an animal. A pancake with bacon in it.

FRAISE, in fortification, a kind of defence, consisting of pointed stakes, six or seven feet long, driven parallel to the horizon into the retrenchments of a camp, a half-moon, or the like, to prevent any approach or scalade. Fraises differ from palisades chiefly in this, that the latter stand perpendicular to the horizon, and the former jet out parallel to it, or nearly so, being usually made a little sloping, or with the points hanging down. Fraises are chiefly used in entrenchments and other works thrown up of earth; sometimes they are found under the parapet of a rampart, serving instead of the cordon of stone used in stone-works.

To FRAISE A BATTALION is to line the musqueteers round with pikes, that, in case they should be charged by a body of horse, the

being presented may cover the soldiers he shock, and serve as a barricade.

AME, *v. a.* & *n. s.* } Fr. *forme;* Arm. AMER, *n. s.* } *fram;* both clearly the Lat. *forma.* To frame signifies to make ling to a frame: and frame, in its natural is that which forms the exterior edging of ning, and consequently determines its form. however far more general in its application: t is used in the senses, to invent; to fabri- to fabricate by orderly construction and of various parts; to fit one thing to ier; to make; to compose; to regulate; to t; to form any rule or method by study or pt; to form and digest by thought; to con- ; to plan; to scheme out.

At last, as nigh out of the wood she came,
A stately castle far away she spyde,
To which her steps directly she did *frame.*
Spenser. Faerie Queene.

Then chusing out few words most horrible,
ereof did verses *frame.* *Spenser.*

The double gates he findeth locked fast;
The one fair *framed* of burnished ivory,
The other all with silver overcast. *Id.*

the *frame* of the heavenly arch should dissolve , if celestial spheres should forget their wonted ons, and by irregular volubility turn themselves way, as it might happen. *Hooker.*

Fight valiantly to-day;
nd yet I do thee wrong to mind thee of it;
or thou art *framed* of the firm truth of valour.
Shakspeare.

I have been a truant to the law;
I never yet could *frame* my will to it,
And therefore *frame* the law unto my will. *Id.*

A woman, that is like a German clock,
Still a repairing, ever out of *frame,*
And never going aright. *Id.*

John the Bastard,
Whose spirits toil in *frame* of villanies. *Id.*

Though I cannot make true wars,
I'll *frame* convenient peace. *Id. Coriolanus.*

hou art their soldier, and, being bred in broils,
st not the soft way; but thou wilt *frame*
yself forsooth hereafter theirs. *Id.*

Astronomers, to solve the phenomena, *framed* to ir conceit eccentricks and epicycles. *Bacon.*

Upon his shield was *framed* that vent'rous lad,
at durst assay the sun's bright flaming team;
ite of his feeble hands, the horses mad
ing down on burning Earth the scorching beam;
made the flame in which himself was fired;
e world the bonfire was, where he expired:
s motto written thus, yet had what he desired.
Fletcher. Purple Island.

The forger of his own fate, the *framer* of his forne, should be improper, if actions were predeterined. *Hammond.*

Unpardonable the presumption and insolence in ntriving and *framing* this letter was. *Clarendon.*

Another party did resolve to change the whole ame of the government in state as well as church. *Id.*

These are thy glorious works, parent of good!
Almighty! thine this universal *frame.* *Milton.*

A bear's a savage beast,
Whelp'd without form, until the dam
Has licked it into shape and *frame.*
Hudibras.

Put both the tube and the vessel it leaned on into convenient wooden *frame,* to keep them from mishances. *Boyle.*

Let us not deceive ourselves by pretending to this excellent knowledge of Christ Jesus our Lord, if we do not *frame* our lives according to it. *Tillotson.*

The most abstruse ideas are only such as the understanding *frames* to itself, by joining together ideas that it had either from objects of sense or from its own operations about them. *Locke.*

Hew timber, saw it, *frame* it, and set it together.
Mortimer.

There was want of accurateness in experiments in the first original *framer* of those medals.
Arbuthnot.

Full of that flame his tender scenes he warms,
And *frames* his goddess by your matchless charms.
Granville.

Urge him with truth to *frame* his sure replies,
And sure he will; for wisdom never lies. *Pope.*

How many excellent reasonings are *framed* in the mind of a man of wisdom and study in a length of years. *Watts.*

From Nature's beauties variously compared,
And variously combined, he learns to *frame*
Those forms of bright perfection which the bard,
While boundless hopes and boundless views inflame,
Enamoured consecrates to never-dying fame.
Beattie.

FRAME, among founders, a kind of ledge, which, being filled with wetted sand, serves as a mould to cast their works in. See FOUNDRY.

FRAME, in joinery, a kind of case, wherein a thing is set or enclosed, or even supported; as a window frame, a picture frame, &c.

FRAME, among painters, a kind of square, consisting of four long slips of wood joined together, whose intermediate space is divided by threads into several little squares like a net; and hence sometimes called reticula. It serves to reduce figures from great to small; or, on the contrary, to augment their size from small to great

FRAME, among printers, is the stand which supports the cases.

FRAMLINGHAM, a large and ancient town of Suffolk. It has the remains of a castle, said to have been built by one of the first kings of the East Angles. Its walls, which are still to be seen, are forty-four feet high, and eight thick; and have thirteen towers, fourteen feet each above the walls. Two of these are watch-towers. To this castle Mary Tudor, afterwards queen Mary, retired, when the unfortunate Lady Jane Gray was proclaimed queen. See ENGLAND. Framlingham has a stately church, built of black flint, with a steeple 100 feet high, and a spacious market-place, with a weekly market on Saturday. It is pleasantly seated upon a clay hill near the source of the Ore, sixteen miles north-east of Ipswich, and eighty-seven N. N. E. of London.

FRA'MPOLD, *n. s.* This word is written by Dr. Hacket, *frampul.* I know not its original, says Dr. Johnson. It seems to be derived from the Sax. ꝑnam; Goth. *fram,* corruptions of the Lat. *forma* (see FRAME). Peevish; boisterous; rugged; crossgrained.

Her husband! Alas, the sweet woman leads an ill life with him: she leads a very *frampled* life with him. *Shakspeare.*

The *frampul* man could not be pacified.
Hacket.

FRANCAVILLA, a town in the province of Otranto, Naples. It is large and well built; the

streets being wide and straight: the houses, though showy, are of a heavy style of architecture. A great part of the town was thrown down by an earthquake in 1734, and the houses since erected, are only one story high. The inhabitants derive their chief subsistence from manufacturing the cotton and tobacco of the neighbourhood; olive oil is also sold here in large quantities. The name of this place is said to have arisen from an exemption from taxes during ten years, granted to the first settlers in the fourteenth century. It is fifteen miles E. N. E. of Tarento, and twenty west of Brindisi. Population 11,000

FRANCAVILLA is also the name of a town in Sicily, in the Val di Demona, near the river of Francavilla, where the Imperialists, under count Merci, obtained a victory over the Spaniards, under the marquis de Leyda, in 1719. Twelve miles W. N. W. of Taormina

FRANCE.

FRANCE. We shall pursue in this article the plan of first *describing* this interesting country; its geographical, statistical, and great political features. Then we shall furnish the details of its *history*, divided into certain convenient periods, as that of our article England, by the different dynasties that have successively occupied the throne.

PART I.

GEOGRAPHY AND STATISTICS OF FRANCE.

FRANCE, a portion of the ancient Gallia, and by the peace of 1815 reduced to its boundaries in the year 1790, with a small addition which we shall hereafter notice, has the natural limits of the English Channel on the north, the Bay of Biscay on the west, and the Pyrenees and the Mediterranean south. Its eastern boundary is of a more mixed character, and touches the frontiers of the kingdom of the Netherlands, Germany, Switzerland, and Savoy. It extends from 42° 30′ to nearly 51° of N. lat., and from 5° W. to 8° of E. long. from Greenwich. Its form is nearly square, and its area was estimated by M. Necker at 26,951 square leagues, of 2282 toises; or 156,024,213 arpents of Paris, which are equal to 131,722,295 English acres: by the committee of the first national assembly at 26,463 square leagues: the later estimate of M. Jorse, author of the Credit National, is 27,000 leagues, at 2282 toises 5785 arpents Paris, to a league. In English miles its extent from north to south is taken at 560; from east to west at nearly 650. The whole area is 204,000 English square miles. The present population is 30,451,187. and the number of persons to each square mile is, consequently, 144. France is, therefore, less populous proportionably than either England or Ireland, as the former contains about 190 and and the latter 170 persons on the same space.

The ancient Gallia contained not only the present kingdom of France, and that part of Germany and Belgium west of the Rhine, but the important addition of Gallia Cisalpina, on the south side of the Alps. Du Fresnoy describes Gallia Transalpina as bounded on the south by the Pyrenees, the Mediterranean Sea, and the Var; on the east by the Alps and the Rhine; on the north by the same river; and on the west by the Ocean. The Roman subdivision of this country was into three principal regions—the Celtic, Belgic, and Aquitaine. The bounds of Gallia Celtica were—the Ocean, the Seine, the Marne, the Saone, the Rhine, and the Garonne. Gallia Belgica was bounded by the Seine, the Marne, the mountains of Vosges, the Rhine, and the Ocean; and Gallia Aquitania by the Ocean, Garonne, and the Pyrenees. Gaul was divided by Augustus into four parts—Gallia Narbonensis, which comprehended Languedoc, Foix, Vivarres, Provence, Dauphiny, and Savoy; Aquitania, which was of larger extent than it had been in the time of Julius Cæsar, and comprehended all the country between the Pyrenees, the Ocean, and the Loire; Lugdunensis, the largest of all, which was bounded by the ocean, the Loire, the Seine, the Marne, and the mountains of Vosges; and Belgica, which was bounded by the ocean, the country of Caux, the Seine, the Marne, the mountains of Vosges, and the Rhine.

In the fourth century of the Christian era, the Notitia Imperii divided Gaul into the five great provinces of Lugdunensis, Belgica, Germania, Vienensis, and Aquitania; each of which was subdivided into several others. Constantine the Great divided it into seventeen provinces or governments, six of which were consular, and eleven under certain presidents sent by the emperor, who resided in the capital cities. The names of the provinces and their capitals were—1. Narbonensis prima, capital Narbonne; 2. Narbonensis secunda, capital Aix in Provence; 3. Viennensis, capital Vienne in Dauphiny; 4. Alpes Graiæ and Penninæ, capital Moustenon in Tarentaise, a province of Savoy; 5. Alpes Maritimæ, capital Embrun in Dauphiny; 6. Lugdunensis prima, capital Lyons; 7. Lugdunensis secunda, capital Rouen; 8. Lugdunensis tertia, capital Tours; 9. Lugdunensis quarta, capital Sens in Champagne; 10. Sequania, capital Besançon; 11. Aquitania prima, capital Bourges; 12. Aquitania secunda, capital Bourdeaux; 13. Novempopularia, capital Auch in Gascony; 14. Germania prima, capital Mentz; 15. Germania secunda, capital Cologne; 16. Belgica prima, capital Triers; and 17. Belgica secunda, capital Rheims.

Under the dominion of the Franks, the Roman divisions gradually disappeared, and new ones were substituted. Several kingdoms were afterwards comprised within the present territorial limits, the divisions and subdivisions of which it is unnecessary to trace. Under the Merovingian dynasty, it is generally considered that France had about the same limits as at present; under the Carlovingian race of kings almost the

as we have seen, was wrested from the so- by the prevalence of the feudal system: and ual recovery of the various provinces under etians we shall have hereafter to state.

ier need we further notice here the addi- and subtractions from the French terri- ich took place during the wars that arose he late revolution, except to remark that riod of the greatest aggrandisement of was between 1801 and 1810. In the year the peace of Luneville extended the ry of France eastward to the Rhine, and Adige between the Austrian territories in nd the Cisalpine republic. By the peace t, concluded on the 7th of July 1807, the Islands were assigned to France. Etruria was incorporated with France on the 30th of the following May; the Papal territories on the 17th of May, 1809; and by the peace of Vienna, concluded on the 14th of October, of that year, the Illyrian provinces, on the right bank of the Save, were ceded by Austria. In 1810 the annexation of Holland to France took place, as well as of the Hanse towns of Hamburg, Lubeck, and Bremen, with the north-western district of Germany, within a line from Wesel on the Rhine, to Lauenbourg on the Elbe. The Valais was likewise united to France in November 1810. The following is a summary view of the territory and population acquired by France, from the commencement of the Revolution to the beginning of 1811:—

I. Acquired Territories.	Extent in sq. miles.	Population.
Department of Mont Blanc (four-fifths), Leman, Maritime Alps, with Venaissain, Montebiliard, and other enclaves	4,810	825,000
Austrian and Dutch Netherlands	10,000	2,150,000
Bishopric of Liege, part of the archbishoprics of Cologne, Treves, Mentz, Duchy of Juliers, Palatinate, Mouers, and Guelderland	12,600	2,050,000
Piedmont, Genoa and Tuscany, Parma, Roman states and the Valais	26,600	5,130,000
Holland, Bremen, Hamburg, Lubeck, part of Hanover, Oldenburg, Munster, and Osnaburg	36,500	4,530,000
Illyrian provinces, including Venetian Dalmatia	19,300	1,372,000
Total	109,810	16,057,000
II. *Territory and Population of Old France*, 1812	204,000	28,500,000
Extent and subjects of the entire Empire	313,810	44,557,000

ance, before the revolution, was divided thirty-two distinct governments, eighteen hich are in the circuit, and fourteen in the lle of the kingdom. The first national nbly, by its decrees of the 15th of January, the 16th and 26th of February 1790, divided ice into eighty-three departments. As, how-, the divisions as they existed before the lution are often referred to, and a knowledge iem is absolutely necessary to the right untanding of the history of France, we shall merate them in connexion with the corrending departments. Each department, it is per to premise, is subdivided into three, four, five districts, called communes arrondisseis. These districts are again divided into tons, and each canton is composed of a cer- number of communes, that is to say, of towns villages. A commune is sometimes a single n, and sometimes a union of several villages, sessing a mayor and communal municipality. the cities of large size are divided into eral communes.

1. The province of Flanders, or the territories ich France possessed in the western part of Netherlands before the revolution, and which still retains This forms the department of north, which contains six districts, sixty canis, and 671 communes; its territorial extent is 6030 kilometers, twenty-four kilometers being very nearly equal to seven square miles, or sixty to a degree. The principal town is Douay.

2. The province of Artois forms the department of the *Straits of Calais*, which contains six districts, forty-three cantons, and 953 communes; its territorial extent is 7042½ kilometers: its principal town is Arras.

3. The principal part of Picardy forms the department of the *Somme*, which contains five districts, forty-one cantons, and 848 communes. Its territorial extent is 6512½ kilometers: its principal town is Amiens.

4. Normandy is divided into the departments of the *Lower Seine*, the *Eure*, the *Orne*, *Calvados*, and the *Channel*. The Lower Seine contains three districts, twenty cantons, and seventy-nine communes; its territorial extent is 6372½ kilometers: its principal town is Rouen. The department of the Eure contains five districts, thirty-six cantons, and 843 communes; its territorial extent is 6182½ kilometers: its principal town is Evreaux. The department of the Orne contains four districts, thirty-eight cantons, and 627 communes; its territorial extent is 6375 kilometers; its principal town is Alençon. The department of Calvados contains six districts, thirty-seven cantons, and 896 communes; its territorial extent is 5640 kilometers · its principal town is Caen. The

department of the Channel contains five districts, forty-eight cantons, and 669 communes; its territorial extent is 6890 kilometers; its principal town is Coutances.

5. The province of the Isle of France is divided into the departments of the *Aisne*, the *Oise*, the *Seine*, the *Seine and Marne*, and the *Seine and Oise*. The department of the Aisne contains five districts, thirty-seven cantons, and 853 communes; its territorial extent is 7422½ kilometers; its principal town is Laon. The department of the Oise contains four districts, thirty-five cantons, and 738 communes; its territorial extent is 6082½ kilometers; its principal town is Beauvois. The department of the Seine contains three districts, twenty cantons, and seventy-nine communes; its territorial extent is 453½ kilometers; its principal town is Paris. The department of the Seine and the Marne contains five districts, twenty-nine cantons, and 561 communes; its territorial extent is 6127½ kilometers; its principal town is Melun. The department of the Seine and Oise contains five districts, thirty-six cantons, and 696 communes; its territorial extent is 5880 kilometers; its principal town is Versailles.

6. The province of Champagne contains the departments of the *Ardennes*, of the *Marne*, of the *Higher Marne*, of the *Aube*, and the *Yonne*. The department of the Ardennes contains five districts, thirty-four cantons, and 599 communes; its territorial extent is 6242½ kilometers; its principal town is Mezieres. The department of the Marne contains five districts, thirty-two cantons, and 699 communes; its territorial extent is 8486 kilometers; its principal town is Chalons. The department of the Higher Marne contains three districts, twenty-eight cantons, and 552 communes; its territorial extent is 6540 kilometers; its principal town is Chaumont. The department of the Aube contains five districts, twenty-six cantons, and 423 communes; its territorial extent is 6242 kilometers; its principal town is Troyes. The department of the Yonne contains five districts, thirty-four cantons, and 484 communes; its territorial extent is 7740 kilometers; its principal town is Auxerre.

7. The province of Lorraine is divided into the departments of the *Meuse*, the *Moselle*, the *Meurthe*, and the *Vosges*. The department of the Meuse contains four districts, twenty-eight cantons, and 591 communes; its territorial extent is 6275 kilometers; its principal town is Bar-le-duc. The department of the Moselle contains four districts, thirty cantons, and 934 communes; its territorial extent is 6552½ kilometers; its principal town is Metz. The department of the Meurthe contains five districts, twenty-nine cantons, and 718 communes; its territorial extent is 6430 kilometers; its principal town is Nancy. The department of Vosges contains five districts, thirty cantons, and 550 communes; its territorial extent is 6522½ kilometers; its principal town is Epinal.

8. The province of Alsace is divided into the departments of the *Lower* and the *Higher Rhine*. The department of the Higher Rhine contains five districts, thirty-nine cantons, and 703 communes; its territorial extent is 6030 kilometers; its principal town is Colmar. The department of the Lower Rhine contains four districts, thirty-seven cantons, and 616 communes; its territorial extent is 5695 kilometers; its principal town is Strasburg.

9. The province of Brittany comprehends the departments of the *Ille* and *Villaine*, the *Lower Loire*, *Morbihan*, the *North Coast*, and *Finisterre*. The department of the Ille and Villaine contains six districts, forty-three cantons, and 352 communes; its territorial extent is 7185 kilometers; its principal town is Rennes. The department of the Lower Loire contains five districts, forty-five cantons, and 209 communes; its territorial extent is 7660 kilometers; its principal town is Nantes. The department of Morbihan contains four districts, thirty-seven cantons, and 231 communes; its territorial extent is 7067½ kilometers; its principal town is Vannes. The department of the North Coast contains five districts, forty-seven cantons, and 376 communes; its territorial extent is 7567½ kilometers; its principal town is Saint Brieux. The department of Finisterre contains five districts, forty-three cantons, and 287 communes; its territorial extent is 7292½ kilometers; its principal town is Quimper.

10. The province of Maine is divided into the department of the *Maine* and the *Sarthe*. The department of the Maine contains three districts, twenty-seven cantons, and 288 communes; its territorial extent is 5452½ kilometers; its principal town is Laval. The department of the Sarthe contains four districts, thirty-three cantons, and 413 communes; its territorial extent is 6467½ kilometers; its principal town is Leillans.

11. The province of Anjou forms the department of the *Maine* and *Loire*, which contains five districts, thirty-four cantons, and 385 communes; its territorial extent is 7637½ kilometers; its principal town is Angers.

12. The province of Touraine forms the department of the *Indre* and *Loire*, which contains three districts, twenty-four cantons, and 311 communes; its territorial extent is 6452½ kilometers; its principal town is Tours.

13. The province of Orleannois comprehends the departments of the *Eure* and *Loire*, the *Loire* and *Cher*, and the *Loiret* The departmet of the Eure and Loire contains five districts, thirty-six cantons, and 843 communes; its territorial extent is 6182½ kilometers; its principal town is Chartres. The department of the Loire and Cher contains three districts, twenty-four cantons, and 309 communes; its territorial extent is 6717½ kilometers; its principal town is Blois. The department of the Loiret contains four districts, thirty-one cantons, and 363 communes; its territorial extent is 7047½ kilometers; its principal town is Orleans.

14. The province of Poitou comprehends the departments of *Vievere*, the *Two Sevres*, and *La Vendée*. The department of Vievere contains five districts, thirty-one cantons, and 344 communes; its territorial extent is 7340 kilometers; its principal town is Poitiers. The department of the Two Sevres contains four districts, thirty-one cantons, and 363 communes; its territorial extent is 6337½ kilometers; its principal town is

The department of La Vendée contains districts, twenty-nine cantons, and 324 mes; its territorial extent is 7242½ kilo-; its principal town is Fontenay.

The province of Berry comprehends the ments of the *Indre* and the *Cher*. The ment of the Indre contains four districts, -three cantons, and 275 communes; its rial extent is 7395 kilometers; its chief is Chateauroux. The department of the contains three districts, twenty-nine can- and 307 communes; its territorial ex- s 7385 kilometers; its principal town is es.

The Nivernois forms the department of *evre*, which contains four districts, twenty- ntons, and 330 communes; its territorial is 7365 kilometers; its principal town is s.

The Bourbonnois forms the department e *Allier*, which contains four districts, y-six cantons, and 350 communes; its ter- l extent is 7427½ kilometers; its principal is Moulins.

The province of Burgundy forms the de- ents of the *Côte d'Or*, the *Saone and Loire*, ne *Ain*. The department of the Côte d'Or ins four districts, thirty-six cantons, and ommunes: its territorial extent is 9192½ eters; its principal town Dijon. The de- ent of the Saone and Loire contains five cts, forty-eight cantons, and 609 communes: rritorial extent is 8912½ kilometers; its ipal town Macon. The department of in contains four districts, thirty-two can- and 416 communes; its territorial ex- is 5675 kilometers; its principal town is g.

. The province of Franche Compté com- ends the departments of the *Higher Saone*, *Doubs*, and *Jura*. The department of the er Saone contains three districts, twenty- n cantons, and 640 communes; its terri- l extent is 5582½ kilometers; its principal is Vesoul. The department of the Doubs ains four districts, twenty-five cantons, and communes; its territorial extent is 5340 ki- eters; its principal town is Besançon. The rtment of Jura contains four districts, y-two cantons, and 728 communes; its ter- ial extent is 5237½ kilometers; its principal is Lons-le-Saulnier.

). The Pays d'Aunis forms the department he *Lower Charente*, which contains six dis- s, thirty-seven cantons, and 506 communes; territorial extent is 7247½ kilometers; its cipal town is Saintes.

1. The province of Saintonge forms the de- tment of the *Charente*, which contains five ricts, twenty-eight cantons, and 455 com- nes; its territorial extent is 6310 kilometers; principal town is Angouleme

2. The province of Marche comprehends the partments of the *Higher Vienne*, and the *euse*. The department of the Higher Vienne tains four districts, twenty-six cantons, and 4 communes; its territorial extent is 6002½ meters; its principal town is Limoges. The partment of the Creuse contains four districts, enty-five cantons, and 296 communes; its territorial extent is 5902½ kilometers; its principal town is Gueret.

23. The Limosin forms the department of *Correge*, which contains three districts, twenty- nine cantons, and 294 communes; its territorial extent is 5857½ kilometers; its principal town is Tulles.

24. The province of Auvergne comprehends the departments of *Puy de Dome* and *Cantal*. The department of Puy de Dome contains three districts, fifty cantons, and 458 communes; its territorial extent is 8450 kilometers; its principal town Clermont. The department of Cantal contains four districts, twenty-three cantons, and 270 communes; its territorial extent is 5937½ kilometers; and its principal town is Aurillac.

25. The province of Lyonnois is divided into the departments of the *Rhone*, and the *Loire*. The department of the Rhone contains two districts, twenty-five cantons, and 261 communes; its territorial extent is 2935 kilometers; its principal town is Lyons. The department of the Loire contains three districts, twenty-eight cantons, and 327 communes; its territorial extent is 5135 kilometers; its principal town is Monbrison.

26. The province of Guienne is divided into the departments of the *Gironde*, the *Dordogne*, the *Lot* and *Garonne*, the *Lot, Aveyron*, the *Gers*, the *Higher Pyrenees*, and the *Landes*. The department of the Gironde contains six districts, forty-eight cantons, and 580 communes; its territorial extent is 1170 kilometers; its principal town is Bourdeaux. The department of the Dordogne contains five districts, forty-seven cantons, and 642 communes; its territorial extent is 9482½ kilometers; its principal town is Perigueux. The department of the Lot and Garonne contains four districts, thirty-eight cantons, and 469 communes; its territorial extent is 6100 kilometers; its principal town is Agen. The department of the Lot contains four districts, forty-one cantons, and 440 communes; its territorial extent is 7432½ kilometers; its principal town is Cahors. The department of Aveyron contains five districts, forty-three cantons, and 589 communes; its territorial extent is 9477½ kilometers; and its principal town is Rhodez. The department of Gers contains five districts, thirty cantons, and 700 communes; its territorial extent is 7047½ kilometers; and its principal town is Auch. The department of the Higher Pyrenees contains three districts, twenty-six cantons, and 501 communes; its territorial extent is 4937½ kilometers; and its principal town is Tarbes. The department of the Landes contains three districts, twenty-eight cantons, and 368 communes; its territorial extent is 9475 kilometers; its principal town is Mont de Marsan.

27. The province of Bearn forms the department of the *Lower Pyrenees*, which contains five districts, forty cantons, and 660 communes; its territorial extent is 8072½ kilometers; its principal town is Pau.

28. The province of Foix forms the department of the *Arriege*, which contains three districts, twenty cantons, and 337 communes; its territorial extent is 5050 kilometers; its principal town is Foix.

29. The province of Roussillon, forms the department of the *Eastern Pyrenees*, which contains three districts, seventeen cantons, and 249 communes; the territorial extent is 337½ kilometers; its principal town is Perpignan.

30. The province of Languedoc is divided into the departments of the *Tarn*, the *Higher Garonne*, the *Herault*, the *Aude*, the *Garde*, the *Ardeche*, the *Higher Loire*, and the *Lozere*. The department of the Tarn contains four districts, thirty-five cantons, and 356 communes; its territorial extent is 6080 kilometers; its principal town is Castres. The department of the Higher Garonne contains five districts, forty-two cantons, and 691 communes; its territorial extent is 8077½ kilometers; its principal town is Toulouse. The department of the Herault contains four districts, thirty-six cantons, and 333 communes; its territorial extent is 6512½ kilometers; its principal town is Montpellier. The department of the Aude contains four districts, thirty-one cantons, and 436 communes; its territorial extent is 6542½ kilometers; its principal town is Carcassone. The department of the Garde contains four districts, thirty-eight cantons, 365 communes; its territorial extent is 6280 kilometers; its principal town is Nismes. The department of the Ardeche contains three districts, thirty-one cantons, and 335 communes; its territorial extent is 5710 kilometers; its principal town is Privas. The department of the Higher Loire contains three districts, twenty-eight cantons, and 272 communes; its territorial extent is 5282½ kilometers; its principal town is Le Puy. The department of the Lozere contains three districts, twenty-four cantons, and 193 communes; its territorial extent is 5390 kilometers; its principal town is Mende.

31. The province of Dauphiny comprehends the departments of the *Isere*, the *Drome*, and the *Higher Alps*. The departments of the Isere contains four districts, forty-four cantons, and 558 communes; its territorial extent is 8940 kilometers; its principal town is Grenoble. The department of the Drome contains four districts, twenty-eight cantons, and 360 communes; its territorial extent is 6927 kilometers; its principal town is Valence. The department of the Higher Alps contains three districts, twenty-three cantons, and 185 communes; its territorial extent is 5650 kilometers; its principal town is Gap.

32. The province of Provence contains the departments of the *Lower Alps*, the *Var*, and the *Mouths* of the *Rhone*. The department of the Lower Alps contains five districts, twenty-eight cantons, and 260 communes; its territorial extent is 7412½ kilometers; and its principal town is Digne. The department of the Var contains four districts, thirty-two cantons, and 210 communes; its territorial extent is 7510 kilometers; its principal town Toulon. The department of the Mouths of the Rhone contains three districts, twenty-six cantons, and 108 communes; its territorial extent is 5315 kilometers; its principal town is Aix.

Avignon and the adjoining territory, which belonged to the pope before the revolution, are now incorporated with France, and form the department of *Vaucluse*, which contains four districts, twenty-two cantons, and 150 communes; its territorial extent is 3700 kilometers; its principal town is Avignon.

The island of Corsica is formed into the two departments of the *Golo* and the *Liamone*. The department of the Golo contains three districts, thirty-nine cantons, and 235 communes; its territorial extent is 3267½ kilometers; its principal town is Bastia. The department of the Liamone contains three districts, twenty-one cantons, and 156 communes; its territorial extent is 2955 kilometers; its principal town is Ajaccio.

France is divided into twenty-two military provinces, each containing a certain number of the civil departments. These are each under the command of a general, who is stationed at a central town, whence the division or province commonly derives its name, and are as follows: the departments included in each division, are,

Resident Towns.	Departments in each Division.
1. Paris. . .	Seine, Seine and Oise, Aisne, Seine and Marne, Oise, Loiret, Eure and Loire.
2. Chalons . .	Ardennes, Meuse, Marne.
3. Metz. . .	Moselle.
4. Nancy. . .	Murthe, Vosges.
5. Strasburg. .	Upper Rhine, Lower Rhine.
6. Besançon . .	Upper Saône, Doubs, Jura and Ain.
7. Grenoble. .	Isere, Drôme, Upper Alps.
8. Marseilles. .	Lower Alps, Vaucluse, Mouths of the Rhone, Var.
9. Montpellier .	Ardeche, Gard, Lozere, Herault, Tarn, Aveyron.
10. Toulouse. .	Aude, Eastern Pyrenees, Ariege, Upper Garonne, Upper Pyrenees, Gers, Tarn, and Garonne.
11. Bordeaux. .	Lower Pyrenees, Landes, Gironde.
12. Rochelle. .	Charente-Inferieure, Deux-Sevres, Vendée, Loire-Inferieure, Vienne.
13. Rennes. . .	Ille and Villaine, Morbihan, Finisterre, Côtes du Nord.
14. Caen. . . .	Manche, Calvados, Orne.
15. Rouen. . .	Seine-Inferieure, Somme, Eure.
16. Lisle. . . .	Nord, Pas-de-Calais.
17. Dijon. . .	Aube, Upper Marne, Yonne, Côte-d'Or, Saonne and Loire.
18. Lyons. . .	Rhone, Loire, Cantal, Puy-de-Dome, Upper Loire.
19. Perigueux. .	Correze, Lot, Lot and Garonne, Dordogne, Charente.
20. Bourges. .	Cher, Indre, Allier, Creuze, Nievre, Upper Vienne.
21. Tours. . .	Sarthe, Indre and Loire, Maine and Loire, Mayenne, Loir and Cher.
22. Bastia. . .	Corsica.

articles of the definitive treaty between
and the allied powers relative to the
aries of that kingdom, signed at Paris,
ovember, 1815, are so important, and so
mark the outline of her present territory,
e think proper to subjoin them.

le I.—' The frontiers of France shall be the
s they were in the year 1790, save and except
difications on one side and on the other, which
ailed in the present article. First, on the nor-
rontiers, the line of demarcation shall remain
as fixed by the treaty of Paris, as far as op-
o Quiverain; from thence it shall follow the
limits of the Belgian provinces, of the late
ic of Liege, and of the duchy of Bouillon, as
isted in the year 1790, having the territories
d (enclavés) within that line of Phillipeville
arienbourg, with the fortresses so called, to-
with the whole of the duchy of Bouillon without
ntiers of France. From Villers near Orval
ie confines of the department Des Ardennes,
the grand duchy of Luxembourg as far as Perle,
ie great road leading from Thionville to Treves,
e shall remain as it was laid down by the treaty
s. From Perle it shall pass by Lauensdorf,
ch, Schardorff, Niederveiling, Pelweiler (all
places with their banlieus or dependencies re-
g to France) to Houvre; and shall follow from
the old limits of the district (Pays) of Sarre-
leaving Sarrelouis and the course of the Sarre,
r with the places situated to the right of
e above described, and their banlieus or de-
ncies without the limits of France. From the
of the district of Sarrebruck, the line of
cation shall be the same which at present se-
s from Germany the departments of the Moselle
the Lower Rhine, as far as to the Lauter, which
shall from thence serve as the frontier until it
nto the Rhine. All the territory on the left
of the Lauter, including the fortress of Landau,
form part of Germany. The town of Weissen-
, however, through which that river runs, shall
n entirely to France, with a rayon on the left
not exceeding 1000 toises, and which shall
ore particularly determined by the commission-
ho shall be charged with the approaching desig-
n of the boundaries.

—Leaving the mouth of the Lauter, and con-
g along the departments of the Lower Rhine,
pper Rhine, the Doubs, and the Jura, to the
n de Vaud, the frontiers shall remain as fixed
e treaty of Paris. The Thalweg of the Rhine
form the boundary between France and the states
ermany, but the property of the islands shall
n in perpetuity, as it shall be fixed by a new
y of the course of that river, and continue, un-
ged, whatever variation that course may undergo
e lapse of time. Commissioners shall be named
th sides by the high contracting parties, within
pace of three months, to proceed upon the said
y. One-half of the bridge between Strasbourg
Kehl, shall belong to France, and the other half
e grand duchy of Baden.

I.—In order to establish a direct communication
een the canton of Geneva and Switzerland, that
of the Pays de Gex, bounded on the east by the
Leman; on the south, by the territory of the
n of Geneva; on the north, by that of the Can-
le Vaud; on the west by the course of the Ver-
and by a line which comprehends the communes
ollex, Bossy, and Meyrin, leaving the commune
erney to France, shall be ceded to the Helvetic
ederacy, in order to be united to the canton of
eva. The line of the French custom-houses shall be placed to the west of the Jura, so that the whole of the Pays de Gex, shall be without that line.

IV.—From the frontiers of the canton of Geneva, as far as the Mediterranean, the line of demarcation shall be that which, in the year 1790, separated France from Savoy, and from the county of Nice. The relations which the treaty of Paris of 1814 had re-established between France and the principality of Monaco, shall cease for ever, and the same relations shall exist between that principality and his majesty the king of Sardinia.

V.—All the territories and districts included (enclavés) within the boundary of the French territory, as determined by the present article, shall remain united to France.

VI.—The high contracting parties shall name, within three months after the signature of the present treaty, commissioners to regulate every thing relating to the designation of the boundaries of the respective countries, and as soon as the labors of the commissioners shall have terminated, maps shall be drawn, and land-marks shall be erected, which shall point out the respective limits.'

Such are the general and departmental outlines of this important part of Europe. The surface of France is in general flat; not rising into any elevations that can be called *mountainous*, except in the central and southern provinces, i. e. upwards of 300 miles south of Calais, where among the sources of the Meuse, the Moselle, the Seine and the Saône, we meet with the mountains of Auvergne. Hence the Cevennes, a long range of mountains, proceeds from north to south in a course at first parallel with that of the Saône and subsequently of the Rhone, until, on approaching the Mediterranean, it branches off to the south-west and joins the Pyrenees. The greatest height of this range is in Auvergne, about lat. 45°, where this chain, or more properly a branch of it, attains, at the mountains called Cantal and Puy de Dôme, an elevation of 6000 feet, and is covered in its higher parts with snow during a great part of the year. Another, but a much less lofty range, extends from Bordeaux to the south-east, a distance of 150 miles, until it reaches the Pyrenees. The smaller chains are numerous in the east and south-east of the kingdom, viz. in Lorraine, the Nivernois, Dauphiny, Provence; also in part of the interior, particularly the Limousin and Guienne. They are interspersed with extensive plains, but convert the whole of the south and south-east of France into rugged and elevated tracts. Down the eastern frontier, and nearly parallel to the course of the Rhine, run the Vosges, until they join Mount Jura, in the Alps, north of the lake of Geneva. The grandest range, however, for scenery is that portion of the Alps which separates France from Switzerland. Here is found the towering Mont Blanc, the highest point of Europe, and so much above the surrounding Alps as to be illuminated by the sun twenty minutes earlier and later. See our articles Blanc Mount, and Europe. Other remarkable peaks in this direction are Reculet and Dole, which are 5660 feet above the level of the sea. On the south of France the chain of the Pyrenees stretches from the port of Vendres, on the coast of the Mediterranean, to the Atlantic Ocean on the coast of Spain. Its greatest breadth is forty leagues;

its highest summit 1751 toises above the level of the sea; the length about 212 miles. Mont Perdu is the highest elevation of the Pyrenees; Mont Canigou the chief of the Eastern Pyrenees: the hill is of difficult ascent, and is 1440 toises above the Mediterranean. The Pyrenean chain appears at a distance like a shaggy ridge, presenting the segment of a circle fronting France, and descending at each extremity. To the south and west they are sterile, but on the north and east, where the descent is more gradual, they afford frequent woods and excellent pasturage: near the summit of Mont Perdu is a large lake, upwards of 9000 feet above the level of the sea, which discharges its waters into Spain.

The *forests* of France constitute one of its principal geographical features. They are estimated to cover altogether a surface of 29,220 square miles, or upwards of 18,000,000 English acres; that is about an eighth of its territorial surface. Since the time of Cæsar, that of Ardennes has been the largest in France: it then extended from the Rhine to the Rhone, but is now much diminished at its extremities. The forest of Fontainbleau covers a space of about 25,000 acres. That of Orleans, including several plains and villages, is fifteen leagues in length, and from three to eight in breadth. It contains great variety of timber, such as oak, elm, fir, aspen, &c. Before the revolution the value of its timber annually was 100,000 livres: the profit being part of the appanage of the duke of Orleans.

M. Chaptal, in his treatise d'Industrie Francaise, estimates the woods which are

	Hectares.
Regularly cut for fuel, equal to .	6,612,000
Those allowed to grow for timber	460,000
And the chestnut woods . . .	406,000
	7,478,000

The hectare is about two-fifths of the English acre. Under the old government, the national forests yielded about 12,000,000 francs to the royal treasury. By the revolution, all forests formerly held by the corporate bodies and the emigrants were annexed to those of the state, which were thus increased to upwards of 4,000,000 arpents, or about one-fourth. These, added to the forests in Belgium, and on the left bank of the Rhine, in the year 1806, yielded rather more than 70,000,000 francs, according to the budget for that year. All forests above 300 acres were also added to the national domains, and declared inalienable. In the year 1800 the national forests were exempted from the land-tax. But the revolution did not abolish the arbitrary laws to which the private proprietors of woodlands were subject. According to these laws, the government appoints persons, who are proper judges of ship timber, to examine all the woods, and to mark such trees as they deem fit for their purpose, after which the proprietor must not lay the axe to them.

The *rivers* of France are numerous, and intersect and beautify the country in every direction. The Rhine now only waters the eastern frontiers of two departments. The Rhone, Seine, Loire, and Garonne, are the other great streams. The Rhone enters France from the lake of Geneva, and enters the Mediterranean by several mouths a few miles west of Marseilles. It passes in its course Lyons, Vienne, Valence, Montelimart, Avignon, Beaucaire, Tarascon, and Arles. The Seine, having a direction generally towards the north-west, rises in the department of Côte d'Or, and waters a series of beautiful valleys previous to its arriving at Paris; whence it follows a sinuous course to the English Channel, receiving a great number of tributary streams. The principal towns on its banks are Troyes, Melun, Paris, and Rouen. The Loire has its source in the western side of the Cevennes, and flows towards the north for about half its way. It then turns to the west and falls into the Bay of Biscay after a course of more than 450 miles. It receives about forty of the central rivers of the country, and is navigable for nearly ninety miles. The principal places it passes are Nevers, Orleans, Blois, Tours, Saumur, and Nantes.

The Garonne, rising in the northern side of the Pyrenees, flows nearly north-west into the Bay of Biscay: having most of its course through a flat country. It is joined by the Dordogne before it reaches the sea, and after the junction is called the Gironde. It passes Toulouse, Agen, and Bourdeaux, below which it opens into a large estuary, having an entire course of above 200 miles.

Other rivers in the *northern* departments are the Somme, which falls into the British Channel below Abbeville; the Oise and the Marne which enter the Seine; the Aisne tributary to the Oise; and the Meuse, the Moselle, and the Scheldt (l'Escaut) watering the *central* departments. The Vilaine discharges its waters into the ocean below La Roche-Bernard. The Sarthe and the Loir unite above Angers, and, having joined the Mayenne at that town, they augment the Loire a little below. These collect their waters on the north of that river. The Creuse joins the Vienne, which with the Cher and the Indre enter the Loire from the south. The Yonne discharges itself into the Seine at Montereau. The Saone and the Doubs unite and afterwards flow into the Rhone. Of the *southern* rivers the three which fall into the Garonne are the Dordogne, the Lot, and the Tarn. The Adour runs into the sea at Bayonne. The Allier discharges itself into the Loire at Nevers; while the Isere and the Durance are both tributary to the Rhone.

The *canals* of France are few, and the general management of them very far behind that of our own internal navigation. The principal existing canals are:—1. The Canal de Briare, which unites the Loire near Briare, with the Loing at Cepoix; where also it receives the canal d'Orleans. From this place the canal of Montargis continues the navigation to the Seine. By means of these, and the connecting rivers, France may be traversed from north to south. This canal contains forty-two locks, and is about fifty-five miles in length.—2. The Canal du Centre, also called the Canal of Charollois, and the Canal of the Three Seas, or of Digoin, is about twenty French leagues in length, and by means of the

the Loire, and the Seine, unites the Mean, the Ocean, and the Channel.—3. nal de la Côte d'Or, likewise called the e Bourgogne, connects the Saone and the at a short distance from Joigny; and er intermediate rivers. Its whole length 140 miles.—4. The Canal de Montargis, cted as early as 1720, to continue the na- of the Canal de Briare to the Seine.— Canal d'Orleans which joins the Loire e Loing. It commences at the former vo leagues above Orleans, and unites with er near Montargis. It has thirty locks in of about fifty miles.—6. The Canal du Canal of Languedoc, the most noted and ve in France. It was constructed under spices of Colbert, during the reign of XIV.; and employed a great number of r fifteen years, among whom nearly half a of money was distributed. This canal nces at the bay of Languedoc, and enters ronne near the city of Toulouse, after a of 126 miles. Its breadth, including the paths, is 144 feet, and its depth about six. rench government has recently formed lans for improving the internal navigation. ort drawn up by the Administration des et Chaussées, for the information of the ministry, enumerates all the canals which shed—all those on which they are at work, those which they recommend to be unen.

the canals which are in progress the most tant are—Canal de Monsieur, parallel with line, which will facilitate the exportation Alsace manufactures both to Paris and illes—Canal de Bourgogne, joining the de Monsieur with the Seine by way of —Canal lateral de la Loire—Canal du Duc rry, striking off from the Loire near Tours assing by Bourges and joining the Loire near Nevers—Canal de Bretagne—Canal vernois, to intersect the Nivernois, and give means of communication to a district in hitherto all goods have been carried on back.

nce contains no *lakes* of importance, and a-coast is singularly deficient in harbours lering its extent. In thirty leagues of coast uedoc has not one good harbour; and Provence abounds in inlets arising from nd and other accretions, which the Rhone s down, being driven to the westward, these r the coast extremely shelving, and full of s. The coast of Provence, is on the consteep and rocky, and inclines gradually to outhward, from the mouths of the Rhone to Toulon. But here all the harbours want as roadsteads for shipping. Going round oast from the north-east we have, at Dunkirk, all harbour in the interior of the town, aphed on the Dutch plan by a canal leading the sea. Boulogne is a shallow roadstead, g protection by land batteries near its nce to small craft. The port of Dieppe is exposed in winter; that of St. Malo is less nd, on doubling the projecting part of Brit, we find, in the south-west of that province, ient, a port of tolerable security for large merchantmen. Farther to the south, we find at La Rochelle a small, but secure harbour, and at Bourdeaux, a river nearly equal in width to the Thames at London. From this there is no seaport, until reaching Bayonne, a place of no easy access. On the Mediterranean, the ports are the Cette and Marseilles, the latter considered spacious and secure. At Brest and Toulon, are the great dock yards and naval stations, both having excellent harbours; Rochefort is nearly equal to them, situated on the river Charente near its mouth. At Cherburg the labor and expense that have been bestowed on the public works have been, as we have seen, immense. See CHERBURG. Its roadstead, is extensive and open, but it has a sea-wall, which, affords considerable protection from the swell of the sea; and its spacious dock is capable of containing fifty sail of the line. Havre de Grace, the best mercantile harbour perhaps in France, has also been formed at a great expense.

The *climate* of France has been divided into that of the North, the Central, and the Southern regions. The north, comprising Flanders, Picardy, Normandy, Brittany, and, in general, all that part of France that would be bounded on the south by a diagonal line from lat. 47° on the west to lat. 49° on the east frontier, bears a great resemblance in temperature and produce, to the south of England; and the chief culture is in wheat, barley, oats, rye; apples, pears, and cherries; hemp, flax, and rapeseed. Here also, and here only in France, is pasturage rich and extensive; while the timber is also remarkably like our own. The central region comprising the country to the south of the Loire, or of the diagonal line we have mentioned, until reaching a similar line in lat. 45° on the west and 47° on the east frontier, has its winters, except in the highest parts, sensibly shorter and milder. Wheat, barley, oats, and rye, are here mingled with maize in the culture, and vines are general. The weather in this great inland tract is also more steady than northward. In the summer it has little rain, and few storms: but when they occur they are frequently accompanied with hail. This is altogether perhaps the most pleasant part of France; it is certainly generally preferred by English visitors and residents. The southern region comprehending the whole breadth of France, from lat. 45° and 46° to lat. 42° 30′, approaches in climate to the warmth of Italy; it being necessary, in the summer months, to suspend all active exertions in the middle of the day. Wheat is here but partially grown; barley, oats, and rye, on the high grounds; and maize very generally. The vines supply in their rich produce and cultivation the main article of export. The common fruits are olives, mulberries, and in warm parts oranges and lemons. The pasturage is good only on mountainous or well watered tracts.

The quantity of *rain* that annually falls in Paris is very nearly the same as in London; the average in both places being between twenty-one and twenty-two inches. The mean quantity for the whole of France is about twenty-one inches. At Marseilles it is 22·5 inches; at Bourdeaux twenty-six; and at Montpelier nearly thirty

inches. Brittany is considered as rainy as Cornwall. In the interior the rains are less frequent, but more heavy; so that there is much less difference in the quantity of rain that falls in the course of the year than in the number of rainy days. The atmosphere of this country is much less cloudy than ours: but the most frequent wind in the north and central part of France is, as in Britain and Ireland, the south-west. In the south of France the winds are commonly from the north. Nor is the difference of temperature between London and Paris considerable: the degree of heat indeed, along the west coast of France, is not felt to be intense until passing Poitou. In the interior it is more perceptible, being strongly felt at Lyons, and still more in the latitude of Nismes, Aix, Marseilles, and Toulon. The variations of climate are considerably greater on the whole between the north and south of France than between the north and south of Britain, where the difference of latitude is so much modified by the vicinity of the sea.

France has a most diversified and abundant *soil*, speaking generally. Arthur Young considers it much freer from poor lands than that of England. It consists chiefly of different kinds of loam, varying from the deepest and richest to the calcareous and gravelly. This author gives the following estimate of the proportion of the different soils. But his numbers it is to be observed include the whole surface of the kingdom, making no deductions for roads, rivers, ponds, &c. Necker estimated the roads of France alone at 9000 square leagues.

	Acres.	Acres.
Rich district of the north-east, containing the provinces of Flanders, Artois, Picardy, Normandy, the Isle of France, &c.	18,179,590	
Plain of Garonne	7,654,564	
Plain of Alsace	637,880	
Lower Poitou, &c.	1,913,641	
Rich loam		28,385,675
The heath district of Brittany, Anjou, and parts of Normandy, &c.	15,307,128	
The heath district of Guyenne and Gascony	10,206,085	
Heath		25,513,213
The mountainous district of Auvergne, Dauphiny, Provence, Languedoc, &c.		28,707,037
The chalky district of Champagne, Sologne, Touraine, Poitou, Saintonge, Angoumois, &c.		16,584,889
The district of gravel of the Bourbonnais and Nivernais		3,827,282
The district of stony soils in Lorraine, Burgundy, Franche Compté, &c.		20,412,171
The district of various loams in the Limousin, Berry, La Manche, &c.		8,292,444
Total		131,722,711

The *agriculture* of France is not equal to its advantages in point of soil and climate. Before the revolution it languished under the seigneurships and ecclesiastical tenures: and since that event the law which directs an equal division of landed property among the children of a family, in most cases, has greatly increased the evils of its minute subdivision. The parent of two children has the free disposal of only one-third of his property; the parent of three children of only one-fourth; the residue being shared equally among all. The claim of primogeniture is thus in a great degree annulled.

One-half of the population of France, it is considered, have from these provisions, and the extensive sales of land in modern times, become landed proprietors; and one-fourth agricultural laborers: consequently two-thirds of the whole are employed in agricultural pursuits; while, in Great Britain, those so occupied do not amount to more than one-third of the population. A recent statement of M. Chaptal (De l'Industrie François) reckons the surface of France at 52,000,000 hectares, which are thus distributed:—

	Hectares.
Arable land	22,818,000
Woods regularly cut for fuel	6,612,000
Woods allowed to grow for timber	460,000
Pastures	3,525,000
Meadows	3,488,000
Chestnut woods	406,000
Orchards	359,000
Kitchen gardens	328,000
Lakes, Ponds, &c.	213,000
Marshes	186,000
Hops and Hemp	60,000
Osieries	53,000
Olives	43,000
Mines and Quarries	28,000
Gardens, Parks, and Pleasure Grounds	16,000
Canals	9,000
Cultures particulieres, crops too small to be classed but as sundries	787,000
Waste lands, heaths, sands	3,841,000
Buildings	213,000
Unproductive, as Towns, Roads, Rocks, Rivers.	6,555,000
Total	52,000,000

It further appears, from this writer, that the whole value of the agricultural produce of France is 4,678,708,855 francs. The expenses of raising this he estimates at 3,334,005,515 francs, which reduces the net profits to 1,334,703,370 francs. Besides this statement of the net profits, three others have been given, arising from them —

	Francs.
According to the registered customs	1,323,138,877
Average value per acre	1,486,244,653
According to the return of special commissioners	1,626,000,000
The mean of these three gives	1,478,461,176

If, to find the average result of all these statements, we take the mean of this last and of M. Chaptal's, we shall have 1,411,582,273 francs; which has been thought a near approximation to the truth. From the estimate of this author, it appears that the capital employed in agricultural pursuits in France is 37,522,061,476 francs; which, compared with the statement of profits, gives only three and a half per cent. upon the whole capital employed.

Buck-wheat is largely cultivated in Normandy and the south of France, both as green food for cattle, and for the diet of the peasantry: it is sown generally in the month of June, and harvested in the end of September. Rape-seed is also general here and in French Flanders; and supplies, as in several districts in England, oil for the market and food for the cattle, either green or in cake. Cole-seed is also raised in this part. Flax is very generally raised in Flanders, Alsace, and Normandy, as well as in the provinces of the west and south, where it is spun in the cottages. Hemp also is raised in many parts of France, particularly in the north. Tobacco flourishes in Alsace and Picardy, and would it is said be extensively reared throughout France but for the excise restrictions, which only license its growth in particular parts. We have often thought our own excise laws sufficiently intrusive upon all the works of man, but this is an interference with natural productions which we do not recollect that they equal. Maize is a culture of great importance, both for the food of man and cattle, in the warm parts of France; when intended to stand for harvest it is planted in rows with but little seed, and yields more than twice the quantity of wheat that would be produced on the same area. During its growth, the leaves are regularly stripped for the cattle; and in some districts it is sown thick and mown for that purpose only. Potatoes are little known, and as little approved, speaking generally. Chestnuts supply, in the central part of France, no inconsiderable portion of human food. In the south the fruits are almonds, olives, prunes, figs, and oranges.

The vine is cultivated over, perhaps, one-half of France, beginning, in a limited degree, in Champagne and Burgundy; in Provence and the lower part of Languedoc, the climate becoming much warmer, the culture of it is general; though it is no where managed with such skill as along the banks of the Garonne. The quality of French wines, it is well known, is very various. The entire amount produced is said to have been considerably increased since the revolution, as well from the division of the larger estates as from the quantity of waste land that has been brought under culture: 5,000,000 acres of land are, we are told, planted with vines; and that the value of the annual produce is from £28,000,000 to £30,000,000 sterling, of which about a tenth or twelfth part only is exported. A farther quantity, equal to about a sixth of the above, is made into brandy.

The official calculations of the produce of France are no where else equalled in point of minuteness. They give the following as the value of articles produced annually in France:—

Wine	20,000,000
Raw silk	9,600,000
Hemp	1,200,000
Flax	800,000
Madder	200,000
Wood for fuel and timber of all kinds	5,600,000
Olive oil, rape-seed, and cole-seed	2,800,000
Tobacco	300,000
Chestnuts	300,000
	40,800,000

Of the following articles also, produced in Great Britain, we extract not the value only, but the quantity and average price.

	Quantity in Winchester Quarters.	Average Price.	Annual Produce.
		s. *d.*	£
Wheat	18,508,000	41 8	38,558,000
Rye and mixed corn (meteil)	10,886,000	27 10	15,150,000
Buck-wheat	3,022,000	14 0	2,115,000
Barley	4,520,000	23 2	5,236,000
Peas and beans	646,000	41 8	1,346,000
Potatoes (56,928,000 boisseaux)		0 10½	2,491,000
Oats	11,524,000	20 10	12,000,000
Maize and Indian corn	2,265,000	27 10	3,152,000
Wool, Merino, 2,000,000 lbs. at 1*s.* 8*d.* per lb.; second quality, metisse, 8,000,000 lbs. at 1*s.* 3*d.*; a third, or common quality, 70,000,000 lbs. 10*d.*			3,583,000
			83,631,000

The pasturage is, as we have stated, chiefly confined to the north and west of France: and here clover and sainfoin abound; lucerne is much more general, being raised not merely in the north, but in the central and southern provinces, wherever irrigation is practicable and the soil and climate suitable.

The art of breeding cattle is little understood in France, nor is there much judgment shown in fattening them. The beef and mutton of the north and west are, however, very tolerable, and their price, though varying in different provinces, thirty per cent. less than in England. Butter is made and used extensively, but cheese much less than in England. In the south, however, olive oil, largely supplies the place of butter in cooking. The French horses are inferior, both in size, number, and general appearance, to those of our own country. In the performance of labor, however, they are found strong and tolerably expeditious. A French mail-coach performs only five instead of seven miles an hour, as with us; but this is owing less to inferiority in the horses, than to the state of the roads, and to general want of despatch at post-houses. More than one-half of the horses belong to the northern provinces, viz. Normandy, Brittany, Picardy, Alsace, and the Isle of France. In the central and southern departments the work is chiefly done by oxen. The total of horned cattle in France, in 1812, was reported officially as follows:—Chaptal, vol. i. p. 197.

Bulls	214,000
Oxen	1,702,000
Cows	3,910,000
Heifers	856,000

Sheep are reared almost every where, and the mutton is good. Merinos were first brought from Spain in 1787, and formed into a royal flock at Rambouillet. The quality has been progressively improved, and distributions of Merinos have been successively made to proprietors of sheep pastures in all parts of France. The consequence is that, in many districts, the weight of the fleece has been nearly doubled. The animals are not folded during night, but crowded into covered buildings (bergeries), and suffer, particularly in winter, much injury from sudden exposure. Mules, though little known in the north of France, are reared in the central and southern parts very generally. Poultry, in France, is both larger and more abundant than with us.

France has some considerable *mines* of silver in the mountainous districts; but is very rich in iron. The Ardennes, Vosges, Jura, Puy de Dôme, Pyrenees, &c., &c., all abound with this mineral; and numerous forges, estimated in all at about 250, have been built, principally in the departments des Ardennes, du Cher, du Côte d'Or, de la Dordogne, de la Haute Maine, du Nievre, de la Haute Saône. There are besides 100 forges à la Catalane, and about 900 faux d'affinerie, for refining the metal, producing nearly 75,000,000 kilos per annum. But, with the exception of that found near Beffort (Bas Rhin), the quality is inferior. It is in general too brittle to be employed in machinery. Copper is only found, in any considerable quantities, at Baygorri (Basses Pyrenées), and at Chessy and St. Bel, near Lyons. A small supply is also derived from a few mines in the departments des Hautes Alpes and de Haut Rhin. Lead is found in the departments de l'Arriege, de la Haute Loire, and du Finisterre; and tin is found near St. Omer; but the whole product of these mines is quite insufficient to answer the demand in France, and zinc is frequently substituted for copper, especially for sheathing ships.

The fields of coal n France are inexhaustible, and the collieries very numerous. They are to be found in the north, near Valenciennes and Lisle, near the banks of the Allier, in the department du Puy de Dôme, de l'Aveyron, du Cantal, and in many other places. Many of them, however, are not worked, in great measure owing to the difficulty of carrying the coal away when brought to the surface. The whole value of coal annually extracted from the mines in France is not above £2,000,000 sterling; nor is the quality in general so good as in England.

Besides the mines that are actually worked, there are many others which exist, but which, owing to the impediments thrown in the way of speculators by the government, have not yet been opened. By the French law, all minerals of every kind belong to the crown, and the only advantage the proprietor of the soil enjoys, is the having the refusal of the mine at the rent fixed upon it by the crown surveyors. There is great difficulty sometimes in even obtaining the leave of the crown to sink a shaft upon the property of the individual, who is anxious to undertake the speculation, and to pay the rent usually demanded, a certain portion of the gross product. The comte Alexandre de B——, it is said, has been vainly seeking this permission for a lead mine on his estate in Brittany for upwards of ten years.

The imports of these metals, of course, are very considerable:—

	Imports.		*Exports.*	
	Kilos.	Value.	Kilos.	Value.
Iron.				
1822 . .	15,616,818	5,772,540	3,032,335	2,714,527
1823 . .	14,806,880	5,328,222	3,558,451	3,601,207
Copper.				
1822 . .	5,023,904	10,265,944	231,886	1,075,277
1823 . .	3,987,736	8,126,761	178,964	228,793
Tin.				
1822 . .	784,156	1,550,848	24,784	93,676
1823 . .	807,675	1,592,998	21,362	68,988

Salt is made in various parts of France. Works corresponding with the salt mines, or brine springs of Cheshire, and called, from their position, Salines de l'Est, are situated at the small town of Salins in Franche Comté. They are wrought by undertakers on lease, yield about 20,000 tons a year, and afford a considerable revenue to government. The heat of the climate on the south and south-west coast, being favorable to the evaporation of salt water, bay salt is made here extensively, not by the action of fire, but by the heat of the sun, operating on sea water, enclosed in a shallow bay (in French etang), so as to produce a saline deposit. The duty raised from salt in France in all is nearly £2,000,000.

Mineral waters are found at Aix, Bagneres, Bareges. The first seem to have been known to the Romans, and a bath was erected by C. Sextius Calvinius. See Aix. The water has nearly the same temperature as some of those at Bath. Bagneres, in the eastern part of Guyenne, was also known to the Romans, and the hottest of its springs is about 123° of Fahrenheit's scale, and the coldest 86°. The baths are about thirty in number. Bareges is situated in a chasm among the mountains, and is only a summer residence, in consequence of the torrents and avalanches that so often prove destructive in winter. The waters issue from a hill in the centre of the village, and are distributed into three baths, the hottest of which exceeds 112°. They are strongly sulphureous and fetid, greasy to the touch, and turn silver black. The waters at St. Sauveur, near Luz, in the department of the Upper Pyrenees, are not so hot as those of Bareges, but are more nauseous to the taste. Hot springs also arise in the midst of beautiful scenery at Cauterets, in this department, the hottest of which is 118°. Other springs are found among the Pyrenees; and there are baths at Forges, Vichi, Bourbonne, Balaruc, and Plombieres.

Woollen cloth is perhaps the most important and most extensive manufacture of France. The best superfine cloths are made at Louvieres in Normandy; those of Abbeville, in Picardy, though fine, are not to be compared with them in quality. The Londrines, made at Carcassone in Languedoc, which were formerly the most successful manufacture in France, and were manufactured expressly for the Turkish and Chinese markets, are also of beautiful quality. The cloths of Julienne, and the superfine fabrics of Sedan, as well in scarlet as in other bright colors, and in black, are only suitable to the affluent. Fine cloths are also manufactured at Rouen, Darental, Audelis, Montauban, and in various places in Languedoc and Champagne. Those of Andelis in Normandy are fine mixed cloths. Fabrics of a second sort of cloth are found at Elbeuf in Normandy, and at Sedan: those of Elbeuf are best suited for workmen and mechanics. Chateaurouge, before the revolution, furnished a great deal of livery cloth. Romarantin, Issodoren, and Lodeve, furnish cloths for military clothing. There are still inferior coarser cloths, made for the wear of the country laborer. The fabrics at Rheims, before the revolution, besides the sort called draps de Rheims, consisted of an imitation of Silesian drapery, called Silesies, imitations of our Wiltons, called Wiltons, and casimeres, which they called maroes. Ratteens were made at Roybons, Crest, and Saillans; cloths and ratteens at Romans; cloths for billiard tables at St. Jean-en Royans. Cloths of different descriptions and qualities were also made at Grenoble, Valence, Troyes, St. Leo, Bayeux, Amboise, Niort, Coutange, Lusignon, &c. In the rank of coarse cloths may also be placed the woollen stuffs of Aix, Apt, Tarascon, Oleron, Orthes, Bagneres, Pau, Auch, the valley of Aure; the cloths of Cevennes, Sommieres, Limoux, &c. The greater part of these cloths bear the names of the various places in which they were fabricated. Besides cloths, properly so called, camblets, callimancoes, baizes, kerseys, wool and hair plushes, are made at Amiens; druggets, flannels, blankets, at Rheims; blankets in the suburbs of Paris; flannels at Beauvais; serges at Aumale, Bicomt, &c.; camblets and plushes at Margny.

It has been thought that the woollen manufacture decreased during the revolution, and even subsequently; but the following are the official numbers of the workmen employed in this branch in the three specified years:—

1789	1800	1812
	8,000	9,000
4,400	4,500	6,200
6,700	8,500	10,000
10,400	13,600	18,300
3,000	3,800	4,800

The machinery used is very defective. It was only in 1804 that carding engines were introduced. The greater part of the spinning-mills, too, are worked by water, or by horses. In Elbœuf and its vicinity several are situated on the small streams: upwards of twenty are turned by horses; there were here in 1825 eleven steam-engines.

The greatest woollen manufacturer, in 1825 in France, was M. Ternaux, late deputy of Paris. He had twenty-two different manufactories, situated in different towns: four at Rheims, two at Sedan, two at Louviers, at Liege, &c. &c. Yet although possessed of the abundant capital which such manufactories must require, he had not thought fit, at that period, to concentrate his establishments, nor even at any one to erect a steam-engine. He employed nearly 6,000 men in that year; twenty years ago he had upwards of 12,000 in his pay; the 6,000 now producing probably as much as the 12,000 then, owing to the use of improved machinery. Besides his general trade as a clothier, M. Ternaux has pursued with great eagerness one particular branch which, till this time, was quite unknown in Europe, the making of Cashmere shawls. He imported with great difficulty, and at considerable expense, a certain number of the Thibet, Angola, and other oriental goats, from whose duvet these celebrated shawls are made. They have bred in France, and he has been very successful in increasing the number

of his flock. The climate seems to suit them, and as their food is, for the most part, what other animals reject, such as horse-chestnuts, of which they are particularly fond, weeds, &c., the expense of keeping them is but small. He has a flock of upwards of 100 at his country-house at St. Ouen, near Paris; another somewhat larger in the Pyrenees; and one or two more of less extent in different parts of France. 'He sells besides from seventy to eighty goats annually. As the quantity of duvet which each animal produces is not above three ounces and a half, he is trying whether, by a cross between the Thibet and Angola goats, he may not be able to obtain a greater quantity, as at present he is, of course, unable to make many shawls of the pure duvet. Nor would the speculation have succeeded, if indeed it has succeeded in a pecuniary point of view, were it not for the reputation his shawls enjoy; as it is an idea generally received that they are made precisely of the same materials as the Cashmere shawls, which bear so high a price, and are so much esteemed in France.' *Quarterly Review, No.* 62.

It is calculated that in the whole of France wool, value £4,000,000 sterling, becomes converted into a manufactured value of £9,000,000, of which about a tenth is exported.

The *cotton* manufacture has been carried on in France about half a century. Forty years ago the system of spinning by machinery was almost entirely unknown. The cotton was then spun, by hand, principally in those mountainous districts where the price of labor was low; but the greater part was imported from England and Switzerland. In the three years ending 1789, the average value of cotton goods imported was 25,831,233 francs (£1,033,500), of which a very large proportion was of the finer kinds; as the French manufactures of that day were for the most part confined to the coarser goods, such as the handkerchiefs furnished by Rouen and Montpelier, principally for the use of the lower classes. Since that time the English improvements in machinery have been slowly adopted in France. New manufactories have sprung up; and the long war, which cut off all communication with Great Britain, compelled them to exert themselves in order to supply, in some degree, the demand for those cotton goods for which formerly they had recourse to our markets. Buonaparte, pursuing a system which, in his own view of it, promised at once to ruin his great enemy, and to add éclat to his reign, attempted, by prohibitions and premiums, to give new activity to the manufactures. He so far succeeded, that machinery of an imperfect description is now generally used, and the French manufacturers are able to supply to their countrymen most of the articles of which they stand in need. There are some, however, which they have found themselves incapable of making. India nankeens for instance, have (since 1816) been admitted as an import on paying a duty of five francs per kilo (equal to 2*lb.* 3*oz.* 5*dr.* 13*grs.* 755 avoirdupois weight). And the consequence has been that the departments de l'Ain, de la Seine Inférieure, de la Somme, and du Nord, which formerly made about 1,500,000 pieces annually, have almost abandoned the manufacture. Other branches of this manufacture are carried on to a very considerable extent, in the departments du Nord, Pas de Calais, Aisne, Somme, Seine and Oise, Seine Inférieure, Seine, Calvados, in the north: Haut Rhin, Bas Rhin, Aube, in the north-east: Rhone, Loire, and other places in the south-east: and Gard and Herault in the south.

The most extensive manufactories are those at and near St. Quentin and Lisle. In 1812 de l'Aisne and du Nord produced more than half the cotton yarn spun in France; and, though the same proportion no longer exists, still Lisle and the neighbouring villages of Roubaix and Tourcoing are among the most important manufacturing districts of France. Neither at St. Quentin, nor at Lisle, however, is much of the cotton yarn woven into goods. From St. Quentin it is sent to the neighbouring peasantry, as it is also from Lisle, Aubenton, St. Michel, and other towns in the departments de l'Aisne, and du Pas de Calais. There is a loom in almost every cottage; and the peasantry, when prevented by the severity of the weather or any other reason from pursuing their agricultural labors, weave those coarse stuffs which are the principal products of that department. At Lisle part is woven in the town, and part, the finest, is sent to Tarare, near Lyons, for the manufacture of muslins.

The cotton trade carried on in Paris and its vicinity has of late much diminished, except at Jouy, where the manufactory of printed goods is still flourishing. It was originally established by M. Oberkamf, who was almost the first individual in France who pursued this particular line. Of later years M. Widmer has greatly increased the sale of these articles, by his chemical discoveries in dyes. The elegance of the patterns, and the beauty of the colors, have rendered them in appearance second only to the cottons of Alsace, while in price they are considerably lower. In Paris itself the diminution both of spinning mills and of looms has been very considerable within these few years.

The exports of cotton goods from Paris were in value in

1819 .	708,108 francs, of which in printed goods .		489,701
1820 .	476,987. . . .		306,226
1821 .	255,830. . . .		173,200

In Alsace, however, the manufacturers are highly prosperous, and though the trade, perhaps is no longer increasing so rapidly as formerly, yet it is progressive. Nor is this surprising when the excellence of the goods is taken into consideration. In some points indeed, especially in the dyes, they surpass those of British manufacture.

Round Lyons, the cotton trade has of late fallen off, being injured by the progress of the silk manufactories. At Tarare, however, from peculiar circumstances, one branch, the weaving of fine muslins, prospers; and it is almost the only place in France where that particular article is made. The principal product of the cotton factories in the south of France is hosiery, of

Nismes and Montpelier used formerly ort a very large quantity. Beside the de- nts just enumerated, in which the greater the cotton manufactories of France are d, there are many others in which the in- nts make part of what is wanted for their onsumption. M. Chaptal mentions forty- epartments in which there are spinning besides much cotton-spinning in the cot- f the peasantry. To what extent this is l, it would be very difficult to ascertain, as cial returns can be procured of the quantity sumed.

m is comparatively but little used anywhere; wheels, wherever currents can be obtained, tablished; in level districts horses are con- employed, and occasionally even manual

In the department de la Seine Inférieure are 109 spinning-mills situated on small s. The country round Lisle is flat, and ecourse is had to horse-power, or the more tain action of wind: sixty wind-mills, prin- y used for expressing oil from poppies, and trefoil, may be seen at one time on g Lisle by one gate; but there are not ten or twelve steam-engines in the town. St. tin is almost the only considerable manufac- g town in France in which the steam-engines ny proportion to the number of mills. There ere twenty-four in the whole, of which all wo or three are used in the cotton mills.

the department de la Seine there are—

In Paris	35
Arrondissement de Sceaux . .	8
de St. Denis .	8
	—
	51

hese several are used at Charenton and the iron manufactories; some for raising water, one of less than half horse power for grind- chocolate. This unwillingness to employ n, which not only adds to the expense of ning, but prevents the thread from being so lar from a want of uniformity in the motion, be attributed partly to the high price of the hines, partly to the badness of the iron and workmanship, whence accidents repeatedly ir, which naturally tend to deter others from ng them up. The low rate of wages also lers manufacturers less attentive to that eco- y of manual labor which has so much con- tributed to the prosperity of the English ufacturer. Yet, indifferent as the machinery t was in a far worse state when M. Chaptal e into office under the imperial govern- t.

n the *linen* manufacture, flax to the value of 00,000 francs (19,000,000 home and 0,000 foreign) is said to be given out to the vers; which sells manufactured for about 000,000; and goods to the value of about 000,000 more are worked up in their cottages the peasantry. They estimate that about),000 quintals of hemp are grown in France, ued at 30,000,000 francs. Five millions more alue are imported; and, when manufactured, whole is estimated at 110,000,000 francs; to ich must again be added the cottage products, ich are 35,000,000 francs more.

The principal manufactures for these two arti- cles are in Normandy, Brittany, Dauphiny, Mayenne, and also in Picardy—departments de l'Aisne and du Nord. Since 1790 fine linen has in France, as in England, been in a great mea- sure displaced by cotton: the two together em- ploy, at St. Quentin (in Picardy) and the neigh- bourhood, no fewer than 40,000 workmen. In a very different part of the kingdom, the province of Dauphiny, there are also carried on linen manufactures of various qualities.

Cambrics, thread, gauze, lawn,—made at St. Quentin, Valenciennes, Cambray, Douay, Chau- ney, and Guise,—rank among the leading ma- nufactures of the north-east part of France. Lace is still more general, being made in great quantities at Valenciennes, Dieppe, Alençon, Caen, Bayeux, Argentan. Machinery has as yet been very little applied to this manufacture in France, and the number of women employed in it is very great. In general the French is thicker and stiffer than Irish linen; while, in whiteness, it is inferior to that of the Netherlands. It is, however, a very serviceable article.

The *silk* manufactures of France are more con- fined to particular districts than either the cotton or the woollen trade. They originated at Tours in the fifteenth century, and gradually spread thence over the south of France. Henri IV. en- couraged by every means in his power the culti- vation of the mulberry tree in Provence, and his exertions were finally so successful that to this day a large part of the population of the ten de- partments on the banks of the Rhone, and of de l'Herault, de l'Indre, and Loire, in different proportions, are occupied in this manufacture. There are, on an average of many years, about 5,150,000 kilos of coccoons produced in the eleven first-mentioned departments, and about 30,000 in that of the Indre and Loire, making altogether something under 5,200,000, valued at 15,600,000, francs. This produces, when washed and spun, about 280,000 kilos of raw silk, 160,000 kilos of organised silk, valued at 23,600,000 francs. About an equal value is imported from foreign countries, making about 47,000,000 francs (in value) of silk, in thread, furnished to the manufactories.

The most important of these are at Lyons, where almost every species of silk goods is made. That town, however, is more particularly cele- brated for its étoffes, especially those intended for furniture. In its neighbourhood however, at the villages of St. Etienne and St. Chumand, and the vicinity, almost all the silk ribands con- sumed in France are woven. At Avignon they make principally satins, Levantines, and taffetas; at Nismes, stockings, gauzes, crapes, mixed goods, &c.; and at Gauges, and the other towns in the Cevennes, they are principally occupied with hosiery. The manufacture of Tours, where, as we have already mentioned, the silk trade began, is confined to stuffs for furniture, and some few other articles of little importance.

Next to Lyons, the greatest variety of silk goods is made at Paris. Out of about 18,600,000 francs worth of silk annually exported from Paris nearly 8,000,000 come under the class of objets de luxe. The total value of the silk goods mad-

in France does not exceed 110,000,000 francs (£4,200,000), of which about 30,000,000 (£1,200,000) is exported—the trade having, if there is any variation, rather diminished.

'The French,' says an able writer in the Quarterly Review, No. 62, to which we have been much indebted on the subject of the French manufactures generally, 'have long been supposed to be unrivalled in the silk manufacture. Obvious causes have contributed to give them a superiority in this respect over England; for, besides the other disadvantages under which the English manufacturer labors, of a high rate of wages and high taxation, he has to import the raw material, much of it either from France itself or from its immediate neighbourhood—the north of Italy; while the duty imposed upon silk, 5*s*. 8*d*. per lb. upon raw, and 13*s*. 8*d*. upon organzined, was so heavy as to put the price of manufactured articles beyond the reach of that class of persons who, in France, are the principal consumers. Yet, even under these disadvantages, by our superior skill and superior machinery, our manufacturers contrived to produce articles which, in appearance, were equal to the French goods, though inferior in quality; thus in some measure compensating for the larger quantity of silk which the French manufacturer could afford to put into his goods. And, those heavy duties being now removed, there cannot be a doubt but that we shall be able in this, as in every other trade, to drive the foreign manufacturer out of the market.'

The French, it is well known, have long excelled in *jewellery*, as well as watch and clock making. These are carried to a considerable extent at Paris: the number of new watches made annually in the kingdom is calculated at 300,000; and the value of these different kinds of workmanship altogethnr at £1,500,000, of which more than the half is made in the capital. The works in bronze, also belonging almost exclusively to Paris, are taken at a farther annual value of £1,500,000 sterling.

The porcelain of Sevres near St. Cloud, and the beautiful tapestry of the Gobelins, are also peculiar to this vicinity. The materials of the latter are silk and fine woollen thread; the subjects woven into the work being taken from paintings executed on purpose. Both the establishments have been long conducted by the government at a sacrifice.

The inferior manufactories, common to every country in the high state of civilisation which France is, we need not particularise. The following is

A SUMMARY of the present state of the MANUFACTURES, stated in francs.

Manufactures.	Value.	Manufactures.	Value.
Silks	107,560,000	Alum	6,000,000
Woollens	238,133,932	Copperas	3,000,000
Flax	100,000,000	Saltpetre	3,000,000
Hemp	142,796,012	Nitric Acid	6,000,000
Paper	31,700,000	Muriatic Acid	240,000
Cotton	191,600,000	Other Salts and acids	6,000,000
Gold, Silver, and Worsted Lace	7,000,000	Soap	33,000,000
Iron	207,390,377	Sugar	60,823,910
Copper	16,171,260	Hats	24,375,000
Lead	4,830,460	Prepared Skins	155,392,600
Other Metals	4,000,000	Dyeing	44,117,950
Watch-making and mending	22,500,000	Varnishing	5,000,000
Gold and Silversmith and Jewellery	38,000,000	Perfumery	13,000,000
Gilding Bronzes	38,000,000	Starch	6,000,000
Glass	20,500,000	Books, Printing	21,652,726
Earthenware of all kinds	26,000,000	Cabinet-ware and Musical Instruments	40,000,000
Bricks and Tiles	17,500,000	Beer	47,635,377
Lime and Plaster	15,000,000	Cider and Perry	48,622,435
Common Salt	6,600,000	Spirits	55,000,000

The foreign *commerce* of France has been so materially shaken and irregular, since the revolution, that we find no regular schemes of the imports and exports since the average of the years ending 1789, which are thus stated by M. Chaptal.

With	Imports.	Exports.	With	Imports.	Exports.
Spain	43,711,800	85,084,133	Holland	28,287,467	40,796,533
Portugal	9,180,353	3,751,933	Sweden	7,051,067	3,943,600
Switzerland	6,796,467	21,124,033	Denmark	3,978,533	6,451,867
Russia	6,854,633	6,523,467	Austria	32,858,200	Not stated
Piedmont	24,571,967	18,981,433	England	62,295,800	33,486,333
Genoa	9,525,833	5,853,967	American states	10,244,833	1,543,633
Two Sicilies	18,717,000	Not stated	Smyrna	6,196,302	14,535,072
Minor states of Germany	8,518,033	23,681,000	Hans Towns	12,789,167	62,310,967
Prussia	4,037,167	10,428,267	Levant in general	37,317,048	18,214,734

Of this amount there was in wine, brandy, corn, and other products of the soil, £10,000,000
Raw materials for manufactures, 2,000,000
Manufactured goods, 6,500,000
Miscellaneous articles, 1,500,000

The war of 1793 compelled the French to desist from exporting a number of articles, and to raise or fabricate others, for which they had hitherto depended on their neighbours: and the interruption of intercourse continued, either by sea or land, for more than twenty years. Since the peace of 1815 the relations of the commercial world have been almost equally unsettled: at present, the imports and exports of France are supposed to be less than before the revolution, and afford a remarkable contrast to the rapid extension of foreign trade in a country like our own possessing the command of the sea.

The same causes that almost destroyed the commerce nearly annihilated the *fisheries* of France, which are now carried on chiefly for herrings, mackerel, sardine, anchovy, tunny, and other species, on her own coasts. One branch of the French fishery is that for coral, in the Mediterranean, for which a company has long been established at Marseilles. In the middle of the last century the French fisheries in America employed annually about 5000 seamen; but the unsuccessful contest with England in 1756 reduced them greatly, and deprived them of Cape Breton, their principal station. The peace of 1783, renewed their right to fish on the banks of Newfoundland, a right subsequently acknowledged by the treaties of 1802 and 1814; and though their only permanent possessions for this purpose are the small islands of St. Pierre and Miquelon in the Gulf of St. Lawrence, they have not been backward to avail themselves of their advantages.

Since 1814 various efforts have been made by the ship-owners of Havre, Bourdeaux, Marseilles, &c., to re-establish the shipping interest, but this at present has been attended with but limited success.

The *roads* of France are managed by government Bureaux or Boards, the chief of which are at Paris. The extent of roads, under their direction, is estimated at 30,000 miles; and the annual expenditure at from £1,300,000 to £1,500,000, the whole being defrayed without a single toll or turnpike. The great roads are, in general, paved and in tolerable condition; but the cross roads in almost every department are most wretched; and receive hardly any repair.

The chief *bridges* in France are those of stone, over the Loire at Orleans, Tours, and Nantes; those on a smaller scale over the Seine at Paris, and those over the Saone and Rhone at Lyons. The Pont du St. Esprit above Orange, over the Rhone, is a long structure of sixteen arches. At no great distance from it is the Pont du Gard, one of the most entire existing monuments of Roman architecture. It is composed of a triple tier of arches, erected for the purpose of conducting an aqueduct over the river Gardon. This magnificent structure is 157 feet in height, 530 feet in length at the bottom, and 872 at the top. Of bridges lately erected in France, the most remarkable are those over the Seine at Neuilly near Paris, and over the Oise at St. Maixent, along with two of larger dimensions, viz. one over the Garonne at Bourdeaux, the other over the Seine at Rouen

Government.—The constitution of France since 1814 greatly resembles that of England, the king being a limited monarch, and the responsibility of all the public measures resting with his ministers. The royal title is 'king of France and Navarre.'

The French cabinet consists of a Keeper of the seals (corresponding to our chancellor), the ministers of Foreign affairs, of Finance, of Police, of War, of the Navy and Colonies, of the Home Department, and finally of the Head of the Royal Household. Each minister is independent in his department, but general measures proceed from the premier. The king has also as with us a privy council, which is convened only on particular occasions: but his Council of State is an efficient body, divided into five committees appropriated respectively to legislation, finance, home affairs, the navy, and the colonies. Each committee is in connexion with the minister of the department to which its labors are directed, and receives from him the materials of its deliberation. The members of these committees are called conseillers d'etat en activité; as the title of conseiller d'etat is in the case of many persons merely honorary; and, what is more remarkable, the appellation of ministre d'etat is given to about thirty public men, exclusive of the cabinet ministers. It implies in that case no participation in ministerial business; but is accompanied with a pension, and is accounted one of the highest marks of royal favor.

The king exclusively has the right of bringing in bills into the Chambers. The opposition act there as in Britain, except that they are denied this important privilege—a denial founded on the supposed agitation which might be produced by the proposition of popular measures in a country where the constitution is as yet unsettled. The chamber of Peers comprises upwards of 200 members, who possess privileges similar to those of the peerage of Great Britain; their number, as with us, is unlimited; the grant of titles being vested in the king, and the dignity hereditary. But no clerical dignitaries have seats as such in the legislature: a few cardinals, who are members, owe it altogether to their titles as temporal peers. The peers take cognizance, as in England, of charges of high treason, and of public misdemeanours. Their discussions are not made public.

The house of Commons, or chamber of Deputies, are elected by the people: the number returned may in some measure be altered at the will of the king; the smallest number allowed is 256. The election is vested in the voters at once, the only qualification required for a voter being the payment of £12 of annual taxes. For a deputy the requisites are, that he shall be of the age of forty, and pay taxes to the amount of £40 a year. One-fifth of the chamber of deputies is re-elected annually.

By the charter, appealed to by all parties as the safeguard of the French constitution, all ranks are equally admissible to public employments, whether civil or military. (The object of this clause is to do away any claim for preference on the part of the noblesse). The catholic is the state religion, but all other religions may

be openly professed, and none imply political disqualification: all sales of national property during the revolution are confirmed to the purchasers: the judges are named by the king; but when appointed are not removeable. Juries are employed in criminal cases only.

The most comprehensive, though the most modern of the honorary *orders* is that of the legion d'Honneur; instituted by Buonaparte, and maintained on nearly the same plan by the Bourbons. The usual title to admission is the discharge of functions, civil or military with distinction; and, in time of war, the performance of an action of eclat. The gradations are, chevaliers, of whom the number is unlimited, and very great; officers, who amount to no less than 2000; commanders, to the number of 400; grand officers, 160; and grand croix, to the number of 80. A member must serve several years as a chevalier before becoming an officer, and the same progressively through the other ranks. Admissions take place once, and frequently twice a year; a specific number being allotted to each great department of the public service, the military, the judicial, and the administrative. Other orders are, that of St. Louis, which is strictly military: that of St. Michel, which dates from 1469, is limited to 100 members, and is conferred as a recompense for distinction in science, literature, or the arts. Eminent professional men and artists, and the authors of discoveries of public utility, constitute the members of this order. The order du St. Esprit, created in 1578, and of the very highest rank, comprises princes of the blood, prelates, and members of the order of St. Michel—the whole limited to the number of 100.

Each department throughout France has at its head a *prefet* or civil officer, who acts as the medium between it and government, maintaining a daily correspondence with the minister of the home department, and reporting on the execution of his orders, as well as on all local transactions and the state of political feeling. He is aided in his laborious office by a conseil de prefecture, consisting of three, four, or five members, whose duty consists in making up the details of business. The departmental council (conseil general de departement) is much more numerous, comprising sixteen, eighteen, twenty, or more members; but they meet only a few weeks in the year, nor are they of much use, except to share, as a collective body, the responsibility attendant on the distribution of taxes, or other similar measures. A sous prefet is an officer much inferior to the prefet. There is one to each of the districts called arrondissemens, and he is aided in his labors by a council of eleven members.

Lastly, the communes, the smallest of the official divisions of the French territory, and of which there are above 38,000 in the kingdom, are little else in fact than parishes; but their distinguishing characteristic consists in having each a mayor and municipal council.

Law.—In this important department France has the great advantage of a compact and definite code, completed at the beginning of the present century, when it was promulgated under Buonaparte, and gave to the jurisprudence and judicial constitution of France nearly the form they now bear. This body of law consists of five divisions, entitled respectively, 1. code civil; 2. code de procedure civile; 3. code de commerce; 4. code d'instruction criminelle; 5. code penal.

The code civil, the first and the most comprehensive of these divisions, defines the rights of persons in their various capacities of citizens, parents, sons, daughters, guardians, minors, married, unmarried. It next treats of property in its respective modes of acquisition and possession, as inheritances, marriage portions, sales, leases, loans, bonds, mortgages.

The code de procedure civile ordains the manner of proceeding before the different courts of justice, beginning with the juge de paix; also the mode of carrying into effect sentences, whether the payment of damages, the distraining of goods, or the imprisoning of the party condemned. It declares, likewise, the course to be followed in transactions distinct from those of the law courts; as, in arbitration, taking possession of an inheritance, or a separation of property between man and wife.

The code de commerce defines the duties of certain officers, or commercial agents, such as sworn brokers and appraisers; it next treats of partnerships—of sales and purchases—of bills of exchange—of shipping, freight, and insurance—of temporary suspensions of payment, and bankruptcies.

The code d'instruction criminelle, explains the duties of all public officers connected with the judicial police, whether mayors, assistants of mayors (adjoints), procureurs du roi, juges d'instruction, &c. After prescribing the rules regarding evidence, it regulates the manner of appointing juries and the questions which fall within their competency. Its farther dispositions relate to the mode and nature of appeals, and to the very unpopular courts authorised to try state offences, termed cours speciales under Buonaparte, and cours prevotales under the Bourbons.

The code penal describes accurately the punishments awarded for offences in all the variety of gradation from the penalties of the police correctionelle, to the severest sentence of the law. All offences are classed under two general heads,—state offences, such as counterfeiting coin, resisting police officers, sedition, rebellion; and offences against individuals, as calumny, false evidence, manslaughter, murder.

These codes,—the first attempt to reduce the laws of a great nation to the compass of a volume—consist of a number of sections and short paragraphs, each paragraph marked by a number, as a means of reference. The style is as concise as is compatible with clearness, and the arrangement very minute and elaborate. The whole is sold for a few shillings, in the shape of one octavo, or of two duodecimo volumes; and copies of it are in the possession, not only of all judges, pleaders, and attornies, but of agents, merchants, and persons in business generally, who, without being enabled by it to dispense with the aid of lawyers, find in it a variety of useful explanations, relative to questions of frequent occurrence.

The juge de paix is authorised to pronounce finally in petty questions (under 50 francs, or £2), and to give, in questions of somewhat greater amount (up to 100 francs, or £4), a decision subject to appeal. He takes cognizance, likewise, of disputes about tenants' repairs, servants' wages, and the displacing of the landmarks of property. No action can be brought before a court of justice in France until the plaintiff has summoned his adversary before a juge de paix, with an amicable intent (cité en conciliation), and received from the juge a procés verbal, showing that the difference could not be adjusted.

A Primary Court exists in every arrondissement, making above 360 for the whole of France. It is composed of three or four members, two or three suppléans or assistant members, and a procureur du roi, acting on the part of the crown. In populous districts, cours de première instance comprise six, seven, eight, or more members, and are divided into two or three chambers. They are chiefly occupied with questions of civil law, and hold, in the extent of their jurisdiction, a medium between the duties of the juge de paix and the powers of the cour royale; their decisions being final wherever the income from a property does not exceed forty shillings, or the principal forty pounds; but subject, in greater matters, to an appeal to the cour royale. The members of these inferior courts are named, like other judges, by the crown, and hold their places for life; their number, throughout all France, including suppléans, is not far short of 3000.

A section of the Tribunal de première instance is appropriated to the trial of offences under the name of tribunal de police correctionnelle; and here the English reader must be careful to distinguish between judicial and government police; the former having no reference to state offences, such as libel or treason, but comprising a very numerous list of another kind, viz. all offences that do not amount to crimes, or subject the offender to a punishment afflictif ou infamant. These offences when slight, are called contraventions de police, and are brought before a juge de paix, or the mayor of the commune; when of a graver stamp, or requiring a punishment exceeding five days' imprisonment, or a fine of fifteen francs, they are brought before the court now mentioned, whose sentences, in point of imprisonment, may extend to the term of five years. The trespasses brought before a justice of the peace or mayor, are such as damaging standing corn, driving incautiously in the high-way, endangering a neighbour's property by neglecting repairs. The offences referred to the tribunal correctionnel are such as assault and battery, swindling, privately stealing, using false weights or measures, &c.

The Cours Royales, in number twenty-seven, are attached to the chief provincial towns. They are all formed on the same model, and possessed of equal power; the number of their members depends on the population of the tract of country, (generally three departments), subject to their jurisdiction. In a populous quarter, like Normandy, a Cour Royale, comprises twenty, twenty-five, or even thirty judges, and is divided into three or four chambers, of which one performs the duty of our Grand Jury, in deciding on the bills of indictment (mises en accusation); another is for the trial of offences (police correctionnelle); and a third, with perhaps a fourth, is for civil suits. These courts are often called Cours d'Appel, as all the cases that come before them must previously have been tried by an inferior court. The collective number of judges in these higher courts is not short of 900. Paris has only its Cour Royale on a large scale (five chambers and fifty judges), and confined in its jurisdiction to the metropolis, and the seven adjacent departments. There is a procureur du roi for every tribunal de première instance, and a procureur general for every Cour d'Appel.

The Assize Courts have cognizance of criminal cases only, that is, of crimes and offences referred to them by the cours royales. They consist of three, four, or five judges, members of the cours royales, but never belonging to the section that finds the indictments. The grand accompaniment of a French Assize court is a jury, which, as in England, consists of twelve members, and decides on the facts of the case, leaving the application of the law to the judges. Complete unanimity was at no time necessary in a French jury. At first a majority of ten to two was required; but this was afterwards altered to a simple majority, with the qualification, that, in case of condemnation by only two voices (seven to five), the verdict should be re-considered by the judges and the party acquitted, if, on taking judges and jurymen collectively, there was a majority in his favor. The assizes are the only courts in France that are not stationary. They are, however, generally held in the chief town of a department once in three months. The costs of suit are very exactly defined by a printed tarif; and it is a rule in criminal, as in civil cases, that the party condemned is liable for all.

The Special Courts were constituted out of the usual course for the trial of state offences. The Cours Speciales were appointed by Buonaparte, the Prevotales by the present government, during the period of disturbance which succeeded the second entry of the king. In both cases they were considered as under the influence of government, and, of course, were very obnoxious to the public.

The name of Tribunal, or Court, is also given in France to a body of five merchants, or leading tradesmen, appointed by the mercantile body in every town of considerable business, and who settle all disputes occurring in mercantile business, and falling within the provisions of the Code de Commerce. Their decisions are founded on that code, and the customs of trade. They are final in all cases below £40. The presence of three members is necessary to form a court. The duty is performed gratuitously.

The court of Cassation, the highest court of justice in the kingdom, is held at Paris, and is composed of three chambers, each of sixteen members and a president, making, with the premier president, a total of fifty-two members. Its province is to decide definitively in all appeals from the decrees of the Cours Royales; investigating not the facts of a case, but the forms of

law, and ordering, wherever these have been infringed or deviated from, a new trial before another Cour Royale. This revision takes place in criminal as well as in civil cases. The royal court chosen for the new trial is generally, for the convenience of the parties, the nearest in situation to the other. The Cour de Cassation has farther powers of the highest kind. It determines all differences as to jurisdiction between one court and another; and exercises a control over every court in the kingdom. It has power to call the judges to account before the minister of justice, and even to suspend them from their functions.

The minister bearing the title of 'Keeper of the Seals and Minister of Justice,' may be compared to the Chancellor of England, but his patronage is much less extensive. He exercises a general superintendence over the judicial body, and is the medium between the king and the courts, in the same way as the minister of the home department is in regard to the civil authorities. The expenses of the judicial body fall under his cognizance. The procureurs généraux and procureurs du roi throughout the kingdom address their correspondence to him, and it is his province to report to the king on the alleviation of punishment; on pardons; in short, on all disputed points of administration. He rarely acts as a judge.

Juries were introduced into France in 1791, and are confined to criminal trials. During several years there were in France grand juries as in England; but under Buonaparte their functions were transferred to the Cours Royales. By the juries, at present, the nature of evidence seems little understood.

A considerable improvement made by the National Assembly was a general mitigation of the penal code, or rather the substitution of punishments likely to be enforced, for others of such severity as in general to defeat their object. Stealing privately in a dwelling-house was formerly punishable in France by the rack and death—an extreme which prevented respectable persons from bringing delinquents before a court. Of the state of crime in France at a recent period, and of the nature of the punishments, an idea may be formed from the following return made by the minister of justice:

	In 1817.	In 1818.
Individuals tried	14,146	9,722
Condemned	9,431	6,712
Acquitted	4,715	3,010
Of these the crimes or offences were,		
Against the state	438	166
—— the person	1,638	1,262
—— the property	7,086	5,547
Sentences.		
Death	558	324
Compulsory labor for life	511	393
Transportation	52	6
Compulsory labor for a term of months, or years	2,645	1,992
Compulsory labor, and to be branded	172	184
Sol tary confinement	2,774	2,116
Pillory	4	1
Banishment	12	2
Degradation from the rank of citizen	2	5
Imprisonment and fine	2,629	1,619

The old laws regulate all questions arising out of transactions passed, or out of rights acquired, prior to 1803 and 1804, the date of promulgating the code. The law students in France thus regard the code as the sole authority. They, however, still read the more celebrated writers on the old law as collateral illustration. There still exists it is said in France the singular practice of parties engaged in a law-suit visiting the judges in private; a practice originating in an age when suitors thought a personal interview the only effectual mode of explaining their case. But such interviews are little else than an exchange of compliments, nor have the judges either before or since the revolution, been charged with acting under the influence of ex parte statement. The law style in France is much more brief than ours; their deeds, leases, mortgages, sales, &c., being generally contained in very few pages, and remarkably free from obscure or antiquated phrases.

Revenue.—France before the revolution raised nearly half her revenue by taxes on consumption, viz. on salt, wine, brandy, tobacco, stamps, leather, and foreign goods imported. These were all abrogated, in 1791, by the National Assembly, and replaced partly by a property-tax (foncier) and partly by the ruinous expedient of issuing assignats. The people thus continued exempt from their old burdens above ten years, and so necessary was it to observe caution in recurring to them, that it was not till 1803 and 1804, when the power of Buonaparte was fully consolidated, that taxes on consumption were renewed. The revenue of France in 1790 was about £22,000,000 sterling. The sum required for payment of the interest of the public debt was nearly £10,000,000 leaving only £12,000,000 for the army, navy, civil list, and other public expenses. In the era of confiscation and judicial murder, the national debt was not openly cancelled, but the interest was issued in assignats of no value except for purchases of national property. At last, in 1798, there was passed a law, declaring that one-third of the old national debt should be sacred, and the interest on it payable in bonds, or paper receiveable in discharge of taxes. This third was called La tiers provisoire, but its price in the market continued very low until Buonaparte succeeded to power, and placed Gaudin, afterwards duke of Gaeta, at the head of the treasury, when means were found to redeem the stocks from their depression, and to resume the payment of the dividends in cash. Could Buonaparte, it is said, have obtained large sums on loan, his career of aggression and conquest would have been still more rapid; but on the restoration of the Bourbons, in 1814, the public debt, funded and unfunded, did not exceed £123,000,000; its interest £7,000,000. In 1799 the expenditure exceeded the receipt by £8,000,000 sterling. The continental peace, a partial reduction of expenditure and improvements in the collection of the taxes, brought, in

1803, the receipts to £19,500,000, while the expenditure was £20,000,000. In subsequent years, both received a progressive augmentation, and, in 1813, the revenue derived from France, exclusive of conquered territory, was about £27,000,000. Such was about its amount in 1815, when, the sums raised by public loan proving insufficient, it became indispensable to impose additional taxes. These carried the revenue, in 1818, to nearly £35,000,000, but the following is the form in which in 1820 the revenue of France became permanently settled.

INCOME AND EXPENDITURE OF FRANCE in 1820, after the discharge of her engagements to the allied powers, and on funding her floating debt.

INCOME.	£	EXPENDITURE.	£
Foncier, or tax on real property, viz. the lands and houses of the kingdom at large. This tax has yielded £10,000,000, but is not reckoned to produce permanently more than	8,000,000	Interest of the national debt	8,000,000
Mobilier, or tax on houses, with reference to the furniture and other effects	1,300,000	Life annuities	500,000
Window-tax	600,000	Interest of deposits made by public functionaries on entering on their places	360,000
Patentes, or tax on persons exercising trades and professions. The above form the direct taxes.	600,000	Annual appropriation to the sinking fund	1,600,000
Enregistrement, domaine et timbre. These comprise the stamp-duties, and a heavy tax on sales, legacies, &c.	6,000,000	Pensions and half-pay allowances, civil and military	2,700,000
Sale of wood from the government forests, average	800,000	Clergy—stipends, pensions, and all allowances	1,300,000
Customs	2,000,000	Civil list and princes of the blood	1,300,000
Salt tax	1,600,000	House of Peers, chiefly in pensions for life	80,000
Droits réunis, or indirect taxes, being a combination of excise duties on wine, spirits, beer, &c.	5,000,000	House of Commons, for printing and other expenses (no pensions)	27,000
Tobacco and snuff, including the monopoly of the manufacture	1,500,000	The annual votes to the different ministers are nearly as follows:	
Lottery	300,000	Administration of justice throughout the kingdom	700,000
Post Office	600,000	Department of foreign affairs for office, charges, ambassadors, consuls, &c.	360,000
Newspapers, stamps, licenses for theatres, gaming-houses, &c.	220,000	Treasury-office charges and abatements of taxes	850,000
Other receipts and contingencies	1,480,000	Police	100,000
		Army estimates	6,000,000
		Navy estimates	1,800,000
		Home department, comprising public works, and a variety of local expenses, the funds for which, though raised on the spot, are held at the disposal of the minister of the home department, and re-issued on an application to him from the prefects or mayors	2,500,000
		Discount to collectors and others	600,000
		Add a computed amount for all extra or contingent charges, such as relief to the poor under a bad harvest, defalcation of particular taxes, &c.	1,223,000
Total £	30,000,000	Total £	30,000,000

*** The *octrois*, &c., borne by the towns and country districts, amount, beside the above, to £1,500,000; and if to these be added the charge of collecting, the aggregate of taxation in France will be found to be about £35,000,000, equal nearly to £47,000,000 in England. Each person in France, as computed by the individual, pays about £1 11*s.* 0*d.* English sterling per head: while we have paid in England £3 10*s.* and £4. But the French taxes are on the whole more unfavorable to productive labor. The droit de patente is a direct charge on labor, while luxuries, such as carriages, horses, men-servants, are exempt from all imposts. In the assessment of the great tax, the foncier, there also exists a surprising number of overratings and omissions. Finally, the enregistrement exceeds in pressure all our stamp taxes; being a duty on sales to the extent of five per cent. on the principal. The expense of collecting taxes in France is fully nine per cent. on the principal, or three per cent. higher than in England.

ARMY AND NAVY.—At the commencement of the revolution France had not an effective army of above 140,000 men: although as early as 1688 she had sent into the field a force of double that number. The compulsory levies of 1793 and 1794 augmented this force prodigiously; and between 500,000 and 600,000 are said to have followed the republican banners.

During the campaigns of 1795, 1796, and 1797, and in those of 1799 and 1800, the force maintained by France and Holland was between 300,000 and 400,000. Buonaparte, at the peace of Amiens, settled his peace establishment at 300,000 men. At the renewal of war it was raised to 400,000, a force with which, in 1805, he overcame the united armies of Austria and Russia. His annual levy of French conscripts averaged at this period 100,000; a supply which, joined to the recruits of his allies, kept up his numbers, and even increased them, notwithstanding the wasteful campaigns of 1806 and 1807. So that in 1812 the force at the command of this mighty despot reached its maximum, and he led into Russia a mass of 360,000 men, while there remained at home, and in Spain and Germany, a number which carried the aggregate to nearly 600,000. With the latter, after the almost total loss of his troops in Russia, and with the aid of fresh levies, he withstood the efforts of Europe in arms against him during two campaigns.

In 1815, on his return from Elba, Buonaparte found about 120,000 men under arms in France. But the disposition of the French people in regard to war was so changed, that the greatest efforts, during the next three months, could only add 60,000 to this number, and the loss of one battle happily disappointed all his hopes. In 1817 the Bourbon government had recourse to the conscription as the only effectual method of filling the ranks; but it was greatly modified, the numbers required being limited to 40,000, and the term of service to six years; still the measure was compulsory, and fell heavy on the middle and lower classes; the alternative for a youth, when drawn, being either to give up his intended profession, or to pay £40 or £50 for a substitute. In 1819 the French army thus amounted to 100,000 men; and soon after to 150,000, a number likely to form its permanent peace establishment. This force is composed of sixteen regiments of the *guards;* viz. eight of infantry, and eight of cavalry; each of the former having three battalions, and each of the latter six squadrons: the *cavalry* of the line, under the various denominations of chasseurs, dragoons, cuirassiers, and hussars, in all forty-eight regiments, but in peace they are on a reduced scale: the *infantry* of the line, classed during the revolution by brigades, and under Buonaparte by regiments, now (since February 1819) by legions, of which there is one for each department, making in all eighty-six, each generally of three battalions: the total number of battalions is 258: the *artillery*, composed of eight regiments serving on foot, and eight of horse.

The engineers are a numerous and well-educated body of officers; the corps of Ingénieurs Géographes comprises five colonels. There are Swiss troops in the French service amounting to 10,000, of whom above 4000 are in the guards.

The Maison du Roi, or body guards, are a corps of young men of family, who go through this service as an introduction to military life. The gradations of rank in the service generally are, sous-lieutenant, lieutenant, capitaine, chef d'escadron, colonel, maréchal-de-camp, lieutenant-général, maréchal de France. The number of the marshals of France is limited to twelve; the number of the other ranks, even that of lieutenant-général, is large, for the etat major, or staff of the army, after a reduction in 1818, consists of 130 lieutenants-généraux, and 260 maréchaux de camp. There are on full pay twice as many officers as are necessary for the duty, but the number of half-pay officers exceeds all proportion. Promotion in the French army never takes place by purchase, and not often by special order; seniority at present determines more than half the appointments.

Of the military schools of France, the Ecole Polytechnique is in highest repute, for the instruction of young men in mathematics and drawing; for the engineer and artillery corps is a seminary in which none but candidates of talent are admitted. The entire war department under Buonaparte cost annually, for some years, £20,000,000.

In 1791 the effective French navy was stated at seventy-four sail of the line, sixty-two frigates, and twenty-nine corvettes. Our victories of Toulon in 1794, and at Aboukir, reduced this, so that Buonaparte found the marine force on his accession to power in a very weak state: and it was not until after the peace of Amiens that he ever could muster a fleet of sixty sail of the line. This was destined to an early humiliation at Trafalgar; and, on the accession of the Bourbons, they could not muster above thirty sail of the line. In 1820 the official accounts give forty-eight sail of the line, and twenty-nine frigates, as the navy of France; eleven of the former being on the stocks, and four of the latter. The annual vote for the navy is 1,800,000.

The garde nationale is a popular corps in France, answering to the description of our volunteer infantry and yeomanry. In Paris alone, at the period of its late dissolution, it amounted to nearly 50,000; it is found in all the large towns of France. The gendarmerie is a much similar corps, chiefly used in aid of the police, and not exceeding in the whole 20,000 men.

RELIGION AND EDUCATION.—The old French church, though catholic, was singularly independent of the interference of the papal see in its ecclesiastical affairs. It had very extensive landed property, which in the early part of the revolution (in 1790) was computed to be worth £100,000,000 sterling, and was assumed by the national assembly, who granted a fixed income in money to the clergy in lieu of these possessions. This arrangement is still in force; and the total fund thus annually payable is not short of £1,500,000, a sum which, though large, leaves but small incomes when divided among so many thousand claimants. A cardinal, of which there are at present six, has £1300 per annum; an archbishop has from £700 to £800

r; a bishop from £500 to £600, a curé in
ge town £60 or £70; in a country parish
and in many cases only £30, with a house
garden. At the revolution all religion, as
nall see, was abandoned for an avowal of
n and the worship of nature: this was suc-
ed by that species of public *indifferentism*
ligion which now so singularly mixes with
ost wretched occasional exhibitions of su-
ition and fanaticism on the continent.
ever it has effected in France the toleration
l sects; or rather their full liberty to wor-
God as they please.

ter the revolutionary troubles Buonaparte
concluded a convention with the pope,
eby fifty only, of the 130 sees existing be-
the revolution, were restored. The Bour-
afterwards agreed that forty-two more
ld be added, but very gradually filled them

ne nomination of all clergymen, whether
olic or Protestant, is vested in the crown;
the latter receive an income according to
ize of the congregations. In respect to po-
l feeling, the Catholic clergy are, almost
out exception, warmly attached to the Bour-
, while the Protestants have felt a consider-
and just distrust of the reigning family.
are said, however, of late, to be very stea-
protected.

emale convents have from time immemorial
ed in France, except for a few years of the
t part of the revolution, and respectable fe-
s are largely educated in them. Monaste-
are, with very few exceptions, abolished,
no idea is entertained of re-establishing the
ys, priories, and other endowed establish-
ts. The Protestants amount to about
0,000, and are found chiefly in the south,
icularly in the neighbourhood of Nismes.
y are eligible to any civil office.

t the revolution the old funds appropriated
he *education* of the lower orders were sup-
d to amount to about £1,000,000 sterling,
were chiefly expended in foundations at-
ed to monasteries and the universities.
se were absorbed in the destruction of the
rch; and it was not until 1796 that an act
passed to provide in their place *primary*
central schools: but new troubles retard-
the execution of this plan, Buonaparte
ed, by a special act, all the schools of the
ire under the control of le grand maitre et
seil de l'Université de Paris, and a board
ed Commission d'Instruction Publique. This
rd is continued by the Bourbons. It is com-
ed that not more than half the lower orders
France are taught to read, chiefly in con-
uence of the want of schools in thinly-peopled
ricts. The legislature has, at different times,
nowledged this want, and authorised rectors
niversities to grant certificates of capacity
eachers to all persons who should be found
y qualified; but no salary is provided, and
aid given by the magistrates of a commune
in general, limited to a school-room or a
elling for the teacher. In this state of edu-
ion, schools on the plan of Bell and Lancas-
could hardly fail to be favorably received
in France. They bear the name of écoles d'en-
seignement mutuel; and in 1820 amounted in
number nearly to 800.

But, though the establishment of elementary schools was thus tardy, the case was very different in regard to the lycées, or schools of the middle and upper classes. These were the particular objects of Buonaparte's care, both as a nursery for officers, and to increase his interest with the parents. Hence he provided them with a number of bourses or scholarships, and granted them exclusive licenses for teaching. A lycée consists, in general, of a spacious range of respectable buildings, like one of our English colleges, with courts and play grounds, enclosed with walls. The pupils, at least those who board in the establishment, go out only with the leave of the proviseur or superintendent. The principal objects of education are Latin and the mathematics; the former occupying four or five years, the latter about two. Along with these are taught writing and drawing; geography and history; to which, in the time of Buonaparte, was added the military exercise. The whole course occupies six, seven, or eight years. The teachers, or professors, as the French style them, are, in general, men of education, but seldom animated with much activity. The board and education of a boy, at a lycée, costs from £15 to £30 in provincial towns, and £36 at Paris. On these payments is levied a tax of five per cent., called taxe universitaire. A similar impost exists on private schools, with the exception of those for mere reading and writing; and the money thus collected is remitted to the central board at Paris. To this fund is added, by the chambers, an annual vote of from £60,000 to £80,000, and the whole is appropriated to purposes connected with education; in particular to the salaries of the teachers of the less frequented lycées. Public examinations are held at these establishments, and prizes distributed periodically—the whole on a plan calculated to excite emulation.

There are throughout France twenty-six academies, similar to our universities; and the towns where they are situated are,

Aix	Dijon	Orleans
Amiens	Douay	Paris
Angus	Grenoble	Pau
Besançon	Limoges	Poitiers
Bourdeaux	Lyons	Rennes
Bourges	Metz	Rouen
Caen	Montpelier	Strasburg
Cahors	Nancy	Toulouse.
Clermont	Nisrjes	

The University of Paris comprises a greater variety of classes than any other in Europe, both in theology, medicine, science, law, and belles lettres.

Facultés de droit (classes for a course of law) are held at

Aix	Grenoble	Rennes
Caen	Paris	Strasburg
Dijon	Poitiers	Toulouse.

The facultés de medicine are confined to Paris, Montpelier, and Strasburg; but every medical man who aims at a complete know-

ledge of his profession, repairs, as in England, to the capital, for the sake of the hospitals.

The Protestants have theological seminaries at Montauban and Strasburg, and students who have gone through their course at Geneva and Lausanne are eligible to clerical stations in France.

A return of the public schools and their pupils throughout France, in 1815, states them thus:—

Schools.		Pupils.
Universities . .	26	6,32.)
Lycées, or Royal Colleges	36	9,000
Secondary schools .	368	28,000
Divinity schools of the second class (one in each Diocese) .	41	5,233
Primary schools .	22,300	737,379
Total .	22,771	785,941

On the subject of the French *manners* and *customs* we feel disposed to say little, because general observations, on the habits of so large and diversified a community, are rarely just, and because our extended intercourse with France, for the last ten years, must have given to the majority of our readers full opportunity to form their judgment upon this topic, either from personal observation, or the remarks of our numerous travellers.

While an Englishman, on landing in France, will be to a degree surprised and disgusted with the apparent negligence and want of cleanliness and decorum which pervade the manners of the people, he will feel these in no small degree counterbalanced by the uniform cheerfulness, hospitality, and frankness of all classes. Every thing is out of order; the common inns are complete Irish cabins, and the streets much resembling those of the 'Auld Town' of Edinburgh, in regard to certain accumulations and general filthiness; while each sex considers the most unreserved enquiries into your business and objects fully warranted by the universal willingness to acquaint you with their own. The eyes of our countrymen are also particularly engaged by the remarkable activity of the women of the middle and lower classes. While in England the domestic circle and its cares are felt to occupy them sufficiently, particularly as we advance from the lowest stations in life; in France they are in the habit of taking part in almost every kind of business, and appear even more frequently than the male sex in shops and warehouses. This produces naturally a degree of coarseness in the manners of the middle class of females not seen in this country. There is also said to be a remarkable contrast between the restraint observable in the females of France before marriage, and the unbounded license of their deportment afterwards.

His vivacity and love of society, urge a Frenchman to singular excesses: he is all ardor of course in love and friendship, but he is consumed with 'ennui' out of society. It is his element, to the utter neglect of personal stability of character; 'the life of his pleasures and the centre of his gratifications.' Hence all ranks of society love display: effect is the great and almost sole aim of a parliamentary oration; and the middle and lower ranks work, sit, debate, and converse in the streets with a pantomimic eagerness to accomplish that great object. No one has, on the whole, characterised the French with more true English feeling, than the late lamented Mr. Scott.

'The essence of their character,' he observes, 'is an exuberance of animal spirits, producing excess of mobility, and a perpetual restless activity. They are quick, ingenious, fertile in expedient, buoyant against difficulty or adversity; but mutable, trifling, confident, vain, credulous, and incapable of moderation. With much that renders them amiable in society, as readiness to oblige, delicate attentions, kind sympathy, and lively sensibility, they are often of insecure commerce, from laxity of principle, unmeaning professions, jealous irritability, and a strong propensity to intrigue.'

'They are a clever people, they are an active people, they are a gay people; but they are not deep or sound thinkers; they do not feel virtuously, or permanently; they have no native relish for the charms of nature, the shallow sophistications and theatrical forms of artificial systems are their favorites;—they can see nothing but simple facts,—they cannot detect causes, consequences, and connexion,—and (what is worst of all) their actions are not indexes to their hearts. Hence they must be, and are, smart conversers, amiable talkers, dexterous workers,—persons who pull down pyramids to see what they contain,—who make drawings of ruins, exhibitions of statues, and speeches at institutes:—but hence they cannot be, and are not, either inspired poets, sound moralists, or correct politicians. Look at all the great modern discoveries of concealed truths, that have done honor to human knowledge, and advantage to human condition, scarcely one of them has been made by France—but France has robbed the discoverers of their honors, and France has raised many splendid but false theories, and Frenchmen have been very able and industrious compilers, collectors, linguists and travellers. On the other hand, by far the majority of the atrocities, disappointments, and sufferings, which have befallen the world during the last 100 years, have had their source in France; there is scarcely an imaginable extreme of opposite follies and crimes into which she has not plunged herself within that period;—there is not an example of imprudence which she has not afforded, not a possible boast of vanity which she has not offensively made, and from which she has not been disgracefully driven. It would be unworthy of a rational man to feel incensed against a nation,—but it would be dastardly and unfaithful towards all the most important interests of our nature, to fall silently in with pretensions that are untrue, unfair, and mischievous. There is no shape in which the claim of being the greatest people in the world

can be made, in which it has not been made by the French.—It is repeated day after day, under every possible change of circumstances; now as conquerors, now as vanquished, now as republicans, now as imperialists, now as royalists. Whatever freak they cut, whatever tumble they take,—whether they stand on their heads or their heels,—or lie or sit,—they poke their faces in those of their neighbours, with a supercilious grin of satisfaction, and an intolerable assumption of superiority.'

Population. France in 1791, when of about the present extent of territory, according to a survey then made, contained 26,363,600 inhabitants: in 1817 she was computed to number 29,000,000 of inhabitants.

The ratio of the increase of population in this country is found to be greatest in the lower classes; the middle and upper ranks seldom having large families, and men of such stations being little habituated to steady industry. The illegitimate births are not numerous except in Paris.

The following tables exhibit both the actual existing state of the population according to the latest returns; and the progress of it with regard to births, marriages, and deaths

TABLE I.

Population of each Department of France, according to the Returns made under 'la Direction de la Statistique' of the Minister of the Interior in 1820, according to the limits fixed by the treaties of peace in 1814 and 1815.

Departments.	Population.	Chief Towns.	Population.
Ain	328,838	Bourg	8,132
Aisne	459,666	Laon	6,837
Allier	280,025	Moulins	13,883
Alpes (Basses)	149,310	Digne	3,621
Alpes (Hautes)	121,418	Gap	6,714
Ardèche	304,339	Privas	3,878
Ardennes	266,985	Mézières	3,781
Ariége	234,878	Foix	4,552
Aube	230,688	Troyes	25,078
Aude	253,194	Carcassonne	15,752
Aveyron	339,422	Rodez	7,352
Bouches-du-Rhône	313,614	Marseille	109,483
Calvados	492,613	Caen	36,644
Cantal	252,100	Aurillac	9,190
Charente	347,541	Angoulême	15,025
Charente-inférieure	409,477	La Rochelle	12,327
Cher	239,561	Bourges	18,910
Corrèze	273,418	Tulles	8,097
Corse	180,348	Ajaccio	7,401
Côte-d'Or	358,148	Dijon	22,397
Côtes-du-Nord	552,424	Saint-Bricuc	9,956
Creuse	248,785	Gueret	4,014
Dordogne	453,136	Périgueux	8,452
Doubs	242,663	Besançon	26,388
Drôme	273,511	Valence	9,805
Eure	416,178	Evreux	9,728
Eure-et-Loir	264,448	Chartres	13,714
Finistère	483,095	Quimper	9,400
Gard	334,164	Nismes	37,908
Garonne (Haute)	391,118	Toulouse	89,202
Gers	301,336	Auch	9,670
Gironde	522,041	Bourdeaux	89,202
Hérault	324,126	Montpelier	35,123
Ille-et-Vilaine	533,207	Rennes	29,589
Indre	230,373	Châteauroux	10,429
Indre-et-Loire	282,372	Tours	21,928
Isère	505,585	Grenoble	23,602
Jura	301,768	Lons-le-Sauln	7,796
Landes	256,311	Mont-de-Marsan	3,065
Loir-et-Cher	227,527	Blois	15,147
Loire	343,524	Montbrison	5,486
Loire (Haute)	276,830	Le Puy	14,844

Departments.	Population.	Chief Towns.	Pop.
Loire-inférieure	433,815	Nantes	
Loiret	291,394	Orléans	
Lot	275,296	Cahors	
Lot et-Garonne	330,121	Agen	
Lozère	133,934	Mende	
Maine-et-Loire	442,859	Angers	
Manche	594,196	Saint-Lo	
Marne	309,444	Châlons	
Marne (Haute)	233,258	Chaumont	
Mayenne	343,819	Laval	
Meurthe	379,985	Nancy	
Meuse	292,385	Bar-le-Duc	
Morbihan	416,224	Vannes	
Moselle	376,928	Metz	
Nièvre	257,990	Nevers	
Nord	905,764	Lille	
Oise	375,817	Beauvais	
Orne	422,884	Alençon	
Pas-de-Calais	610,344	Arras	
Puy-de-Dôme	553,410	Clermont-Ferr	
Pyrénées (Basses)	399,474	Pau	
Pyrénées (Hautes)	212,077	Tarbes	
Pyrénées-orientales	143,054	Perpignan	
Rhin (Bas)	502,638	Strasbourg	
Rhin (Haut)	370,062	Colmar	
Rhône	391,580	Lyon	
Saône (Haute)	308,171	Vesoul	
Saône-et-Loire	498,057	Mâcon	
Sarthe	428,432	Le Mans	
Seine	821,706	Paris	
Seine-inférieure	655,804	Rouen	
Seine-et-Marne	303,150	Melun	
Seine-et-Oise	424,490	Versailles	
Sèvres (Deux)	279,845	Niort	
Somme	508,910	Amiens	
Tarn	313,713	Alby	
Tarn-et-Garonne	238,143	Montauban	
Var	305,096	Draguignan	
Vaucluse	224,431	Avignon	
Vendée	316,587	Bourb.-Vendée	
Vienne	260,697	Poitiers	
Vienne (Haute)	274,470	Limoges	
Vosges	357,727	Epinal	
Yonne	332,905	Auxerre	
Total	30,451,187		

TABLE II.—PROGRESS of the POPULATION of FRANCE during the year 1823, furnished by the Minister of the Interior.

Departments.	Births.				Total of Births.	Marriages.	Deaths.		Total of Deaths.
	Legitimate.		Illegitimate.						
	Males.	Females.	Males.	Females.			Males.	Females.	
Ain	5213	5111	114	83	10521	2471	3885	4249	8134
Aisne	8137	7773	555	490	16955	5268	5720	5552	11272
Allier	4205	3805	540	468	9018	2551	4592	4432	9024
Alpes (Basses)	2459	2347	148	149	5103	1299	2146	2062	4208
Alpes (Hautes)	2133	1967	120	173	4393	1164	1671	1696	3367
Ardèche	5173	4858	126	131	10288	2704	4840	2083	6923
Ardennes	4529	4067	254	241	9091	2861	2692	2792	5484
Ariège	3544	3263	217	195	7219	1638	2465	2344	4809
Aube	3128	3057	123	115	6423	2134	2428	2252	4680
Aude	3717	3612	261	258	7848	1828	3210	3290	6500
Aveyron	4920	4903	258	235	10316	2479	3800	3763	7563
Bouches-du-Rhône	4938	4936	587	547	11008	2415	5283	5156	10439
Calvados	5105	4807	670	614	11196	3626	5517	5652	11169
Cantal	3327	3074	215	196	6812	1793	2328	2826	5154
Charente	4651	4305	231	208	9395	2696	3579	3602	7181
Charente-inférieure	6334	5803	235	218	12680	3646	5158	4693	9851
Cher	4261	4454	223	188	9126	2669	3402	3699	7101
Corrèze	4548	4425	246	262	9481	2441	3378	3250	6628
Corse	2621	2151	72	70	4914	1300	2676	2219	4895
Côte-d'Or	5225	4914	398	419	10956	2649	3772	3714	7486
Côtes-du-Nord	10226	9642	325	311	20504	4867	6573	6519	13092
Creuse	3522	3293	253	246	7314	2294	2856	3067	5923
Dordogne	6497	5995	281	317	13090	3524	4922	4773	9695
Doubs	3776	3645	228	199	7848	1726	3124	3108	6232
Drôme	4497	4226	325	291	9339	2235	3716	3384	7100
Eure									
Eure-et-Loir	3942	3689	224	220	8075	2928	3147	3105	6252
Finistère	9041	8698	279	274	18292	4367	7240	6683	13923
Gard	5665	5310	213	188	11376	2647	5037	4459	9496
Garonne (Haute)	5592	5414	417	361	11784	2811	4906	4753	9659
Gers	3324	3169	304	270	7067	1930	3007	3151	6158
Gironde	6490	6289	791	702	14272	3609	5452	5191	10643
Hérault	5394	5002	273	254	10923	2531	4624	4213	8837
Ille-et-Vilaine	8318	7749	205	216	16488	4403	7122	7270	14392
Indre	3976	3456	227	186	7845	2293	3292	3191	6483
Indre-et-Loire	3551	3361	353	327	7592	2995	3121	2917	6038
Isère	8692	7583	692	669	17636	4200	6491	6373	12864
Jura	4449	4207	259	216	9131	2387	3065	3219	6284
Landes	3786	3375	478	421	8060	2071	3763	3618	7381
Loir-et-Cher	3658	3405	282	269	7614	2651	2874	2992	5866
Loire	6595	6223	266	217	13301	2887	4765	4587	9352
Loire (Haute)	4287	4048	150	132	8617	2189	3271	3536	6807
Loire-inférieure	6497	5823	374	383	13077	3226	4945	5016	9961
Loiret	4601	4435	585	548	10169	3290	4132	3774	7906
Lot	3566	3239	203	232	7240	1928	2954	2845	5799
Lot-et-Garonne	4065	3537	255	179	8036	2771	3003	3156	6159
Lozère	1890	1824	86	76	3876	988	1543	1446	2989
Maine-et-Loire	6077	5415	367	335	12194	3445	4157	4453	8610
Manche	6926	6813	413	440	14592	4409	6006	6045	12051
Marne	4820	4456	356	386	10018	3527	3666	3720	7386
Marne (Haute)	3280	3076	165	193	6714	2142	2348	2324	4672
Mayenne	5235	4818	305	263	10621	2742	3822	3731	7553
Meurthe	5965	5760	645	638	13008	2956	4498	4656	9154
Meuse	4666	4456	243	231	9596	2652	3470	3445	6915
Morbihan	7229	6812	238	240	14519	3408	5628	5653	11281
Moselle	6440	5953	401	343	13137	2946	3862	3710	7572
Nièvre	4784	4443	230	211	9668	2865	3560	3278	6838
Nord	15954	14954	1615	1640	34163	7801	13010	12316	25326

Departments.	Births.				Total of Births.	Marriages.	Deaths.		Total of Deaths.
	Legitimate.		Illegitimate.						
	Males.	Females.	Males.	Females.			Males.	Females.	
Oise	5434	5175	296	261	11165	4545	4528	4485	9013
Orne	4854	4659	241	248	10002	3382	3574	4093	7667
Pas-de-Calais	9318	8899	894	854	19965	5257	7129	6607	13736
Puy-de-Dôme	8079	7677	292	285	16333	4564	6329	6385	12714
Pyrénées (Basses)	4895	4691	455	505	10546	2566	4174	4260	8434
Pyrénées (Hautes)	2828	2699	351	266	6144	1268	2159	1970	4129
Pyrénées-orientales	2378	2255	366	327	5326	1075	2930	2398	5328
Rhin (Bas)	8950	8242	568	514	18274	3513	6397	6211	12608
Rhin (Haut)	6612	6347	510	475	13944	2964	4956	4822	9778
Rhône	6324	6073	1058	1058	14513	3497	5587	5725	11312
Saône (Haute)	4686	4468	566	473	10193	2441	3337	3275	6612
Saône-et-Loire	8189	7706	480	431	16806	4664	6920	6802	13722
Sarthe									
Seine	10798	10426	5186	5008	31418	9017	14373	14262	28635
Seine-inférieure	9576	9223	1174	1138	21111	5933	8461	8247	16708
Seine-et-Marne	5118	4650	260	278	10306	3570	4138	3919	8057
Seine-et-Oise	6224	5687	395	380	12686	4474	6058	5614	11672
Sèvres (Deux)	3668	3339	136	141	7284	2253	2558	2729	5287
Somme	7367	6925	702	639	15633	4781	6146	6162	12308
Tarn	4697	4477	193	186	9553	2403	3718	3576	7294
Tarn-et-Garonne	2887	2748	143	168	5946	1612	2404	2407	4811
Var	4279	3951	284	325	8839	2011	3937	3497	7434
Vaucluse	3932	3683	309	261	8185	1625	3647	3358	7005
Vendée	4582	4227	90	105	9064	2603	3517	3673	7190
Vienne	3833	3537	78	88	7536	2031	2924	2827	5751
Vienne (Haute)	4338	4173	223	232	8965	2482	4418	4403	8821
Vosges	5732	5223	441	396	11792	2849	3786	3771	7557
Yonne	4776	4656	251	292	9975	3999	3828	3506	7334

TABLE III.—COMPARISON of the PROGRESS of POPULATION in FRANCE in the following Years.

Years.	Births.				Total of Births.	Marriages.	Deaths.		Total of Deaths.	Increase of Population.
	Legitimate.		Illegitimate.							
	Males.	Females.	Males.	Females.			Males.	Females.		
Total 1817	456,570	425,002	31,887	30,666	944,125	205,244	382,813	365,410	748,223	195,902
Total 1818	440,972	414,332	30,216	28,335	913,855	212,979	376,412	375,495	751,907	161,948
Total 1819	475,651	446,606	33,660	32,001	987,918	215,088	398,260	389,795	788,055	199,863
Total 1820	460,463	432,121	33,915	32,434	958,933	208,893	389,822	380,884	770,706	188,227
Total 1821	463,069	432,803	34,552	32,934	963,358	221,868	377,062	374,152	751,214	212,144
Total 1822	465,274	437,774	35,820	33,928	972,796	247,495	391,44	382,719	774,162	198,634
Total 1823	461,015	433,735	35,901	34,142	964,793	260,423	376,98	367,353	744,342	220,451

PART II.

HISTORY OF FRANCE.

SECT. I.—THE VARIOUS RACES OF ANCIENT GAUL.

The people who inhabited France at the most distant epoch of its history are scarcely known but in the writings of their conquerors, the Romans. They undoubtedly owed their origin to other conquering nations mixed with the people they had subdued. Cæsar represents them as warlike, going always armed, and ready on all occasions to terminate their differences by the sword; as a people of great levity, and little inclined to idleness; but hospitable, generous, confiding, and sincere. They were so possessed with the idea of what has been called *the right of the strongest*, that they claimed the power of life and death over their wives and children. The Druids, their priests, who were the sole depositaries of learning amongst them, were indebted to the credulity of the people for the deference they paid to them. These priests ruled the people by the terror of their anathemas; they were exempt from all tribute to the state, and abounded in riches. Like many other barbarians, they sacrificed human victims. It is said, however, that they taught the doctrine of one Supreme Being; but it seems more probable, that they maintained only the superstitions

of polytheism, or a species of gross fetichism. Their bards or poets composed war songs to animate the combatants, and to perpetuate the memory of their heroes.

These people, whom the Romans called Gauls, but who denominated themselves Kelts or Celts, were governed mostly by an aristocracy. The elders, notables, or senators of their towns, together with the military and their chiefs, formed what we call the nobility; these, in conjunction with the priests, possessed the riches and the power; vassalage and misery were the portion of the commonalty. The nation of Gaul formed a kind of confederation, most of the states of which were governed by chiefs elected by the military. These chiefs were by no means possessed of absolute authority; one of them said to Cæsar, 'the commonwealth has not less power over me, than I have over it.'

The discipline of the Romans, and the genius and good fortune of Cæsar, triumphed in ten years over the valor of the Gauls. It was the policy of these conquerors to sow divisions among minor states; and thus, by intriguing with their allies and partisans, to vanquish them by means of themselves. As the Gauls were impetuous in attacking their enemies, so they were easily discouraged by a reverse of fortune. Colonies had commenced the work of their subjugation, and conquest completed it; the Gauls became Romans; the latter introduced among them the arts and new manners; they subdued them by civilisation. The municipal regulations, and the agriculture of the Romans soon rendered the country flourishing, and despotism afterwards despoiled it. This state of things continued for four centuries, when the people were reduced to the lowest depths of misery, devoured by the proconsuls, the prey of factions, and alternately passing from insurrection to slavery, under tyrants who were perpetually changing.

About this time, and in the midst of the confusion occasioned by the inroads of various barbarous tribes, Christianity was established in the Roman empire. At first it was the religion of the oppressed and the persecuted; and the consolation of the unfortunate; and it quickly spread as such among the Gauls. In the year 325 the emperor Constantine decreed the public exercise of the new religion, and soon re-established order. The bishops enjoyed the affections of the people; despotic power therefore caressed them, in order to gain the obedience of the multitude. They, on the other hand, hesitated not to avail themselves by degrees of the civil jurisdiction; and the bishop of Rome, since that time decorated with the title of Sovereign Pontiff, already possessed some spiritual supremacy. The civilisation, arts, and literature, of the Romans, were on the decline; the empire, divided and weakened, was falling into ruin; discipline was relaxed; the illusion of the Roman name had vanished; and ignorance and barbarism were extending their shades over the fine provinces which had flourished under the administration of a Trajan, an Antonine, and a Marcus Aurelius.

Sect. II.—The Merovingian Dynasty

Attracted by the salubrious climate, and great riches of the provinces of the empire, the barbarous tribes of the north of Europe frequently invaded it; but were driven back, sometimes by force, and sometimes by treaties and presents. This latter proceeding however, though despotism in its weakness often employed it, soon increased the mischiefs it was designed to cure. Degenerate Rome had recourse even to the arms of its enemies to defend itself against its own subjects. Lands were allotted to legions of barbarians, who were set to guard the frontiers. The Franks, a Germanic tribe, were for a long time appointed to defend the banks of the Rhine, from which they derived the name of Ripuarius (from ripa, the bank of a river); but these barbarians no sooner learned the arts of war from the Romans, than they began to turn them to their own advantage; they chose rather to invade the empire, than to defend it, and saw the important opportunity offered, by the confusion which prevailed, for them to form durable establishments where they pleased. The Vesogoths, or Visigoths, settled in Spain and the south of France; The Burgundiones, or Bourguignons, fixed themselves in the east; and the Franks established their dominion in Belgium. Of all the uncivilised tribes, the Franks bore the greatest resemblance to the Romans; they marched in different tribes or armies, at the head of each of which was an elective chief. The monks, who have written chronicles of these times, have handed down to us the names of some of their princes, whom the monarchical historians of that country have denominated kings of France. But Theudemer, Hlod, Merveg, and Hild-rik, can only be regarded as powerful provincial chieftains: and the very existence of Faramund, or Pharamond, is doubtful. Actius, a Roman general, obtained some advantages over Hlod, or Clodion; he also vanquished several barbarous tribes, and for a short time re-established the Roman authority in Gaul, with the exception of Armorica (now Brittany), which was declared independent. About this time the cloud of Tartars which Attila, called the scourge of God, led on to the plunder of the world, fell upon Gaul; when Actius, concluding treaties of peace with the other enemies of the empire, united his army to that of the Visigoths, and overcame Attila in the plains of Chalons, in Champagne. But for this great victory, probably, the race of the Gauls would have been at this day mixed with that of the Huns.

At that time (A. D. 458), the son of Merveg, Mérovée, or Childeric, commanded the Franks at Tournay; but they deposed him, because he debauched their daughters. The fact is remarkable, and proves that these tribes were accustomed to exercise this important right of sovereignty. In his room they chose Ægidius, the commander of the Roman militia; who, in consequence of a Patrician, that was his personal enemy, stirring up the Visigoths, and even the tribe of Ripuary Franks against him, entered into an alliance with Childeric, and they together vanquished the Visigoths at Orleans. Childeric upon this was reconciled to his Franks: he was a brave soldier, and resided at Tournay, never penetrating far into Gaul.

At his death (A. D. 481) he left his son, a

youth of sixteen years old, at the head of his tribe, now known as the Salic tribe. Our limits do not allow us to trace all the events which present themselves in the history of the Gauls about this period; and indeed they are not very interesting: we behold alternately wars and alliances among the Romans and Franks, the Visigoths, and other barbarians; ambitious generals, raised to power by the intrigues of the imperial court, but quickly overcoming their feeble masters, and calling in the aid of the barbarous tribes to serve the ever-changing purposes of their personal ambition. The Western Empire was then just falling; the Saxons seized upon Anjou and Maine; the Burgundians occupied the Seine; the Goths and Visigoths extended their dominion as far as the Loire; the Franks and the All-manns, branches of the different hordes of German plunderers, contended for the possession of the North; while the Romans or Gauls kept the remaining part of the country, and the Armoricans were independent.

Hlodwech or Chlodovech, was the son of Hildrik; and is the French Clovis, a name which appears to have a common origin with that of Hludvik or Louis. His territories were very limited; but he was ambitious, and possessing superior talents, formed the design of making himself master of Gaul. Having united himself with a Frankish tribe, he first of all defeated Syagrius, the son of Ægidius, who governed the Gallo-Romans of Soissonnais, and, having forced him to surrender at discretion, he caused him to be beheaded. Clovis very soon entered into alliance with the Ripuary Franks; and still farther increased his power and influence among the Gauls, by marrying Clotilda, the daughter of the king of Burgundy. This princess being a professed Christian, Clovis, by this marriage, appeared to come forward as the protector of the Christians of Gaul, who composed the greater part of the population: he at the same time availed himself of their support, and soon found that he needed it. Some powerful competitors presented themselves, among the German tribes, to whom, in conjunction with his allies the Ripuarii, he gave battle at Tolbiac near Cologne, in 496, and defeated them. Gregory, the chronicler, relates a circumstance respecting this battle that too much resembles the *labarum* of Constantine, to be considered as any thing but a fable. It is possible, however, that while the battle was doubtful, the French monarch, imitating the policy of the Roman, publicly made a vow to become a Christian, in order to reanimate the courage of the numerous soldiers of that religion who served in his army. Remigius, or Remi, the bishop, afterwards baptised him at Rheims, as well as part of his army; the coronation is a doubtful circumstance, and the story of the miraculous phial was invented since that time. The history of this age abounds in legends and pretended miracles.

The Romans had often bestowed dignities on barbarous princes, in order to command their influence by means of their vanity. Clovis already held the title of master of the Roman militia; after the defeat of Syagrius he became so in point of fact. His conversion subjected all the Roman orthodox party to his power. The kings of the Visigoths were also Christians, but Arians. The confederated Armoricans hastened to treat with Clovis, who had been for a long time at war with them, and who, in 494, had taken Paris, one of the cities of the coalition. It remained for him only to subdue the Visigoths and the Burgundians, and he began with the latter. Clotilda herself excited him to it, through her resentment against Gondebaud, the murderer of her father. Clovis, who undertook nothing without an ally, proposed, in 500, to share the contest with the powerful Theodoric, who, while he reigned over the Goths, was endeavouring to restore in Italy the civilisation of the Romans; but Clovis conquered without his assistance. Theodoric, however, took possession of his part of the spoil. The revolt of the Christians had great influence in the defeat of Gondebaud; too late he perceived, that he could not withstand the ruling opinions; he became a Christian, and Clovis re-established him on his throne, making him tributary to himself. Theodoric, who dreaded the aggrandisement of Clovis, constrained him, without doubt, to adopt this moderate proceeding; he is also said to have raised impediments in the way of the defeat of the Visigoths. Their king Alaric, however, having given dissatisfaction to his subjects, Clovis took advantage of this circumstance, formed a junction with Gondebaud, and beat the army of Alaric at Vouillé, near Poitiers, in 507; the consequence of this victory was the conquest of almost the whole of the south of Gaul, which in later times received from its conquerors the name of FRANCE. Clovis returned in triumph to Tours, where he presented offerings at the tomb of St. Martin. Here also he received a diploma from the emperor, conferring on him the dignity of Roman consul, and the title of Augustus. This, however, added but little to his power, and deprived him of none of his independence.

Clovis now took up his residence at Paris, the chief city of the Parisian tribe, but still called Lutetia. Here Julius Cæsar, we are told, resided when he so gloriously conducted the administration of Gaul. In order to extend his own dominions, Clovis destroyed the various tributary kings of the Franks, and caused himself to be elected in their place. He died at Paris in 511. The similarity of character that may be traced between this prince and Constantine is very striking: the first professed Christian monarchs, they were alike ambitious, and their principal knowledge of religion seems to have consisted in the art of making it subservient to their own designs. This was in fact the secret of their conquests.

With respect to the situation of the nations that inhabited France, at this period, the Franks were either freedmen or slaves; but slavery was not so much a personal bond among them as among the Romans. Those of the tribe of Clovis, called the Salic, were governed by the law of that name, which had been enacted by their chiefs: the tribe of the Ripuarii had its own institutions. The freemen assembled every year in the Champ-de-Mars, and there passed the

laws. They nominated their kings; but they generally chose the eldest son of the former monarch. The Burgundians, governed by the laws of Gondebaud, which went by the appellation of Gombette, maintained the form of a nation until the second dynasty; their manners were more fierce than those of the others. The Visigoths had for the most part gone over into Spain, while the Romans or Gauls preserved their civil condition, as far as the rights of conquest would permit. As the ecclesiastics belonged to this nation, it on that account preserved a remnant of influence; the clergy being able for a long time to perpetuate the Roman society and civilisation. Religion was the only restraint they could oppose to force; unhappily in later times they were destined to abuse it. But at this period they retained much of their primitive simplicity, and the docile confidence of the barbarous tribes rendered the power of the bishops salutary in preserving peace, and effecting reconciliations for them. When a Frank was made a priest, they cut off his long hair, which was a mark of distinction among the freemen of his nation, and he became in a manner a Roman or literary man. A lighter fine, it is said, was exacted for having killed a Roman than a Frank. In other respects the Romans were judged by their own tribunals, and when a Roman and a Frank were parties in a cause, the tribunal was formed of an equal number of the two nations. The degenerated Latin language evidently predominated, and was employed in the public decrees of the Franks; in fine, the Franks became united with the Romans. It is only necessary to glance over the history of these times, in which we do not find a single insurrection of the Gauls against the Franks, and in which we see that the ascendancy of the bishops tended to maintain a kind of equality and union between the two nations, to reject the notion of Montesquieu and others, who have asserted that the Gauls were reduced to a state of slavery. Neither can we admit the conclusions that the abbé Dubos has drawn from the consulship of Clovis, that the king of the Franks was the real heir to the authority and magistracy of the Romans.

The conquerors dispersed among the Gauls did not meet to appoint a successor to Clovis; his sons divided his dominions among them. Similar divisions were often made, and from this circumstance have arisen great evils to the people, and great confusion in the history of these times. We shall not occupy our pages with the name of a crowd of obscure kings, who reigned at Orleans, at Metz, at Soissons, or at Paris, or with the wars which they waged in disputing what they called their inheritances. In this tissue of cruelties, assassinations, and inglorious combats, we find no one point to which we can refer for any great changes, or for events of any political importance. After two successive wars the Franks completely subjugated the Burgundians; they afterwards drove the Goths from the provinces of the Alps. The emperor Justinian about this time (A.D. 535) granted to the French kings the rights of empire over the Gauls. Clotaire, who was at first only king of Soissons, was at the time of his death in possession of the entire monarchy of Clovis. His children shared his dominions among them; but they had Paris for their common centre: yet the queens Fredegonda and Brunehaut excited perpetual wars among them. The former was a prodigy of boldness, of wickedness, and genius; and gained several battles in person; the other, if we may believe records which generally abound in contradictions, died a most dreadful death. Dagobert was a prodigal king, who burdened France with taxes, to found monasteries and support his mistresses. Although a popular song has styled him the good king, the treacherous massacre of 15,000 Bulgarians, who sought an asylum in his dominions, and whom he had permitted to pass the winter there, by no means proves his humanity. The monks have made him a saint; but it must be remembered, that Eloi, his goldsmith and treasurer, scarcely ever concerned himself with the finances, except for the purpose of adding to the number of monasteries. This period of the history of France affords very little that is interesting; we, however, find in it the beginnings of the feudal system, which for so long a time oppressed the people and devoured France.

What were exactly the countries which fell to the Franks after the above conquest, or were given to them by their kings, is a point on which historians are not agreed. A similar obscurity rests on the subject of those lands called Salic, which, having been granted in recompense for military service, could not be inherited by women, a custom from which is derived the famous Salic law, which excludes females from the throne of France. Certain it is, that the kings, after the example of the Romans, granted lands, or military benefices, at first for a time, and afterwards for life. The great men, called fidelles, who had the nearest access to the kings, who fought at their sides, who formed their council, and swore allegiance to them, transmitted these concessions in inheritance to their posterity. Each of them possessed a seniorate or seigniory, a name borrowed from the municipal regulations of the Romans, and by which the Franks, or even the Gauls before them, designated the public authority attached to the domain, and a superiority over the neighbouring estates. This was the commencement of feudality, a kind of sovereignty of the castle over the country, of the landlord over the tenant. The seniores or seigniors would necessarily soon become so many petty tyrants. From that time they exercised the right of civil and political justice in their several cantons; fines and confiscations became their perquisites of office. These seigniories were then few in number, but in after-times they spread over Europe. The bishops and monks also became seigniors, as the seigniors and military men became bishops and abbots; the priests held the highest station at this epoch. The most ignorant superstition enslaved the minds of men, and from this the church derived immense riches. But oppression was perpetually changing places, and thus accomplishing in part the work of justice. The soldiers pillaged the people, and the churchmen levied a tax upon the territories of the soldiers; again the king

would afterwards seize on the property of the clergy to give the temporary use of it to the military or seigniors who sometimes paid the church an annual indemnity to secure an entrance into Paradise. When a king had committed a murder, he was absolved on his founding a monastery. When the people wished to depose a king, they shut him up in a cloister, and made him a monk. The kings, however, often laid claim to the nomination of the bishops, who ought to have been chosen by the people. If a layman on horseback met a priest, he was forced to dismount in order to salute him. These traits are sufficient to characterise the age, and to demonstrate that the feudal system, barbarism, and the power of the clergy grew together. According to the customs of the Franks, the domestic offices of the palace were appropriated by the nobility; and perhaps the chief places of trust were borrowed by the barbarous kings from the court of the emperors of Constantinople. The last kings of the Merovingian dynasty had nothing more than the shadow of authority. The chief of these haughty servants, was the major domo or mayor of the palace. The office was at first reversible; afterwards it was made hereditary, and thus in fact a new race of kings commenced. The titulary kings, shut up by the mayors in their palaces, were doomed to a life of inactivity and nothingness, which gave rise to the appallation *faineans* or idlers, as they were called, on whose names we shall not dwell. When imprisonment in a cloister did not save them, they were often the victims of assassination.

While Neustra (A. D. 690), vegetated under the power of the monks, the mayor Pippin, or Pepin Heristal, governed Austrasia, a French kingdom near the Rhine. This able chief succeeded in reducing the whole of France under his power; and re-established, under the ancient name of Champ-de-Mars, the assemblies of the nobles, which had fallen into disuse. His son Karl, one of the most warlike men of his time, was surnamed Martel, or Marteau, and constantly kept the soldiers under arms; he became, in fact, their idol. On the Saracens, who had conquered Spain under the banners of Mahomet, invading France, Charles vanquished them at Poitiers in a very memorable battle, and drove them beyond the Pyrenees. That which chiefly renders the measures of Charles Martel, as he is commonly called, remarkable, is, that in order to recompense his lords, and to defray the expense of continual wars, he ventured to seize the wealth of the church, then possessing the greater part of France. On this account the monkish historians load him with obloquy. It is supposed that the origin of fiefs is to be traced to the numerous benefices thus granted by him: it is, however, remarkable, that the first feudal lords were the detainers of the property of the clergy by a gratuitous title.

Sect. III.—The Carlovingian Dynasty.

Charles Martel, it is said, refused the crown, but his son Pepin thought it necessary to his political plans. On obtaining it he rendered himself popular both with the army and clergy, to the latter of whom he ordered the restitution of part of their wealth; and sent the following case of conscience to the pope for his decision: 'should the title of king belong to an individual unfit to reign, when the royal power is actually in the hands of one who knows how to use it well?' Zachary replied, 'that he who had power should assume the title'; on which the legitimate king was made a monk. Pepin was the first of the French kings who sought for a sanction to his regal claims from the ceremonies of the church: he caused himself to be anointed, or consecrated by a prelate; and thus introduced the coronation of kings, to give eclat to an usurpation.

The reign of Pepin was glorious; he drove the Saracens from the south, and rendered himself powerful in Germany. He is said to have selected able public officers, and to have committed all affairs of importance, together with the reformation of the laws, to the assemblies of bishops and seigniors, at that time called pleas and councils, who held it as a principle that the laws are made by the consent of the people and of the king. The usurper Pepin is extolled by the churchmen; the pope styled him a new Moses, a second David: and it was perhaps to recompense the clergy for their submission that Pepin granted them great influence in the national assemblies.

A man endowed with great activity of mind, and possessing powerful means, may found a new political order; but he can effect nothing durable, but as the people are disposed to second him, and as his designs are in accordance with the general inclinations. Pepin, as early as A. D. 768, had divided his kingdom between his two sons: one of them died soon after, and the other, the celebrated Charlemagne, reigned alone. The king of the Lombards, who possessed all the north of Italy, was at that time a powerful prince: Charlemagne, to whom he offered his daughter in marriage, accepted her, repudiating his former wife, notwithstanding the remonstrances of the pope. He soon after, however, divorced this princess also, and taking part against his father-in-law, in behalf of the inhabitants of Rome, who were his enemies, he dethroned him, and received from the hand of pope Adrian the iron crown of the Lombards. Having become king of the Romans, Charles determined to subjugate the Saxons, a poor and valiant people, whose only crime was their hatred of a foreign yoke. Thirty years were devoted to overcoming them with missionaries and with garrisons; for he, in common with many of his predecessors, sought for their conversion only as the prelude and the guarantee of their allegiance. He slaughtered many thousands; and transported whole bands of these unfortunate people into other parts of his dominions. Vitekind, their chief, is said to have been a prodigy of constancy and courage. About this time Charles resolved on pushing his conquests into Spain; but his arms were less successful against the Saracens, who were in possession of that country. In one great project, however, he finally succeeded. At the end of the eighth century, he placed the imperial crown upon his own head at Rome, pope Leo III. assisting him in the accomplishment of this design,

and the fallen people of Rome crying 'Live Charles, the august and pacific emperor of the Romans, crowned by the hand of God.' The vain thought of re-establishing the empire of the Cæsars is remarkable in the successor of a race of barbarous kings who had bent all their efforts towards its overthrow. The papacy, however, inherited the fruits of his work; and, two centuries afterwards, almost re-established the Roman empire by means of the hierarchy.

Thinking now that he ought in the first place to enlighten the people, he instituted schools for the teaching of reading, arithmetic, and church singing. These schools were allowed to be held only in cloisters and episcopal palaces; and the priests alone were the tutors. An English monk was sent for to court to superintend one of them. Charles, who had been driving through Europe, sword in hand, thought all at once of applying himself to the study of grammar. He passed the whole of the winter and the spring at Aix-la-Chapelle, and there he assembled those champs-de-mars, or great councils, in which the bishops, the abbots, the lords, and twelve freemen from every county, discussed the capitularies that he promulgated as laws. His legislation was perhaps as agreeable to the general interests as the times would allow. Montesquieu, who draws a brilliant and strongly marked portrait of Charlemagne, assures us, that he prevented the nobles from oppressing the clergy and the people, by always employing them in war. The capitularies were certainly useful at a period when so many nations, united in one empire, were governed by different laws, and Charles evidently loved industry and the arts. He was indefatigable in every thing he undertook; he was well fitted altogether to struggle against barbarism; but he was able to re-establish neither the Roman empire nor civilisation. The social state was at this time territorial and military; and the nations had to undergo long revolutions before they could arrive at that social condition on which modern civilisation is founded.

During his long reign, Charlemagne engaged in various treaties with the court of Constantinople, received an embassy of congratulation from the caliph Haroun the Just, and presided over all the public councils. In order to lessen the influence of the bishops, he exempted them from military service, and by one of his capitularies established the dîme or tenth (an offering then voluntary), to compensate them for the loss of that property which the kings had taken from them. He applied himself also to the reform of ecclesiastical discipline, and prevented the right of sanctuary enjoyed by the monasteries from degenerating into the impunity of crime. He made sumptuary laws, and instituted various regulations concerning exchanges and commerce; finally, he established administrative assemblies in the provinces, to which he regularly sent his judges or deputies to collect and decide upon the complaints of the people: but during his whole time the system of feudality was, as we have intimated, generally and finally established.

Charles, now master of the greater part of Europe, determined to share his empire among his children. He made Pepin king of Italy, and Louis king of Aquitain; and, when the former died, he united Louis with himself in the administration of the government. But the end of this powerful reign presaged disasters; the pirates of Denmark and Sweden, then called Northmanns, or men of the North, began to carry fire and sword through the coasts; and it was in vain that Charles, thinking to repulse them, visited the ports, and ordered vessels to be built. He died, however, when he had only foreseen the evils which these greedy barbarians were about to bring upon France. Charlemagne is described as of an unusually high stature, and amazing strength; he was sober, just, economical, and generous; simple in his diet, and neglectful of nothing; he governed his immediate domains with the same precision as he did his empire, and ordered the produce of his garden, to be sold. How could such a prince, asks M. Bodin, order the massacre of 30,000 Saxons?

After his death, the bands that had been cemented by power were soon loosened by weakness, and the whole fabric of Charlemagne in a short time crumbled into dust. Louis the Pious, or the meek, had great private virtues, some courage, information, and humanity; but more than these were necessary in the successor of Charlemagne. He also divided the empire between his sons, and associated one of them with himself; but, as he was far less able than his predecessor to command obedience, four extensive revolts made his reign a long series of wars. Bernard, king of Italy, was subdued and chastised: the emperor, departing for once from his usual moderation, had his eyes put out (he had been condemned to death); but soon, yielding to the scruples of his conscience, he descended to every species of penance and humiliation, that the clergy chose to require. This conduct excited fresh rebellions. Judith of Bavaria, his second wife, had prevailed on him to divide his dominions a second time in favor of her son, when the other children revolted. The emperor yielded, humbled himself, and consented to the imprisonment of the empress. He soon, however, recalled her, and endeavoured to resume some authority over his sons; but they rose a second time against him, drew the pope over to their party, disseminated treason among the troops, and dethroned the emperor. Lothaire took possession of the throne. Some infamous bishops condemned the unfortunate monarch to public penance during the whole of his life; he, therefore, suffered himself to be disarmed, clothed himself in hair-cloth, was covered with ashes, and retired into a monastery. This excess of humiliation moved the people in his favor; a party was formed; the kings of Aquitain and Bavaria, induced by remorse, joined it; Lothaire was vanquished; but he obtained his pardon, and the restoration of his kingdom of Italy. The bishops, who had insulted the fallen monarch were punished. Still the ambitious projects of Judith in favor of her son Charles provoked another war, in which the emperor subdued Louis of Bavaria, and he soon afterwards died, overwhelmed with grief.

What especially fixes our attention on this reign, is the rank which the clergy enjoyed. Charlemagne availed himself of them as a political instrument; Louis submitted to them as a mighty power. The one enriched the popes in order to purchase their gratitude, together with the homage and obedience of the people; the other made them temporal princes, and prostrated himself at the feet of those very men who had bowed at the footstool of his father. From this reign we may chiefly date the arrogant pretensions of the tiara over crowns, and that despotism of a false theocracy which became terrible under Innocent III. The bishops at this time arrogated to themselves the only legitimate right to power; they possessed immense riches, wore armor like the military, and were scandalously luxurious. An instance is cited of one abbot who alone had 20,000 vassals. Louis wished to reform these abuses, so contrary to the doctrine of the gospel; and this drew on him the wrath and vengeance of the clergy. To undertake the reform of a class of men, whose supremacy we at the same time acknowledge, is a dangerous project.

Justice was at this time perverted by the most ignorant barbarism. It was believed, that God would sooner work a miracle, than suffer an innocent person to perish; in order, therefore, to wipe off an accusation it was necessary to plunge the arms into boiling water, or walk over red-hot iron, &c.; if no injury resulted from it, the person was acquitted. At other times their differences were decided and crimes judged by single combat; the parties pleaded by battle; women and infirm persons were represented by a champion whose thumb was cut off if he was conquered. Every monastery had one of these to defend its interests; the clergy, however, preferred the trial by ordeal. Charles ordered the stick to be substituted for the sword, and this order was renewed five centuries after; but for a long time serfs were the only persons who fought with sticks. Witnesses and even the judges themselves were often obliged to fight duels. Religious ceremonies preceded these decisions, which, though they may be traced to the Hindoos and the Greeks, were immediately derived from the Burgundians, a German nation.

The Romans had rendered the Latin language popular among the Gauls; and the Franks and other barbarians corrupted it. From this sprung a dialect called Romance, a mixture of Celtic, Teutonic, and Gothic, in which the Latin predominated. This is the language which, after the polish of eight centuries, forms the basis of the French tongue.

Under Louis the Meek, the monarchy, though torn with divisions within, yet maintained itself without; under his son, Louis the Bald, every thing went to ruin. He was a weak and cowardly prince, and his reign was a long series of calamities. After the death of their father, the three brothers again made war upon each other. He who held the title of emperor was conquered at the battle of Fontenay in Burgundy, where 100,000 men perished. The bishops, who then disposed of the crown, dethroned him, and made a new partition of the empire. At that time the Danes, or Normans, were a terrible scourge to France; they pillaged one-half of the country; burned Paris, and, after the custom of the emperors of degraded Rome, Charles lavished upon his enemies that treasure, which was to them only a new motive for returning. Every year fresh fleets of robbers landed on the coasts, and the king crushed the people with taxes to satisfy them. During this confusion (A.D. 846) the lords and bishops disputed for power; the former prevailed in an assembly, from which the people were excluded; the latter revenged themselves by deposing the king, in order to give the crown to his brother the German, and afterwards excommunicated the latter. Thus the priests and the grandees were occupied only in sharing among them, or disputing for, the spoils of the people, while the pirates were invading France. The king of Lorrain narrowly escaped being deprived of his kingdom by excommunication, because he had been divorced. It was about this period that Bardouin, a French lord, who had also been excommunicated for having carried off Charles's daughter, received from him the earldom of Flanders, which he transmitted to his posterity. We must now, however, explain, how a government came to be established, which rendered the people so miserable, and yet contributed so much to the abolition of slavery.

At the time of the conquest the provinces were governed by Roman officers, sometimes called counts, or companions of the emperor, and sometimes dukes or generals. The king afterwards continued to appoint these military and civil functionaries. During the confusion of the reign of Charles the Bald, they rendered themselves independent of the royal power, and even wrested from its feebleness the hereditary possession of their offices. By these means a new government was established, or rather the government was divided into as many parts as there were provinces. The king was considered as the supreme head; but his power was an illusion; force still prevailed, and the exercise of force is the origin of continual war. This political system was founded on fidelity. The inferior was called a vassal; the superior a suzerain or lord. The king, as king, was the vassal of none but God, as they were accustomed to speak; and his vassals had others under them, over whom they were lords; these subdivisions were endless. The fief was a kind of temporary payment; the lord gave the fief to the vassal, on the condition that the latter should follow him to the war; and in return he guaranteed him security and protection. There could be but little regularity in such a system, only as the conditions of this treaty were well fixed and reciprocally guarded; it was indeed organised insubordination. The plebeians, vulgar, or rustics, were not vassals, but subjects of the lord, and constrained, on a requisition from him, to march under his banner. In this political and social scale, each degree had no direct authority, but over the rank immediately below it. Such is, in substance, that political system which has been called the feudal government.

The royal power could not thus exist for a long period. Charles the Bald was exceeded in

weakness and inanity by his successors. Their names, and a date, are all that history affords of them. Louis the Stammerer was the son of Charles the Bald. Louis III. and Carloman succeeded him. After their time a powerful nobleman set up the small kingdom of Provence. There was another son of Louis the Stammerer, named Charles, who was five years old when the crown, together with the title of emperor, was offered to Charles the Fat, who reigned in Germany. The Normans, who still continued their depredations, proceeded to lay siege to Paris. Odon, or Eudes, who was the earl, defended it valiantly. After the siege had lasted two years, the emperor went to its assistance with an army; but the Normans frightened him, and he purchased a peace. At the time of his death (A. D. 888) he was dethroned, imprisoned, despised, and miserable; his superstitious notions had driven him mad. Eudes, who then accepted the crown as the guardian of young Charles, might easily have seized on it for himself; but Charles, surnamed the Simple, for a little while shared the throne with Eudes, and after his death reigned alone.

It was about this time that the Saxon pirates established themselves in that part of France which was formerly called Neustria, and has from them taken the name of Normandy. Thus the descendants of the Franks, degenerated as under the idle kings, suffered in their turn the disgrace of conquest. The king sent his daughter to Rollo, their chief, inviting him to become a Christian, and to acknowledge himself as his vassal. The Norman accepted the proposal, but he refused, on paying feudal homage to the king, to kiss his feet. One of his officers, who complied with this ceremony, performed it in such a manner that he almost overturned Charles. This breach of manners only produced laughter, to such a state had the priestly regime reduced France. Rollo, however, rendered Normandy prosperous. He enacted the most severe laws against every species of dishonesty; and his people devoted themselves to agriculture.

The minister of Charles the Simple having excited the discontents of the lords, these latter attacked the king and dethroned him. Rotbert, or Robert, brother of the late king Eudes, assumed his place; but he was killed in battle by the hand of Charles; who claims at least the character of some military courage. Hugues, called the White, the son of Robert, obtained the victory on another occasion, and Charles, having fled to the residence of one of his lords, was detained a prisoner until his death. His rival, who already had the title of duke of France, did not wish for that of king; but left it to Raoul duke of Burgundy, whose reign was constantly disturbed by factious wars. A powerful lord having formed the design of making his son, a child of five years old, a bishop, with a dispensation from the pope; a war ensued on that account that lasted eighteen years, and the bishops took part in it, both by levying armies, and launching their excommunications. Raoul dying, after a reign of eight years, Hugues put in his place the son of Charles the Simple, Louis IV. called Outremer, because he had been brought up in Great Britain. This young king wished to get rid of his guardian, but the latter soon made him feel that a king of feudal France was nothing. He made him prisoner, but afterwards released him. A question of legitimacy was now agitated in Germany; whether the succession must proceed in a direct line, and whether the grandson could exclude his uncles from the throne? This case was decided by single combat between two champions; the champion of the direct succession gained the victory: since that time the grandson has always represented his father.

On the death of Louis, Lothaire, his son, succeeded to the crown; an arrangement to which Hugues the White willingly consented, and, dying two years after, transmitted his power to Hugues Capet his son. These Hugues, counts of Paris and dukes of France, had seized at this time on several of the richest abbeys, and were enjoying their revenues, as lay lords were accustomed to do without any scruple. They even assumed the title of abbot. The surname of Capet (cappatus) came from the chape or cope of St. Martin of Tours, which they wore as the possessors of the abbey of that name. Lothaire, who had some strength of mind, now assumed a degree of authority over these lords. Under his reign, however, Lorrain, which had been for 100 years past the subject of contention between the kings of France and Germany, was given up to the emperor Otho, who did homage for it to Louis as his suzerain. On the death of the latter, Louis V. succeeded to a short reign, i. e. of one year, which terminated the Carlovingian dynasty. According to hereditary right, the brother of Lothaire, his uncle, should have ascended the throne, but Hugues Capet, being all-powerful, was proclaimed king by his vassals and friends; while the other dukes and counts, who paid little respect to the monarchy of that period, aided in or suffered the usurpation, which elevated their equal without depressing themselves.

Sect. IV.—The Capetian Dynasty.

Hugues Capet was, as we have seen, the grand nephew of Eudes, a descendant of Robert le Fort, or l'Angevin, a chieftain of great courage, who had been sent by Charles the Bald into Anjou to defend that country against the Normans. The French genealogists have written volumes upon the origin of this chief: some of them have called him a Frank, others a Gaul, a Visigoth, or a Saxon. Louis XIV. placed much dependence on the proofs of his being descended from the Franks. The reader may find his history in the Historical Researches of Anjou, by J. F. Bodin, ex-deputy of the Maine and Loire; published by Lecoint and Durey, Paris.

Hugues was crowned at Rheims; and observing a caution that had now become common among those who attempted to found a new dynasty, associated with himself his son Robert, in order to secure his succession to the throne. Charles, duc of Lorrain, his rival, endeavoured to give weight to his claims to the throne by an armed force; but he was delivered up at Laon by a bishop and died two years afterwards.

Hugues died at Paris, much regretted by the priests and the army, whom he had equally cherished: the people, however, held no rank in the state. The elevation of the Capetians may be attributed to the feudal anarchy: feudality ascended the throne with king Hugues. He sent one day the following question to an earl who had revolted, 'who made thee an earl?' The latter replied, 'who made thee a king?'

Robert was a prince of great devotion and mildness, very charitable and very unfortunate. He was related to his wife in the fourth degree, and had been her god-father; relationships which the pope, notwithstanding the dispensations of the bishops, judged so incompatible, that he annulled the marriage and suspended the prelates who had allowed it. The latter, on this, excommunicated the king, who was refractory; although he constantly chaunted at the reading desk; and from this time, if we may believe the recitals of the priests, he was abandoned by all his lords, and avoided by his domestics. The same prince, after a penance, caused to be condemned and burnt at Orleans, with great pomp, some unfortunate creatures who were called heretics and Manicheans. His second wife, Constance, was a sort of fury, who stirred up her sons to revolt. He had one of them crowned, whose name was Henry; but he was not the eldest, which proves that the right of primogeniture was not yet acknowledged. Under his melancholy reign, which, moreover, had nothing to do with nine-tenths of France, there was a dreadful famine, during which human flesh was devoured by the people.

Henry I. (A. D. 1031) had at first to struggle against Constance, the queen-mother, who stirred up his brother against him. He then endeavoured to wrest Normandy from duke William, at whose father's he had found an asylum; but he was defeated in this project. At this period the hierarchical supremacy of the popes was first solemnly proclaimed, and Leo IX. held a council in France, contrary to the wish of Henry. The king, wishing to have his son crowned, assembled the bishops, monks, and lords; among whom the archbishop of Rheims at that time had the right of consecrating him, and the legates granted him their suffrages in the name of the pope. The Capetians thus transmitted their crown as far downward as to Philip Augustus, who married a princess of the house of Lorrain (a branch of the Carlovingians), and who thought himself sufficiently powerful not to need the coronation of his son.

Let us pause here: this is the middle epoch of pure feudalism; of that frightful system which burdened France for almost three centuries, and reduced mankind to the lowest depths of misery. The whole nation had become serfs or slaves; the condition of the people was little better than that of brutes. Any one might strike, mutilate, or even kill, a serf, with impunity. Almost all the freemen had given up their liberty of their own accord, that they might be less harassed by the lords; who, in return, condemned, taxed, and plundered them at pleasure. The feudal axiom, 'No land without a lord,' was established every where; and there existed no asylum or appeal from its decisions. It was necessary to be either the oppressor or the oppressed. The churchmen and the lords pillaged each other by turns, while each contributed to the ruin of the people, and natural strength or religious authority were the only prevailing forces. The use of cavalry, of which the Franks were almost entirely ignorant, was become, together with that of bearing arms, the exclusive privilege of the nobles; and a lord on horseback, clad in iron armour, made a whole canton tremble. The serfs, who composed the main strength of the army, fought on foot. Overwhelmed with services, tells, and subsidies of all sorts, imposed by the military or the ecclesiastics, humbled by seignioral claims which were revolting to nature and modesty, they knew not whom to obey, and fought only to rivet their chains more firmly. Those who lived in the country were called villeins, those of the cities and towns bourgeois. Neither of them could labor but for the advantage of their lords, who often came to live upon them with their men, their serjeants, and varlets. The latter were the candidates for the profession of cavaliers or men at arms. Valets have, it thus appears, rather a noble origin.

Among themselves the lords were equally arbitrary and ferocious; their declarations of war extended to relations and allies, and the quarrel of a single family was sufficient to deluge a whole district with blood for thirty years together. It was a state of constant war; all the castles and abbeys were fortresses, or rather retreats, where 100,000 tyrants shut themselves up with their booty. France became one vast field of blood, and perpetual carnage at length wearied even ferocity itself. It was thought, by means of a council, to impose on these factious spirits what was called the peace of God. The bishops ordained fasts and penances, during which humanity breathed; but this peace, as well as 'the truce of God,' which forbad their fighting on Saturday evening or Monday morning, soon fell into disuse. Such was the feudal system, as it has been called, in France; a state of real anarchy, in which force was only tempered by anathema.

The long reign of Philip I., son of the preceding king, is an epoch of remarkable events. William the Bastard, duke of Normandy, crossed the channel (A. D. 1066), and effected the conquest of England, where he established his own rigorous modification of the feudal regime. He had the firmness to refuse homage to the pope. A jest of the king of France on the excessive fatness of William kindled a war, from which we may date a long-continued enmity between France and England: Normandy and the Beauce were at first the scene of the contest. About this time also began the quarrels of the emperors and the popes about investitures. The imperious and turbulent Hildebrand (Gregory VII.) was the originator of them. It was this pontiff who made emperors and kings his dependents, who established despotism in the church, and a Christian theocracy throughout Europe.

The king tired of his wife, Bertha, attempted to prove that she was related to him, and under this pretext divorced her, according to the

of the times. He then seized on the per-
Bertrade, countess of Anjou, and married
ut was intimidated in his career by the
see. Being excommunicated by Urban II.
first separated from Bertrade: then took
ain, on which the pope proceeded to Poi-
repeat his anathema in a council, at which
shops and lords are said literally to have
each other with stones. An insurrection
, in which several noblemen, who had
ed their wives, took part with the king.
tter associated his son Louis with him, in
the better to resist the storm; but Bertrade
e jealous of the prince, and attempted to
a him. In fine, the bishops found it was
eir interest to grant the king absolution;
e came, by the consent of the pope, in the
r and barefooted, to receive it at a council
in Paris.

m this state of degradation and brutality,
ich the feudal system held the human race,
mbition of ecclesiastics was at last destined
liver it. A French pope, the celebrated
ert, conceived the idea of conquering the
Land, or Palestine; and a hermit realised
roject. Returning from the pilgrimage to
salem, which was then so much in vogue,
r travelled through Europe, preaching in
s and cities and councils; he inflamed the
ls of men with zeal for the holy sepulchre,
indignation against the Mussulmans, who
it in their polluted grasp. All classes heard
with attention, and entered with ardor into
undertaking he proposed. The serfs, to
l the grinding slavery of the soil; the vas-
to escape the despotism of their lords, and
ors, in order to free themselves by indulgences;
men, women, children, princes, monks, lords,
ops, set out on the expedition, crying out,
is the will of God.' They bore on their
nents a cross of red stuff, and thus were
d croisés. An undisciplined multitude,
Peter for their general, now carried devasta-
through some of the finest parts of Europe:
massacred the Jews, wherever they found
n, and at last found a tomb for themselves in
ngary. Thirty thousand men, the remains of
gular feudal army, however, took Jerusalem
he year 1099, and made Godfrey of Bouillon,
of their chiefs, king. This was called the
t crusade. These follies, devoutly warlike,
re useful to the cause of humanity, though they
re the cause of much bloodshed. The people
re delivered from the presence of many of
ir lords; the latter sold part of their estates
the king or the clergy to defray the expenses
the expedition; and the royal power, freed
m many of its fetters, began in some measure
re-establish itself.

The dominions of the French kings did not
tend farther at this time than about fifteen or
enty leagues round Paris. Louis the Fat dis-
ayed his activity in making war in Orleans, in
rmandy, and in the Isle of France, against his
ssals the barons, powerful brigands, who rifled
e passing traveller. To reduce one of them,
laid seige three times to a little feudal fort.
a war against the king of England, Louis
owed considerable personal courage. When
the emperor, the son-in-law of the former, took
part with him and determined on the invasion of
France, Louis called together the great vassals of
the crown, whose duty it was to march under the
royal standard against a foreign power; and
an army of 100,000 men was raised. The
Germans passed the Rhine. The French were
soon able to attack the Normans; but the counts
and dukes, fearing to render the king too power-
ful, returned home, and left him without an army.
Peace however was concluded between the two
monarchs in 1128, and Louis applied himself to
the internal regulation of his kingdom. Not-
withstanding his piety Louis could not escape,
being excommunicated even by the bishop of
Paris. He died after having procured the co-
ronation of his son.

This reign forms a very important epoch of
French history. The miserable people began
now to emerge from their nothingness, and to be-
come of some importance in the state. Various
insurrections took place in several of the towns
possessed by the clergy and the barons, as well
as within the domains of the king; who, being
unable or unwilling to repress them, gradually
found his advantage in recognising the liberty of
the inferior classes. They were allowed to in-
stitute their own civil governments; to name their
own magistracy; to assess themselves in the
annual rent, which they had engaged to pay their
former tyrants; to raise their own militia, &c.
These little democracies, independent under cer-
tain conditions of the lords, were called com-
munes. It is true, that the king sold them char-
ters, by which he granted them these rights of
nature; but it was a great advancement of the
public liberty that they were to be thus obtained,
and greatly to the mortification of the barons,
the bishops, and the monks. Afterwards several
of the feudal sovereigns imitated the king, and,
in order to recruit their finances, sold their li-
berty to the serfs of the cities and boroughs.
But in many places the citizens, rising against the
barons, established the communes by their own
power.

Louis, surnamed the Young, by marrying Ele-
anora, the heiress of Aquitaine and Poitou, made
a temporary addition to the domains of the
crown. In a war against the earl of Cham-
pagne, he set fire to a church, in which 1300
persons were burned to death. St. Bernard an
enthusiast, who perhaps possessed some portion of
genius, having preached up a second crusade,
Louis, penetrated with remorse, inflamed him-
self with pious zeal and enlisted in the cause
with his court, his queen, and 200,000 men.
This crusade produced no other result than nu-
merous pillages along the road; it was, however,
useful. A foundling, who had risen to the post
of abbot of St. Dennis, in this period, in which
the abbots of this monastery were the king's
counsellors, became regent of the kingdom, and
continued the work of liberty begun under Louis
the Fat, whose minister he had been; his name
was Suger. He was born for this station; and
took that interest in the welfare of the people
which rendered the provinces of the royal terri-
tory the most flourishing part of France. On
his return, however, the king, contrary to Suger's

advice, committed the fault of repudiating his wife. She married Henry, duke of Plantagenet, who already possessed Anjou and Normandy, and had become king of England. As her dowry she brought him a third part of France; and thus the antipathy of husband and wife changed the face of the two kingdoms. The sons of the king of England had revolted against their father; Louis abetted them, but without success. He died (A. D. 1180), after having proved himself a weak devotee and an imprudent sovereign.

His son, Philip II. surnamed the August, commenced his reign by an act which, even in those times of superstition and rapine, was thought outrageous. The Jews were masters of the little commerce that existed, their political situation having forced them to become industrious, and the king drove them out of the kingdom by an edict. He was capable, however, of better deeds: he exterminated the banditti called Brabantins, and withstood the pope's legate. He overcame the king of England, who was in possession of the half of France, and went on the crusade with his successor Richard, the Lion-hearted, to rescue Jerusalem from the Saracens. The two kings suceeeded only in taking St. Jean d' Acre; and Philip, on his return, invaded Normandy during Richard's absence. Having divorced himself from his wife, he was excommunicated by the pope, and the kingdom put under an interdict; that is to say, masses and divine worship were suspended; meat was not allowed to be eaten; marriages were put off, &c. Philip had the good sense to laugh at this interdict, and he seized on the temporalities of the bishops. Another bold action distinguished his reign: John, surnamed Lackland, king of England, had murdered young Arthur, his competitor; and Philip caused him to be tried by his peers, as his vassal, declaring Normandy, Anjou, Tourain, &c., on his conviction, to be forfeited to the crown of France. He executed this judgment at the head of an army. Thus the French monarchy, which had been dismembered by the feudal government, began to recover its unity. Philip Augustus, we may add, was the first of the French kings who kept a standing army, and this was a new blow to the feudal system.

A fourth crusade, which was set on foot at this time, (A.D. 1204), produced only a short-lived conquest over the Greek empire. The crusaders crowned their chief, Badouin of Flanders, at Constantinople. A more lamentable crusade was directed against the Christians of the south of France, called the Albigenses. Myriads of them were exterminated, and many burned, because they entertained doubts, as their adversaries alleged, on some mysterious doctrines. It was to this prince that Pope Innocent III. offered the crown of England; John, on his part, surrendered his kingdom to the pope, who upon this became his protector. A powerful league was formed against Philip. John, earl of Flanders and emperor, assembled 200,000 men, and they were already partitioning France, when Philip with 50,000 defeated them in the plains of Bovines. A French bishop signalised himself in this famous battle; he killed his enemies with an iron club, that he might not infringe the canons of a council, which prohibited priests to shed blood. The English barons, after having compelled John to sign their great charter, rose against him, when he retracted it; upon which some of them acknowledged Louis, the son of Philip Augustus, as their king; and this young and very warlike prince kept his ground for some time in England.

In looking back on this twelfth century, we observe several efforts of the human mind to break through its vassalage to lords and priests. On the one hand we see an increasing multitude of monastic orders, and begging friars, the devourers of the nation, and the militia of the pope; and we see laymen, the dupes of their interpretations of the apocalypse, and various parts of Scripture, leaving their wealth to pious foundations. But we behold also some men, driven to extremity by the luxury and pomp, pride and rapacity of the clergy, coming forward as reformers, or shaking off the yoke of credulity. We may notice also in this account a vicissitude that has frequently occurred; the clergy, at first poor and austere, enriching themselves by abusing the terrors of the people; when rich, arriving at a high pitch of corruption; then falling into contempt, and disgracing religion; spoiled, and growing rich again, only to be despoiled afresh. The popes exacted of the nations of Christendom taxes of every description, and proclaimed themselves infallible; upon this arose Berenger and Arnold of Brescia, those forerunners of the Reformation. Unto the time of Luther, the same causes produced the same effects. Every thing in human affairs tends to abuse, and abuse leads to resistance and revolution.

Schools began at this time to be established in the bishoprics. That of Paris soon became the most famous in Europe, although the course of instruction pursued in it was very imperfect 3000 students listened in the open air to the lectures of the logician Abelard the lover of Heloise, names which seem hardly to belong to so rude an age. But truth was sought for, not in nature and reason, but in the distorted doctrines of Aristotle; men did not reason, they wrangled. During this period, chivalry flourished in castles and tournaments, while the people were oppressed by the most gallant of its votaries. The troubadours were incessantly singing of beauty and love; and these men opened the path for the career of Dante and Petrarch, those fathers of modern literature in Italy, where insurrections, like those which had produced the communes in France, were just beginning to lay the foundation of republics. The crusaders had brought a dreadful malady from Asia; and France was filled with leprous people. Contagious and pestilential diseases were in this age also as frequent as want. Perpetual war, by interrupting the cultivation of the country, brought on famine and mortality; the dead corpses, lying unburied, produced the plague.

Louis VIII., called the Lion, defeated the king of England in France, where he was endeavouring to establish himself; after which, as the agent of the Inquisition, founded by Innocent

III., he went (A. D. 1223) on the crusade against Raymond of Toulouse, expecting to deprive him of his dominions, on the pretext, that he favored heretics. Having failed in this enterprise, he died, leaving a son about twelve years old, who was made king, and a widow, Blanch of Castile, who became regent. This princess first quelled the factions of some of the great lords; she then pursued the war against the unfortunate earl of Toulouse, who basely submitting, suffered the inquisition to continue its ravages among the Albigenses, and even engaged himself to exterminate them. The piles were again lighted; councils prohibited the laity from reading the Bible; and the breviary was given to them only in Latin. 'This,' as a modern French historian observes, 'speaks volumes.'

Young Louis IX., whom the church counted as a saint, was really as good a prince as the times would permit. He vanquished the English at Taillebourg and at Saintes, where they were assisting a rebellious vassal The pope, who had just excommunicated the emperor, being obliged to flee from Rome, went to ask an asylum in France; which Louis had the firmness to refuse, and this disturber took refuge at Lyons, a city of which the archbishop was the lord. But, being at the point of death, Louis vowed if he recovered to set out on the crusade, and neither the queen, nor the bishops, could divert him from his purpose. He performed prodigies of valor in Egypt, (A. D. 1249), but without any useful result; sickness and famine annihilated his army, until, made prisoner by the Mussulmans, with all his men, he was compelled to contract for his liberty at the price of an enormous ransom. During this time a madman took upon himself to preach the crusades to the shepherds and peasants; 100,000 fanatics, called pastoreaux, followed him; they did nothing but rob, say the historians, and they were massacred. It is conjectured however that at least a portion of these unfortunate wretches fell in with this project only to shake off the feudal yoke.

After the death of his mother Louis returned to France, and devoted himself wholly to the administration of the kingdom. He maintained peace as much as possible among the great vassals, and often yielded with more delicacy than good policy to the claims of the neighbouring kings. The pope had just laid the king of the Two Sicilies under an interdict; he offered his kingdom to the brother of Louis IX., who held the earldom of Anjou in apanage, but he reserved to himself an annual tribute, under pain of excommunication. The earl accepted it, and went over into Italy with a multitude of volunteers, who thus became crusaders, because they were called together in the name of the pope; and who thought it a pious work to dispossess an excommunicated person. Naples was conquered in a short time, and the usurper beheaded the legitimate king. Louis, in the meanwhile, seized on the temporalities of the bishops, while they were pillaging the people; and yet would have become a cordelier, if it had not been for the queen. This superstitious prince still uniformly wore the cross; and, notwithstanding his age, determined on a new crusade. Alleging that he should be able to convert the bey of Tunis, he disembarked in Africa, A.D. 1270; and, after having seen his army perish under a scorching sun, died miserably.

The reign of Louis IX. was the epoch of great political improvements. Since the capitularies of Charlemagne had fallen into disuse, there were no longer any national laws; every province, or rather every feudal sovereignty, was governed by the caprice of its lord, or by usages not committed to writing, which were called customs. Every lord had his own tribunal, before which the people pleaded and combated. Louis IX. caused laws or establishments to be reduced to writing, to govern that part of France which was immediately subject to him: he abolished judicial combat, which had been already prohibited by a council, and fixed a scale of pecuniary mulcts, though it must be allowed imperfectly. He bestowed upon all the towns, which were formed into communes, the privilege of trial by peers, or juries, and gave them new guarantees for their freedom from the feudal yoke. He also established appeals in the place of citations, which forced the judges to act with the utmost rigor against the appellants; and personally administered as king the last degree of the feudal jurisdiction. A private gentleman, imprisoned by the count of Anjou, with whom he had a suit, appealed to the king, who heard the cause; he was acquitted and the king's brother was condemned. So great an act of justice was then an unheard of novelty. Feudal family wars, in which relations were obliged to take part, under penalty of losing their inheritance, were forbidden. The art of coining money, of which a multitude of lords had possessed themselves, was restricted. Justinian's code, which had been taught at Bologna since the twelfth century, began at this time to be known in France. The priests, or clergy were still, however, the only literary men; they filled the offices of barristers; they also practised medicine, and thus rendered themselves indispensable, for the time being, to the community. When any person died intestate, and on this account the church was deprived of the legacy of part of his money, which was obligatory in the case of all wills, the whole or part of the inheritance was confiscated: the establishments repressed these abuses. Louis IX. was in many respects the restorer of justice; but his religious zeal was too violent. He inflicted dreadful punishments upon those who swore by the name of God or the saints, and he established by ordonnances the frightful regimen of the Inquisition. He, however, showed the firmest opposition to the covetous despotism of the popes: declaring, in his famous law denominated the Pragmatic sanction, that the kingdom was dependent on God alone.

After the death of the king (A. D. 1270) his son continued the war against the Tunisians, and granted them a peace on their paying a tribute. This was the issue of one of those distant expeditions which had impoverished Europe. The young king, Philip III. surnamed the Bold, returned into France, where

he added to the possessions of the crown the vast assignments of his uncle, the earl of Poitiers, who died without children. In this reign the Sicilians, resolving to shake off the heavy yoke of Charles of Anjou, rose at Palermo, at the hour of vespers, and slew all the French throughout Sicily. Charles was from home. The king of Arragon endeavoured to seize on this island, when the pope excommunicated him and proclaimed a crusade against him. Philip put himself at the head of the crusaders, but returned to die at Perpignan, having taken only Gironne, after a long siege. Two monasteries disputed for his heart. This prince was much under the influence of the pope; and to him the holy see was indebted for the Venaissin, which it retained till the revolution.

Philip IV., his son, surnamed the Fair, succeeded to the throne. Edward I. king of England paid homage to him for Guienne, which he acknowledged he possessed as a vassal of the crown of France; but, some disagreement having taken place between the two nations, Philip cited Edward before his court, and on his refusal to appear, he fell upon Guienne sword in hand. The war was then transferred to the dominions of the earl of Flanders, who was in allegiance with Edward. Here the French beat the English and conquered Flanders. A pope, who yielded in pride to none of his predecessors, Boniface VIII., was the second enemy against whom Philip had to contend. Being in urgent need of money, and wishing to spare the people, who were already overwhelmed with imposts, he laid a light tax upon the clergy. The pope immediately issued a bull, forbidding the ecclesiastics to pay it without the permission of the holy see. Philip replied by prohibiting the laity to pay any thing to the church. The pope insulted the king in another bull; but, being forced to yield, he made peace by canonising Louis IX., and he was allowed a small tax for St. Peter. Shortly after, however, the pope re-commenced his insolent proceedings. A French bishop, his legate, insulting the king, was driven by him from his presence; when the pope, rendered furious, fulminated new bulls, and summoned the king, under penalty of an interdict, to acknowledge himself king by the favor of the pontiff. Philip on this called an assembly of the people (1302) to his assistance. The national assemblies had fallen into disuse, but he now included in them the deputies of the communes, which have been since called the tiers-etat. The three orders voted separately for the maintenance of the independence of the crown; and, though the clergy at first wished some respect to be shown to the pope, the nobility opposed it. Money, however, was the main thing wanted, and an old French historian well remarks on this subject, 'Public assemblies are a good means of levying taxes.'

The pope, on the other hand, called a council, which declared the omnipotence of the tiara. The king retorted by causing the French bishops and nobles to accuse the pope of imposture and heresy. Excommunication was then hurled against him; and the crown of France was offered to a prince of the house of Austria. The pope, after this, was seized and insulted in his own territory, by the French partisans; and though afterwards rescued, died, it is said, from vexation and anger. During this time the Flemings, headed by an aged weaver, had revolted, and massacred the French; and, on the count of Artois proceeding thither with an army, he lost the battle of Courtray, at which 20,000 Frenchmen were killed. The king now took the command of the army in person, but also failed to reduce the rebels: all he could do was to re-instate the earl of Flanders in the possession of a few cities. Some time after the pope excommunicated his successor.

The proceedings against the Templars is a notable event of this reign. Philip the Fair pursued them to destruction with a fury that is inexplicable, but did not seize upon their wealth. The pope showed, also, as much animosity against them as the king. They were suddenly arrested throughout all France, and put to the torture, when the confessions they were expected to make were dictated; and if they retracted they were burnt in a slow fire. Among those who were thus sacrificed were the grand master himself and all the great officers. The possessions of the order were given to the Hospitallers, since called the order of Malta.

The re-uniting of Champagne and Lyons to France, and the rendering of the parliament stationary at Paris, are also to be attributed to Philip the Fair. This latter was before a moveable and feudal assembly, following the court, and composed of noblemen chosen by the king. As these men of war could neither read nor write, men of the law, called clerks, or learned men, were added to the number, who acted as their counsellors. By degrees, the nobles having retired, these men remained sole judges. The peers, great lords of the soil, or domesties of the court, also possessed the right of admission to the parliament. This assembly was, properly speaking, the king's tribunal; and, since the time of Louis IX., took cognizance of all the appeals in the kingdom. It now generally sanctioned the Roman law, and made the study of the laws necessary; transferring to the learned men, and gentlemen of the long robe, a part of that authority and influence which had hitherto been engrossed by the military order. Thus the code of Justinian at first inflicted a heavy blow on feudalism; but, in later times, the agents of the kings derived from it precepts and precedents in favor of despotic power.

In the thirteenth century some progress was made towards modern civilisation. Under Louis IX. a public library was formed in France; and Roger Bacon, the English monk, a prodigy for his time, discovered part of the science of natural philosophy; and invented the camera obscura. Mean shows, and mountebank theatricals, under the name of mysteries, were at least steps that now lead us forward to Polyeuctes and the Tartuffe. Theological disputes and wrangling still continued, it is true, but the Sorbonne was founded in Paris, and the citizens derived, even from the disorders of the university, habits of anti-feudal independence; while the brotherhoods, or corporations, gave them the

strength of political organisation. The mayors, provosts, and sheriffs, were also accustomed to resist arbitrary measures; and the tiers-etat attained a solidity of character and power which the crown felt to be useful to itself.

Upon the death of Philip, A. D. 1314, the royal authority was exercised successively, during a short space of time, by his three sons. Louis X., surnamed le Hutin, caused Enguerrand de Marigny, the superintendant of the finances, to be condemned to death: they were only able to prove him a rogue, though they accused him of sorcery, and the king soon after repented of this unjust prosecution. The most memorable event of this reign was the enfranchisement of a great part of the serfs in the country districts. The king set the example in his domains, which the lords by degrees imitated. In the preamble of the edict, dated 3rd July, 1315, it is declared that 'according to the rights of nature every one ought to be born free.' Liberty, however, was sold to the peasants as it had been to the citizens, and many of them, accustomed to slavery, and judging that liberty was not worth the price, wished to remain in that state. The want of money has often made men commit or repair acts of injustice. The Jews were recalled in the hope of plundering them; but, on the whole, Louis occupied himself much for the public good. He died in 1316, not without suspicion of his being poisoned.

Some historians here introduce, as king, a posthumous child of Louis, who lived only eight days, and was called John; but Philip V., called the Long, became the effective successor, in opposition to the claims of a daughter of Louis. He made some reforms in the administration; excluded the bishops from the parliament in which they still preserved some influence; and endeavoured, we are told, to establish a general system of exchanges and measures. He also disarmed the citizens, in order more certainly to abolish private war, and named in every commune a captain to command a royal militia or national guard, which often appears to advantage in the wars of those times. Horrid cruelties were committed in this reign on the Jews and the lepers, who were blackened with the most absurd accusations, and were burned by hundreds, in order that they might be plundered. Hospitals also having become as numerous as they were richly endowed, their funds were frequently confiscated.

Charles IV., surnamed the Fair, punished many of the extortionate financiers of this period, who were generally Italians. He made war on the English A. D. 1321, in Guienne: and his sister, the wife of Edward II., dethroned that prince. Charles having died without children, Edward III. laid claim to the throne of France, as the nephew, by his mother's side, to the late king. The peers, however, decided, that Philip of Valois, who was descended from St. Louis by a younger branch, ought to be preferred. The crown had been almost elective under Philip the August, and women had been excluded under Philip the Long; but it was since that time agreed, that they did not even transmit the succession to a male; 'thus in process of time,' says Mr. Bodin, 'was established the usage, once called the Salic law, now legitimacy.'

Section V.—The Branch of the Valois.

The reign of Philip VI. was one chain of calamities. He at first determined upon the reduction of the Flemings, who had revolted against their count, under the conduct of the brazier Arteveldt. He afterwards succeeded in making the king of England do homage to him for Guienne, as that prince was not then in a situation capable of supporting a war. But his brother-in-law, whom he had justly banished, having taken refuge in England, stirred up, A. D. 1336, a terrible combination against him. Edward III. entered into an alliance with the Flemings and the emperor, and took up arms to reclaim the crown of France. The earl of Hainault joined him, with several other of the French lords. A strong fleet, consisting it is said, of 120 vessels, and manned by 40,000 men, was defeated by that of the English in the battle of Ecluse; Edward was there in person. He supported a furious war in Brittany, which the earl, the king's nephew, had excited, and availed himself of the advice of another traitor, Geoffrey of Harcourt, who counselled him to make a descent upon Normandy, and penetrated as far as the gates of Paris. He then retired into Picardy, followed by the French, who, urged by their imprudent impetuosity, attacked him at Crecy, August 26th, 1346. The Genoese cross-bow men gave way, and threw the French army into confusion; it was defeated, and 30,000 slain were left on the field of battle. The French historians say, that, through an excess of honor or military pride, their troops would not use the cross-bow, considering it as a cowardly weapon; hence they hired foreigners for this purpose. The English, less scrupulous, formed bodies of cross-bow-men among themselves. It is also stated that they first used cannon in this battle.

After this victory, Edward laid siege to Calais which did not surrender, until it had endured a dreadful famine. The devoted conduct of six citizens of this town, who, in order to save it, went bare-footed, and with ropes round their necks, to expose themselves to the wrath of Edward, appears like an incident in ancient history. Voltaire, however, disputes the truth of this story. To all these reverses were added a famine and a plague, which depopulated France. Disaster was now at its height; the people could no longer fight or pay. Some fanatics, called flagellants, went about the country scourging themselves till they drew blood, thinking to appease the wrath of heaven. The king died, broken-hearted as it is said, and hated by his subjects. He had established the gabelle, a tax upon salt. Under his reign Dauphiny was added to France, on condition that the prince royal should bear the name of Dauphin; and Jane of Anjou sold Avignon to the pope.

John, the son of the former king, was also an impolitic and still more unfortunate prince. He at first caused the earl of Eu, his constable, to be beheaded, because he was suspected of keeping up a correspondence with Charles the Bad,

king of Navarre, a powerful and active monarch, who had some claims to the crown. Edward III. now again carried the war into France; upon which John summoned the states-general, in order to procure subsidies. But here again we must pause to survey one of the great epochs of this history.

Philip the Fair succeeded in rendering the royal power almost absolute; he had freed himself from that of the Pope, and he strengthened himself by assembling the states-general, who had no proper idea of their own rights. The rivalry of the three orders had only tended to secure the preponderating influence of the king, and the states at first looked upon themselves only as a council destined to record his will. Now we see them assuming another attitude. Those of the north, or of Langue d'Oil, had the greatest influence on the public affairs. The states of 1355 acted upon the principle that the king had no right to impose taxes, but with the consent of the nation, represented by them, and determined to take upon themselves the receipt and employment of the revenues. For this purpose they sent into the Bailiwicks deputies with the title of officers of the receipts, and named a standing commission, consisting of three members of each order, to watch over the conduct of the king, during their vacations. They took also the greatest precautions to guarantee the useful employ of the surplus funds, and to fix the limit of the king's expenses.

The prince of Wales, called the Black Prince, the son of Edward, and one of the heroes of this age, now headed the English forces in France. Entrenched with 8000 men, most of them Gascons, in an advantageous post, near Poitiers, and attacked by John, who had 60,000, he completely beat him and took him prisoner. Charles, the Dauphin, assembled the states, who, as the organ of the nation, appeared now to be sensible of its rights. 'They were strong,' says a French historian, 'in the unanimity of discontent.' They ordered an enquiry into the causes of the people's complaints, and granted subsidies, but on such conditions that the court, being offended, endeavoured to collect them on its own authority, but this the people refused to obey. The states were again assembled, and it was found necessary to comply with the prescribed conditions.

The Dauphin tried one means of raising money, which his predecessors had often employed; the alteration of the exchanges. On this the Parisians revolted under the conduct of a private citizen, M. Marcel; and the king of Navarre, who had been imprisoned by John, escaped and supported the insurrection. The people were harangued alternately by him, by the Dauphin, and Marcel. Paris became at this time a true democracy; the revolters having, for their rallying signal, a red and blue hood. Marcel now began to form a confederation between the cities of France and the capital; when the Dauphin, having taken the title of regent, slipped away, and went to Compiegne to assemble the states general.

France upon this was thrown into the greatest confusion. Profiting by the disorder, the nobility endeavoured to bring the peasantry again under the ancient yoke of iron: the latter, armed with forks and sticks, pillaged the castles and inurdered the nobles, who, forming themselves into troops, slaughtered in their turn immense multitudes. This war of extermination is known by the name of Jacquerie, and the revolted peasants were called Jacques bons hommes.

There was but one step from this excess of anarchy and the evils of civil war to the restoration of absolute power, and to that every thing was at last yielded. The states of Compiegne first granted, it is true, the taxes under the names of aids and free gifts; but they annulled every thing that the former states had done, as the work of seditious men and traitors; and several deputies were condemned to death. Paris, having been blockaded, surrendered; Marcel was assassinated, and the regent made his entry.

A treaty with England restored his liberty to John, who stipulated for the cession of one-third of the kingdom, and 3,000,000 of gold crowns. Not being able to raise this enormous sum, John voluntarily returned to London, where he died in the Savoy, 1364. He is said to have been the author of that fine saying, that if good faith were banished, she would take refuge in the hearts of kings. Having obtained Burgundy by inheritance, John left it in apanage to one of his sons: thus commenced the famous house of Burgundy, and thus this feudal custom of apanage began again the dismembering of the kingdom.

When Charles V. ascended the throne the whole of the public affairs were disorganised, but, being both prudent and clever, he rapidly retrieved his affairs. Charles the Bad of Burgundy did not cease to conspire, and proved a formidable opponent: Bertrand de Guesclin however defeated him, when the war still raging furiously in Brittany that accomplished captain proceeded thither. Here he found Montfort, supported by the English, who made him prisoner in the first battle that was fought, and peace was soon after restored.

Charles V. had by good management recruited his treasury, when, the people of Guienne being dissatisfied with the English, he declared war against them and the talents of de Guesclin rendered him every where successful. The court of peers condemned the English princes as rebellious vassals, and confiscated their French provinces. De Guesclin, appointed constable, executed this decree. New treasons on the part of the king of Navarre, a long and ill-advised war, undertaken against the duke of Brittany, and extirpation of the English, wholly occupied the rest of Charles's reign. About this time the western schism of the church took place; the pontifical see having been removed from Rome to Avignon, two, and even three popes were elected at once; and the different kings espousing different sides, disputes, wars, and scandalous offences, were multiplied in all directions.

Charles, during his whole reign, assembled no meetings of the states; he conceived the plan of holding, instead of parliaments, seats of justice, where he obtained the ratification of the laws, in the presence of the peers, the nobles, and a few of the principal citizens. His administration,

however, was throughout skilful and paternal; and the historians have surnamed him both the Good and the Wise.

In this fourteenth century an almost imperceptible progress was made by the human mind. While the capuchins were disputing, and even fighting on the question, whether their scourges should be made round or pointed, a Neapolitan invented the compass, and a Swiss cordelier gun-powder. Charles encouraged learning; he collected 900 volumes, which, however, treated of little else than astrology. Universities were multiplied, but they were only occupied in the study of theology and logic. At this time Sallust and Cæsar were translated into French, and a few other Latin works preserved in the monasteries. Some curious particulars of the domestic life of this prince are on record: he always rose at six o'clock; and having performed his private devotions, as well as attended mass, he gave audience to all who presented themselves, rich and poor, receiving their petitions, and reading them himself. At ten o'clock he dined, spending but a very short time at table, and eating only of one dish; he always diluted his wine with a considerable portion of water. During dinner he listened to the discourse of some learned man. After dinner he gave audience to foreign ambassadors, and then admitted his own ministers, to learn from them the state of the kingdom. At one o'clock he retired into his chamber and reposed himself; an hour afterwards his chamberlains entered and entertained him with light conversation; at three he attended vespers, and afterwards walked in his garden. On his return the queen brought in his children, whom he examined respecting their progress in education. In winter, instead of walking, he employed himself, it is said, in reading the Holy Scriptures. He took little supper, and early went to bed. Though he spent his time at home, in this plain and simple manner, he always appeared in public with considerable splendor. His dress was magnificent; the gens d'armes preceded him; his squires carried his ermine mantle, his sword, and his regal hat; and he walked always by himself, his brothers and the princes of the blood following him at some distance. He seems to have been fond of literature, and no present was more acceptable to him than books.

We now again come to one of the most unfortunate reigns in this history, that of Charles VI. He was a minor; his uncles, the former king's brothers, disputed for the regency, and the duke of Anjou, who obtained it, took the opportunity to enrich himself by a system of rapine. He had completely plundered the treasury, when the king came to age. The Parisians, however, rose, and refused to pay the taxes; when the government, intimidated, pretended to suppress them by an ordinance, and convened the states. These granted some subsidies; but, when the court wished to obtain others by arbitrary means, the people murdered the collectors. This is what is called the insurrection of the swaddlers. The king returning out of Flanders, where a revolt against the duke had been suppressed by the carnage of Rosbeck, entered Paris at the head of his army, caused the richest of the citizens to be arrested, executed several, among whom is mentioned a venerable magistrate of seventy years old, declared that the whole of them deserved death, and was satisfied only by the payment of an enormous sum. Thus in the fourteenth century an end was put to the resistance of the Flemish and French communes against arbitrary power.

The war continued in Flanders; and was on the point of being carried into Brittany, to revenge the sudden arrest of the constable Clisson, when the king, passing through the forest of Mans, a man clothed in white, and of a hideous form, issuing from a thicket, seized his horse, and cried out, 'King, go no farther; you are betrayed.' This was sufficient to drive Charles out of his senses; he became raving mad. Some time after, having recovered the use of his reason, he relapsed at a masked ball, at which the fire had caught his clothes. It was in vain that a pretended magician endeavoured to cure him; he had but another lucid interval, and his madness became the signal of the most frightful discord. It was during this period, that Richard II. of England married the daughter of Charles VI.

Two monks, who had boasted that they could cure the king, but who had only increased his malady, were executed on the Place de Grève, because they had given rise to atrocious suspicions about the duke of Orleans, his only brother. These suspicions were afterwards revived; the duchess, who was a Milanese, was accused of having attempted to poison the dauphin; and the duke was said to have employed enchantments against his brother, and to maintain a criminal correspondence with the queen, Isabella of Bavaria. This princess, on her side, had the king entirely under her influence, and treated him most unworthily; he was often, together with his children, deprived of the necessaries of life. About this time, the duke of Orleans having been named lieutenant-general of the kingdom, John, surnamed the Fearless, duke of Burgundy, became jealous of him. A dreadful enmity was excited between these two princes, and two furious parties were formed. The duke proposed a new tax; John, who was present at the council, opposed it, in order to make himself popular; he left Paris, and returned with some troops to support his views. The queen and the duke fled, while John kept possession of the dauphin. These two enemies afterwards appeared to be reconciled; they consulted together; they shared the same bed; but on a sudden the duke of Orleans was surrounded by assassins and sacrificed. The perfidious John, forced to acknowledge his guilt, at first left Paris, and occupied himself in subjugating the people of Liege who had risen against their bishop, but entered it again at the head of his army, and behaved with the utmost haughtiness. No one regretted the duke; he was generally detested, and a cordelier was found, who made an apology for the assassination, alleging, that it was lawful to kill a tyrant, a doctrine that the Jesuits have since often revived.

But the young duke of Orleans, assisted by the count of Armagnac, his father-in-law, raised

the standard of revolt to revenge his father's death, and various battles ensued in different parts of France. The two parties were known as the Armagnians and Burgundians. A third faction, the Cabochians, allies of John, at the same time desolated Paris; while the king, during an interval of reason, took part against the latter, and headed an army against him.

France at this time was the theatre of the exploits of factious nobles, and all the interests of the people were forgotten in the strife. Untaught as yet by an experience that had still been severe, they became in fact subservient as dupes or victims to those passions of their rulers which they foolishly shared, and were driven to and fro like the inert mass, struck by the hammer, and repelled by the anvil, until they became the ready prize of a foreign conqueror.

Henry V., king of England, disembarked an army in France, with which he passed the Somme in the autumn of 1415. The French, much superior in numbers, gave him battle at Agincourt in a very unfavorable situation, and were defeated. (See our article AGINCOURT). But this victory was of no consequence to the English at the time; too weak to proceed, they again crossed the channel. The factions now revived: D'Armagnac entered into a treaty with Henry V., acknowledging him king of France, while the queen went over to the side of John, who had delivered her from prison, and the latter, entering Paris, again put his enemies to the sword. Villaret relates, that 3500 persons were massacred in three days in the prisons, the streets, and the court of the palace. 2000 nobles, men in arms, presided at these Septembrisades; and their chiefs, the Luxembourgs, the Harcourts, the Chevreuses, &c., enriched themselves with the spoils of their victims. It was during this time that Henry V. seized upon Normandy.

But the course of the despot John was hastening to a close. One day the dauphin had an interview with him on the bridge of Montereau, and the latter was assassinated. The queen (A. D. 1419) joined the son of John against the dauphin, when Henry went to them at Troyes, and was there proclaimed regent. He entered Paris with great magnificence, married one of the daughters of Charles VI., and committed to prison a French marshal, who had failed in respect to him. He died soon after, and Charles VI. speedily followed him, lamented, it is said, by the people, as an unfortunate, if not a meritorious prince.

The parliament, which before had been appointed only for a year, now became permanent; the counsellors even possessed the right of presenting the new members to the king for instalment. Thus commenced the power of this body of men, who were becoming respected for their integrity; we shall soon see how quickly they abused their influence. At this time of confusion, the university of Paris also exercised a species of independent power. By virtue of one of its liberties, which was an abuse, crimes committed by its members were not cognizable by the civil courts, and impunity often was the result.

The dauphin (Charles VII.) proscribed by the queen and by Henry V., had, in the character of regent, transferred the parliament from Paris to Poitiers. At the death of the two kings, he began to rally his party, and Marshal de la Fayette had gained for him the battle of Baugé, against the English. On the other side, the duke of Bedford caused himself to be declared at Paris, regent of France for Henry VI., now an infant The English had possession of more than half the kingdom: they had for their allies the powerful duke of Burgundy, and the duke of Brittany; and though Charles VII. was brave, he was weak and voluptuous, suffering himself to be governed by his debauched companions and mistresses. At first partially successful, and attended by the valiant knights Dunois, Lahire, and Tremoile, he lost the battle of Verneuil, and all his commanders were bad generals. Orleans, now besieged, was on the point of surrendering, when a young shepherdess, gifted with a lofty imagination, persuaded herself that she was destined by heaven to save France, and undertook to do it. She spoke like an inspired person, and communicated her enthusiasm to others. Covered with armour, and with a banner in her hands, she marched at the head of the army and raised the siege. Possessed with the idea that her mission was to go to Rheims, to crown the king, she traversed with him eighty leagues of the enemy's country, and accomplished her astonishing enterprise. For once, religious insanity produced a signal benefit; but her good fortune abandoned the heroine personally: wounded and taken by the English, she was condemned by some infamous judges and burnt at Rouen. Thus perished Joan of Arc, whose only crime was that of having saved her country. The tribunal that condemned her was composed of nine doctors of the Sorbonne, and thirty-five abbots and monks; at the head of it was brother Martin, vicar of the inquisition, and Cauchon, bishop of Beauvais, both Frenchmen!

Henry VI., however, was crowned at Paris, and Charles VII. consumed his limited resources in festivals. 'No one can lose a kingdom more gaily,' said Lahire to him. But events took another turn, and his character rose with them. The duke of Burgundy, weary of the despotism of Bedford, and ashamed of being in alliance with a foreigner against his relation, entered into a treaty with Charles. Paris opened its gates to him; the English evacuated it, and the king entered in triumph. Agnes Sorel, his mistress, had reanimated his courage, and he signalised himself at Montereau. Normandy was conquered; Talbot was vanquished; and the English were driven out of France. The nation having now recovered its energies, and found that union was its strength, the king applied himself to the re-establishment of order, being thwarted only by the unnatural revolt of the dauphin, afterwards called Louis XI. Already had the latter drawn into his treasonable designs the old friends of the king, and retired into Dauphiny, then under the dominion of the duke of Burgundy. Other French princes also endeavoured, about this time, to treat with the English, and the king died full of trouble and mortification. His mother, the infamous Isabella, died in misery at Paris, during the residence of the English.

Some important changes in the political condition and the manners of the nation were produced in this reign. The royal power was extended and consolidated; the knights and nobles assisting in this, because it gave scope for their exploits. The gendarmerie, or body of permanent cavalry, was formed, and a corps of foot archers. Formerly, when these veterans required their arrears of pay, some of the communes were resigned to them as garrisons: this was called living on the people. Now a perpetual tax was raised for the payment of the troops by the royal authority. According to Philip of Comines, 'Charles VII. was the first who gained this point of raising taxes without the consent of the states. To this the nobles of France consented, for certain pensions, which were promised to them in consideration of the money which should be raised on their estates.' Thus then it was the nobles who bartered this important right of the nation, and it is a noble who records it! Now also were reduced to form the customs of every province, and fresh parliaments, like that of Paris, were established with a view of extending the royal jurisdiction in France. The council of Basle, in 1431, had set limits to the power of the popes, and an assembly of the clergy, at Bourges, composed, with this intention, the famous Pragmatic Sanction, the charter of the liberties of the Gallican church. It also abolished the reserves and the annats, re-established the election of bishops, and stopped the abuses of appeals to the holy see. The parliament registered this decree. Under the following reign, this law, odious to the court of Rome, was formally abolished; but it nevertheless continued partially to be observed.

Every thing in Europe, and especially in France, now tended to a central monarchy; and in Louis XI. appeared a prince who, more than any other, assisted this movement. The example of this prince became fatal, and was a direful school for tyranny. Many princes, such as Richard III., and Borgia, took Louis for their model.

The feudal sovereignty, relieved by the apanages, or the present assignment of an estate or province, in lieu of the future right of succession to the whole, was still in force: the king conceived the design of overthrowing it, and in this the interests of the nation were for once consistent with his own. But the nobles formed a league against him, which was called 'The league for the public good:' an expression used by all the factions. Charles the Rash, heir of Burgundy, duke of Brittany, and the dukes of Bourbon and Berry united, yielded to the king at the bloody and undecisive battle of Montlheri, and Louis finished the war by negociations, in order to gain time. Soon after he resumed Normandy, which he had granted in apanage to his brother, the states, which he had convened at Tours, supporting him by a unanimous decision.

Some time afterwards the king was taken in a snare laid by himself. During an interview, in which he was caressing and betraying Charles the Rash, the latter was informed that French emissaries had been sent to raise the people of Liege against him. Charles, therefore, boldly seized the perfidious Louis, and compelled him to march with him against the Liegese. On Liege being reduced, Louis was permitted to depart for his own dominions. During the remainder of his reign, this monarch continued to act with his habitual duplicity. He first excited his people to rebel, and then, having crushed them, divided their possessions with his ministers, equally infamous with himself. At last they almost universally conspired against him. His brother Charles was poisoned; the constable St. Paul, his brother-in-law the count of Armagnac, and the dukes of Alençon and Nemours, were beheaded; and the children of the last named nobleman were sent to the Bastile sprinkled with the warm blood of their father.

England at this period, as well as France, had been for a long time the prey of factions. In an interval of repose its king endeavoured to renew the old claims on France, and Louis only maintained peace by engaging to pay a tribute. He lost, however, nothing by this; but gained an opportunity to accomplish other objects. Having a great wish to obtain the dominions of René of Anjou, earl of Provence and king of Sicily, the latter entered into negociations with the duke of Burgundy, upon which Louis threatened the good René, his uncle, with a citation before the parliament: René yielded, and Anjou was united to the crown. Not long after Provence was ceded by the will of René's heir.

Louis XI. made many conquests by his pen and his knavery; his cunning, however, was deceived by the marriage of the heiress of Burgundy with Maximilian of Austria, the emperor's son. This alliance raised up a powerful enemy for France. Burgundy, according to the law of apanage, was restored to the crown; but Flanders refused to submit to Louis, and a war ensued; in which the French conquered Franche-Comté, and some time after a treaty united to it Artois. Thus fell the monarchy of Burgundy, which had caused so many evils to France.

The last years of Louis XI. were disturbed by terrors and crimes. Shut up in a fortress he was afraid of his subjects, his servants, his own son, and even his physician. While, an impostor in his superstition, he wore relics over his dirty linen, and perjured himself without ceasing. 'He wished to deceive even the saints,' say the lively French writers. With respect to the people, if this prince was the author of some useful and popular measures, it seems only to have been with the view of rendering himself more despotic. He encouraged industry, for instance, as the great means of his own aggrandisement: he wished to see the people prosperous only that he might lay on them the heavier taxes; and if he first established posts in France, as Buonaparte afterwards formed military roads, it was only that he might the more readily clutch the victims of an iron despotism. He took the title of the 'most Christian king,' while his ruling maxim was, 'He who knows not how to dissemble knows not how to reign.' A clause of one of his charters, however, granted for the organisation of the communes, deserves particular notice: 'No citizen shall be detained in prison if he can give bail for his appearance

before the court.' This is exactly, says a French historian, the habeas corpus of the English. We find it also in the institutions of St. Louis, and the capitularies of Charlemagne.

Charles VIII. was thirteen years old at the time of his father's death: his eldest sister was regent. The duke of Orleans, a descendant of Charles V., ambitiously sought her in marriage, and made great efforts to obtain her: but the states were assembled at Tours and he lost his cause. Some doubts were entertained of the competency of the states on this occasion: 'To whom does it belong to decide this question,' said Pot, a deputy of the nobility, 'if not to the same people, who first elected their kings, who conferred on them all the authority with which they are invested, and in whom, definitively, the sovereign power resides? When I say the people, I mean the assembly of all the citizens, of whatever rank they may be.' Such language was new, and must have produced a deep impression. The states consulted on the miseries of the people, which the records describe in energetic terms: they were wandering about in the forests without food; men, women, and children, harnessed themselves to the plough in the night, through fear of being extorted upon during the day by the tax-gatherers and military. The states now, therefore, decreed the reduction of two-thirds of the taxes, with which Louis XI. had burdened the nation. The ministers objected, that they were paring the nails of the king; they replied, 'that the interest of the king was that of the people, and to cherish the one is to serve the other.' But they afterwards showed themselves very tractable.

On the duke of Orleans appearing to raise a party in Brittany, he was worsted at St. Aubin by that of the court; and Maximilian, the suitor of Anne, the heiress of Brittany, being rejected, she was married to Charles VIII. Brittany being thus united to France, the duke of Orleans was restored to favor. The young king now thought he would become a conqueror; and remembering that he held, by the succession of Sicilian Anjou, some pretended rights over Naples, he marched thither (1494) with an ill-equipped army. At Rome he was alternately flattered and betrayed by the execrable Borgia, pope Alexander VI. Naples, however, was conquered in haste, and fêtes and tournaments were given by him in the capital; while a powerful league was formed against him in Lombardy. The French army repassed the Appennines, and 8000 men in less than an hour beat 30,000 Italians at Fornova. The conquest of Naples, however, was already lost; Ferdinand, king of Spain, who appeared in that country with the French as an ally, caused the rest of the army to be driven out by Gonsalvo of Cordova. The French gained nothing by this expedition but a dreadful malady, and Charles died of an apoplexy. Comines describes him as having a good heart but a bad head.

We are now arrived at the end of the fifteenth century. The Genevese Columbus had discovered America; the Portuguese Gama had doubled the Cape of Good Hope; the compass had opened the way to the new world, and commerce had proceeded thither as well as ambition. Speculations, until this time confined within narrow limits, extended themselves over the two hemispheres. Voyages informed the minds of men and banished their prejudices. A German, by the invention of printing, had rendered a still more important service to the human mind. In the mean time men disputed, as they will always dispute, and the realists and the nominalists contended with one another to know whether they ought to employ themselves about words or things. The sum of observation and experience, however, increased; dogmas became less imperious and creeds less exclusive; men began to think more of laboring to some useful purpose, and of knowing, in order to enjoy.

The reign of which we have now to speak is described, by the French historians, as the happiest in their history, yet without much appearance of external policy. Louis XII. was perhaps the best of the kings of France. He had a real and ardent love for the people, of whom he was called the father, and restrained the great, without ill-treating them. 'The king of France,' said he, 'does not avenge the injuries of the duke of Orleans.' For it was he, whom we have seen disputing for the regency in his youth, as the first prince of the blood; but age had matured him. Unfortunately the mania of conquest, however, pervaded the nation; and he yielded to the infatuation. At that time civil relations began to be more extensive in Europe. That ridiculous feudal policy, unknown to the ancients, which treats a nation as a dowry, an inheritance, an indemnity, and which makes the fate of nations depend on a bad administration, prevailed more than ever. Louis divorced his wife in order to marry the widow of Charles VIII., and to retain possession of Brittany. He had some claims on the Milanese in right of his grand-father, and he set out with an army (A D. 1501) to assert them. The Milanese were conquered in twenty days; Naples soon followed; and, always the dupes of Ferdinand's perfidy, the French, beaten at Carignoles, were again driven out of Naples. Louis by a treaty was about to give his daughter, with a third part of France as her dowry, to this treacherous ally, when the states, which he assembled at Tours, diverted him from it.

He afterwards had to contend with Julius II. the pope who made war in person, and mounted the breach. It was then that almost the whole of Europe entered into a league at Cambray against Venice, a powerful republic founded by poor fishermen. Louis marched first against the Venetians. Until betrayed by the pope and the Spaniards, forsaken by the Swiss, who were no longer the men of Morat, and fought only for those who would pay them best, he assembled the clergy, who decided on a war against the pope, and furnished a subsidy. The battle of Ravenna was gained over the Spaniards by Gaston de Foix, who perished in it. Money was now wanted, and the French were obliged to withdraw from the Milanese, notwithstanding the prowess of the famous Bayard. La Tremouille, however, re-entered that territory, and was defeated by the Swiss at Navarre. At the same time the English, united to the Imperialists, b

the French in Picardy. The Swiss penetrated as far as Dijon; in fine, after entering into a treaty with Henry VIII. king of England, whose sister he married as his second wife, Louis XII. died, the victim of numerous disappointments. He was economical and diminished the taxes; he knew how to search out merit in obscurity; protected the laborer and the artisan; watched over the administration of justice, and wished the law to be sovereign. It must be remembered, however, that at that time the law was nothing else than the will of the monarch. Unfortunately, in this reign, the states general only acted in appearance: the sole authority which seemed to plead the cause of the nation, was the parliament, which, according to its constitution, should have meddled with nothing but the judgment of suits. The people, however, deprived of the states, saw with pleasure a permanent and respected body becoming their defenders, although it was to give importance to itself. These judges sometimes resisted the royal power, refusing the formality of registering its edicts, and they shared the privilege of a veto with the legislative authority. Perhaps it was well that there should be the image of a deliberative assembly, which might struggle with the nobles; but it was often only the advocate of despotism. The parliament was at least useful in reducing arbitrary power within certain forms and regulations.

Louis XII. was called the plebeian king; Francis I. was the king of the gentlemen. He was also a descendant of Charles V. by another branch, and was a prince of handsome person, brave, prodigal, gallant, with high ideas of honor, a very brilliant knight, but a bad politician. 'We are laboring in vain,' said Louis XII., 'this great boy will spoil all;' his prediction was just. In order to carry on the war in Italy, the king began by selling the fees of the courts of justice, and setting out to gain over the Swiss in the pay of the emperor at the battle of Marignan; he beat them during two days. He then concluded a concordat with Leo X., which, annulling the Pragmatic sanction, and abolishing the elections of the clergy, transferred to the pope and the king the rights of the church of France: the Chancellor Duprat made this wretched treaty, because he wished to be a cardinal. The imperial throne being now vacant the king wished to compete with the emperor's heir and king of Spain, who, however, obtained the dignity and became Charles the Fifth. This rival of her prince was a terrible enemy to France, opposing the most refined policy to imprudence the most self conceited. Francis entered into alliance with Henry VIII; but Charles prevailed to disunite them; while another enemy, Leo X., assisted the emperor to deprive the French of the Milanese, where they had rendered themselves hated. All Europe was now therefore leagued against France, and one of her best and noblest warriors, the constable of Bourbon, being discontented, entered into the service of her enemies. Francis was not intimidated; he passed over into Italy, Charles's attempt upon Provence having been repulsed: but here slighting the advice of his oldest generals, he fought and lost the fatal battle of Pavia, and being made prisoner, after exhibiting prodigies of valor, graced the return of his conqueror to Madrid. Francis now agreed to ransom himself by the cession of Burgundy; but the treaty was not executed, the states of Burgundy refusing to pass under a foreign yoke. The king of France, however, obtained his liberty; and leagued against Charles with a new pope, Henry VIII. and the Venetians, he re-passed the Alps and laid seige to Naples. But here the plague broke out in his army, and he again evacuated Italy. On a definitive treaty of peace being signed at Cambray, his ransom was finally settled at 2,000,000 of gold crowns.

About this time the duke of Bourbon, not having the means of paying his imperialists, led them on to pillage Rome: on which the pope, who was taken prisoner, also paid a great ransom to Charles V., who begged pardon of him for this violence; but kept the money.

At this same period 'a new religious schism,' as our French neighbours call it, was preparing for the emancipation of the human mind, and for great political changes. Leo X., wanting money to build St. Peter's at Rome, commanded the preaching of indulgences; and when the Dominicans fulfilled this mission in Germany, and publicly sold in the ale-houses seats in Paradise, the Augustinians were much discontented at being deprived of all share of the profits. One of these monks, named Luther, say the historians whom we follow in this article, a fiery theologian, preached against the Dominicans, the pope, and all the clergy. The scandals of which he complained, were open, and served to support his discourses. He then attacked with the Scriptures, the doctrine and discipline of the church; he rejected the confession, broke the monastic vows, claimed for every man the right of praying to God in the language that he understood, and demanded the reform of Christianity. The pope excommunicated him; but in opposition to some juggling tricks, which might have made a few dupes in a credulous age, this reformer converted the whole of the north of Germany. Henry VIII., excommunicated for having changed his wife, and on account of the delay of a courier, separated from Rome through private pique, and constituted himself the regulator of the *protestants* of England; the reformed were so called, because they had protested against the diet of Spires, which condemned them. Charles V., after persecuting them, managed them with prudence. Francis, who had entered into alliance with them in Germany, burned them in a slow fire in France, with the approbation of the parliament and for the amusement of his court.

Sforza, the duke of Milan, having furnished a pretext, the king again asserted his claims to that territory. The emperor, on his side, undertook to invade France but without success. Being accused of poisoning the dauphin, he was cited before the parliament, which confiscated Artois and Flanders by a decree of default, and after this the king contracted an alliance with the sultan Soliman; with whom we have already seen the pope in alliance. The concerted plan failed; the cunning Charles obtained a truce, and a passage through France to go to

Ghent, which had revolted from him. Any other than Francis I. would have seized this opportunity of exacting a ransom in his turn; but this confidence of a man of bad faith is a fine testimony to the honor of his dupe.

The two princes having quarrelled, a new war broke out, A.D. 1542, and raged along all the frontiers. The king's galleys joined those of Barbarossa the Turk, and the count d'Enghien gained the battle of Cerisoles, in Italy, but without any advantage to France. Charles, in league with Henry VIII., penetrated as far as Soissons, and a peace was again signed at Crecy, which did not, however, procure the slightest rest to the world. On the inhabitants of Cabrières and Merindol, cantons of Provence, where the traditions of the Albigenses had been preserved, embracing Lutheranism, the parliament of Provence condemned them to the flames: the troops which were returning out of Italy executed this decree, and 3000 persons were massacred for the honor of the faith, by bands of robbers. These things did not prevent Cauvin or Calvin from making fresh proselytes to a reform more entire than that of Luther. He denied the real presence, suppressed the ceremonies of worship, and submitted the Scriptures and the faith to the test of reason. He, however, caused poor Servetus to be burned, who did not believe in the trinity. His doctrine spread in Switzerland, France, Holland, and England. Francis I. died of a disease called the Neapolitan in France, and at Naples the French.

Francis I. was the most absolute of the kings of France; he loaded the people with taxes without the authority of the states; and substituted, instead of these, assemblies of the nobles, that is to say, courtiers, whom it was his pleasure to consult, and who always approved his actions. He enslaved the Gallican church, instituted the censorship, sold the office of the judges, and corrupted the nation by his bad example. He was called the restorer of learning and the arts, because they grew while he was on the throne; he doubtless protected them, but the age for their advancement had arrived. The genius of republicanism had prepared the way for them in Italy; Erasmus, the Hollander, the Voltaire of the sixteenth century, had ridiculed the pedantry of theologians; liberty had peopled Florence with great men, and the Medici, merchants who had become magistrates, were the Mecænates of the age. The honor of the revival of letters has also been very improperly attributed to the Greeks, who, having emigrated from Constantinople in 1453, brought into Western Europe the reveries of Plato, a taste for subtilties that was by no means wanted, and the mania of erudition instead of the spirit of enquiry. Francis I. is only to be celebrated for having founded the college of France, and established the use of the French tongue in public documents.

The character of Henry II. much resembled that of his father; their reigns are also in some respects similar. The war was still carried on against Charles, in the course of which the king took Metz, Taul, and Verdun, and the emperor laid siege to Metz with 100,000 men. The duke of Guise, a celebrated member of the ancient house of Lorrain, repulsed him, when Charles avenged himself by rasing to the ground 400 towns, and soon after Europe heard with astonishment, that he had quitted the empire to retire into a convent. Ferdinand, his brother, was made emperor, and his son Philip II. king of Spain. The latter was the Louis XI. of this age, and the most powerful prince in Europe. He moved it with two great levers, the gold of Mexico and Peru, and religious zeal. While the French were carrying on a fruitless war in Italy, the duke of Savoy, his general, obtained at St. Quentin, a victory disastrous to France. Terror spread on all sides; Paris was fortified; the Spaniards could have easily entered it; Philip, however, thought proper to retreat. The duke of Guise, who was now appointed lieutenant general of the kingdom, repaired this loss by taking Calais from the English; but, when a peace was signed at Cateau Cambresis, it was stipulated that Calais should be restored in eight years (which has never been done) while the French were to keep possession of Metz, Toul, and Verdun. Henry II. was killed soon after this at a tournament, while jousting with one of his knights.

Under this reign, as under the preceding, women began to assume great influence at court; their intrigues, say the historians, have always been fatal to France. Henry II. suffered himself to be governed by his mistress, Diana of Poitiers, who had already governed his father. The ingenious Rabelais, and the lively Brantome, have satirised these two kings, and described the dissolute manners of the age. In 1558 the states were assembled in conjunction with the parliament, and figured in it as a fourth order: an anomaly which has not since been renewed. The nobles, humbled by Louis XI., had become the courtiers of his successors, until the luxury of the court had completely attached them to the king, and they appeared formed for obedience to his will. External wars now no longer occupied them, and, while they resumed a portion of their independence, those factions re-appeared of which religion was the motive or the pretext. The prince of Condé, and the king of Navarre, his brother, of the branch of Bourbon, were the chiefs of the protestant party; Guise, the uncle of Mary Stuart, the king's wife, directed that of the Catholics. The constable, Montmorency, had also his party. The imperious queen dowager, Catharine of Medicis, alternately protected and betrayed each party, while she endeavoured to preserve the balance between them, by the celebrated maxim, 'divide and rule.'

The magistrate, Anne Dubourg, having been hanged as a protestant, A. D. 1560, his brethren formed a conspiracy at Amboise, to revenge his death. This the duke of Guise defeated, and the conspirators perished in arms. The punishments of the Calvinists were now redoubled; they defended themselves, and in the assembly of Fontainbleau claimed liberty of conscience, but in vain: the states were convened at Orleans, in order to draw the Bourbons thither: and when Condé attended he was arrested, and

condemned, and would have been executed, had not the king died. Francis II. is described as an excellent young man; but he was a weak prince. His brother Charles IX. succeeded him at the age of ten years.

The states were now very much agitated: L'Hospital, a virtuous citizen, and philosophical magistrate, a prodigy for his time, endeavoured in vain to bring their minds back to moderation and union. He merely succeeded in re-establishing the Pragmatic sanction in relation to the election of bishops. Catharine then turned about from the Calvinist or Huguenot party (from a German word signifying confederates), and proposed to terminate the existing differences, by a conference at Poissy which only revived them. It was at this period that the Jesuits first established themselves in France.

A massacre of the Huguenots now took place at Vassy in Champagne, in consequence of some injuries committed by the duke of Guise's people. At Toulouse 4000 of the Protestants were murdered; an outrage which the people of Toulouse, for two centuries, have annually celebrated, and this furnished a fresh motive for rupture. The civil war broke out; the Protestants were conquered by the royalists at Dreux; and two of their ablest generals were taken. The rapacious and ambitious duke of Guise laid siege to Orleans, and was assassinated there: he had made use of religion wholly as a means of aggrandising himself. A short peace ensued; but the persecution of the Protestants soon re-commenced; and was continued with impunity. The Huguenots were driven to extremities. Condé undertook to carry off the king, in order to get possession of the government; for so absurd are the consequences of absolute power, that it is often exercised in the name of the titulary sovereign against himself. This attempt failed, and the doubtful battle of St. Denis took place soon after (A. D. 1567), in which the able Montmorency was slain. On a renewal of the war, the Huguenots, assisted by the Protestants of Germany and England, ventured upon another pitched battle at Jarnac, and were defeated by the duke of Anjou, the king's brother. Here the prince of Condé fell; assassinated it is said, near the field of battle, and while surrendering himself to his enemies as a prisoner. Coligny, a prudent chief, repaired this defeat, and rallied the forces, until Henry of Navarre, whom he had formed for war, was placed at the head of the party. The duke of Anjou was again victor, however, at Mocontour.

After these checks, the Protestants again made an advantageous peace, and having had four cities surrendered to them as pledges for their civil and religious liberty, Catherine drew their chiefs to court, and lulled them into a false confidence of security. Young Henry had just married the king's sister; and scarcely had the festivities closed, when on a sudden, in the dead of the night, the alarm bell was sounded, and the royalists rushed into the houses of the Huguenots, and massacred them without distinction of age or sex. The Louvre flowed with blood; the infamous king fired from his balcony upon the French. At the same moment similar horrors were perpetrated in the different provinces of the kingdom; but in the midst of this infatuation of cruelty, every one was filled with admiration at beholding two of the king's officers (D'Orthez and Curzay) who refused to act as executioners. The illustrious Coligny, however, was sacrificed; and on this occasion the infamous Charles IX. said, 'A dead enemy always smells well.' Henry and the new prince of Condé were compelled to a sudden abjuration of their sentiments; and the king openly avowed that every thing had been done by his orders: even the parliament applauded this massacre, and decreed an annual procession to commemorate the murder of 100,000 Frenchmen! It is sufficient at this day to mention St. Bartholomew's day to excite horror; and yet at this day, observes an able French writer, it finds some apologists.

If ever men were justified in assuming the sword in defence of religion, the Protestants of France were at this period. (A. D. 1573). The war was again kindled; and the duke of Anjou lost 4000 men at the siege of La Rochelle; the women even fought with the courage of despair. The year following the party of the malcontents was formed, to which the Huguenots united themselves, and the contest still continued. In the midst of these transactions the king died. We learn with some surprise, says the worthy writer above alluded to, that this monster had some sense, wrote verses, and protected learning. During this reign the long continued council of Trent terminated its sitting; after being occupied wholly in matters of diplomatic etiquette, and in condemning the doctrines of the Protestants. At this time also the Belgians and the Hollanders rose against the Catholic despot, Philip II. The duke of Alva, his general, committed in those countries horrible excesses against the Huguenots, who were here called Beggars. But the latter found happily those means of resistance which enabled them to found one of the richest and most industrious communities of Europe. The manners of this age are a mixture of corruption and barbarity, of stoicism united with superstition, and debauchery with crime. By an ordinance of 1574, in conformity with a bull of Gregory XIII., the year, which used to commence with Easter, and consequently to alter every year, was fixed to begin regularly on the 1st of January. The parliament for three years opposed this reform: it had always an antipathy to useful innovations.

The duke of Anjou, who had just come from Poland, where he had been chosen king, returned to France under the name of Henry III. He proved himself a very successful general of an army: as a king he was idle, trifling, superstitiously devout, and given up to infamous debaucheries. He was advised to act mildly towards the Calvinists; he declared war against them. His brother, the duke of Alençon, and Henry of Navarre, afterwards Henry IV., united against him, and, in an edict of 1576, the Calvinists obtained some political advantages. The holy league was then formed: a combination of mad Catholics who pledged themselves to defend religion and the king in blind obedience to their chief, Henry of Guise. The states were

assembled at Blois, and the leaguers had the ascendancy, for the king was compelled to authorise the league; but they soon began to treat him with little respect; and having consulted the pope, to know if they might disobey him for the service of religion, were answered in the affirmative. Guise put forward the old cardinal Bourbon, who issued a manifesto in the name of all the Catholic monarchs of Europe; and the court, intimidated, yielded entirely to the leaguers. After this, however, the war called that of the three Henries broke out. Sixtus V. excommunicated Henry of Navarre; and the punishment of Mary Stuart, ordered by the Protestant Elizabeth, increased the fury of the Catholics. Henry, however, beat the royalists, under the command of Joyeuse and other favorites, at Coutras; while Guise, on the other hand, defeated the German Calvinists who were coming to his assistance. In the mean time, insurrections were organised at Paris under the name of the Sixteen; that is, the sixteen quarters of the commune. The Sorbonne, which supported them, decided that the government might be taken out of the hands of weak princes; and, having assembled at Nancy, the leaguers dictated orders to the king, who sent for the Swiss to Paris. The fanatical citizens immediately ran to arms, barricadoed the streets, even up to the Louvre, and surrounded the troops. The king fled and left the capital to Guise and the league. This was 'the day of the barricading.' The leaguers imposed on the king a new union against the heretics; and, about the same time, the English defeated the great invincible fleet of Philip.

The states re-assembled at Blois (A. D. 1588), when the leaguers again had the majority. They occupied themselves much about the council of Trent, and not at all in the establishment of order. The Guises were now at the summit of their power, and could with equal ease play the parts of Pepin or of Capet. This the king perceived, and, being unable to resist them, procured, to his disgrace, their assassination. The rage of the leaguers was thus redoubled: in the duke of Mayenne they soon found a second head: they cursed the king in the pulpit; and those members of the parliament who resisted them were imprisoned in the bastile. At last the king, having only a few towns left, felt the necessity of being reconciled to Henry of Bearn; who received him very cordially and led him back towards Paris. They had already reached St. Cloud, when a young Dominican, under the direction of the leaguers, stabbed the king with a knife; a murder which the Parisians celebrated with joy: the Catholics generally, instigated by the Jesuits, endeavoured to prove from Scripture that it was lawful to kill a tyrant; and Clé, the assassin, was regarded as a saint. In this reign the order of St. Michael, founded by Louis XI., having fallen into discredit, that of the Holy Spirit was instituted to flatter the Catholics. The intriguing Catherine died in 1589, detested by all parties.

Sect. V.—The Branch of the Bourbons.

The branch of the Valois being extinct, Henry of Bourbon Navarre ascended the throne as a descendant of Louis IX.: he merited it by his virtues. Brought up in the mountains, and among shepherds, he had little knowledge of that which corrupts princes; he was a man long before he was a king; and became, so to speak, the author of that legitimacy which he had to prove sword in hand. Acknowledged only by a few provinces, in full possession of none, he first struggled against Mayenne, whose numerous army included a considerable body of Spanish infantry, at that time the best in Europe. He was on the point of determining to go over to England, when encountering Mayenne at Arques he defeated him with 5000 men, and marched immediately towards Paris, which he was very near surprising. Here the old cardinal of Bourbon, his cousin, had just been declared king under the title of Charles X. Henry, after this, vanquished Mayenne, in another battle, at Ivri, where he was heard to cry out 'Save the French,' and then blockaded Paris. The leaguers defended themselves with fury; fanaticism supported them; they even formed regiments of priests and monks; but the famine became frightful and bread was made of the bones of the dead. Henry at last suffered provisions to be sent in to the besieged until the celebrated Farnese, the general of Philip II. came with an army to raise the siege.

During this time the duke of Savoy invaded Dauphiny and Provence; and, the new pope having proscribed Henry IV., Philip II., 'the demon of the south,' assisted by the Sixteen, labored to get himself elected king of France. Henry laid siege to Rouen, which Farnese delivered, and war raged throughout almost all the country. To increase the anarchy a new faction was formed at Paris, called the party of the politicians, which united with that of the malcontents. It consisted of some moderate Catholics who sought for peace by recognising the king. At length the various parties came to a conference. The king decided on recantation, and said, 'Paris is worth a mass;' Mayenne signed a truce, and the league fell by the power of ridicule and contempt in an attempt to assassinate Henry, who entered Paris on the 22nd of March, 1594.

Thus closed the sixteenth century, the century of the Reformation, and of the most glorious events for mankind. Copernicus, Galileo, and Torricelli, notwithstanding the power of the inquisition, applied themselves in this memorable era to the study of the philosophy of experience and reason, while the pedants of the university were contending about the pronunciation of the letter Q. Bacon, the chancellor of England, introduced some order into the catalogue of human sciences; Montaigne carried independence of mind into the study of man; but political questions were still approached with much timidity. Morus, Bodin, and Grotius sought for the laws of the social body, rather among the ancients than in nature, while Boëtius attacked despotism with quotations and declamation. The Reformation, however, must be admitted, spread something of a republican spirit: the Calvinist politicians, in 1575, traced the plan of a constitutional organisation, and were the liberals of the age; but public

opinion was not ripe for their efforts. Then also, as at all times when the human mind is emancipated, the enemies of religious and civil liberty were leagued together to reduce it again under their yoke. The Spanish kings had strengthened their throne by a union of the tiara with the sword; the inquisition had been established; and though for this time, at least, it was repulsed by France, the policy and fanaticism of the priests again rallied, and the society of the Jesuits was founded, to become the curse of the world.

Holland, struggling both against the ocean and the Spanish aggression, triumphed over both. Called forward by the states of this republic, the brother of Henry III. wanted to assume the authority of a king, but the French stupidly cried out 'Live the mass,' and they were irritated, and drove them away.

Henry IV. at first re-established the parliament; then he undertook to allay the animosities of the Calvinists and the leaguers; which the Jesuits as steadily inflamed. They were, however, by the advice of the parliament, driven out of the university and the church, until they obtained from the pope the absolution of the king, as the price of their re-establishment. At this time Mayenne was not reduced, but the king defeated him at French Fontaine, and granted him an amnesty. The duke of Epernon also having revolted, submitted, and war was declared against Philip II., who took Calais. On this the king, who wanted money to oppose him, summoned the nobles at Rouen, to take their advice; that is to say, to ask for subsidies, and told them, that his fairest title was the quality of a gentleman.

Ultimately, the Spaniards were driven back; Mercœur, governor of Brittany, who still held with the league, submitted, and a treaty was signed with Philip, who died soon after. At this time, the Calvinists having loudly expressed, in their meeting at Saumur, their discontent at the little favor they enjoyed, Henry issued the celebrated edict of Nantes, in which the exercise of their religion was tolerated under some restrictions.

An event of this period leads us to speak of the French peerage. According to one of the principles of feudalism, a man was to be tried by his peers. The dukes of Normandy, Burgundy, and Aquitaine, the earls of Champagne, Toulouse, and Flanders, and other great vassals, could alone judge in matters that concerned each other; and they had a right to enter the king's council at any time, as they were themselves sovereigns: it has been seen how the royal power was oppressed by such counsellors; but, by their pride or their carelessness, the chief of them were kept from repairing to the court. Philip the Fair created new peers, in order to weaken and pervert this institution, which was still so imposing that the rank of peer was superior to that of prince of the blood. During the civil wars, however, the peerage had declined; the nobles, being divided, became less formidable, and Henry IV. lowered their claims by a vigorous display of the royal will. But the governors of the provinces had usurped immense power in the time of the anarchy. They formed the project of preserving this in the same way as the counts of the time of Charles the Bald had done; in fact, they wished to recommence the feudal government. Mayenne, Mercœur, and Nemours strove to make their honors hereditary. Biron treated with the duke of Savoy to attain the same object. The plan was to make France a feudal and electoral confederation like Germany. But the conspiracy was discovered, and Biron, although the king's old companion in arms, was beheaded by a decree of parliament, A. D. 1602.

The latter events of this reign were, the promise made to the pope to recall the Jesuits; the conspiracy of Henrietta of Entragues, to whom Henry had made a promise of marriage; and the mediation between the pope, the Venetians, Spain, and Holland. Henry took arms against Austria, and proposed, they say, to execute the plan of a perpetual peace and confederation of Europe. At this time he was assassinated by Ravaillac. Two other fanatics had already attempted this crime; excited to it, as was this wretch, by the Jesuits.

Henry, assisted by Sully, his friend and minister, introduced order and economy into the public treasury, which formerly not more than one-fifth of the taxes ever reached. He was truly a good man, though he reigned like an absolute monarch; and repressed every rising attempt at freedom, even to the resistance of parliament, by the empty parade of seats of justice. How, indeed, could such a man sign the cruel edict, that condemned his subjects to the whip and the galleys for killing a rabbit? The reason may be easily given, though it is with pain; the despotism of Richelieu and of Louis XIV. is to be traced to Henry IV. After this we may cease to reproach him for loving gambling, and seducing the wives of his subjects. But he was popular, and still lives in the gratitude of the nation; a glory which, to the present day, belongs almost solely to him.

Louis XIII. being only nine years old, the parliament gave the regency to his mother, Mary of Medicis: this tribunal thus again assumed the rights of the states-general. The benefits of the preceding administration were lost; Sully was dismissed, and his savings dissipated. The Florentine Concini, since marshal of Ancre, and his wife Galigai, ruined France by their influence over the regent. The nobles and the factions rose again, and, when the states-general were assembled, their time was spent in empty discussions. They had not since that time been convened up to the period of the revolution. The complaints of parliament about the bad administration of affairs were resented; the prince of Condé was arrested; he was at the head of the discontented and the Calvinists, who rose several times, and obtained some advantageous treaties. One of the king's young pages, who had his ear, persuaded him to dismiss his minister, in order to shake off the yoke of the regent, whom he treated very harshly and banished. She twice revolted, assisted by some of the lords. The prince, cruel through his weakness, caused Concini to be assassinated, while his wife was accused of sorcery and burned.

The new favorite received, as a gift from the king, the immense riches arising from their malpractices. Louis XIII. was one of those men, who execute without energy the suggestions of others, and who avenge themselves for their habitual submission, by fits of brutality.

At this time appeared the celebrated cardinal Richelieu; he was the creature of Concini, and had lived retired since the fall of the latter. Possessed of a disposition the most inflexible, and the most ardent desire of making others feel his power, he subjected every thing to the force of his despotic but able mind. He at first attempted to make himself feared by the great, and caused several of them to be condemned to death by commissions. He surrounded himself with guards; suppressed the high offices of admiral and constable, which formerly conferred immense authority; and treated the Calvinists with sufficient kindness to excite their hopes, that he might afterwards succeed in his project for oppressing them, by taking away their towns. After a famous siege, which he conducted in person, and a truly heroic resistance of a year, displayed in all the horrors of famine, he took Rochelle, which was defended by an English fleet, and he caused this bulwark of the Calvinistic faith to be rased to the ground. He then reduced Rohan, the general of the reformed army, and discovered, it is said, that the plan of the Protestants was to found a federative republic, like that which they had seen so prosperous in Holland. Had they succeeded, how different would the history of Europe have appeared!

We are, in fact, not now treating of the reign of Louis, but of Richelieu, before whom every thing bowed. Roussillon was conquered in 1628; the house of Austria was humbled, and several wars were carried on against the Spaniards with various success: Catalonia was given up to France. The genius of Richelieu could avail itself of all the resources of policy; and he is entitled to the praise of gloriously maintaining the rank of France among the nations of Europe. There is, however, something sad and monotonous in this reign; every thing in it bears the mark of despotism. Weak attempts were made, from time to time, to resist its progress, but they were always effectually suppressed; even the noblest families connected with them did not escape. The marshal Marillac was executed in 1630; the duke of Montmorency, taken in arms, and condemned by the parliament of Toulouse, was doomed to the same fate, notwithstanding he obtained the king's pardon, in 1632; and his estates of St. Maur, Ecouen, and Chantilly passed to the house of Condé, as national domains. Cinq Mars and de Thou were beheaded in 1642, for having conspired against the cardinal, with the knowledge even of the king himself, who was weary of the haughty pomp of his minister. At length this tyrannical priest died. Louis XIII. breathed a little, and then died also, 'as if,' say our French authorities, 'Richelieu had ordered him to follow him to the tomb!'

The absolute power of Charles VII. and Henry IV. at least preserved the elasticity of the French character. Richelieu, like Louis XI., humbled and degraded it; under him France was rendered miserable; it seems as if despotism stupified the people, and inflicted barrenness on the soil. The claims of parliament were of very little avail under such a master. One day, the magistrates having refused a registration, Richelieu had them cited before the king, and kept them on their knees during the whole of the audience. He, however, instituted the academy, which had the patience to draw up his apotheosis annually for 150 years; but the Cid, which he suppressed, gave scope to the genius of French literature, and Descartes, persecuted by the devotees, went to philosophise in Sweden.

Louis XIV. was at this time (A. D. 1643) five years old. The parliament still arrogated to itself the right of appointing the regency. The queen dowager, Anne of Austria, a coquettish and versatile woman, obtained it. Mazarine, an Italian cardinal, her favorite, who had been elevated by Richelieu, governed for her. He was a clever and supple man, who cunningly acted the despot, and seemed to regard the art of making dupes as the only art of reigning. The war with Austria continued, but without any result. The young d'Enghien, afterwards the great Condé, showed himself on this occasion: he triumphed at Rocroy and at Fribourg; Turenne was victor (1644) at Nordlingen, and took Dunkirk; and Condé was again victorious at Lens. This war, in which the Swedes were useful allies, terminated in the treaty of Westphalia (A. D. 1648), which arranged the Germanic body, and limited the imperial power.

At the peace, the discontents of the nobles broke out against cardinal Mazarine, and, united with the parliament, they began the association called La Fronde, while the people sometimes supported them, and opposed the two magistrates appointed by the court. There was, however, hardly any thing interesting to them in these quarrels of a few ambitious and turbulent men: bowed down under the yoke, they gained nothing by these disputes; these factions were in fact the clubs of despots, who laughed and jested at the public wrongs while they were contending for power. A libertine prelate was seen playing the part of Catiline, and, while he recited his strange exploits, he rendered civil war amusing. At length Condé, discontented with the court, which he had at first served, forsook it; and though Mazarine had him arrested, he afterwards released him. Seeing the storm growing blacker, this great man at first left France; but, a price being set on his head, he returned, raised 7000 men, and united himself with the Frondeurs and the Spaniards. Mazarine now raised a force, which he placed under the command of Turenne, and an engagement ensued near the fauxbourg of St. Anthony; in which Condé was victorious after a bloody battle. The parliament on this appointed the irresolute Gaston, duke of Orleans, lieutenant of the kingdom. Mazarine retired from court, and the Fronde having no longer any pretext dispersed; but the king and the cardinal soon re-entered Paris, and the natural result of this parade of insurrection was to render their power more absolute. Condé now

rejoined the Spaniards in the Low Countries, and the war continued for a long time between him and Turenne; it was terminated, however, at last, by the treaty of the Pyrenees. France retained possession of Artois, Roussillon, and Alsace, and Louis XIV. married (A. D. 1659) the infanta Maria Theresa of Spain. Mazarine died, leaving the despotism in good hands. Louis declared, that he wished to reign in his turn. He had already gone into the parliament in his hunting dress, his boots, and his whip in his hand, to forbid them meddling with state affairs.

Louis XIV. formed the design of being the most powerful monarch in Europe; he succeeded in it by the assistance of some superior men, whom he had the talent of discovering. Colbert restored the finances, encouraged commerce and industry, protected the sciences, and organised the administration. A man of genius, named Riquet, devoted his fortune and his life to the construction of the canal of Languedoc. A marine was formed, which was able to contend with those of Holland and England; the king made his ambassadors respected abroad; and, Philip IV. being dead, pretended claims were set up in favor of his daughter Maria Theresa, in order to declare war upon Spain. Flanders was conquered in 1668, and Franche Comté in three weeks. Holland, England, and Sweden united as mediating powers; and, by the treaty of Aix-la-Chapelle, la Comté was restored, but Flanders was retained by this fortunate prince and fortified by Vauban.

Louis, however, became enraged against Holland; he must necessarily have an antipathy to a republic as bold as it was proud. He raised against them 200,000 men; and, after having entered into an alliance with the king of England, effected the passage of the Rhine (A. D. 1672) in company with Condé, Turin, and Luxembourg, which at that time was extolled as a great military exploit. Holland was invaded, and the king proposed the most ruinous conditions as the price of peace; but despair produced exasperation; Ruyter, who had risen from the rank of a cabin-boy to that of an admiral, often beat the English and French fleets; the Hollanders laid their country under water to preserve its liberty, and Louis evacuated it. Various neighbours of this imperious despot now took arms to quell his pride; he reconquered Franche-Comté, and made Turenne burn the palatinate. Condé gave battle to the stadtholder of Holland, which cost the lives of 25,000 men. Duquesne by three naval victories rendered the French flag formidable; and the peace of Nimeguen consolidated the conquests of the French arms.

After this, however, the stadtholder attempted an invasion of France, and the marshal of Luxembourg was sent to repulse him. In 1681 Strasburg was taken. The king sent a fleet about the same time to bombard Algiers, in order to teach the pirates of the Mediterranean to respect the French commerce; he afterwards bombarded Genoa for having assisted Algiers. He was now at the height of his power; his person, his palaces, his exploits, were endless themes of flattery; he was said to be the model of all that was handsome and magnificent, and the unheard of splendor of Versailles, in which the wealth of France was swallowed up, still intoxicates the people. He now became inspired with the desire of extirpating heresy: and the Jesuits, the ladies, the poets, and orators applauded it. Missionaries were sent into the Cevennes, accompanied by dragoons, who massacred the Calvinists, in order to convert them. The perpetual edict of Nantes was revoked, the temples demolished, children were torn from their parents to be made Catholics, and 800,000 peaceable Christians compelled to carry into strange lands their industry and resentments. Indignant Europe at last entered into a league against this persecuting despotism; of which the stadtholder, the prince of Orange, became the soul and strength. This prince having been called as William III. to the throne of England, and the parliament having driven out the Stuarts, Louis offered his protection to the dethroned king, James II. A terrible war broke out; the palatinate was again set in flames by order of the minister Louvois: Luxemboug gained victories at Fleurus, Steinkerque, and Neawin, over king William, 'an unsuccessful soldier, but a man of great ability,' say the French writers; and the philosophical and fortunate general, Catinat, triumphed over Savoy at Staffarde, and Marseilles. On the other hand, Tourville, at first superior to the Anglo-Hollanders, lost fourteen ships of the line at la Hogue; while the privateer, Duguay-Trouin, ruined the commerce of the enemy. Every where humanity groaned under useless carnage. The peace at Ryswick was finally made (1697) through weariness. Louis, as formerly, did not sign it officially, and France was ruined. Money was made of every thing; the title of nobility, hitherto purchased by fiefs until the time of Henry III., was sold for 2000 crowns.

The king of Spain, having no direct heir, suffered himself to have extorted from him, after much hesitation between the houses of France and Austria, a will in favor of Louis's grand-son, the duke of Anjou; and this prince accepted the crown of that country, knowing, however, that he exposed himself to a terrible war. When Louis sent him as Philip V. into Spain, he told him to come no more over the Pyrenees. A little counterfeit abbé, whom the proud Louis had disdained, and who had become one of the emperor's best generals, prince Eugene, obtained great advantages in Savoy over old Villeroi. The duke of Savoy, Victor Amadeus, abandoned Louis, notwithstanding the bands which united him to the Bourbons. Marlborough now triumphed (A. D. 1703) in the Low Countries; but Villars also defeated the imperialists at Hochstet, where the year following the French were defeated in their turn, by Eugene and Marlborough, while he was absent. The English took Gibraltar and Barcelona; Vendome, however, the worthy grandson of Henry IV., repulsed Eugene in Italy, while Marlborough gained the decisive victory of Ramilies over Villeroi. Fortune then changed in the south; the French army was beaten at Turin; Toulon was besieged; the arch-duke was

crowned at Madrid, and Louis's protégé, Philip V., was on the point of losing Spain, if Berwick had not gained for him the battle of Almanza. Eugene now traversed the Netherlands, went from north to south, and south to north, and took Lille, in conjunction with Marlborough. Louis, on this, stooped to seek a peace; but such hard conditions were imposed upon him, among which was that he should set aside the succession of his grandson, that he preferred continuing the war. After many efforts of heroic constancy, the French army, commanded by Villars, was defeated in 1710 at Malplaquet, where the loss of the enemy however was immense. The king now again humbled himself, but his offers were rejected. Vendome then retrieved his affairs in Spain; Marlborough retired in disgrace; a truce was concluded with England; and Villars, having surprised Eugene at Denain, obtained one of those splendid victories which often save empires.

A respectable historian assures us, that the allied sovereigns declared, before the battle of Denain, that they were not fighting with the nation of France, but with its head, whose ambition and despotism were incompatible with the peace of Europe. They demanded, as a condition of the peace, the periodical convocation of the states-general in France. Preparations were making at court to retire behind the Loire. We might thus think we were reading the history of our own times, as it has been observed: and can it be true, asks a modern French writer, that but for the victory of Denain, the representative government would have been established in France a century sooner?

The peace of Utrecht was the consequence of this victory. Villars, on the emperor hesitating to sign it, passed towards the Rhine, repulsed the imperialists, and signed with Eugene the peace of Rastadt. The issue of this ruinous war was less fatal than France might have expected: the most humiliating condition was the destruction of the port of Dunkirk. At its close, the death of the dauphin, and of his son the duke of Burgundy, almost at the same time, put a finishing stroke to the misfortunes of Louis. He died at the age of seventy-seven, having reigned sixty-two years; bequeathed to France 3,111,000,000 livres of debt, and been the means of the slaughter of more than 1,000,000 of men. Almost deified, while alive, he died, as might be expected, forsaken, and the people insulted his corpse.

The seventeenth century has been called the age of Louis XIV., because this prince contributed to give splendor to it by his magnificence and taste for a certain sort of greatness. But what good did he effect for France or Europe? He rendered the former powerful, but a slave; 'he is the cause,' say some of their best historians, 'of the French having lost their national spirit.' By constituting himself the dispenser of glory, as well as of fortune, he demoralised the nation; it forgot itself, to think only of him; and when he uttered that saying, 'I am the state,' he was believed. His vain splendor gave false ideas to the nation, which is but too much inclined to make the man of the present moment its idol and its palladium. Under Louis XIV. Racine, Boileau, and Moliere, it is true, corrected the public taste and produced some masterpieces; but without Louis, Corneille, Pascal, La Fontaine, Fenelon, and La Bruyère, would have rendered France illustrious; reason would have had more free instruments; genius, delivered from the contemplation of the great king, would have aspired to conceptions more noble because more useful. The spirit of independence, roused by the struggle of the Fronde, would not have been repressed; the examination of the true interests of nations would not have been retarded; and the seventeenth century would, perhaps, have been at once the age of reason and of genius. In order to oppress thought, despotism borrowed, as usual, the yoke of the faith. Bossuet was the apostle of the monarchy of Louis XIV. and preached his infallibility. The jansenists were persecuted less on account of the doctrines about which they disputed, than because they thought in their own way, and destroyed the unity of the church. All France must think like the king; from this arose that thick varnish of hypocrisy which concealed the corruption of manners. The Tartuffe, sanctioned by the court, is the triumph of genius! This Louis XIV. moreover, so absolute, who would not suffer himself to be governed by his mistresses, closed his reign by allowing a Jesuit his confessor, to share his power with him; together with an old woman, whom he had married the widow Scarron, the governess of his legitimate bastards.

The great grandson of Louis XIV. also became king at the age of five years. The parliament violated the will of the late king, and named his son, the duke of Orleans, absolute regent. He was a very witty debauchee, and careless about business. The monotonous grandeur of the former reign, joined to its reverses, had, at length, wearied the French; and, delivered from the oppressive constraint which ceremony and intolerance had imposed upon manners, they abandoned themselves to the licentiousness of a foolish joy, and rushed into an opposite extreme, like children who have escaped from the eye of a severe master. During the war against Spain, stirred up by the old Italian curé Alberoni, who dreamed of some day overturning Europe, the design was conceived of paying the debts of Louis XIV., and an adventurer of the name of Law arrived from Scotland with a system of finance which was eagerly received. Every thing was paid with the money of the dupes, who received, instead of it, paper and gigantic hopes, until stock-jobbing drove the nation mad; the rich ruined themselves, and the poor became rich and noble. The abbé Dubois, the minister, was as vile as his master was corrupt: such a man was, characteristically enough, the sycophant of the Jesuits.

The regent died in 1723, just as the king entered into his majority, and the duke of Bourbon was appointed minister. He signalized himself only by some persecutions of the Protestants. The abbé de Fleury, who succeeded him, was a very moderate and prudent man, about seventy-three years old; he possessed the talent of quieting and conciliating the minds of

the people, and procured a long peace for France, which had been disturbed by the expulsion of Stanislaus, the king of Brittany, father-in-law to Louis XV. Alliances were contracted; a war was undertaken against the emperor, allied to Peter the Great, who for the first time made Russia the theme of conversation in Europe. The campaign in Italy in 1734 was decisive; peace was signed at Vienna, and France gained Lorraine, of which Stanislaus had the sovereignty only for his life.

The war of 1740, for the emperor's succession, which his daughter, the illustrious Maria Theresa wished to preserve entire, was less successful. Several French armies were destroyed without fighting: but the retreat of the marshal from Belle Isle into Germany has been much admired. Frederic, the famous king of Prussia, now began to exhibit his great talents as a politician and general; he conquered Silesia. In this war France was the ally of Prussia and the elector of Bavaria, the candidate for the empire. She had to contend against England, Holland, and Piedmont. The battle of Fontenay, in France, was gained against the two former powers by marshal Saxe; Louis XV. being present at the battle in which his family fought valiantly. Success was balanced in Italy, and Maria Theresa's courageous perseverance was crowned (A. D. 1748) by the peace of Aix-la-Chapelle. The war also raged at sea: some French merchants made themselves masters of Madras, and their trade was respected in the Indies. At this time Charles Edward Stuart, assisted by France, landed in Scotland, but failed after some surprising exploits.

The war soon began again, or rather the hostilities in the colonies were not interrupted; an English expedition was despatched thither without the form of a declaration of war, and the French armies were at first successful in Canada and in Europe; Richelieu took Mahon; a naval battle was gained; D'Estrées beat the English at Hastembeck, and Hanover was conquered. In this war the ancient policy of Europe was overturned; the strongest alliances were formed. France united with Austria against Prussia; Frederic was lost; Soubise marched against him with the powerful army of the coalition; when his army met with a defeat as complete as that which fifty years afterwards took place at Jena. The war continued until the treaty of Paris, which deprived France of all its American possessions except New Orleans. The alliance then contracted with Spain, under the name of the family compact, was not to the advantage of France. Chatham governed England, the power of which he raised to the highest pitch.

To finish the picture of this reign, we must mention the endless religious disputes and political intrigues excited by the bull unigenitus, which assumed the infallibility of the pope; the persecution renewed by the Jesuits and the government against the Jansenists and the parliament; and the ridiculous miracles with which the latter endeavoured to defend themselves. The dissolute conduct of the court at this time, indeed, and the scandal of the private life of the king, who gave himself up to the most abandoned women, and spent the greater part of his time in the orgies of the Parc-au-cerfs, while the French were in want of bread, is still in lively recollection throughout France; as well as the mean despotism of the lettres de cachet, and their attendant oppressions. But why should we be delayed by this base spectacle of the decrepitude of arbitrary power? It is enough that, by a reaction, it has produced the greatest benefits. The reign of Louis XV., therefore, has been said to be that to which France owes the most; it made the people think; it fully opened their eyes to the evils of absolute power; and then hastened the epoch of national manhood and deliverance. Degraded despotism is as instructive to nations, as despotism, surrounded with its glory, is fatal to them. We need only therefore speak of the ministry of Choiseul, who rendered France glorious in her external relations, and conquered Corsica, and of the expulsion of the Jesuits, who had just been assassinating a king of Portugal, and were suspected of directing the poniard of Damien against Louis XV. This is a curious event in a reign in which fanaticism sacrificed the old Calas and the young Labarre; and in which Avignon was restored to the philosophical pope, Clement XIV., as a recompense for abolishing the Jesuits. The patriot Chalotais was imprisoned in this reign for making use of the parliament of Brittany to denounce the tyranny of an extortionate governor.

In reviewing the march of the eighteenth century, the subject, on the one hand, of the malediction of the partisans of ignorance, fanaticism, and passive obedience, and extolled on the other by the disciples of anarchy, and of a false philosophy, we shall allow our French authorities, as we have frequently done in this paper, to speak freely on French topics. Whatever blame may be attributed to the corruption of the regency, it is to this period that the French are indebted for the emancipation of their minds. The most popular of their historians say, 'The literary paradoxes of Lamotte attested at least some independence of mind, and the desire of opening up new paths to knowledge. Fortenelle rendered science popular. Montesquieu took a bold view of the manners, faith, and laws of nations. Voltaire carried a philosophic spirit into literature; while Massillon, by introducing it into the pulpit, rendered in a moment Christian eloquence the interpreter of close reasoning. The protestant refugees also, Bayle especially, contributed more or less to the emancipation of thought;' but see our article Bayle. 'Frederic of Prussia, who was not a philosopher, but merely a man of a strong mind,' says M. Bonet, 'for philosophy is the science of doing good to mankind,' sent for Voltaire, and protected him openly. He formed in France an association of well-informed if not very sober philosophers, who undertook the Encyclopædia, that is to say, the grand thought of Bacon submitted to alphabetical arrangement. Another society, less boasted of, rendered perhaps greater services to humanity, we mean the economists, who have not been sufficiently valued, because they had recourse to ridicule. Notwithstanding their dogmatic tone, the soaring character of their style, and their too ex-

clusive inductions from principles at this day disputed, we owe them some gratitude for having directed the curious enquiry of all towards the examination of questions of public interest. Strange systems have multiplied, but the attention has been generally turned to the useful; the causes of the misery of the people have been enquired into, and the public mind has been formed. Adam Smith, and the Scotch, have applied to this study that rectitude of mind which they have manifested in philosophical history. The Italians distinguished themselves by their sagacity and investigation, but the French economists must still be regarded, say the French writers, as the forerunners of the enlightened philanthropists, at this day spread over both hemispheres. Voltaire, D'Alembert, Diderot, Duclos, Mably, Condillac, Marmontel, and Helvetius, certainly sapped the foundation of many baleful prejudices, which obstructed the march of the human mind; Raynal displayed to the new world an immense futurity of prosperity; and Rousseau, in his unnatural way, developed something of the philosophy of the heart and of nature.

Section VII.—The French Revolution.

It is difficult to know how to commence the history of the Revolution; its true preamble has certainly been already given in the history of the entire monarchy. The existence of a nation (observe our lively neighbours) may be compared to the life of man: he is born, he grows, he prospers or meets with adversity; he has his ailments, and their cures and relapses; and he dies after having given life to a new man. The nation of the old regime exists no longer, a new nation has taken its place; it is of importance to know how it has arisen, and for that purpose to take as copious a view of its original and progressive courses as possible.

Strange social combinations, established by chance, by force, or by error, must in time, it has been well said, be subverted by law, that is, written reason: we shall not decide whether this reason is absolute or relative; we only consider it as the expression of the ideas and wants of the greatest number. The general interest, the sharing, as much as possible among men, of the advantages of the social state, is the proper object of law. Men dispute about a crowd of differing theories, which, however, agree in this point; and while they contend respecting the seat of sovereignty, its exercise, and its attributes, all political doctrines and systems must bow before the general interest, manifested by the opinion of the greatest number.

The French revolution, according to the respectable writers of that country, is the application of this idea; it was nothing else but the solemn manifestation of the general interest, situations and antecedent circumstances giving place to the reign of opinion and law. We shall see this change effected, they observe, in the midst of terrible outrages, and, notwithstanding obstinate resistance, we shall see it consolidated in dangers, and plots, in passions, and errors, and crimes. The interests and ambition of a few will for a long time be injurious to the interests and wants of almost the whole community. We shall behold the revolution, hurried and irritated, passing far beyond the bounds it had at first intended, and returning to them as all revolutions do. We shall be astonished at the recital of deplorable excesses, which critical situations, resentments, and mistrust, do not sufficiently palliate, and which are not compensated by a few sublime actions. We shall find moments of delirium, and even of madness; schisms, and purifications in parties, when they possessed power; alliances with the most opposite parties, when they were not in power; opinions bending to circumstances; weakness rendered hardy by fear; egotism, bold when it is poor; timid or apostate, when rich; in fine, we shall see disinterestedness and good faith often the dupes of avarice and hypocrisy. 'The new nation conceived during the time of a declining despotism, has however spent its childhood amidst these frightful sorrows; but it is strong, and full of hopes. It is the most substantial result of the revolution, and this result will last.' May the prediction be verified, we add most cordially!

The revolution had already taken place in the public mind, when Louis XVI. (1774) ascended the throne. Nothing was wanted but to reduce it into a palpable form. The king could accomplish this end in two ways; either by assembling the nation, and leaving it to digest the particular forms of a constitution, or execute it himself, by granting the nation what it demanded. He began to take this last course, but afterwards abandoned it, because, though he had a real love for that which is good, he wanted the perseverance indispensable for doing it. He called to the ministry Turgot and Malesherbes, men who united great talents to great virtues. The former, who professed the principles of the economists, and who had rendered himself famous by the wisdom and popularity of his administration in a province, came with the desire of producing those reforms which public opinion claimed, and of which the king acknowledged the necessity. He wished to abolish the services, to destroy the vestiges of feudalism, to suppress the monks, recall the Protestants, give liberty of conscience, fix the civil interest on the foundation of law, &c.; in fine, he wished to apply the theories which the economists had developed. A reformer of this sort must necessarily draw upon himself disgrace from the court, and all the privileged orders. Abuses are naturally inimical to reformers. An old courtier called Maurepas rallied them, and leagued them with the parliament, recently renewed. A storm gathered against the patriot ministers, and the young king sacrificed them to the clamors of a corrupted court, who turned his good intentions and kind manners into ridicule, and which especially feared economy. Their dismissal, the momentary triumph of the court, disgusted and distressed the people. The scandals of prodigality increased more than ever. Maurepas, however, placed at the head of the finances (the chief place in the ministry, since here the disease chiefly lay) Necker, a Genevese and a Calvinist, which was at least a concession to the spirit of the age.

At this time the memorable war broke out

the English colonies of America. They followed perhaps the course of nature, in separating from their mother country, and the desire of independence was the real cause, though a miserable tax on tea became the ostensible one. When a revolution is to take place, it is very often a financial question that determines it: we shall see another example of this in France. The cause of the American insurgents naturally at any rate excited great enthusiasm in France, such as the eighteenth century had made it. 'To help in resisting oppression, to found a republic,' were invitations sufficiently dazzling to the French youth; and even among the nobility philosophical and liberal principles were imbibed. The young marquis de la Fayette setting off the first, at his own expense, gave the signal to the whole nation. He was the first volunteer for the new liberty. Franklin, who was the patriarch of it, hurried away the cabinet of Versailles with the thought of humbling England; and this was certainly the result of the war. The French fleet appeared with honor on all the seas; the army worthily seconded general Washington: by the treaty of Paris (1783) the independence of the United States was acknowledged in Europe, and the French, who returned from them, gave those flattering accounts of the new republic, which induced the people to think they had seen a nation at once free and wise.

Still it was necessary to borrow, in order to support this war; and the embarrassment of the finances increased. Necker unfolded the cause of this in a book that he published, as well as the means of obviating the evil, by an equalisation of the rates; when the nobility and clergy attacked this plan and displaced the minister, Calonne came forward promising confidently to set all things right. He spoke of economy while he smiled on the prodigality of the court; he had resources against every event, systems to suit every circumstance. But the nation soon perceived that he was a mere blunderer, who relied on loans, as a convenient tax imposed upon futurity, to relieve the present. The affair of the necklace, and the disgrace of the prince de Rohan (see our article ANTOINETTE), then followed, and still farther diminished the respect of the people for the crown. Calonne wanted to give to his projects the support and assistance of an appearance, at least, of public opinion. He had an assembly of the notables convened, that is of the principal persons of the court and the magistracy, before whom he laid the existing deficiency of 140,000,000, and requested money. He addressed himself to the wrong sort of men; they were the privileged; they exclaimed against it, and separated after having overthrown Calonne; the assembly of notables, over which Monsieur, afterwards Louis XVIII., presided, contributed much to his fall. Still the French owe to this assembly the demanding of the king the edicts, which abolished the feudal services and created provincial assemblies, such as Turgot suggested.

Archbishop Brienne, a man of the court, brought into the ministry a complete incapacity for business. A territorial tax and one upon timber were rejected by the parliament, notwithstanding the efforts of the seat of justice, which it was thought would carry them with a high hand. The better to intimidate the court, the parliament called for the states-general, and thus made itself popular; but it did not dream that it was signing its own abdication. Banished from Troyes, where it had become wearisome, it returned to Paris with the intention of granting the ministry a loan of 420,000,000, and then suddenly refused it to the king, who had too sharply pressed the registration. In these circumstances it was, that the duke of Orleans began to show that opposition in consequence of which he was banished.

In order to humble the parliament, the ministry formed the plan of the division into bailiwics, and the creation of a plenary court, composed of the great functionaries, civil, military, and ecclesiastic, which was appointed to accomplish the registrations. The counsellor d'Epremesnil unveiled the secret of this absurd plan, and denounced it to his colleagues, when the parliament protested immediately against every system founded on the good pleasure of the sovereign: and the people applauded and protected the magistrates against the armed force, which had violated their precincts. The financial distress, however, increasing, the king recalled Necker, who was the popular minister, and at the same time fixed the meeting of the states-general for 1789. The dismissal of Brienne was celebrated at Paris by the burning of a little man in a mitre before the statue of Henry IV. Blood was shed several times on this occasion. The fermentation was not less in the provinces. The parliament of Brittany appeared to wish to begin the revolution; while the states of Dauphiny exhibited the three orders united by the same patriotism and leagued against arbitrary power.

Necker commenced by repairing the faults and outrages of Brienne. The parliaments were renewed; but that of Paris was already retiring before the states-general. According to his custom of allowing legislative consultations, he declared that the deliberations and votes of the orders would take place, as in 1614. But the old antecedents were no longer seasonable, and the patriots demanded that the third state should at least be equally represented with the two other orders. A multitude of writers attempted to discuss this question, and in Sieyes's book entitled, What is the third order? it was answered plainly—the nation. From that time two parties were very clearly distinguished. The aristocrats were those who wished to preserve the exclusive privileges, and resist the reformers; they were weak, and had only the court, the dignified clergy, and the majority of the nobles for their partisans. The patriots consisted of the peasantry, the industrious laborers, the citizens, the inferior clergy, and a small part of the nobility. Monsieur, and a multitude of young officers who had returned from America, showed themselves patriots at court. Duport was at the head of those in parliament. Necker appealed from the decision of this assembly to a second meeting of the notables, which confirmed it; Monsieur's board alone supported the opinion of the king in favor of the double representation. In oppo-

sition to the advice of the notables, the king declared, that it should take place, but with separate votes. Then the election was contemplated, and France was prepared for the revolution.

It will be impossible to mention all the local insurrections and partial acts of violence that took place, and had more or less influence on the march of the great events of this time; it is of more importance that we should observe the progress of the great parties. With the meetings of the bailiwics for the elections commenced political clubs, after the pattern of those of England: but in France they were destined to become more turbulent. At that time they were peaceably conducted, and the speakers astonished the people by informing them of their rights; but they did not excite them to obtain them by murder.

Some of the elections were tempestuous; the nobility of Brittany refused to send deputies; that of Provence excluded from the election of the three states one of their members, as a passionate and violent orator; a politician of lofty and prompt measures; a man of a clever and active conduct; ambitious, because he was corrupt; and an implacable enemy of arbitrary power, because he had been in the Bastile: this was Mirabeau. The constituents sent back to their mandtoaries some papers in which their wishes were expressed. These sheets contained the voice of the people; they fully admitted that the nation needed a revolution; and the three orders now agreed to demand the reforms that the general interest required. The court assembled the states at Versailles, thinking the more easily to influence their proceedings. At the ceremony of installation the tiers etat, in a modest suit of black, received from the etiquette of the court all the pitiful mortifications that could be inflicted. But the people perceived it, and cried out, live the states; while the order in question kept silence, 'thinking of the time, when they should raise their heads.'

Neither the clergy nor the nobility attended at the hall of the sittings for the verifying of the powers. The urgent representations of the states to avoid a schism having been rejected, they constituted themselves a National Assembly, and declared every other kind of representation illegal. This vigorous measure overawed the court, which prepared some half concessions for the royal sitting, and brought troops into the hall, in order to support them. When the king, at his sitting, ordered the states to separate into three chambers, the states remained, declaring the inviolability of the representatives; Mirabeau declared that they would yield only to the force of bayonets. From this time the people assumed a real sovereignty, and though a part only of the nobility and the majority of the clergy united themselves to the great body at first, the rest severally joined it, in deference to the king and to the necessity of the case. Still were the privileged orders strong enough to disturb if not to resist the stream of events: they conspired, and 20,000 men surrounded Paris. At this juncture M. Necker was once more sent away. The assembly in vain demanded the dismissal of the troops: the tumult was at its height, and the French guards, uniting with the people against a foreign regiment, the universal cry was 'To arms!' The mingled soldiery and populace rushed into the arsenals, the workshops, and finally (July 14) to the Bastile, in which despotism had so often buried its victims, carried it by assault, and rased it to the foundations. It is however to be observed that the prisoners released, neither in their number, nor in the description of their cases, justified this measure of open revolt against all existing authority.

The court, stupified with astonishment, now ordered the dismissal of the troops, and the recall of Necker. Paris nominated Bailly, who presided at the tennis court, its mayor, and La Fayette became commander of the national guards. The king came to Paris from Versailles, and received from Bailly the tri-colored cockade, the mark of his union with the people, who saluted him with sincere acclamations. At that time, perhaps, the revolution was completed; but emigration commenced, and the public agitation continued. While the assembly was discussing the 'Declaration of the rights of man,' which was to be the basis of the constitutional edifice, the fanatics of liberty assassinated various individuals, and set fire to the chateaux. Robbery succeeded to confusion. The clergy and nobility consented to give up their privileges for the public peace, and in one memorable night (Aug. 4) every vestige of feudalism was annihilated by the voice of the deputed nobles and prelates. Their constituents were far from subscribing to this act of disinterestedness, wrested from them in a moment of fear and enthusiasm, and the discontent of these orders united with the menaces of foreign troops to increase the exasperation of the people: every where they were ready to run to arms. The king and queen vacillated towards each party by turns. Now they seemed by their presence to approve of the counter-revolutionary vows uttered at a banquet by the body guards and the officers of the army; again they would hold interviews (especially the queen) with known aristocrats; and evidently acted on the mere intimidation of the moment. A want of bread was experienced at Paris, when an immense crowd went to Versailles, and though restrained by the national guard, who ran to the assistance of the queen when the furious wretches, who had forced the palace, were about to sacrifice her, they proclaimed aloud their determination to bring the king to Paris, together with the assembly; which they accomplished. Many of the members belonging to the nobility now separated from the latter.

At this time was formed the famous Jacobin Club, an illegal and violent power, which raised itself at the side of the national representation, in order soon after to crush it. At first it consisted of a few well-disposed deputies and patriots; but every thing was lost when the leaders made themselves the distributers of popularity. This focus united in itself that violent excitement which was perhaps necessary for the defence of the new system against attacks both from without and within. But the frequent insurrections began to brutalise the manners of the people, and the assembly decreed martial law to stop their excesses. The liberty of the press and of religious opinions was, at the same

decreed! Some real services, however, performed by the National Assembly.— e was divided into departments; the titles nobility were abolished; the wealth of ergy, who possessed a fifth of the territory ance, was, notwithstanding their outcries, ed national property, and appropriated as ge for the issue of the assignats; while the was purified of aristocratic privileges, and fficers. The oppositions and protestations parliament and the emigration, however, sed. At last the idea of a great patriotic l was conceived, in order to effect a general ciliation. The 14th of July, 1790, the ersary of the taking of the Bastile, was n for this confederation, and 100,000 depu- f the people, of the army, and the national s assembled at the Champ-de-Mars, to fidelity to the nation, the law, and the king, appeared in the midst of them. Never had been a more solemn compact, or greater siasm manifested; all hearts were intoxi- with hope, and the whole people appeared ! what a mere appearance!) like a nation others. The aristocracy, who took no part is national emotion, turned it into ridicule. lst all the patriotic donations the embarrass- of the finances increased, and Necker, whose reat confidence in himself had fettered his ns, now finally retired. Some clubs of aris- ts were formed, and a camp of the enemies e revolution appeared at Jalès.

surrections among the people, the army, and , now extended: the constitutional monar- lost its defender, Mirabeau, who received onors of the Pantheon; when on a sudden as reported that the king, yielding to the estions of his court, had escaped, but had stopped at Varennes, on his way into many. The design of this emigration ap- ed very suspicious to the people: to every cting mind, out of France, it was obviously retreat of worn-out patience and frustrated e. The unhappy prince re-entered Paris in midst of a silent population: and the assem- suspended him from his functions until they ld finish the constitution, and offer it to him his acceptance. This however was only a ly formality; the words forfeiture and repub- had been pronounced, and all their supposed sequences contemplated, and they met with a ltitude of echoes among a people whom every g conspired to sour or irritate. A republican rrection, against the constitution, took place he Champ-de-Mars, and was only suppressed the martial measures of La Fayette and illy. On the other hand, the right side of the embly, that is, the partisans of privileges, de- med against a constitution which gave the g only the title of Hereditary Representative the nation. The acceptance of the constitu- n, however, gave the people another festival; t fears of all kinds now occupied the minds of n.

According to the terms of this constitution, the nstituent assembly gave place to a new meet- g of representatives, and committed the fault excluding from it its own most valuable mem- rs. The legislative assembly was elected according to the opinions of the moment; and, republicanism prevailing in it, a consultation was soon held about the abolition of the monarchy. In the mean time the princes were waiting at Coblentz for an opportunity of introducing the former state of things into France. The emperor and the king of Prussia had just entered into a coalition against it. The kings in alliance with them thought perhaps of sharing this fine country among them.

Whatever opinion may be entertained of the constituent assembly, the mere enumeration of its labors will astonish posterity. It directed its attention to the foundations of things; it organised the national guard, and constituted the army of the line according to the strictest principles of liberty: it practically applied the principle of the separation of the authorities; instituted a real jury and justices of the peace; made rural, municipal, and penal laws; freed industry from monopoly and the yoke of the masters; gave back to society myriads of monks who were of no previous use to it; restored the property of the church to the circulation, to agriculture, and to the exchequer; suppressed burdensome taxes, entries, and exemptions (those rattles of vanity which become strong instruments to degrade and corrupt men); and, above all, regulated public instruction, and placed it on a basis which subsequent changes have not been able to destroy. 'Little remains to us of the good that it did,' observes a modern historian of this era, 'but we owe it not the less gratitude on that account.'

In the constituent assembly the aristocratic opposition was very feeble: Maury, Cazales, and Epremesnil in vain rendered it remarkable by their eloquence. The royalists, Mounier, Clermont-Tonnere, and Lally Tollendal, who wished for the two English houses, could scarcely find any support; neither could the republicans Petion, Buzot, and Robespierre. That imposing majority, in which were Rabaut St. Etienne, Chapelier, Montmorency, Noailles, Volney, Sieyes, the originator of projects, the profound Duport, the Jansenist Camus, the judicious Barnave, the lawyer Thouret, the skilful Lameth, and so many other celebrated men, among whom was the great Mirabeau, stood steadfast. The legislative assembly was divided into three parts: the moderate republicans, of whom may be mentioned the eloquent Vergniaud, the virtuous Condorcet, Brissot, and Guadet, the logician Gensonne, and those who were called the Girondists (because the deputation from the Gironde were the most distinguished of them), the Cordeliers, who suffered Danton to direct their club, Camille Desmoulines, Fabre d'Eglantine, and the constitutional royalists, who were very feeble against enemies supported by popular opinion. At first the majority assumed the attitude of hostility to the royal power, both by restraining it and by failing in the respect due to its functions. The king made some resistance, by opposing to some decrees, that were offered to him for his sanction, his veto, the right of which the constitution gave him. But this right was illusory, and without sufficient strength to secure respect.

The Girondist Petion was now elected mayor of Paris, and procured a decree for the closing

of the club of royalists called Feuillans. The property of the emigrants was sequestrated, and a new oath was required of the priests. Some unpopular ministers increased unhappily the distrust of the royal power, and, at the moment when the assignats were depreciated at home, information was received, from St. Domingo, that the disturbances which had taken place between the whites and the men of color, in the time of the constituent assembly, had become much more serious since the blacks had taken part in them. News also arrived of massacres in different cities of the kingdom, especially at Avignon, where one party desired union with France, according to the decree of the constituent assembly; while the other wished to remain under the government of the pope. Terrible reprisals were made upon this party in the massacre of the Glacier (1792), but the assassins were pardoned. The emigrant princes were now denounced at the bar of the assembly; and war was evidently coming on. In the midst of this universal agitation the king was without any adequate support. He appeared to turn to the side of the Girondists, and took a ministry of their choice: among whom were Roland, whose wife is so celebrated for her republican virtues, her writings, and her death, and Dumouriez, afterwards so successful as a general. It was the latter who persuaded the king to come into the assembly and declare war against Austria.

But the assembly was disposed to undertake a still more important contest at home; it continued to contend with the king, who at once thwarted the measures of his new ministers and corresponded with the princes. They began with depriving him of the means of defence and attack, by disbanding his constitutional guard; and decreed the formation of a camp of 20,000 men near Paris. It was evident, they wished either to dethrone the king, or to induce him, by dint of mortifications, to abdicate. This unfortunate monarch, who adopted through uncertainty, hasty and unseasonable measures, and who was obstinate only through bad advice, dismissed his ministry. Immediately the rabble of Paris rose; and, passing the assembly with symbols grotesquely hideous, went to the Thuilleries to insist upon placing the red bonnet on the head of the king. The Girondists and Petion were accused of aiding this indecent and seditious conduct; they, at least, had suffered it; but when the latter was suspended from his authority, by the king, he was restored by the assembly.

Suddenly La Fayette appeared at the bar of the assembly, at the head of an armed force, to demand the punishment of the guilty, and the closing of the Jacobin club; a step which, though it astonished the demagogues of the day by its boldness, effected nothing; it was supported by no authority present, and even the terrified court yielded it no sanction. The king had an insurmountable dislike to receiving any constitutional assistance. He was now evidently and naturally, may it not be said, looking for protection from without. Three places that had been taken by general Luckner had been just retaken by the enemy; on this, the animosity against the king seemed redoubled, and the Jacobins demanded his deposition; when a scene of a singular description took place in the assembly: a woman had made an appeal to concord from the gallery, and painted, in a very lively manner, the evils of anarchy; on which a deputy seized the opportunity of proposing to his colleagues to rally round the constitution; that the one party should renounce every after-thought of a republic, and the other should give up the project of an aristocratic chamber: at once all present appeared inspired with the spirit of reconciliation; they mingled with each other; they ran to embrace those on the opposite benches. A moment after they resumed their resentment and their opposition. This proceeding was truly ridiculous, too truly French (speaking of what Frenchmen had becme publicly at this time), because it could not be sincere.

The catastrophe of this tragi-comedy was now approaching; it was decided by a declaration that the country was in danger; and, when the annual confederation of the 14th of July was held, the cry was 'Petion, or death;' for the parties always attached themselves to some man in vogue. On certain marshalled confederates, who had made proof of their energy in the south, arriving in Paris, the leaders of the Jacobin club resolved on an open attack upon the authorities: the refusal of the assembly to encourage their animosity against La Fayette still further exasperated them. At length the enemy invaded the frontiers; the insolent manifesto of the duke of Brunswick irritated and distressed the people; and Petion instituted in the sections a deliberation about deposing the king. On the 9th of August the insurrection, that was in preparation, was denounced to the assembly on the part of the department, which was composed of constitutional nobles, such as the virtuous La Rochefoucault-Liancourt. A frightful tumult took place in the hall, where poniards were brandished: as the night advanced, the tocsin sounded; when the Swiss guards, some ex-nobles, and volunteers of the national or disbanded guard repaired to the palace to defend the king. He now condescended to accept the proposition made to him by Rœderer, the chief attorney of the department, to seek an asylum in the midst of the assembly, after enlarging Petion, who had been detained a prisoner in the palace. The insurrection, however, proceeded. The Jacobin club had installed in the commune a municipality devoted to Danton; confusion reigned in the palace, until the Marseillais, who formed the advanced guard of the mob, though at first repulsed by the brave Swiss, returned with fury to the charge; and their cannon, aided by a multitude armed in haste, overturned the ancient throne of France.

The assembly, in confusion, pronounced the deposition of the king, and removed him to the Temple with his family; while the statues of all the kings, even that of Henry IV., and the insignia of royalty, were trampled under foot by the mob. An extraordinary tribunal, over which Danton, the minister of justice presided, shed torrents of blood. The first days of September were signalised by the massacre of several thousands of citizens, with whom the prisons were

crowded; and those detained by the high court instituted at Orleans, for crimes against the state, were assassinated.

While the French were thus murdering one another, they resisted invasion with astonishing devotion and firmness: the king of Prussia, who had penetrated as far as the plains of Champagne, was checked in his march by Dumouriez, and beaten by Kellerman: 300,000 men rushed, at the call of their country, to the frontiers, with an enthusiasm which only belonged to this period, and in what may be called the very fanaticism of liberty.

It is impossible to read tranquilly the history of these times. In all factions there are a few leaders; the immense troop that follows consists of dupes, people of integrity, in many instances, who are perpetrators of mischief, with the intention of doing good. In these dreadful times a man did not walk, he was dragged along; it was a terrible sea, in which you must follow the currents, or be broken to pieces, says an eloquent French historian. 'Faults were committed on both sides; but we must especially execrate two things: despotism exercised in the name of liberty, and the shedding of blood for political causes, without the necessity of legitimate and immediate defence.'

The legislative assembly had summoned a convention, which on the 21st of September began its operations by abolishing royalty, and proclaiming the republic. It immediately assumed to itself the whole power, even the judiciary; for it proceeded to judge Louis XVI., whom only part of its members had accused. The enemy was at the gates, however; anarchy and treason existed in the interior; to proceed, a species of dictatorship, the French say a despotism, was necessary. This monstrous despotism had a thousand heads, and three principal directing powers: the convention, the jacobin club, and the commune of Paris; the two last were the most real, and certainly the most illegal. The assembly was shared between the Girondists and the Jacobins, when the struggle finally commenced. The former possessed fine talents; the latter derived their strength from the club and the commune. The execrable Marat, and the horrible Hebert assisted these, by rousing the passions of the people with the bait of an impossible equality, until they drew the Marseillais into their party: and a man who, under the calm external show of moderation and patriotism, concealed a cruel fanaticism; a man, whose wickedness can only be accounted for from his envy, Robespierre, conceived the design of elevating himself on the ruins of the state. In vain did the courageous Louvet attack him; the hypocrite of citizenship meditated a terrible vengeance, in which all France was doomed to suffer.

The Mountain, or the Jacobins (so called from their sitting on the high seats of the amphitheatre of the hall of the convention) from the first thought of sacrificing Louis as a victim to the consolidation of the republic. The Girondists wished, they say, to save him; but several of them condemned him. The virtuous Malesherbes in vain exerted the eloquence of friendship in favor of a king, who too late repented the not having followed his patriotic counsels. Vergniaud also made some efforts; but a mob of furies, male and female, surrounded the hall of the convention, and threatened the judges; while the Mountain dictated the sentence. The guilt of the unfortunate monarch was almost unanimously voted; one-third of the assembly however wished for an appeal to the sanction of the people: 387 voted for his death, almost all of them without any condition; 334 demanded either imprisonment, banishment, or death, with a formal reprieve. The Girondists attempted in vain, by returning to the question of reprieve, to annul a sentence of death pronounced by so small a majority. Louis however was led to death on the 21st of January, 1793: the crime for which he suffered being the possession of those ideas of royalty in which all the kings of France had been educated (so say even the apologists of the revolution now), and wishing to preserve the power which he inherited. Two good and upright men, observes M. Bodin, Charles I. and Louis XVI., have perished on the scaffold, but their families have re-ascended the throne. The Tarquins were banished from Rome, and never more appeared there.

The death of the queen soon followed: the absurd and infamous charges brought against her astonished all Europe; see our article ANTOINETTE. La Vendée rose, and the continent as well as England armed in hostility to the convention, whom nothing seemed to intimidate. Fourteen armies, without experience, and merely with the aid of paper-money, were set in motion. Custine took Mentz; Montesquieu invaded Savoy; Lille repulsed the Austrians, who bombarded it; and Dumouriez making a descent upon Belgium, which since 1789 had been in a ferment, and impatient of the yoke of Austria, carried the redoubts of Jemappes with the bayonet, now substituted for the old French tactics. The generals had only to sound the Marseillais hymn, and the citizen soldiers saw in the republic a futurity of peace and prosperity, although the roots of what was called the tree of liberty had been bedewed with blood. A descendant of Turenne was honored with the title of the first grenadier in France; a Biron marched against the royalists in La Vendée. The young Orleans fought for national independence, while his father, under the name of Egalité, passed from the Mountain, where he sat, to the scaffold.

But the Mountain men still meditated vengeance on the Girondists for their superiority, their constant opposition to their barbarous atrocities, their denunciations of Marat for his demand of 60,000 heads, and their causing the arrest of Hebert. After an attempt at assassination, the Mountain ordered an insurrection. A hired multitude went on the 31st of May, to dictate to the representation, and on the 2d. of the next month demanded twenty-two heads, that had been pointed out to it among the Girondists! The proscribed all perished with the exception of one who survived the entire revolution, the virtuous Languinais. This first attack on the inviolability of the representation became a fatal example. Charlotte Corday now devoted herself to avenge the Girondists by sacrificing Marat; a monster

of iniquity who was buried in the Pantheon. Seventy-three deputies were decreed in a state of arrest, and though a constitution was drawn up, it was strangled in its birth, and the revolutionary government, or regime of terror, was organised, the administration of which was the guillotine, and its functionaries the executioners.

The Convention is a political phenomenon, which has existed but once, say our authorities: in it the most audacious energy was often the result of fear. Its terrible power was wielded mainly by men of the most base but ambitious character, deluding and controlling a few ardent and sincere patriots; and some men of pacific dispositions, with the axe hanging over their heads. The Mountain was a volcano, which vomited its fires over Europe, while it inundated France with its incendiary lava: and the jacobin club, the cave where the thunderbolts of power were forged. Rapidity and strength marked all the acts of this inconceivable depotism. Its thousand arms extended in every direction, and carried with it at once, heroism and astonishment, ferocity, obedience, and death. Every thing that resisted it was suddenly crushed. While cunning or perfidious apostles of a chimerical liberty preached up the dominion of the laws, the despotism of the Convention, with its bandage on its eyes, knew no bounds; it decreed in opposition to nature. Never was madness greater, or produced things more gigantic or more pitiful: Europe was vanquished, and the fraternity of Sans-culottes was instituted; it seemed as if the world were turned upside down: to crown the triumph of moral and political insanity, a festival was proclaimed for Reason; religion was openly renounced; death *decreed* to be an everlasting sleep; and a naked prostitute exalted on the altar of the church of Notre-Dame as a representation of the goddess of their idolatry! Still these fanatics of liberty remained poor, while they were denouncing death on the rich; as they depopulated the earth, while they were promising themselves to share its blessings and live like brethren. Every thing in fact was immolated to the fierce inflexibility of their passions or abstractions.

Some attempts, however, were made to shake off this frightful yoke. The Girondists and constitutionalists, who had been proscribed as moderate men and as wishing to break the unity of the republic, rose at Caen and at Lyons: when the Convention decreed, that Lyons should be destroyed! and Collot avenged himself there with case-shot for the hisses he had experienced at the theatre!! Marseilles was decimated, and its name suppressed. Toulon opened its gates to the English, but Nantes repulsed the Vendéans. The Mountain sent out its chiefs on all sides to establish its power; a revolutionary army followed them, they established in fact a mission of terror; and extended their works of death even to St. Domingo. The Noyades of Carrier and the atrocities of Lebon are well known. Every where tribunals of blood were in horrible activity: even the camps were not an asylum: Houchard, who had just conquered the English at Houdscoote, soon followed his predecessor, Custine, to the scaffold. To crown these evils, industry and commerce were proscribed. Requisitions and a maximum, which heavily taxed provisions, produced a famine; the west of France was set on fire, and the same men decreed the conflagration who pronounced as legislators the abolition of the punishment of death, and founded the Institute, the Conservatories, and the Polytechnic school.

Great talents were certainly displayed in the committee of public safety, a select part of the Mountain faction. But Carnot had only begun to secure victory to the French arms by his arrangements, when he had to contend against the treason of Dumouriez. This general had delivered up to the enemy the commissaries of the Convention, who were coming to bring him instructions, and take him back to the guillotine. So far he acted in self-defence; but, before he emigrated, he endeavoured to unite the French and the Germans against the republic to which he owed allegiance, in order to march to Paris. The lines of Weissembourg had also been surrendered by traitors. On the other hand, a young lieutenant of artillery, named Buonaparte, contributed to the retaking of Toulon, where the English destroyed the fleet, before they evacuated the place.

Robespierre (1794) was now rising to his bad eminence; but there were still around him some men who surpassed him in merit or in wickedness. He commenced by ridding himself of Hebert and his companions; he afterwards sacrificed his old associate in crimes, Danton, who saw in the revolution a means of enriching himself, and who was afterwards disowned by the rigid jacobins; and science, reputation, and talents, became but titles to proscription. Every thing was sacrificed in order to attaint distinguished patriots and illustrious constituents, such as Bailly, Thouret, Chapelier, and André-Chenur. Lavoisier's unequalled talents, as a chemist, could not avert or delay the fatal decree; Condorcet wrote on the perfectibility of man almost under the knife of the executioner. At last this prince of homicides Robespierre, surrounded with corpses, insulted, while he proclaimed, the name of 'a God,' and appointed a festival for him, at which he acted as high priest!

Robespierre closed his career, by making the Mountain itself tremble, demanding 'those purifications,' which threatened to attaint even the executioners themselves. Billaud first shook off the yoke; the Jacobin speculators, the remains of Danton's party who saw themselves in danger, united with the remaining part of the Girondists, and on the 9th of Thermidor, Tallien braved and unmasked the villain whom St. Just, his confidant, in vain endeavoured to defend. Cries of 'Down with the tyrant' issued from every mouth. Robespierre and his party were hurried away, but the mob, at the sound of the tocsin, rose in their favor. Barras now put himself at the head of the national guard, in the name of the Convention; and they easily made themselves masters of the hotel de ville. The tyrant fell: quaking, and, after having shot away his own jaw, he received his well-deserved death-blow. But a cruel re-action blemished this crisis; the Thermidorians proscribed the Moun-

their turn; and some royalists rising in ıth organised themselves into companies ıssins. The guillotine devoured those ıd fed it; vengeance continued the reign ›r, and yet the festival of Marat's apo- continued to be observed. In the midst confusion the powder magazine at Gre- as blown up.

Jacobins in 1795 made some further strug- r power: the Thermidorians opposed to he golden youth of Freron, an armed as- ›n of all those, who had to avenge some of the system of terror, and who sung the ening of the people.' On the 12th of Ger- an assemblage of the people, excited to e by the famine, was dispersed, and en Mountain men were arrested; Billaud ollot were transported to Guiana. The der of the Mountain, however, obtained dvantage on the 1st of Prairial, by getting sion of the hall of the Convention, where puty Feraud, who had been taken for , was assassinated. Already had the ter- Faubourg advanced in a column. The idorian committees were conquerors at last ıt striking a blow; the 31st of May was avenged; and six Mountain men, doomed ıth, put an end to their own lives. A was then concluded with the Vendéans, who l the hope of an approaching restoration.

Convention, who were enacting a new tution, decreed, that two-thirds of its mem- hould of right enter into the new legis- body. This measure, rejected by the rs of Paris, was the pretext for an insur- ı. The sections, weary of the Convention, few Vendéans marched against it on the ıf Vendemiaire in the year 3; it called the ins to its assistance, when young Buona- saved it at the head of some troops. The ntion also triumphed without. Prussia Spain requested peace; Hoche retook the Jourdan recovered, at Watignies and at ıs, that Flanders which a decree re-united ance. Holland conquered by Pichegru in ımous campaign on the ice, where some rs took some vessels, was formed into the ian republic. But Pitt and England as ıs Austria, remained the enemies of France. said that Barrére being interrogated upon vere measures pursued by the famous com- e, replied, 'It repulsed the enemy, would have done as much?' This justification is ite, certainly, but it is fearful.

ECT. VIII.—BUONAPARTE'S ELEVATION.

e most enlightened civilians of the Con- on, among whom was the learned and vir- s Daunou, modelled the representative m after that of the United States; two elec- councils, one of the Five hundred and the r of the ancients, were to be re-elected every by thirds. The executive power was confided ve directors, elected by the councils, and re- ed by a fifth: the directory found, on their ession to an anarchical despotism, 30,000,000 assignats without value, some distrusts citations distracting the people, a civil and a foreign war. It became necessary for them to find employment for a multitude of persons, to whom insurrection had become a kind of profession, in which they had regularly received high wages. They endeavoured to turn their attention to the mass of the people, who wished for repose, and to keep that middle course so slippery in France, which, as it inclines sometimes to the right and sometimes to the left, has been called la bascule. The mandats softened a little the shock, that the repayment of the assignats occasioned. The royalist mas- sacres in the south ceased by degrees: and La Vendée, where so many thousands of the French had been buried, was pacified by the moderation and activity of Huche, a young hero, who knew how to negociate as well as to conquer. The administration was organised according to the principles of liberty; and the republic was no more a vain word. The metric system equalised the weights and measures. The fine idea of central schools, the focuses of instruction, free and worthy of the age, was executed, while in its external affairs the directory followed the bold policy of the Convention; and bearing at least the promise of liberty to the vanquished, it undertook the emancipation of Europe from absolute power and the feudal system. In Ger- many Moreau triumphed by retiring, and ren- dered himself illustrious by a retreat, interspersed with victories. If Corsica was again taken by the English, an expedition, conducted by Hum- bert, intimidated that power in Ireland. Buo- naparte now at the age of twenty-six, in his brilliant campaign in Italy, took the Milanese from the Austrians, and overturned the ancient and glorious aristocracy of Venice. Marching directly towards terrified Vienna, he only stop- ped to sign the fundamental articles of the treaty, which declared, at Campo-Formio, the superiority of France over her enemies; and founded in Italy two provisional republics.

The remembrance of the conventional despo- tism had occasioned a restraint of the executive power, that was accompanied with excessive dis- trust. It was feeble and poor: instead of dis- playing that royal magnificence which the French admire, while they are paying for it, it lived upon nothing, and met, with a few light taxes, the expenses of numerous armies. Foreigners spent more money in France, to corrupt and divide it, than it had to subsist upon. The liberty of the press too was now more entire than it had ever been. The journals of the opposite parties declaimed against the government at their plea- sure; and blame or ridicule was poured upon its acts, or its members. 'In France people love the power which dazzles, and which has a lofty bearing; a republic is too citizen-like for them.' The royalist party, organised by the numerous agents of the Bourbons, conspired at Clichy, and endeavoured to make a monk of some general. To the simple-hearted and credulous Vendéans succeeded the Chouans; nocturnal insurgents, who infested the high roads. The Anarchists made an attempt, at the camp of Grenelle, to raise the Mountain party again; while the new election brought into the coun- cils a majority of royalists, who concealed, in some measure, their design of overturning the directory.

Two of the directors themselves (Carnot was one) were in this plot. The three others had their choice, either to commit the crime of violating the constitution, or to suffer it to fall. They violated it in order to defend it. Supported by the army of Italy, from whence they had sent for Augereau, and by that of Hoche, they seized, in military style, upon the legislative body, and fifty-one representatives, the two directors, and some journalists were condemned to transportation on the 18th of Fructidor. Merlin and Francis de Neufchateau replaced the proscribed directors.

General Buonaparte, who had rendered himself popular by his victories, received at Paris that homage, which must have excited his ambition, and which now brought it into action. It was already evident that he was aiming to play the part of Cæsar, when he made the directory adopt the project of an expedition as adventurous as the crusades; the army of Italy was embarked at Toulon. In Europe the loftiness of the republican plenipotentiaries had embroiled France, a second time, with all her neighbours; the gold of England had united Russia and Austria in a coalition (1798); Suwaroff was marching upon Italy, and the directory had sent Massena into Switzerland, to humble the aristocratic despotism of Bern by protecting the democracy of the Pays de Vaud, when the news reached them, that the French fleet had been destroyed at Aboukir, while the army was victorious by land. Nelson returned to Naples to enjoy his triumph, and hang the ablest men of the country at the instigation of the queen. A detachment of Frenchmen quickly succeeded in chastising Rome and Naples, and founded (1799) the Roman republic. Italy, however, was soon retaken from Moreau, and Joubert's army was reduced to great feebleness. The Austro-Russians and the army of the emigrants already were on their march towards France. But the fortune of the day was again changed: Massena routed the allied army at Zurich. Italy was reconquered, and new and flattering accounts reached France of the expedition to Egypt. Bruno, in the mean time, had beaten the English and the Russians in Holland, where he re-established the Batavian republic.

France triumphed, but some intriguing persons were preparing a revolution by sowing the seeds of trouble in the nation and the public councils; the latter of which opposed or perverted all the measures of the directory. The persecution and transporting of the priests excited discontent, as also did the reduction of two-thirds of the debt. Speculators, who had enriched themselves by stock-jobbing; the royalists, who wished to get into favor with the monarchy, expecting its restoration; the contractors, who had introduced licentiousness, and corruption, into the expenses of the unfortunate soldiers; generals and governors, who had acted as judges in foreign countries, all cried out that France had need of a stronger government; that is, one that might ennoble and decorate them. The systematic Sieyes had at this time been called to the directory; on the 30th of Prairial, year 7, the councils had introduced three members; and while the momentary confusion increased, a man was wanted to grasp the falling reins of power. Buonaparte, informed of this state of things, did not hesitate to leave the army in Egypt; where he also left Kleber, 'the just,' in a desperate situation; but the opportunity was a fine one for him. His disembarkation surprised every body: he was received with great pomp, although his conduct in returning was, in the estimation of cool and reflecting men, that of a coward and a rebel. Sieyes now took from the republican, Bernadotte, the post of minister of war. A conspiracy was pretended; the councils were called together at St. Cloud, and Buonaparte put himself at the head of the directory's guard in order to overturn it. He gained over the ancients by promising to make them senators; but the resistance of the Five-hundred disconcerted him for a moment: he grew pale and hesitated in the sight of the danger he had created for himself, and which the president Lucien, his brother, alone succeeded in turning aside by presence of mind. They resumed their courage for him: the grenadiers, with bayonets fixed, rushed in upon the national representatives and dispersed them. On the 18th of Brumaire (10th of November, 1799), Buonaparte became a usurper and Sieyes a dupe.

Buonaparte now digested a constitution which was intended to deliver the power to a consul (that is to say, himself), assisted, for form's sake, by two under-consuls; and a mute legislative assembly passed the laws, under which a tribunate alone had the right of speaking. A public body, called the conservative senate, was paid to approve of all that was done. 'What shows,' say her own historians, 'how they make a jest of every thing in France, is, that they still preserved the name of a republic.' Buonaparte, who had already discovered the way of fascinating the nation by his enterprising disposition, his superior talents, his prodigious fire, and his skilful charlatanism, met with more opposition in the army, where the republican spirit was still preserved. He left that of Egypt to the English and the Turks; only some feeble remains of it returned to France. A little while after he sent to St. Domingo, in order to repress the independence of the negroes, 40,000 of the old soldiers of the republic. The burning sky of the tropics killed numbers of them; for Hayti knew how to defend the liberty of which she now shows herself worthy. The only trophy ever gained by France in this ruinous expedition was the black chief Toussaint Louverture, whom Buonaparte suffered to perish miserably in a strong fortress, where he was immured.

Six months had hardly passed away since Buonaparte became consul when he unexpectedly passed the St. Bernard, to fall upon the Austrians, and gained the battle of Marengo, where the virtuous Desaix met his death in giving him victory. During this time Moreau, commanding the army of the Rhine, triumphed at Hohenlinden, and threatened Vienna. The peace concluded at Luneville further aggrandised France. Italy and Switzerland placed themselves under her protection; Piedmont became French territory; when Spain, and England herself

signed the peace of Amiens, March 22nd, 1802. Though a peace of but eighteen months, this gave welcome repose to France and to the rest of Europe. Soon after several republicans were arrested, under the accusation of having wished to assassinate the first consul; and the royalists made no scruple of attempting his life by an explosion, which might have destroyed a multitude of citizens. Buonaparte gained a party by this danger; he strengthened his guard and increased his power; while the formidable police, and his vile minister Fouché, gave him an account of the actions and thoughts of all France. He even procured a more powerful police still; and made for himself some zealous friends among all classes of the people, by granting the pope a concordat, which re-established the Catholic clergy. An act still more politic and just followed this: he put an end to the proscription of the emigrants, and opened the country to them; giving them possession of such part of their property as had not been sold. A concert of sincere praises now arose to him; the senate had agreed to continue the consulship during ten years, but this true and all powerful dictator now procured a popular vote, which declared him consul for life. It was at this time (1803) that he proved his respect for legitimacy, by demanding of the Bourbons a cession of their right to the throne.

Soon after he avenged their refusal, while he disgraced himself indelibly, by the seizure of the young Bourbon Condé, the duke d'Enghien, whom he caused to be shot (see our article Enghien). Pichegru, and Cadoudal, who wished to restore the Bourbons, and Moreau, who impatiently submitted to the yoke of a man who was his equal, were said at this time to be implicated in a conspiracy against Buonaparte; and, though the punishment of the two former excited little interest, the latter, surrounded with republican glory, was considered, as it were, the representative of his brethren in arms, who discovered with bitter regret that they had shed their blood only to raise a dictator to power.

The sympathy for Moreau threatened a dangerous ferment; but the camp at Boulogne, which was made to resound with a threatened descent upon England, created a diversion: Moreau was forgotten. Buonaparte had the policy of astonishing the people by numerous changes of sights, and keeping the French continually at bay. He immediately obtained the decree of the imperial crown from the Tribunate, in which Carnot signalised himself by his resistance, as the polytechnic school also did; and these were the last sighs of expiring Liberty: the senate bowed itself, notwithstanding the opposition of the patriotic Lambrechts and the virtuous Gregoire, the friend of the blacks. Napoleon demanded the adherence of the public functionaries, and of the army; an empty formality, to which the people expressed little eagerness to add theirs. The pope now proceeded to Paris to crown the emperor, and to sanction that which the royalists must have considered as a usurpation. Most of them, however, applauded, no more expecting to find a monk in Buonaparte; they saluted him king, when Napoleon substituted the eagle for the tri-colored flag; and passing to Milan, to make a kingdom of the republic of Italy, assumed the iron crown of the ancient kings of Lombardy, and made a dowry for his sister out of one of its principalities: he was already, also, preparing thrones to establish his brothers.

England influenced Russia, after the emperor Paul, the admirer of Buonaparte, had been assassinated by the grandees of his court. A league was formed with Austria and Sweden. Napoleon had the address, however, to detach Prussia from it by promising Hanover to the king. The camp at Boulogne was now suddenly raised; an Austrian army as suddenly capitulated at Ulm; and two emperors, Alexander and Francis, were beaten at Austerlitz. The emperor of Germany was now compelled to submit to the terms of his conqueror. Joseph Buonaparte was sent to Naples with the title of king, while Louis was placed, as king, in Holland, and Prussia lost her Rhenish provinces. The confederation of the Rhine was confirmed to Napoleon, in order to supply him with soldiers. Prussia, at this period, still trembling for her own safety, was once more excited by England and Russia to resistance; upon which, Napoleon transports his immense army across the continent, and in less than one month arrives at Berlin, having gained the battle of Jena. In that city he launched his famous interdict against the English trade; and, shortly after, the Russian army was crushed at Eylau and at Friedland: finally, the peace of Tilsit confirms Napoleon in the highest degree of power which he could reach; Prussia, punished for her temporising policy, is occupied by the military: Jerome Buonaparte is installed king of Westphalia, and Poland forms the hope of raising herself from the ashes of her freedom, under the auspices of the great emperor. Never had the fortune of a man been more brilliant; the whole world was struck with astonishment at the recital of victories so rapid, and seemed to bow itself before so colossal a power. But the ambition of Napoleon did not permit him to stop here; Europe was the devoted prey of his ambition, and every freeman was his enemy. No sovereign could be more absolute; he regarded other men as insignificant cyphers, destined to increase the amount of that unity which centred in himself; their wealth, their thoughts, their life—all was nothing. He wished to fill the pages of history with the account of his time, and he has succeeded; there was no further anxiety about France.

It has been often said, that Buonaparte recompensed France for the loss of liberty and repose by the illusions of his glory; but nothing can make up for the want of liberty. It is true, that, always ready to suffer herself to be seduced by the false glory of conquest, France appeared to offer her shoulders to the yoke; but it is not less a crime, on that account, to have enslaved her. We shall see Napoleon soon after laboring to bring back the ancient order of things, by abolishing all the customs and effacing all the images of liberty. The tribunate, which existed only in name, and which had been honored with the discussion of the civil law, Napoleon closed;

ne made a monopoly of public education, in which youth were taught the glories of the emperor, as children are taught their catechism. Some of the priests declared from the pulpit, that he had a divine mission. He created a military nobility, something like that which existed before the time of Henry IV.; and his generals, adorned with ribands, endowed with pensions, and enriched with the spoils of an enemy's country, respected him as their chief. They were no longer those poor leaders, who led the French on foot to the defence of their country; the times of the patriots Jourdan and Perignon had passed away; Hoche, Desaix, Marceau, Dugomier, and Kleber were dead: yet the army could still reckon in the list of its worthies such men as Lecourbe, Gouvion-Saint-Cyr, Lefebvre, Dejeau, Desolles, and Lannes, who preserved their dignity, and were not cowed by their new master. Some of the old Jacobins, strangely decorated with feudal titles, and some emigrants installed in the antechambers, rivalled one another in submission, and in prostrating themselves around him. He re-established the imposts, the abuses and prodigalities of the ancient monarchy. The aids and monopolies re-appeared under the name of united duties. The press was kept under by a merciless censorship; juries were perverted; prefects and other petty subaltern despots assumed the place of free administrations of justice; the emperor nominated all the public functionaries, and all, even down to the field-keepers, were inviolable: the council of state, a dependent and removable body, was the sole arbiter of their responsibility. The election of the deputies was a ridiculous thing in this pretended representative government, the laws of which were the dicta of the emperor, under the name of decrees, or senatorial edicts. Individual liberty no longer existed; and while the 14th of July was often celebrated, many bastiles were occupied throughout France in the service of this arbitrary despot. A police, that was a true political inquisition, suspected even silence itself; accused even the thoughts of men, and extended over Europe a net of iron. All this time too the conscription, a dreadful tax upon human life, was levied with unsparing activity; and the French youth were surrendered to his will by the senate as a sort of annual contribution. It is said that Napoleon held the human race in sovereign contempt; he had, indeed, good reason to do so!

Portugal was now in the emperor's possession, and Spain placed herself at his feet: the army of the latter fine country he transported into the north to fight the battles of his future ambition. Discord prevailed at this time among the Bourbons at Madrid, who chose Napoleon arbitrator, and he made them prisoners, in order to raise his brother Joseph to the throne; Murat, his brother-in-law, being transferred to Naples. The emperor went to Erfurt to meet Alexander of Russia, and they agreed to shut up the Continent of Europe against the English who had blockaded it. The Spaniards, however, rose against the conquerors of Europe, and for several years Spain became the grave of the French. Both Napoleon and France well knew what the most stupid nation could achieve, when directed by enlightened men, and roused to a pitch of fanaticism by the priests; and yet to this unjust aggression Spain owes the dawn of liberty she has seen; and Europe her deliverance from his iron grasp. Suddenly Napoleon was once more (A. D. 1809), obliged to transport his powerful army to Vienna; where, after having beaten Austria at Essling and at Wagram, he demanded Maria Louisa in marriage. To accomplish this adulterous alliance Josephine Beauharnais was divorced; and an arch-duchess espouses a man whom the nobility of Germany looked upon as an upstart. Half-a-dozen kings were present at the marriage; and Napoleon, a year after, was presented with a son, whom he decorated, from his cradle, with the title of king of Rome.

The French departments now (1811), extended from Rome to Hamburg: all Europe bowed to Napoleon but it could not contain him. He undertook to chastise Russia, which had just broken the blockade; and the English, whose attempt upon Belgium had been repulsed by the national guards, effected a coalition between Russia and Sweden, which had just elected Bernadotte her crown prince. Napoleon now urges the whole of Europe upon Russia: 400,000 men, who might have crowned him on the way emperor of Constantinople, arrived in time to witness the heroic and ever to be lamented burning of Moscow. Nature at length subdued the pride of a man who never started at impossibilities; and, while an unusual severity of cold annihilated his superb army, he who had dated his decrees from the Kremlin returned alone to Paris to put himself into a terrible and ridiculous passion against the liberal sentiments of the people. During his absence (1812) the conspiracy of Mallet had failed of effecting a change in the government. The senate, however, furnished men, money, and horses, and Napoleon went to Saxony to subdue the Prussians and Austrians who had declared against him. There Moreau fell, with the reproach of having fought against his country, but with the satisfaction of knowing, at the same time, that he was defending the cause of Europe and civilisation. The emperor, however, could not stand out against the defection of all his allies, and even of the kings whom he himself had made. Still, however, he might have concluded a glorious peace; but he would yield nothing, and therefore lost all. His campaign in France evinced the energy, the constancy, and the superiority of his genius; there, struggling with a handful of men against immense forces, he gave a sufficient answer to those who would pretend that he never conquered but with vast armies at his command. But France, enslaved and gagged, had forsaken him; the mutes of the legislative body had found their tongues; a cry of liberty resounded in Germany; the kings seemed to approve it, and accepted the assistance of those liberal notions which at this day they fear and disavow.

The English and Portuguese, united with the whole Spanish people, had driven into the south of France the few forces that opposed them, and the battle of Toulouse left the glory uncer-

etween the success of numbers and the nce of the vanquished. Bourdeaux was ed to the English by its mayor; while defended by its inhabitants, a few invalids, ıe young pupils of that school, all the ıts and labors of which were consecrated good of their country, opened its gates to gn force. The people now (1814) learned ıe who had been emperor but the night , was the next day to retire to a little island Mediterranean: and some persons, in robes, proclaimed the Bourbons, who ıdvancing with a promise of the abolition conscription and the united duties. Led M. de Talleyrand, ever skilful in taking tage of circumstances, the senators formed ı of a constitution, nearly the same as that exists in the charter, and recalled Louis I., on condition that he would continue to their situations. They then signed the cted deposition of Napoleon. The allied rchs approved it; France was reduced to ncient limits; the remainder of the fleet, ı had been almost annihilated at Trafalgar 05, and by the fireships at Rochefort, was ered up, as well as part of the artillery.

f,' says the able French writer whom we permitted chiefly to tell this tale of France, have judged Napoleon with rigor, we render ıge to his great actions. At a time when his in conjunction with his genius, directed to that which was good, he deepened the of Cherbourg, and formed the roads of nt Cenis and the Simplon; he despoiled ıe and Nismes, to embellish Paris. His con- ıtal system and his prohibitions, which were l as far as they were reprisals, gave to French stry that activity which peace has redoubled. he depopulated the country parts, and already ıred France with military fiefs. There is an or, a declared supporter of feudalism, who ires Napoleon, 'because,' as he says, 'he e could and would have established it. Certain that he destroyed the revolution by its own er; while he was to be pitied for his predi- ıon for nobility and the splendor and etiquette ourts; one cause, perhaps, of his own fall.'

Vearied with the imperial yoke, and with inual war, France hailed the approach of ce with acclamations of joy and hope. The laration of St. Ouen, which included in it ıral of the fundamental principles of the ılution, re-assured all hearts. France, and n Europe are indebted to Louis XVIII. for ing set a useful example, by assisting in the stablishment of the representative system. senators, in conjunction with some others, ned a chamber of peers. At the same time convened the legislative body of the empire, ich formed the chamber of deputies; and ıis, who had declared his determination to ıpt a liberal constitution, granted the charter, ich, notwithstanding some omissions and perfections, contains sufficient guarantees for erty, were they well executed; but here lies difficulty. The imperial institutions still sted, and these alone had any real effect. The ırter promised, but it organised nothing; the ıstitution of the year 8 remained in force with regard to the people, and the charter was founded on that constitution, and on the despotic decrees of Napoleon. Had Buonaparte been bribed to smooth the way for the restoration of royalty, he could not more faithfully have fulfilled his mission. The Bourbons found the communes, the national guard, trial by jury, the department, the elections even, and an enormous budget in the hands of the executive authority; they found a hierarchy of irresponsible officers, rising in various degrees around this centre, from which every thing emanated, and to which all tended. It has been disputed, whether or not a counter-revolution had taken place: the fact is, Napoleon had already in part formed a counter-revolution; take away the right of general taxation, and the equality of men in the eye of the law, and it is completed. Louis re-established, with the representative system, a part of the revolution; to restore it entirely, it was necessary to put in the place of the imperial institutions, which govern France, the liberal institutions that she hopes to behold.

Little alteration in fact was made at this time: the ministers contented themselves with displaying the charter, and, without fulfilling its conditions, cavilled about its meaning. There was need of economy, but prodigality was the order of the day. The parties which had not been dissolved, but only depressed by Napoleon, raised themselves again. The most ridiculous claims were urged with insatiable eagerness; the satellites of despotism, in order to reinstate themselves, openly displayed their treason; and prefects, who had executed the conscription in a way similar to the treatment of negroes, dreamed only of serving the legitimacy in the same manner. The possessors of national property were disturbed alternately by hopes or by fears; the army, discontented at having lost its political ascendancy, had already begun to move. On a sudden in the spring of 1815 it was reported that Napoleon, having escaped the unsuspicious commissioners of the allies, had landed at Cannes with a few soldiers, which in Grenoble were taken for a regiment; that he was entering Lyons, and would soon be at Paris with an army. Every thing was thrown into confusion; the king and the princes again swore fidelity to the charter; they confided the security of it to the citizens and the army, and protested their love for liberty. Napoleon also promised liberty; he was again placed on the throne, and the Bourbons fled to Ghent.

France now knew not what law to obey, but order was restored. A chamber of representatives was convoked; and an assembly of the French electors announced under the name of champ-de-mai. Napoleon obliged, in these circumstances to have something to do with liberty, offered for the provisional acceptance of the people, the additional act, in imitation of the charter. The congress of Vienna, however, where the kings had divided among themselves the nations, to whom they owed their deliverance, still continued. One of the king's ministers, Talleyrand, still accredited there, stirred up the coalition against the usurper of Europe. The army and the national guards hastened to the

frontiers; but the foreign troops entered on all sides. While the west, where an insurrection had with much difficulty been excited, and the south, aided by the king of Spain, were yielding to the discipline of a few regiments, and to the power of patriotic confederations, Napoleon at Waterloo lost his throne in a moment. Paris, where Fouché still was, capitulated; the representatives who, at the call of la Fayette, had renewed the declaration of rights, and enacted even at the cannon's mouth a free constitution, separated. Napoleon abdicating a second time, went to deliver himself up to the English, who imprisoned him in the midst of the ocean, at the distance of near 5000 miles. The army retired beyond the Loire, to submit peaceably to its discharge, and to sacrifice to the tranquillity of the country, even the irritated feelings of a disappointed hope. The allies proceeded to seize on and pillage a great part of France, and the king re-entered Paris on the 18th of July.

This disastrous epoch of the hundred days was a very remarkable one. The spirit of liberty had roused itself in France, after a slumber of fifteen years; Napoleon was resisted; the army and the National guards recollected the re-action of 1792; the citizens and soldiers began to approach one another; the military again became citizens; Napoleon was no longer their idol, he had been only a rallying point imposed by circumstances; they resolved, in fine, for the cause of their country, and of liberty, both of which they had too much forgotten. Some few places held out for a length of time, and an Austrian army, that was besieging Huningen, were astonished at being stopped in their course by an invalid and a few veterans. The situation of the king, on the whole, was a critical one; he entered his capital, preceded by irritated foreigners, who exacted an enormous contribution, part of which was paid on the spot by means of a forced loan; cannon was planted on his palace, and the greatest disorder prevailed in France. The king proclaimed, on the 29th of June, that his government had perhaps been faulty in some respects, promised to add to the charter all the guarantees which secure its execution, and declared that the representative government should be maintained. The rest belonged to his ministers and to circumstances; the responsibility of the former has been unnoticed in the charter, but it ought not to escape the notice of history.

The chamber of 1815, called the Unsearchables, was nominated by the yet incomplete electoral colleges, and the knights of St. Louis, who were united to it. It seemed as if it gave the signal for a re-action of the most furious passions. The tribunals, the military commissions, and the provostal courts, shed the blood of a great number of persons, accused of political crimes. Denunciators, partly some of the old Jacobins, filled the places of the former functionaries, and the standing commissions were renewed. The impunity of assassination organised, in the south, a set of royalists called green-men, who made the country tremble. Brune killed himself at Avignon; Ramel, sent in the name of the king, was assassinated; some unfortunate Mamelukes, who had attached themselves to the fortunes of Napoleon, expired under the cruel hand of the Marseillais; while the Protestants were murdered at Nismes by some wretches, who walked about boldly, encouraged by a chamber, which imposed silence on Argenson, their accuser. Enquiries pursued the military, and the amnesty was on the point of becoming dreadful to France, if the ministry had not opposed the chamber. Espionage and domiciliary visits were for a long time the reprisals for some measures of a similar kind, adopted during the hundred days. Fiery orators signalised themselves in the chamber by propositions, little encouraging to the nation, or perhaps to the throne itself. In fine, the discontented state of France, that had already manifested itself by an insurrection in the Iserer, which had been severely repressed, warned the minister, that it was time to stop this torrent, which grew more rapid the more it was confined. The foreign cabinets even showed a desire for this step. The charter itself was threatened, and, to place things in safety, the ordinance of the 5th of September was renewed, and the chamber dissolved.

A new assembly, elected under the influence of a moderate policy, adopted, notwithstanding the opposition of the aristocratic party, a law for elections agreeable to the charter: this was the chief requisite of the representative government. Prosecutions gradually ceased; the public spirit revived; the ministry, without granting all that was claimed, seemed at least to allow the people to hope. Other institutions, conformable with the charter, were promised; the administration became more lenient, and mutual instruction was encouraged and already made great progress. Fifteen members, introduced into the chamber by the new law, strengthened the constitutional majority; salutary measures, with regard to military promotion, were defended with talent by the conscientious minister, Gouvion Saint Cyr; and the frontiers were delivered from 100,000 foreigners, whose presence had given all its force to the re-action. Still, however, that system of policy which, while it sought support on the right and the left, was finally influenced rather by private interest, and the advantage of a set of pensioners, than by public opinion, insinuated itself slowly. Expenses swelled, notwithstanding extraordinary public burdens; but the frank opposition avowed by the nation marked these abuses, and expressed their wants.

The aristocratic party, which appeared to have assumed, in their parliamentary tactics, the language of the liberals, and implored in vain by their secret notices for the aid of a foreign power, foresaw that they would soon be reduced in the chamber to the rank they held in the nation; they therefore stirred up opposition to the electoral law. The chamber of peers, which till then had excited little notice, received the proposition for modifying this law—a proposition which a ministry, appointed at this crisis, rejected; and sixty new peers were created to displace the majority. The ministry resting on public opinion, a satisfactory law on the freedom of the press was adopted, and the journals became free. Soon, however, an injudicious discussion on the re-

calling of the banished, and some disturbance, that had occurred in the law school, broke the unanimity which prevailed between the ministry and the liberal majority. Some persons, undoubtedly with the best intentions, contemplated the alteration of the law of elections, until the ministers, St. Cyr, Dessoles, and Louis, refusing to take part in this business, retired (1820) with popularity for their only reward. The Spanish revolution, which then broke out, and the rejection of a deputy legally elected, again exasperated the new schism.

Suddenly a prince of the royal family, the Duke de Berri, fell beneath the knife of a fanatical assassin; and a sad presentiment seized on all upright minds, to whom the experience of the past is not useless, and who well know, how power can form a party for its support from a bloody robe. Two laws immediately suspended individual liberty, and the liberty of the press. A minister who, notwithstanding the new attack on the law of election, preserved a popularity that he owed to the remembrance of the 5th of September, M. Decaze, was overthrown. His successors, with the majority of five voices (their own) passed a law, which establishes two kinds of elections, and gives the richest electors the right of voting twice. Some outrages committed on the deputies, who refused their consent to this law, occasioned reprisals and numerous mobs; on which several days after, the cavalry made a charge and dispersed them. Soon (1821) the ministry brought before the court of peers a great number of military men, accused of a formidable conspiracy. In this proceeding were seen, among others, some of those men, known by the name of exciting agents, who have done much mischief in every period of the revolution, and who make the police an instrument of promoting confusion. As to the legislative session, it presented only the continued triumph of a strong majority, introduced into the chamber of deputies by the new law.

During this year the Neapolitan and Piedmontese nations, which had established among them the representative government, and the constitution of the Cortes, were subdued and chastised by the Austrians. It was also in the year 1821, that the news reached Europe of the death of Napoleon. A few years before, this event would have convulsed the world: at this period it only produced the effect of the resounding of the far distant, but still formidable storm. The new election in 1821, reinforced the right side of the chamber, already so numerous. At the opening of the session, the majority overthrew the ministers to whom it was indebted for the law, and some of the presidents, under whose direction it had been chosen. A minister, whom they deemed more decided, had been named. The ex-ministers, according to custom, retreated to the chamber of peers, or received appointments as ministers of state. A very severe and restrictive law now passed, with regard to the press, subjecting authors to the judgment of a jury, and a new law on the publication of newspapers took the place of the censorship. A budget of more than 900,000,000, or much above any that had been proposed in times when the kingdom was at its greatest height of power, passed without difficulty, supported by the majority of the right side: while still the left continued to render itself worthy of its popularity, and of the national gratitude, by its devoted conduct, its fine talents, and its indefatigable zeal in defending the general interests.

Louis XVIII. died in 1824. Our review of the factions and changes of modern French history has been perhaps already continued too far—the events are hardly cooled from the crucible in which they have taken their apparent form. It will suffice to say that this prince was truly a Frenchman: that at least in his second though short exile he learned much, and that France has resumed and retained a power of teaching her future kings more.—She will be free.

Our intelligent readers will observe that the whole of the preceding *History* of France has been recast, on the basis of the most esteemed French authorities, for the present work: we have in some cases simply translated particular passages, and exercised a supervisory care over the whole; conceiving that an intelligent and moderate French historian would be able to give us the fairest and best digested account of French history.

FRANCE, ISLE OF, the name of an important province of France before the revolution. It comprised Paris, and probably received its name from being surrounded by the Seine, the Marne, the Oise, the Aisne, and the Ourcq. It is in general level, fertile, and populous; but is now divided into the departments of the AISNE, OISE, SEINE, SEINE and OISE, and SEINE and MARNE, which see.

FRANCE, ISLE OF, or Mauritius, an island in the Indian Ocean. See MAURITIUS.

FRANCFORT. See FRANKFORT.

FRANCHE COMTE', or Upper Burgundy, the name, before the revolution, of a province of France, adjacent to Switzerland and Lorraine. It now forms the departments of the DOUBS, JURA, and UPPER SAONE, which see. Its northern part is level: its southern hilly and better adapted to pasturage. Its principal rivers are the Saone, the Doubs, the Oignon, and the Louve; along the banks of the first two are many iron works; and in the vicinity of Salins extensive salt works. Franche Comté has belonged to France since 1674, and was confirmed to that country by the peace of Nimeguen. Its capital town was Besançon.

FRANCHEMONT, or FRANCHIMONT, a town and district of France, in the department of Ourte; formerly a marquisate of Germany, in the bishopric of Liege. The town lies thirteen miles south-east of Liege.

FRAN'CHISE, *n. s.* & *v. a.* Fr. *franchise*. Privilege; immunity; right granted; exemption from slavery or any onerous duty. Frankness;

generosity; district; extent of jurisdiction; to make free; to keep free.

Certain, thought she, whom that this thing displese
I rekke not for here I him assure
To love him best of any creature
Though he no more hadde than his sherte.
Lo, pitee runneth sore in gentil herte
Here may ye seen, how excellent *franchise*
In women is, whan they hem nawe avise.
Chaucer. The Merchantes Tale.

There are other privileges granted unto most of the corporations, that they shall not be travelled forth of their own *franchises.* *Spenser's State of Ireland.*

I lose no honour
In seeking to augment it; but still keep
My bosom *franchised,* and allegiance clear.
Shakspeare.

They granted them markets, and other *franchises,* and erected corporate towns among them.
Davies on Ireland.

His gracious edict the same *franchise* yields
To all the wild increase of woods and fields.
Dryden.

Franchise, is also used for an asylum or sanctuary, where people are secure of their persons, &c. Churches and monasteries in Spain are franchises for criminals; so were they anciently in England, till they were abused to such a degree that there was a necessity for abolishing the custom. One of the most remarkable capitulars made by Charlemagne in his palace of Heristal, in 779, was that relating to the franchises of churches, by which he forbad any provision to be carried to criminals retired into churches for refuge.

Franchise, and Liberty, in law, are used as synonymous terms; for 'a royal privilege, or branch of the king's prerogative, subsisting in the hands of a subject.' Being therefore derived from the crown, they must arise from the king's grant; or, in some cases, may be held by prescription, which presupposes a grant. We shall briefly mention some of the principal kinds of franchise, premising only, that they may be vested either in natural persons or bodies politic; in one man, or in many: but the same identical franchise, that has before been granted to one, cannot be bestowed on another, for that would prejudice the former grant. A county Palatine is a franchise vested in several persons. It is likewise a franchise for a number of persons to be incorporated and subsist as a body politic; with a power to maintain perpetual succession, and do other corporate acts: and each individual member of such corporation is also said to have a franchise. Other franchises are, to hold a court-leet; to have a manor or lordship; or, at least, to have a lordship paramount: to have waifs, estrays, treasure-trove, royal fish, forfeitures, and deodands: to have a court of one's own, or liberty of holding pleas and trying causes; to have cognisance of pleas; which is still a greater liberty, being an exclusive right, so that no other court shall try causes arising within that jurisdiction: to have a bailiwic, or liberty exempt from the sheriff of the county; wherein the grantee only, and his officers, are to execute all processes: to have a fair or market; with the right of taking toll, either there or at any other public places, as at bridges, wharfs, or the like; which tolls must have a reasonable cause of commencement (as in consideration of repairs, or the like), else the franchise is illegal and void: or lastly, to have a forest, chase, park, warren, or fishery, endowed with privileges or royalty. Usage may uphold a franchise without either record or creation, allowance or confirmation; but it hath been adjudged that grants of franchises, made before the time of memory, ought to have allowance within the time of memory, in the king's bench; or by some confirmation on record; and such ancient grants shall be construed as the law was when they were made, and not as it hath been since altered; but franchises granted within time of memory are pleadable without any allowance or confirmation; and, if they have been allowed or confirmed, the franchises may be claimed by force thereof, without showing the charter.

Franchises may be forfeited and seized for mis-user, or non-user, and, when there are many points, a mis-user of any one will make a forfeiture of the whole. For contempt of the king's writ, in a county palatine, &c., the liberties may be seized, and the offenders fined; and the temporalities of a bishop have been adjudged to be seized until he satisfied the king for such a contempt.

FRANCIA (Francis), a celebrated Bolognese painter, born in 1450. He was first a jeweller, afterwards a graver of coins and medals; and, applying at last to painting, obtained great reputation by his works, particularly by a painting of St. Sebastian, whom he had drawn bound to a tree, with his hands tied over his head. Hearing much of the works of Raffaelle he greatly desired to see some work of so celebrated an artist; and Raffaelle, having painted a St. Cecilia for the church of St. Giovanni del Monte at Bologna, wrote to Francia, requesting him to see it properly fixed. The letter was received with rapture; but when he came to examine the picture, the sight of so much perfection in design, grace, expression, and exquisite finishing, struck Francia with astonishment, and threw him into a state of melancholy; and the feeling of how much Raffaelle was superior to himself is said to have occasioned his death, in 1518.

FRANCIS (Philip), D. D., an ingenious writer, of Irish extraction, his father being dean of a cathedral in that kingdom. He was more distinguished as a translator than as an original writer. His versions of Horace and Demosthenes have been justly valued; the former is accompanied with learned and useful notes. He was also a considerable political writer: and is supposed to have been employed by the government; for which service he was appointed rector of Barrow in Suffolk, and chaplain of Chelsea hospital. He was also the author of two tragedies, Eugenia, and Constantia. He died at Bath in March 1773, leaving a son, then one of the supreme council at Bengal.

Francis (Sir Philip), a celebrated whig politician of modern times, was the son of the last mentioned, and was born in Ireland in 1740.

he was educated partly by his father, and afterwards at St. Paul's school; on leaving which he became a clerk in the secretary of state's office He went out to Portugal with the British envoy in 1760; and on his return obtained a situation in the war-office under lord Barrington. He was dismissed, or relinquished the post, in consequence of a quarrel with that nobleman; and in 1773 he went to the East Indies, when he became a member of the Bengal council, and distinguished himself by his opposition to the measures of governor Hastings, the violence of which at length occasioned a duel, in which Mr. Hastings was wounded. In 1781 Mr. Francis returned to England, and was chosen M. P. for the borough of Yarmouth in the Isle of Wight. In the house of commons he joined the opposition; and, on the impeachment of Mr. Hastings, actively supported his accusers. He came into office with the whig administration; where he was honored with the order of the bath. He died in 1818, having published several clever political pamphlets, and to him has been somewhat plausibly assigned the credit of having written the famous Letters of Junius. See Junius.

Francis (St). the founder of the society of the Franciscans, was the son of a merchant of Assisi, in the province of Umbria. Having led a dissolute life, he was reclaimed by a fit of sickness, and in 1208, hearing the passage quoted, Matt. x. 9, 10. 'Provide neither gold, nor silver,' &c., he was led to consider a voluntary and absolute poverty as the essence of the gospel, and to prescribe it as a sacred rule to himself and those who followed him. See Franciscans. He died in 1226.

FRANCISCANS, in ecclesiastical history, religious of the order of St. Francis, founded by him in 1209. This society, which appeared to Innocent III. extremely adapted to the state of the church, was solemnly approved and confirmed by Honorius III. in 1223. Francis, through an excessive humility, would not suffer the monks of his order to be called fratres, i. e. brethren or friars, but fraterculi, i. e. little brethren, or friars minor, by which denomination they still continue to be distinguished. They are also called gray friars, on account of the color of their clothing, and Cordeliers, &c.— The Franciscans and Dominicans were zealous and active friends to the papal hierarchy. In 1287 Matthew of Aqua Sparta, being elected general of the order, discouraged the ancient discipline of the Franciscans, and indulged his monks in abandoning even the appearance of poverty. This conduct raised the indignation of the spiritual or austere Franciscans; so that from 1290 schisms arose in an order that had been famous for its pretended disinterestedness and humility. Such was the enthusiastic frenzy of the Franciscans, that they impiously maintained, that St. Francis was a second Christ, in all respects similar to the first; and that their institution and discipline were the true gospel of Jesus. Accordingly, Albizi, a Franciscan of Pisa, published a book in 1383, with the applause of his order, entitled, The Book of the Conformities of St. Francis with Jesus Christ! In the beginning of the eighteenth century, the whole Franciscan order was divided into two parties; the one called Spirituals, who embraced the severe discipline and absolute poverty of St. Francis; and the other, Brethren of the Community, who insisted on mitigating the austere injunctions of their founder. These wore long, loose, and good habits, with large hoods; the former were clad in a strait, coarse, and short dress, pretending that this dress was enjoined by St. Francis, and that no power on earth had a right to alter it. Neither the moderation of Clement V. nor the violence of John XXII. could appease the tumult occasioned by these two parties: however their rage subsided from A. D. 1329. In 1368 these two parties were formed into two large bodies, which still subsist, comprehending the whole Franciscan order; viz. the conventual brethren, and the brethren of the observances or observation, from whom sprung the Capuchins and Recollects. The Franciscans are said to have come over to England in 1224, and to have had their first house at Canterbury, and their second at London; but there is no certain account of their being here till Henry VII. built two or three houses for them. At the dissolution of the monasteries, the conventual Franciscans had about fifty-five houses, which were under seven wardenships; viz. those of London, York, Cambridge, Bristol, Oxford, Newcastle, and Worcester.

FRANCISCO (St.), a capacious town and harbour on the coast of Brasil, on the south frontier of the province of St. Paul. The bay has three fortified entrances, of which that to the south is the most frequented. The inhabitants in the neighbouring country are chiefly employed in cutting timber, and ship-building; in which many negroes are also employed. The town is situated on a small island at the entrance of the bay, in lat. 26° 153′. Behind it, is a ridge of mountains, which rise to the height of 4000 feet. Over this impassable barrier a road is constructing, at an incredible expense, which when it is finished will be of great importance to this port.

Francisco Rio, a large river of Brasil, which has its rise in the province of Minas Geraes, between 20° and 21° of S. lat., in that low valley which is formed in the interior, beyond the first ridge of the Andes, which here run in a direction nearly north and south. It runs north for many miles, with an inclination to the north-north-east, and then, turning east, after a course of about 800 miles it falls into the Atlantic, in lat. 6° 55′ S., and is the boundary between Bahia and Pernambuco.

FRANCKLIN (Thomas), D. D., a miscellaneous critic, and writer, was the son of a printer and bookseller of Covent Garden, where he was born in 1721. His father, who was printer of the Craftsman, devoted him to the church, and he was educated at Westminster school, and Trinity College, Cambridge. He afterwards was an usher in the school in which he was educated, and in 1750 became Greek professor at Cambridge. He first appeared as an author in a translation of The Epistles of Phalaris, 1749 and of Cicero's tract De Naturâ Deorum

About the same time he published An Enquiry into the Astronomy and Anatomy of the Ancients, reprinted in 1775, 8vo. In 1759 appeared his Sophocles, 2 vols. 4to. which is allowed to be a fair and forcible translation of that great poet. This was followed by a Dissertation on Ancient Tragedy: he is also supposed to have aided Smollet in the Critical Review, and in the translation of the works of Voltaire. In 1757 he received from Trinity College the livings of Ware and Thundridge in Hertfordshire, and published in 1765 a volume of popular Sermons on the relative Duties. The next year he produced at Drury-lane theatre the tragedy of the Earl of Warwick, borrowed without acknowledgment from the French of La Harpe; and although in 1767 he was made one of the king's chaplains, and in 1770 D. D., he paid a constant attention to the stage, by the occasional production of dramas, chiefly adapted from the French, and on one occasion descended even to farce. In 1776 he was presented to the living of Brasted in Surrey. In 1780 Dr. Francklin published his excellent translation of Lucian, in 2 vols. 4to. and died March 15th, 1784. Besides the works already mentioned, he was the author of a humorous piece entitled A Letter on Lectureships, An Ode on the Institution of the Royal Academy, and three volumes of posthumous Sermons.

FRANCOIS, Cape, a town on the north coast of Hispaniola, and one of the principal towns of the island. Its port is advantageously situated on a cape at the edge of a large plain, sixty miles long and twelve broad. It is screened too much from the land wind by the mountains, and thus left exposed to the unmitigated heat of the sun. The plain on which it stands is well watered and cultivated. Here are straight roads, forty feet broad, lined with hedges of lime and lemon trees, intermixed with long avenues of other trees, and leading to plantations which produce a greater quantity of sugar than any other spot of the same size in the world. The town once possessed several elegant public buildings, such as the Jesuits' College, converted since the revolution into a government house; the governor's house, the barracks, the arsenal, the theatre, and two hospitals. The port is one of the most secure and convenient in the whole island. It is exposed to no wind but the north-east.

Cape François was founded in 1670, and was burnt in 1793 by the people of color. It has suffered severely since the intestine commotions by which the island has been distracted. Previously it contained 8000 inhabitants, and was the last town retained by the French in the island in 1803. It was called Cape Henry by Christophe. Long. 72° 16′ W., lat. 19° 46′ N.

FRANCONIA, a circle of the old German Empire, bounded on the north by Meissen and Thuringia, on the south by Bavaria and Suabia, on the east by Bohemia and the Upper Palatinate, and on the west by the Lower, and the electorate of Mentz; being eighty-eight miles from north to south, and ninety-five from east to west. The middle is fertile in corn, wine, and fruits; but the borders are full of woods and barren mountains. The majority of the people are Lutherans; but there are also many Calvinists, Roman Catholics, and Jews. The Franks, who conquered and gave name to France, came from this province. See France. Nuremburg is the capital.

FRANEKER, Franequer, or Franker, a town of the Netherlands, in north Friesland. It has a castle, and many magnificent buildings, and stands on the canal between Haarlem and Lewarden. There is also a university or Athenæum, once famous for its learned professors; particularly Adrian Metius, George Pasor, Pierius Winsemus, &c. It lies nine miles west of Lewarden, and five east of Harlingen. Population 3400.

FRA'NGIBLE, *adj.* Lat. *frango.* Fragile; brittle; easily broken.

Though it seems the solidest wood, if wrought before it be well seasoned, it will shew itself very *frangible.* *Boyle.*

FRA'NION, *n. s.* Sax. ꝼɼeon, a lover; a paramour; a boon companion.

First, by her side did sit the bold Sansloy,
Fit mate for such a mincing minion,
Who in her looseness took exceeding joy,
Might not be found a franker *franion.*
Faerie Queene.

FRANK, *adj.* } Fr. *franc*; Germ. *frank*,
Frank'ly, *adv.* } is connected with the word
Frank'ness, *n. s.* } *frech*, bold, and *frei*, free.

Liberal; generous; not niggardly; unreserved; free without restraint; without conditions; without payment. Frank is not, however, quite synonymous with candid, free, open, and plain: Frankness is a voluntary effusion of the mind between equals: candor is a debt paid to justice from one independent being to another. The frank, free, and open, all speak without constraint; but the frank man is not impertinent like the free man, nor indiscreet like the open man. See Crabb.

Thou hast it won; for it is of *frank* gift,
And he will care for all the rest to shift.
Hubberd.

Oh, were it but my life,
I'd throw it down for your deliverance,
As *frankly* as a pin.
Shakspeare. Measure for Measure.

If ever any malice in your heart
Were hid against me, now forgive me *frankly.*
Id. Henry VIII.

The ablest men that ever were, have had all an openness and *frankness* of dealing, and a name of certainty and veracity. *Bacon.*

The moister sorts of trees yield little moss, for the reason of the *frank* putting up of the sap into the boughs. *Id.*

He entered very *frankly* into those new designs, which were contrived at court. *Clarendon.*

The lords mounted their servants upon their own horses; and they, with the volunteers, who *frankly* listed themselves, amounted to a body of two hundred and fifty horse. *Id*

When the Condé duke had some eclaircissement with the duke, in which he made all the protestations of his sincere affection, the other received his protestations with all contempt; and declared with a very unnecessary *frankness*, that he would have no friendship with him. *Id.*

He delivered with the *frankness* of a friend's tongue, word by word, what Kalander had told him touching the strange story. *Sidney.*

'Tis the ordinary practice of the world to be *frank* of civilities that cost them nothing. *L'Estrange.*

They were left destitute, either by narrow provision, or by their *frank* hearts and their open hands, and their charity towards others. *Sprat's Sermons.*

Tom made love to a woman of sense, and always treated her as such during the whole time of courtship: his natural temper and good breeding hindered him from doing any thing disagreeable, as his sincerity and *frankness* of behaviour made him converse with her before marriage in the same manner he intended to do afterwards. *Addison's Guardian.*

I value my garden more for being full of blackbirds than cherries, and very *frankly* give them fruit for their songs. *Spectator.*

Conscience, what art thou? thou tremendous power,
Who dost inhabit us without our leave,
And art within ourselves, another self,
A master-self that loves to domineer,
And tread the monarch *frankly* as the slave.
Young.

Frank, *n. s.* & *v. a.* Fr. *franc*, a stye. A hogstye; a place to feed hogs in, so called from liberality of food; a letter which goes free and pays no postage. It is also the name of a French coin. To frank is used in the various applications of the noun, and, in addition, it signifies to feed high; to fatten; to cram.

Where sups he? Doth the old boar feed in the old *frank?* *Shakspeare. Henry IV.*

In the sty of this most bloody boar,
My son George Stanly is *franked* up in hold.
Shakspeare.

You'll have immediately, by several *franks*, my epistle to lord Cobham. *Pope to Swift.*

Gazette sent gratis down, and *franked*,
For which thy patron's weekly thanked. *Pope.*

My lord Orrery writes to you to-morrow; and you see I send this under his cover, or at least *franked* by him. *Swift.*

Frank, or Franc, in the ancient English customs, signifies literally free from charges and impositions, or exempt from public taxes; is used in various senses, sometimes compounded, and sometimes not; though the latter is doubtless more proper. Thus,

FRANKALMOI'GNE, *n. s.* The same which we in Latin call *libera eleemosyna*, or free arms in English; whence that tenure is commonly known among our English lawyers by the name of a tenure in frank aumone, or frankalmoigne, which, according to Briton, is a tenure by divine service. *Ayliffe's Parergon.*

Frank Almoigne is a tenure, whereby a religious corporation, aggregate or sole, holdeth lands of the donor to them and their successors for ever. The services which they were bound to render for their lands were not defined: but only in general to pray for the souls of the donor and his heirs, dead or alive; therefore they did no fealty (which was incident to all other services), because this divine service was of a more exalted nature. This is the tenure by which almost all the ancient monasteries and religious houses held their lands; and by which the parochial clergy, and very many ecclesiastical and eleemosynary foundations, still hold them; the nature of the service being upon the reformation altered, and made conformable to the purer doctrines of the church of England. It was an old Saxon tenure, and continued under the Roman revolution through the great respect that was shown to religion and religious men in ancient times. This is also the reason that tenants in frankalmoigne were discharged of all other services except the trinoda necessitas of repairing the highways, building castles, and repelling invasions; just as the druids among the ancient Britons had omnium rerum immunitatem. And even at present this is a tenure of a very different nature from all others, being not in the least feudal but merely spiritual. For, if the service be neglected, the law gives no remedy by distress, or otherwise, to the lord of whom the lands are holden; but merely a complaint to the ordinary or visitor to correct it.

Frank Chase is a liberty of free chase, whereby persons, that have lands within the compass of the same, are prohibited to cut down any wood, &c., out of the view of the forester.

Frank Fee signifies the same thing as holding lands and tenements in fee simple; that is, to any person and his heirs, and not by such service as is required by ancient demesne, but is pleaded at common law. See Fee.

Frank Law, the free and common law of the land, or the benefit a person has by it. He that for any offence loseth this frank law incurs these inconveniences, viz. he may not be permitted to serve on juries, nor used as an evidence to the truth; and, if he has any thing to do in the king's court, he must not approach it in person, but appoint his attorney; his lands, goods, and chattels shall be seized into the king's hands; and his lands be estreated, his trees rooted up, and his body committed to custody.

Frank Marriage, in law, is where tenements are given by one man to another, together with a wife, who is the daughter or cousin to the donor, to hold in frank marriage. By such gift, though nothing but frank marriage is expressed, the donees shall have the tenements to them, and the heirs of their two bodies begotten; that is, they are tenants in special tail. For this expression, frank marriage, denotes ex vi termini, not only an inheritance, but likewise limits that inheritance; supplying, not only words of descent, but of procreation also. Such donees in frank marriage are liable to no service but fealty; for a rent reserved therein is void until the fourth degree of consanguinity be past between the issues of the donor and donee.

FRANKPLEDGE, Lat. franciplegium, of franc, i. e. liber and pleige, i. e. fidejussor. A pledge of surety for freemen. For the ancient custom of England for the preservation of the public peace was, that every freeborn man at fourteen years of age, religious persons, clerks, knights and their eldest sons excepted, should find security for his fidelity to the king, or else be kept in prison; whence it became customary for a certain number of neighbours to be bound for one another, to see each man of their pledge forthcoming at all times, or to answer the transgression of any one absenting himself. This was called frankpledge, and the circuit thereof was called decenna, because it commonly con-

sisted of ten households; and every particular person, thus mutually bound, was called decenner. This custom was so strictly observed that the sheriffs, in every county, did from time to time take the oaths of young ones as they grew to the age of fourteen years, and see that they combined in one decenna; this branch of the sheriff's authority was called visus franciplegii, view of frankpledge.

FRANKED LETTERS. The privilege of letters passing free of postage to and from members of parliament was claimed by the house of commons in 1660, when the first legal settlement of the present post-office was made; but afterwards dropped, upon a private assurance from the crown that this privilege should be allowed the members. Accordingly a warrant was constantly issued to the postmaster-general, directing the allowance thereof to the extent of two ounces in weight: till at length it was expressly confirmed by 4 Geo. III. c. 24, which added many new regulations, rendered necessary by the great abuses in franking; whereby the annual amount of franked letters had increased from £23,600 in the year 1715, to £170,700 in the year 1763. Other regulations afterwards took place; in particular, franks were required to be dated (the month written at length), and put into the office the same day; notwithstanding which, the revenue still lost by its privilege above £80,000 per annum. The following are the regulations of franking required by 35 Geo. III., and now in force. No letter directed by or to any M. P. shall be exempted from postage if it exceeds one oz. in weight. No letter directed by any member shall be exempted, unless he shall actually be in the post town, or within the limits of its delivery of letters, or within twenty miles of it on the day, or the day before it, on which the letter shall be put into the office. No member shall be entitled to send free from postage more than ten letters in one day, nor to receive more than fifteen. Whenever the number of letters sent or received by such member in one day shall exceed the number exempted, and the postage upon any of them shall differ, the letters chargeable with a higher postage shall be included in the number exempted, in preference to any chargeable with a lower postage, and the remainder shall be chargeable with the postage to which common letters are now chargeable. Persons who may now in right of their offices send and receive letters free may continue so to do. Printed votes or proceedings in parliament, and printed newspapers, may also be sent as usual. No single letter sent by the post from any non-commissioned officer, seaman, or private, in the navy, army, militia, fencible regiments, artillery, or marines, shall be charged with more postage than one penny, but must be paid at the time of putting it into the post office; and such letter must have written thereon, in the hand writing of, and signed by, the commanding officer, the name of such commanding officer, and of the ship, vessel, corps, regiment, or detachment. Also no single letter directed to any such non-commissioned officer, seaman, or private, shall be charged with more postage than one penny, to be paid on the delivery thereof; but such letter must be directed to such persons, specifying the ship, vessel, regiment, troop, corps, company, or detachment, to which they belong: and the postmaster must deliver such letter either to the party to whom it shall be directed, or to some person appointed to receive the same by the commanding officer, and to no other. Every cover containing patterns or samples of goods, not exceeding one ounce, shall be charged only as a single letter, if sent open at the sides, and without any letter or writing therewith, other than the name of the person sending the same, the place of his abode, and the prices of the articles.

FRANKEN (Francis), commonly called Old Frank, a famous Flemish painter, supposed to have been born about A. D. 1544. He painted historical subjects from the Old and New Testaments; and was remarkable for introducing a great number of figures into his compositions, which he had the address to group very distinctly. Vandyck greatly commended his works.

FRANKEN (Francis), or Young Frank, the son of the former, born in 1580, was instructed by his father, whose style he adopted so closely, that their works are not easily distinguished. He travelled into Italy for improvement in coloring. His chief performances are, a Scriptural piece in the church of Notre Dame at Antwerp, and another of Solomon's idolatry. He died in 1642.

FRANKENBERG, a town of Hesse-Cassel, Germany, on the Eder. It contains 2700 inhabitants, and is the chief place of a district, which once had some gold and silver mines, and still contains lead ore. Thirty-five miles south-west of Cassel.

FRANKENBERG, a town of Upper Saxony, in Erzgeburg, nine miles west of Freyberg, and seven N. N. E. of Chemnitz. It is a place of great antiquity, and contains at the present time some flourishing woollen, cotton, and leather manufactories. Charlemagne fortified it against the Saxons.

FRANKENDAL, a strong town of France, in the department of Mont Tonnerre, late of Germany, in the dominions of the elector palatine. It was taken by the Spaniards in 1623, by the Swedes in 1632, and burnt by the French in 1688. It has a good trade in porcelain, cloth, silks, &c.; and a navigable canal to the Rhine. It lies eight miles north-west of Manheim, and eight south of Worms. Long. 8° 29′ E., lat. 49° 25′ N.

FRANKENHAUSEN, a town of Germany, in the principality of Schwartzburg-Rudolstadt, having extensive salt works, and 3000 inhabitants. It stands on the Wipper, ten miles east of Sonderhausen, and twenty-six north of Erfurt.

FRANKENIA, in botany, a genus of the monogynia order, and hexandria class of plants; natural order seventeenth, calycanthemæ: CAL. quinquefid, funnel-shaped; petals five; stigma sexpartite: CAPS. unilocular and trivalvular. Species four; two natives of our own country, one of the Cape, and one of Siberia.

FRANKENSTEIN, a town of Silesia, on the Bautze, containing a flourishing linen manufactory. It is twelve miles S. S. W. of Glatz, and has 4150 inhabitants.

FRANKENTHAL, a town in the province of the Rhine, Bavaria, which was destroyed in 1688, with several other towns of the palatinate, but rebuilt. It suffered also greatly in the wars of 1794 and 1795. Its present population is about 3500, engaged in the linen and woollen manufactory. Here is a canal which communicates with the Rhine. Twelve miles from Heidelberg.

FRANKFORT, a town of the United States, on the river and in the state of Kentucky. Long. 83° 12′ W., lat. 38° 3′ N.

FRANKFORT ON THE MAINE, a considerable city of Germany, the seat of the Germanic diet, is situated on the Maine, about twenty miles above its influx into the Rhine, over which is a good stone bridge. It is divided by the Maine into two parts: the one on the north bank, by much the larger, called Frankfort Proper; the other Sachsenhausen. Frankfort was formerly fortified, but most of its works are now converted into promenades or gardens. The houses are partly of wood, but the principal streets, 'the Zeile' in particular, are wide; there are also three noble squares. This town, the residence of ancient electors, princes, and counts, is now divided, in religion, between the Catholics, who have nine churches, the Lutherans seven, the Calvinists two. The Jews are said to amount to between 7000 and 9000. They formerly lived in a quarter of the city blocked up at one end, and regularly shut in at night; but since 1796 they are at liberty to live in any part of the town, though they are still not exempt from vexatious treatment. Population 41,000.

Frankfort is much frequented by travellers, and carries on a great trade in books and printing. It is the birth-place of Goethe. It contains, among its public establishments, a Lutheran academy, and Catholic gymnasium. The library of St. Bartholomew has some valuable MSS., and there are also several great private collections. Two great fairs are held here annually in spring and autumn; and its commercial activity is always great. Merchandise of all kinds arrives by the Rhine from all parts of Europe, and the exchange transactions are very considerable. The local manufactures, however, are on a small scale; the principal are in silk, velvet, and cotton stuffs.

Frankfort, long a free city, was under the iron yoke of Buonaparte from 1806 to 1813: its constitution at present is a mixture of democracy and aristocracy, affording a perfect equality to the different denominations of Christians, and a final appeal to the Diet. The town possesses an adjacent territory of 110 square miles, with a population of 48,000; its yearly revenue is about £80,000 sterling, but it is burdened with a debt of more than £300,000, chiefly the result of the forced contributions of the French. It is twenty miles E.N.E. of Mentz, and fifty south-east of Cologne.

FRANKFORT, GRAND DUCHY OF, is the name of a temporary sovereignty formed in Germany in 1806 by Buonaparte, in favor of the archchancellor or elector of Mentz, who was named prince primate of the confederation of the Rhine. He added to this territory the city of Frankfort on the Maine. The population of this duchy was in 1811 as follows:—

	Square miles.	Population.
Aschaffenburg	880	86,000
Wetzlar	22	4,983
Frankfort	66	52,000
Fulda	946	90,000
Hanau	462	60,000
	2376	292,983

At the congress of Vienna, the primate was deprived of his states, and treated as the secularised bishops of 1803, receiving an annual pension of 100,000 florins from those powers who obtained his possessions.

FRANKFORT ON THE ODER is a considerable town of Prussia, and the capital of the middle mark of Brandenburg. It is defended by a fort, standing on the bridge of the Oder. The town is well built, and has a university, founded in 1506; but the number of students is seldom more than 200. It has three annual fairs, and is a place of considerable trade, communicating with the North Sea by the Muhlrose canal; 2000 boats and barges are said to be employed on that canal and on the Oder. Here are manufactures of silks, woollens, leather, and earthenware. The neighbourhood was the scene of a sanguinary battle between the Prussians and Russians in 1759. It is twelve miles S.S.W. of Custrin, and forty-eight east of Berlin. Population 12,000.

FRANKFORT, the metropolis of Kentucky, United States of North America, is situated in Franklin county, on the north-east bank of Kentucky River, about twenty-four miles from its junction with the Ohio. It is a flourishing and regularly built town, with a handsome state-house. Population, in 1816, 1099. Twenty-five miles north by west of Danville.

FRANKINCENSE, *n. s.* 'Frank and incense;' so called perhaps from its liberal distribution of odor; says Dr. Johnson. Mr. Thomson more probably from Goth. *ve*, holy, and *rauck*; Teut. *rauch*, smoke or odor.

Take unto thee sweet spices, with pure *frankincense*.
Exodus.

I find in Dioscorides record of *frankincense* gotten in India. *Brerewood on Language.*

See how it weeps! the tears do come,
Sad, slowly dropping like a gum.
So weeps the wounded balsam; so
The holy *frankincense* doth flow.
The brotherless Heliades
Melt in such amber tears as these. *Marvell.*

Black ebon only will in India grow,
And od'rous *frankincense* on the Sabæan bough.
Dryden's Virgil.

Cedar and *frankincense*, an od'rous pile,
Flamed on the hearth, and wide perfumed the isle.
Pope.

Frankincense is a dry resinous substance in pieces or drops, of a pale yellowish white color; a strong smell, but not disagreeable, and a bitter, acrid, and resinous taste. It is very inflammable. The earliest histories inform us, that *frankincense* was used among the sacred rites and sacrifices, as it continues to be in many parts. We are still uncertain as to the place whence *frankincense* is brought, and as to the tree which produces it. *Hill.*

FRANKLAND'S ISLANDS, a cluster of islands in the South Pacific, on the north-east coast of New Holland, about six miles from the land. Long. 146° E., lat. 17° 12′ S.

FRANK'LIN, *n. s.* From *frank*, a freeholder; an ancient name for a freeholder of considerable property. Fortescue (de L L. Ang. c. 29) describes a Franklin to be a pater familias, magnis ditatus possessionibus. He is classed with, but after, the miles and armiger, and is distinguished from the liberé tenentes and valecti; though as it should seem the only real distinction between him and other freeholders consisted in the largeness of his estate. Spelman, in v. Franklein, quotes the following passage from Trivet's Fr. Chronicle (M S. Bibl. R. S. n. 56). Thomas de Brotherton, filius, Edwardi I. (Mareschallus Angliæ), apres la mort resposa la fille de un Francheslyn apelée Alice. There appears no foundation for Dr. Johnson's definition of a franklin as 'a gentleman servant, steward, or bailiff.' A modern life of Dr. Franklin, whose memorable name with that of various other English families has been derived from this word, alludes to the following passage from Chaucer as contradicting our lexicographer:—

> A *frankelein* was in this compagnie
> White was his berd as is the dayesie—
> An householder and that a grete was he
> Seint Julian he was in his contree—
> At sessions ther was he lord and sire,
> Full often time he was knight of the shire
> An anelace and a gipciere all of silk
> Heng at his gerdel white as morwe milk.
>
> *Chaucer.*

> A spacious court they see,
> Both plain and pleasant to be walked in
> Where them does meet a *franklin* fair and free.
>
> *Faerie Queene.*

FRANKLIN (Benjamin), LL.D. and F.R.S., one of the most celebrated philosophers and politicians of the eighteenth century, was born at Boston, January 6th, 1706. He was the son of Josias Franklin, a tallow-chandler, descended from an ancient English family, who had resided upwards of three centuries at Ecton in Northamptonshire, possessing a small freehold estate of thirty acres, and the eldest son whereof had been uniformly bred up to the profession of a blacksmith. This family had early embraced the opinions of the reformation, and were in danger of suffering for them, under the bloody reign of queen Mary I. Josias was the youngest branch of this family. He had joined the nonconformists, and upon the prohibition of conventicles, under Charles II., emigrated with his wife and family to New England in 1682; where, on the death of his first wife, he married Abiah Folger, daughter of Peter Folger, author of several tracts on liberty of conscience, who bore him nine children besides the subject of the present memoir. Benjamin early acquired reading and writing, but made no progress in arithmetic, as he states in his Life written by himself. From ten to twelve years of age he worked at his father's business; but his inclination for books determined the latter to make him a printer, though his elder brother James was already of that profession. To this brother he was accordingly bound apprentice, and by his rapid proficiency in the business soon became of great use to him, though he was often treated rather tyrannically. Meantime he improved himself in arithmetic and other branches of science, as well as in composition, by writing anonymous essays for his brother's paper, The New England Courant, and which, being much admired, were for some time of advantage to it. But one of them, upon a political subject, happening to give offence to the Assembly, his brother was taken up, imprisoned for a month, and prohibited from printing his newspaper. The paper was then continued under the name of Benjamin Franklin, whose indentures were discharged, and a new secret contract agreed upon: but fresh differences afterwards arising between the brothers, our author, at the age of seventeen, emigrated to Philadelphia, where he arrived, without knowing a single individual in it, after escaping the danger of being taken up as a runaway servant, and various other adventures, which he humorously describes in his Memoirs. Here he soon obtained employment from Bradford and Keimer, the only two printers then in the city. After this he was introduced by his brother-in-law, Captain Holmes, to Sir William Keith, governor of the province, who promised to do much for him, but, except entertaining him occasionally, in his own house or a tavern, performed nothing. By his advice, however, he paid a visit to his parents, and in the end of 1724, sailed for London, where by his own merit, without Sir William's promised letters of recommendation and credit, he obtained the best employment, first in Palmer's printing office, and afterwards in Watt's. At this time our author falling in with some Deistical companions, renounced the religious principles in which he had been educated, commenced sceptic, and published a Dissertation on Liberty and Necessity, Pleasure and Pain, wherein he endeavoured to prove that there is no difference between virtue and vice; which he afterwards considered as one of the grand errors of his life. This work, however, introduced him to the acquaintance of Drs. Mandeville, and Pemberton, Sir Hans Sloane, and other celebrated authors. But he had been only eighteen months in London, during which time, living very temperately, or rather abstemiously, he had begun to lay up money, when a proposal was made to him by his friend, Mr. Denham, of returning to Philadelphia. This gentleman had been formerly a merchant in Bristol, and, having failed, emigrated to America, where he made a fortune; then returned, invited his creditors to a feast, and paid their balances with interest. He engaged Franklin as his clerk and book-keeper, and to superintend the goods he was carrying back to America. They accordingly sailed on the 3d of July, 1726, and arrived at Philadelphia, October 11; but Denham dying in February, 1727, our author engaged once more as a printer with Keimer; whom he also served as a letter-founder, ink-maker, engraver, and copper-plate printer; as well as constructor of a press for that purpose. This press, which was the first that had been seen in the country, was erected

r. Franklin, at Burlington, to print some Jersey money-bills; and proved the means acquaintance with judge Allen, and several members of the assembly, who were after- s of great service to him. After this, he ıissioned types from London, set up a ng-office, in company with Hugh Mere- a fellow-workman, whose father advanced money for them; and, at the same time, klin established a weekly club, for mutual ovement, which proved an excellent school ıilosophy. This society, which was called unto, lasted nearly forty years. Mean time ıdustry, which was habitual, receiving addi- l energy from the idea of working for him- rapidly advanced his credit, and Keimer, g unable to continue his newspaper, sold opyright to Franklin for a mere trifle; who, ıis improvements in the conduct and execu- of it, soon raised it to a high degree of cele- . After this, his accurate and elegant manner inting recommended him to the employment he assembly: and his partner Meredith, giv- ıp the printing, turned farmer, and thus left ıklin sole proprietor of the business in 1729. ereupon his friends, Messrs. Coleman and ce, offered him money to carry it on exten- ly, and he accepted of half the offered sum ı each. Soon after, a new emission of paper ency being wished for by the public, but osed by the opulent part of the assembly, ıklin published a pamphlet on the subject, ch, being unanswerable, occasioned the mea- to be carried through, and himself to be re- ded by being employed to print the bills. ılic and private employment now flowing ın him more and more, he, in 1730, married ıdy, whose maiden name was Read, for whom had entertained an affection before he went London, and whose attachment was mutual: ıough, during his absence, she had been pre- led on by her mother, to marry one Rogers, oiter, who had used her so ill, that she did so much as bear his name. (See Franklin's e, written by himself, and published by Dr. ice). To our author she proved an excellent fe, and contributed much to the success of his ıp. In 1731 Franklin's love of literature led n to set on foot, first a private, and afterwards ıublic library, which, in 1742, was incorpo- rated by the name of the Library Company of ıiladelphia; which now consists of many thou- ıd volumes, besides a philosophical apparatus, . In 1732 he began to publish Poor Richard's manack, a work which he rendered remarkable its numerous valuable and concise moral max- ıs, recommending industry and economy, and hich he at last collected into one humorous ldress to the reader, entitled The Way to Vealth, which has since been translated into va- ous languages. In 1736 he entered on his po- tical career, by being appointed clerk to the eneral assembly of Pennsylvania. In 1737 he as appointed post-master. In 1738 he formed ıe first company for preventing damages by fires, nd soon after got an insurance office erected. n 1744, during the war between France and Britain, the French and Indians having made nroads upon the frontiers of the province, he proposed a voluntary association for its defence; which was approved of, and immediately signed by 1200 citizens, who chose Franklin their colonel. But he was then too deeply engaged in philosophical and political pursuits, to accept of that honor. In 1745 he published an account of his new invented fire-place (see FIRE-PLACE); and in 1725, was elected a member of the General Assembly, where he supported the rights of the citizens in opposition to the proprietaries. In 1749 he completed the plan of the Philadelphia Academy, upon the most liberal principles, which was incorporated in 1753. Franklin had now conducted himself so well in his office of post-master to the province, that in 1765 he was appointed deputy post-master general for the British colonies; and, in his hands, this branch of the revenue soon yielded thrice as much, annually, as that of Ireland. Yet none of these public avocations prevented his making important discoveries in science. The Leyden experiment in electricity having rendered that science an object of general curiosity, Mr. Franklin applied himself to it, and soon distinguished himself so eminently in that science, as to attract the attention and applause of not only the count de Buffon, and other French philosophers, but even of Louis XV. himself. He was the first who thought of securing buildings from lightning; and he was also the first inventor of the electrical kite; having completed his experiment in June 1752, a full year before M. de Romas's discovery. His theory of positive and negative electricity has likewise received the sanction of public approbation; though many think it is not fully capable of supporting itself. See ELECTRICITY, index. His theories were at first opposed by the members of the Royal Society in London; but in 1755, when he returned to that city, they voted him the gold medal, which is annually given to the author of a memoir on the most curious and interesting subject. He was likewise admitted a member of the society, and had the degree of LL.D. conferred upon him by the universities of St. Andrews, Edinburgh, and Oxford. When the war broke out between Britain and France, he returned to America, to take a share in the public affairs of his native country. About 1753 he set on foot, and prevailed on the assembly to establish, the Pennsylvania hospital. In 1754, the American colonies having suffered much by the depredations of the Indians on their frontiers, he drew up, and presented to the commissioners from several colonies, a plan of union (called the Albany Plan, from the place where they met), which, though unanimously approved of by the commissioners, was at last rejected by the assemblies, as giving too much influence to the president, who was to be appointed by the king; and disapproved of by the British ministry, as giving too much power to the representatives of the people. This rejection on both sides affords the strongest proof of the excellency and impartiality of his plan, as suited to the situation of Britain and America at that period. It appears to have steered exactly between the opposite interests of both countries. In 1757 he restored tranquillity to the province, by an amicable and

equitable settlement of the differences that had long subsisted between the proprietaries and the people, as to taxation. In 1766 he travelled into Holland and Germany, and in 1767 he visited France; being every where received with the greatest marks of attention by men of science. He was introduced in the latter kingdom to Louis XV. Returning to England in 1767, he was examined before the house of commons concerning the stamp act. In 1773, having been appointed agent for Pennsylvania, he again came over to England, while the disputes between Great Britain and America were on the point of coming to extremities; when he attracted the public attention by a letter on the duel betwixt Mr. Whatley and Mr. Temple, concerning the publication of governor Hutchinson's letters. On the 28th January 1774 he was examined before the privy council on a petition he had presented long before, as agent for Massachusett's Bay, against Mr. Hutchinson; but this petition, being disagreeable to ministry, was precipitately rejected, and Dr. Franklin was soon after removed from his office of post-master general. He was now looked upon by government with such a jealous eye, that it was proposed to arrest him as a fomenter of rebellion. The Dr., however, departed for America in the beginning of 1775 with such privacy, that he had left England before it was suspected that he entertained any such design. Being elected a delegate to the continental Congress, he had a principal share in bringing about the revolution, and declaration of independency. In 1776 he was deputed by congress to Canada, to persuade the Canadians to throw off the British yoke; but they had been so much disgusted with the hot-headed zeal of the New Englanders, who had burnt some of their chapels, that they refused to listen to their proposals, though enforced by all the arguments Dr. Franklin could urge. On his return to Philadelphia, Congress, sensible how much he was esteemed in France, sent him to finish the negociations of Mr. Silas Dean. This important commission was readily accepted by the Dr., though then in the seventy-first year of his age. The event is well known; a treaty was signed between France and America; and M. le Rá asserts, that the Dr. strongly advised M. Maurepas not to lose a single moment, if he wished to secure the friendship of America, and to detach it from the mother country. In 1777 he was regularly appointed plenipotentiary from Congress to the French court. Having at last seen the full accomplishment of his wishes by the conclusion of the peace in 1783, which confirmed the independence of America, he requested to be recalled, and Mr. Jefferson was appointed to succeed him. Dr. Franklin arrived safe at Philadelphia in September 1785, and was received amidst the acclamations of a vast multitude, who conducted him in triumph to his own house. In a few days he was visited by the members of Congress and the principal inhabitants. He was afterwards twice elected president of the assembly. In 1787 he was appointed a delegate from Pennsylvania, for revising the articles of confederation; and signed the new constitution in the name of the state. He was also chosen president of the Philadelphia Society for alleviating the miseries of prisons, and of the Pennsylvania Society for Promoting the Abolition of Slavery. His last public act was signing a memorial on this subject, 12th February, 1789. During the greatest part of his life he had been very healthy. In 1735, indeed, he was attacked by a pleurisy, which ended in a suppuration of the left lobe of the lungs, so that he was almost suffocated by the quantity of matter thrown up. But from this, as well as another attack, he recovered so completely, that his breathing was not affected. As he advanced in years, however, he became subject to fits of the gout, to which, in 1782, a nephritic colic was added. From this time he became subject also to the stone; and during the last year of his life these complaints almost entirely confined him to his bed; notwithstanding which, neither his mental abilities, nor his cheerfulness forsook him. His memory was tenacious to the last; a remarkable instance of which is, that he learned to speak French after he was seventy. About sixteen days before he died, he was seized with a feverish disorder; which, about the third or fourth day, was attended with a pain in the left breast, accompanied with a cough and laborious breathing. Thus he continued for five days, when the painful symptoms ceased; but a new imposthume had now taken place in the lungs, which suddenly breaking, he was unable to expectorate the matter fully, and expired on the 17th April, 1790. He left one son, governor William Franklin, a zealous loyalist; and a daughter, married to Mr. Willlam Bache, merchant in Philadelphia, who waited upon him during his last illness. Dr. Franklin was sententious but not fluent in society; more inclined to listen than to talk; and an instructive rather than a pleasing companion. He was author of many tracts on electricity, and other branches of natural philosophy, on politics and miscellaneous subjects. The following epitaph on himself was written by Dr. Franklin many years before his death:—

The Body of
BENJAMIN FRANKLIN, PRINTER,
Like the cover of an old book,
Its contents torn out,
And stript of its lettering and gilding,
Lies here food for worms.
Yet the work itself shall not be lost;
For it will (as he believed) appear once more,
In a new and more beautiful Edition,
Corrected and amended
BY THE AUTHOR.

His funeral is said to have been more numerously and more respectably attended than any other that had ever taken place in America. The concourse of people assembled upon the occasion was immense. All the bells in the city were muffled, the newspapers published with black borders, &c. The body was interred amid peals of artillery, and nothing is said to have been omitted that could display the veneration of the citizens for so illustrious a character.

Congress ordered a public mourning through-

ierica for one month. Dr. Smith, pro- the College of Philadelphia, and Mr. ouse, one of its members, were selected Philosophical Society to prepare a eulo- o the memory of its founder; and the bers to the city library, who had just a handsome building for containing their left a vacant niche for a statue of their tor. This has since been placed there by nificence of an estimable citizen of Phila- .

NKLIN (Mrs. Eleanor Anne), known as ?. ess, as Miss Porden, was the youngest er of Mr. Porden, an architect; and was July, 1795. She exhibited in her youth rkable memory, and a strong bias towards ire, which led her to make considerable s in the acquirement of the Greek and anguages. She wrote, in her seventeenth ier first poem, The Veils, or the Triumph nstancy, which was published in 1815, dedication to countess Spencer. Three afterwards appeared a small Poetical Tri- nder the name of The Arctic Expedition, ted by a visit to the Isabella and Alex- discovery ships, which led to an acquaint- with captain Franklin, the celebrated tor, whom she married after his return in August, 1823. The year previously red Miss Porden's epic poem on the sub- the third crusade, entitled Cœur de Lion, ated by permission to the king. In June, the birth of a daughter encouraged hopes friends that a tendency to a pulmonary laint, increased by the bursting of a blood- in 1822, might be counteracted, but these tations were soon destroyed, and she died ary 22nd, 1825, a few days after her hus- had sailed from England on his second ex- ion.

ANKLIN, the north-westernmost county rmont, United States, is bounded north by r Canada, and west by Lake Champlain. lation, in 1816, 16,427. The chief town is lban's.

ANKLIN, a county of Pennsylvania, is led on the north by Mifflin, north-east and y Cumberland and York, south by Wash- n county in Maryland, west by Bedford y, and north-west by Hunterdon. It pro- iron, and is well watered by the Conne- ague river. Population, in 1816, 23,083. hief town is Chambersburg.

ANKLIN, a county of Kentucky, bounded by Scott county, north-west and west by y, south-east by Fayette, and south by dford. Population in 1816, 8013. Frank- s the chief town.

ANKLIN, a county of North Carolina, in ax district. It is bounded on the north by nville, south by Johnston, north-east by ren, south-west by Wake, and west by ge county. Population, in 1816, 10,166. sburg is the chief town.

ANKLIN, a county of Virginia, bounded on north by Bedford, north-west by Botetourt, by Montgomery, south-west by Henry, n by Patrick, and east by Campbell county. about forty miles long, and twenty-five broad, and contained, in 1816, 10,724 inhabitants.

FRANKLIN, a county of Georgia, situated in the upper district, bounded east and north-east by Tugulo River, west and north-west by the country of the Cherokees, south by the branches of Broad River, and south-east by Elbert county. Population, in 1816, 10,815.

FRANKS, FRANCS, FRANKIS, or FRANQUIS, a name which the Turks, Arabs, Greeks, &c., give to all the people of the western parts of Europe. The appellation is commonly supposed to have had its rise in Asia, at the time of the crusades, when the French made the most considerable figure among the croissées; from which time the Turks, Saracens, Greeks, Abyssinians, &c., used it as a common term for all the Christians of Europe, and called Europe itself Frankistan. E. Goar, in his notes on Condinus, cap. 5, N. 43, gives another origin of the appellation Franks, of greater antiquity. The Greeks, he says, at first confined the name to the Franci, or German Franks, who had settled in Gaul (see FRANCE); but afterwards they gave it to the Apulians and Calabrians, after they had been conquered by the Normans; and at length they extended it to all the Latins. In this sense is the name used by several Greek writers; as Comnenus, &c.; who, to distinguish the French, called them the Western Franks. Du Cange adds, that about the time of Charlemagne, they distinguished eastern France, or western France, Latin or Roman France, and German France, which was the ancient France, afterwards called Franconia.

FRANTICK, *adj.* } Lat. *phreneticus;* Gr.
FRAN'TICKLY, *adv.* } φρενητικος. Phrenetick;
FRAN'TICKNESS, *n. s.* } mad; deprived of understanding by violent madness; outrageously and turbulently mad; transported by violence of passion; outrageous; turbulent. Simply mad.

Far off, he wonders what makes them so glad;
Of Bacchus' merry fruit they did invent,
Or Cybel's *frantick* rites have made them mad.
Faerie Queene.

Esteeming, in the *frantick* error of their minds, the greatest madness in the world to be wisdom, and the highest wisdom foolishness. *Hooker.*

The lover *frantick,*
Sees Helen's beauty in a brow of Egypt.
Shakspeare.

Fie, fie, how *frantickly* I square my talk. *Id.*

To such height their *frantick* passion grows,
That what both love, both hazard to destroy.
Dryden.

She tears her hair, and, *frantick* in her griefs,
Calls out Lucia. *Addison's Cato*

I had not strength to stir, or strive,
But felt that I was still alive—
A *frantic* feeling when we know
That what we love shall ne'er be so.
Byron. Prisoner of Chillon.

FRASCATI, a small but beautiful town and bishop's see of the ecclesiastical state, in the Campagna di Roma, on the side of a hill near the site of the ancient Tusculum. It contains nothing remarkable, except a seminary, endowed by the late cardinal York, once bishop here. Population about 9000 In the environs are a

number of villas belonging to Roman families, who pass the summer here. The ruins of Tusculum are scattered in long lines of walls and arches higher up the hill, intermingled with shrubs and bushes. The view is particularly interesting towards the north-east. Frascati is ten miles south-east of Rome.

FRASERBURGH, or FRASERSBURGH, a small sea-port town in Aberdeenshire, seated on the south extremity of the Murray Frith, called Kinnaird's Head. It was erected in the sixteenth century, on Sir Alexander Fraser's estate, whence the name. It has a good harbour, made and kept up at a considerable expense by the proprietor and the town, and well adapted for building small vessels. There are from eleven to fifteen feet water within the harbour, and twenty feet immediately without at spring tides; without is a tolerable road for shipping, in a bay nearly a league in length, and half a league in breadth, with good anchorage in a sandy bottom. Vessels of about 200 tons burden enter the harbour. Fraserburgh contains above 1000 inhabitants; and is well situated for trade with the east coast of Europe. The town has been much improved of late years. It is sixteen miles east of Banff, and forty north of Aberdeen.

FRATELLINI (Joanna), a celebrated Italian paintress, born at Florence, in 1666. The archduchess Vittoria, having noticed in her a readiness at her pencil, procured for her the best masters, and in a short time she acquired such a command of the pencil, that she surpassed her instructors in elegance, as well as in beauty of coloring. She painted delicately in enamel, and in crayon painting was equal to Rosalba: one of her best works is a picture of herself and son in the ducal gallery of Florence, in which city she died in 1731.

FRATELLINI (Laurence Maria), the son of Joanna, was born in 1690, and studied under Gabbiani. He painted principally portraits, animals, landscapes, and historical subjects. He died in 1729.

FRATER'NAL, *adj.* } Fr. *fraternel;* Lat.
FRATER'NALLY, *adv.* } *fraternus.* Brotherly;
FRA'TERNITY, *n. s.* } pertaining to brothers; becoming brothers. The state or quality of a brother. Body of men united; corporation; society; association; brotherhood; men of the same class and character.

The admonitions, *fraternal* or paternal, of his fellow Christians, or of the governors of the church, then more publick reprehensions; and, upon their unsuccessfulness, the censures of the church, until he reform and return. *Hammond.*

One shall arise
Of proud ambitious heart; who, not content
With fair equality, *fraternal* state,
Will arrogate dominion undeserved
Over his brethren. *Milton's Paradise Lost.*

'Tis a necessary rule in alliances, societies, and *fraternities*, and all manner of civil contracts, to have a strict regard to the humour of those we have to do withal. *L'Estrange.*

With what terms of respect knaves and sots will speak of their own *fraternity.* *South's Sermons.*

Plead it to her,
With all the strength and heats of eloquence
Fraternal love and friendship can inspire. *Addison.*

FRATERNITY, in the Roman Catholic religion, signifies a society originated for the purposes of devotion. Of these there were several sorts; as, 1. The fraternity of the rosary, founded by St. Dominic. It is divided into two branches, called the common rosary, and the perpetual rosary; the former of whom are obliged to confess and communicate every first Sunday in the month, and the latter to repeat the rosary continually. 2. The fraternity of the scapulary, whom the blessed Virgin, according to the sabbatine bull of pope John XXII., has promised to deliver out of hell the first Sunday after their death. 3. The fraternity of St. Francis's girdle are clothed with a sack of a gray color, which they tie with a cord; and in processions walk barefooted, carrying in their hands a wooden cross. 4. That of St. Austin's leathern girdle comprehends many devotees. Italy, Spain, and Portugal are countries where the greatest number of these fraternities, some of which assume the name of arch-fraternities, resided. Pope Clement VII. instituted the arch-fraternity of charity, which distributed bread every Sunday among the poor, and gave portions to forty poor girls on the feast of St. Jerome their patron. 5. The fraternity of death buried such dead as were abandoned by their relations, and caused masses to be celebrated for them.

FRATRICELLI, or FRATELLI, Ital. q. d. fraterculi, little brothers, in ecclesiastical history, an enthusiastic sect of Franciscans, which rose in Italy, particularly in Ancona, about A. D. 1294. The word was used as a term of derision, as they were most of them apostate monks. For this reason the term, as a nick-name, was given to many other sects, as the Catharists, Waldenses, &c., however different in their opinions and in their conduct. But this denomination, applied to the austere part of the Franciscans, was considered by them as honorable. See FRANCISCANS. The founders were P. Maurato, and Foiombroni, who having obtained of pope Celestin V. a permission to live in solitude, after the manner of hermits, and to observe the rule of St. Francis in all its rigor, several idle vagabond monks joined them, who, living after their own fancies, and making all perfection to consist in poverty, were soon condemned by pope Boniface VIII. and his successor, and the inquisitors ordered to proceed against them as heretics; which commission they executed with great barbarity. Upon this, retiring into Sicily, Peter John Oliva de Serignan had no sooner published his Comment on the Apocalypse, than they adopted his opinions. They held the Romish church to be Babylon, and proposed to establish another far more perfect one. They maintained, that the rule of St. Francis was the evangelical rule observed by Jesus Christ and his apostles. They foretold the reformation of the church, and the restoration of the true gospel of Christ, by the genuine followers of St. Francis; and declared their assent to most of the doctrines published under the name of the abbot Joachim, in the Introduction to the everlasting Gospel, a book published in 1250, and explained by one of the spiritual friars, whose name was Gerhard. Among other enor-

mities, inculcated in this book, it is pretended that St. Francis was the angel mentioned in Rev. xiv. 6, and had promulgated to the world the true and everlasting gospel of God; that the gospel of Christ was to be abrogated in 1260, and to give place to this new gospel; and that the ministers of this great reformation were to be humble and bare-footed friars, destitute of all worldly employments. Some say they even elected a pope of their church; at least they appointed a general, with superiors, and built monasteries, &c. Besides the opinions of Oliva, they held, that the sacraments of the church were invalid; because those who administered them had no longer any power or jurisdiction. They were condemned afresh by pope John XXII. in consequence of whose cruelty they regarded him as the true antichrist; but several of them, returning into Germany, were sheltered by Louis, duke of Bavaria, the emperor. There are authentic records from which it appears that no fewer than 2000 persons were burnt by the inquisition, from 1318 to the time of Innocent VI. The severities against them were again revived towards the close of the fifteenth century, by pope Nicolas V. and his successors. However, all the persecutions which this sect endured were not sufficient to extinguish it; for it subsisted till the time of the Reformation in Germany, when its remaining votaries embraced the doctrine and discipline of Luther. And this has led Popish writers to charge the Fratricelli with many enormities, some of which are recounted by Bayle, under the article Fratricelli. They had several other denominations: they were called Dulcini, from one of their doctors; Bizochi, Beguins, and Beghardi.

FRATRICIDE, *n. s.* Fr. *fratricide;* Lat. *fratricidium.* The murder of a brother.

The *fratricide* [of Abel] is said by some to have been committed in this place.
Maundrell. Journey to Aleppo.

FRATTA, La, a considerable town of Italy, in the Venetian states, and standing on the Scorta: here reside a number of the old and noble families of this once flourishing state. It is in the Polesino di Rovigo, six miles south-west of Rovigo, and has 6,300 inhabitants.

Fratta Maggiore, a considerable town of Naples, not far from the capital. A great quantity of cordage is manufactured here; and the principal church is an elegant building. Population 8500.

FRAUBRUNNEN, a town of the canton of Berne, Switzerland, on the road to Saleure. Here was founded a celebrated abbey of this name in 1246. The Bernois were here victorious, in 1375, over the Burgundians and Normans. In 1798 the troops of the canton sustained a defeat near this town from the French. It is seven miles north of Berne. It contains about 1400 inhabitants, and is a bishop's see.

FRAUD, *n. s.* } Lat. *fraus;* Fr. *fraude.*
Fraud'ful, *adj.* } Deceit; cheat; trick;
Fraud'fully, *adv.* } artifice; subtilty; stratagem. Artful; trickish; deceitful; subtle.

Whi rather take ghe no wrong? whi rather suffren ghe not dysseit? but also ghe doen wrong, and doen *fraude* and that to britheren. *Wiclif.* 1 *Cor.* vi.

The welfare of us all
Hangs on the cutting short that *fraudful* man.
Shakspeare. Henry VI

Our better part remains
To work in close design, by *fraud* or guile,
What force effected not. *Milton*

Nor content with such
Audacious neighbourhood, the wisest heart
Of Solomon he led by *fraud* to build
His temple right against the temple of God,
On that opprobrious hill, and made his grove
The pleasant valley of Hinnom, Tophet thence
And black Gehenna called the type of Hell. *Id.*

None need the *frauds* of sly Ulysses fear.
Dryden.

He, full of *fraudful* arts,
This well-invented tale for truth imparts. *Id.*

If success a lover's toil attends,
Who asks if force or *fraud* obtained his ends.
Pope.

Such is the knowledge of vice, the various temptations to it, and the secret ways of practising it, especially the arts of dissimulation, *fraud,* and dishonesty. *Mason.*

Fraud, in law, signifies deceit in grants, or conveyances of lands, &c. or in bargains and sales of goods, &c., to the damage of another person. A fraudulent conveyance of lands or goods, to deceive creditors, as to creditors is void in law. And a fraudulent conveyance, to defraud purchasers, is also to such purchasers void; and the persons justifying or putting off such grants as good, shall forfeit a year's value of the lands, and the full value of the goods and chattels, and likewise shall be imprisoned. See Cheat.

All *frauds and deceits,* for which there is no remedy by the ordinary course of law, are properly cognizable in equity; and it is admitted, that matters of fraud were one of the chief branches to which the jurisdiction of chancery was originally confined. 4 Inst. 84. It would be endless to enumerate the several cases, wherein relief has been given against frauds; but the following instances are too material to be omitted.

Wherever fraud or surprise can be imputed to, or collected from the circumstances of the transaction, equity will interpose and relieve against it. Toth. 101. 2. 2 Ch. Ca. 103. Finch. 161. 2 P. Wms. 203, 270. 3 P. Wms. 130. 2 Vern. 189. 2 Atk. 324. 2 Vez. 407. It is said, however, that it must not be understood, from cases of this kind being generally brought into equity, that the courts of law are incompetent to relieve; for, where the fraud can be clearly established, courts of law exercise a concurrent jurisdiction with courts of equity; and will relieve by making void the instrument obtained by such corrupt agreement or fraud. 1 Burr. 396. Wood's Inst. 296. Therefore where the obliger was an unlettered man, and the bond was not read over to him, he was allowed to plead this circumstance in an action on the bond. 9 Hen. V. 15, cited 11 Co. 27, b. So if the bond be in part read to an unlettered man, and some of its material contents be omitted or misrepresented. 2 Rol. Ab. 28, p. 8. It is observable that lord Coke in the same passage where he confines the jurisdiction of courts of equity to such 'frauds covin and deceit, for which there is no remedy

by the ordinary course of law,' seems to admit that all frauds were not relievable at law. See 3 Inst. 84.

The chancery may decree a conveyance to be fraudulent, merely for being voluntary, and without any trial at law; yet it has been insisted, that fraud or not, was triable only by a jury. Pre. Ch. 14, 15.

As to those gifts or conveyances which want a good or meritorious consideration for their support; their being voluntary seems to have been always a sufficient ground to conclude that they were fraudulent; but though the statute protects the legal right of creditors against the fraud of their debtors, it anxiously excepts from such imputation the bonâ fide discharge of a moral duty. It therefore does not declare all voluntary conveyances, but all fraudulent conveyances, to be void; and whether the conveyance be fraudulent or not is declared to depend on the consideration being good, and also bonâ fide.

A good consideration is that of blood, or of natural love and affection. A gift made for such consideration ought certainly to prevail, unless it be found to break in upon the legal rights of others; in that case it is equally clear it ought to be set aside. If therefore a man being indebted convey to the use of his wife or children, such conveyance would be within the statute; for though the consideration be good, yet it is not bonâ fide; that is, the circumstances of the grantor render it inconsistent with that good faith which is due to his creditors. Fonblanque's Treat. Eq. c. 4, sect. 12 in notes.

Fraudulent gifts, or grants of goods to defraud the lord of his heriot, shall be void; and the value of the goods forfeited, under statute 13 Eliz. c. 5.

Fraudulent conveyances to multiply votes at election of knights of the shire, shall be taken against the persons making them as free and absolute; and all securities for redeeming and restoring, &c.; to be void, statute 10 Ann. c. 23.

Gross criminal frauds are punishable by way of indictment or information; such as playing with false dice, causing an illiterate person to execute a deed to his prejudice, &c.; for these and such like offences the party may be punished not only with fine and imprisonment, but also with such farther infamous punishment as the judges in their discretion shall think proper.

FRAUD'ULENCE, *n. s.*
FRAUD'ULENCY, *n. s.*
FRAUD'ULENT, *adj.*
FRAUD'ULENTLY, *adv.*
} Lat. *fraudulentia.* Deceitfulness; trickishness; proneness to artifice.

We admire the Providence of God in the continuance of Scripture, notwithstanding the endeavours of infidels to abolish, and the *fraudulence* of hereticks always to deprave the same. *Hooker.*

He that by fact, word, or sign, either *fraudulently* or violently, does hurt to his neighbour, is bound to make restitution. *Taylor.*

He with serpent tongue
His *fraudulent* temptation thus began. *Milton.*

Now thou hast avenged
Supplanted Adam,
And frustrated the conquest *fraudulent.* *Id.*

He that upon the score of a small debt, doth extort a great sum, is no less a thief, in regard to what amounts beyond his due, than if without any pretence he had violently or *fraudulently* seized on it. *Barrow.*

She mixed the potion, *fraudulent* of soul;
The potion mantled in the golden bowl.
Pope's Odyssey.

FRAUENBOURG, a town of East Prussia, in Poland, on the river Frischellaff, six or seven leagues to the north-east of Elbing. In the cathedral is the tomb of the great Copernicus, on the subject of which the eminent John Bernouilli, of Berlin, wrote to the earl of Buchan a letter, dated the 22nd of February, 1794, of which the following is a translation:—'In the year 1777 the bishop of Warmia, whom I met in the abbey of Oliva, near Dantzic, told me that he had the pleasure to discover, in his cathedral of Frauenbourg, the long neglected tomb of Copernicus. In the year 1778, on my journey to Russia, passing through that town, and having nothing to do during my short stay there that could interest me more, I went to the cathedral in search of this precious monument. I knew nobody in Frauenbourg, but in the street I accosted a canon, whose countenance and manner encouraged my address, and I was not disappointed. He told me, that as for the spot where lay interred the ashes of Copernicus, there was no certainty, because it was usual to place the coffins of the deceased canons in a vault, where, in the course of time, from their number, it was impossible to distinguish them from each other; but that with respect to the sepulchral stone, it was a slab of marble, such as was usual for others of the same station, with the short inscription, Nic. Copernicus, Thor. That this stone had been hidden, from neglect, many years, and afterwards accidentally observed and placed in the chapter-house of the cathedral, with a view to consider maturely of a proper place for its erection. I regret, however, very much, that I did not make a point with my guide to show me this stone, as, if a part of the inscription be not effaced, it does not tally with that recorded by Gassendi, who says, p. 325, in his life of Copernicus, that bishop Martin Cromer, a celebrated Polish historian, caused to be erected to the memory of that great astronomer unam tabulam marmoream, with this inscription:—

D. O. M.
N. D. NICOLAO COPERNICO
TORUNENSI ARTIUM ET
MEDICINÆ DOCTORI.
CANONICO VARMIENSI.
PRÆSTANTI ASTROLOGO ET
EJUS DISCIPLINÆ INSTAURATORI.

MARTINUS CROMERUS
EPISCOPUS VARMIENSIS
HONORIS ET AD POSTERITATEM
MEMORIÆ CAUSA POSUIT.
M.D.LXXXI.

Gassendi adds, that it was thirty-six years after the death of Copernicus; but this does not agree with the date of our stone. My canon had for his apartment the dormitory of Copernicus, and he kindly asked me to pay it a sentimental visit,

vitation you may believe I accepted with on, and enjoyed with pleasure. Above the of the dormitories there is another little nent, which my guide allotted to the ory of his great predecessor, and which he ecorated with his portrait in oil colors, well rved, and perhaps only a copy from some al painting. It was from this place that rnicus enjoyed a fine scope of the heavens, a large horizon; here that he made the ns his study, and rendered himself a lumi- of the first magnitude in the constellation of rn astronomers; and, when he found it sary to make his observations in the open here is a little gallery or terrace that com- cates with this apartment, and the adjoining le or belfry, which served to accommodate reat Copernicus in his researches. You, ord, are able to conceive the divine satisfac- I enjoyed in this place—classic and sacred ere I inhaled as it were the spirit of depart- reatness! and it was the shock of these cendant emotions that made me to forget tone I have described in the former part of etter, my time being elapsed, and my car- ready to depart. Near the cathedral my n showed me a large reservoir of water, with h tower, which contains the remains of a aulic machine, said to have been invented opernicus, for carrying and distributing the r by pipes to the different apartments of the ns, his brethren: a convenience now lost, which, from the ruin of the machine, they obliged to fetch from a fountain in the lower of Frauenbourg. I have read in an old nan journal, that in the ancient town of igsberg there are, or were, preserved many e books belonging to Copernicus at the time s death, with his portrait in oil colors, which purchased at Thorn, probably in his house at town, possessed by the family so late as year 1720; and in this house Copernicus born.'—Frauenbourg was built in 1279, and hirty-eight miles south-west of Konigsberg. ral monuments of the genius of Copernicus un here, particularly the hydraulic machine, h supplied Frauenbourg with water, and h is supposed to have served as a model for of Marli. See our article COPERNICUS.

RAUGHT, *part. pass.*, *n. s.* & *v. a.* } Part. of
RAUGHT'AGE, *n. s.* } fraight, written freight. Laden; charged; filled; d; thronged: freight; a cargo: to load; owd.

ese marchants han don *fraught* her shippes newe;
whan they han this blisful maden seen,
e to Surrie ben they went ful fayn.
Chaucer. The Man of Lawes Tale.

this sad Una, *fraught* with anguish sore,
ed, where they in earth their blood had spilt.
Spenser.

e Scripture is *fraught* even with laws of nature.
Hooker.

im so *fraught* with curious business, that I leave eremony. *Shakspeare. Winter's Tale.*

eld up, oh love, thy crown and parted throne
rannous hate! swell, bosom, with thy *fraught*;
tis of aspicks tongues. *Id. Othello.*

Hence from my sight:
If after this command thou *fraught* the court
With thy unworthiness, thou dyest.
Id. Cymbeline.

Our *fraughtage*, sir,
I have conveyed abroad.
Id. Comedy of Errors.

In the narrow seas, that part
The French and English, there miscarried
A vessel of our country, richly *fraught*.
Shakspeare.

Whosoever hath his mind *fraught* with many thoughts, his wits, and understanding do clarify and break up in the communicating and discoursing with another. *Bacon.*

Hell, their fit habitation, *fraught* with fire,
Unquenchable, the house of woe and pain.
Milton.

With joy
And tidings *fraught*, to hell he now returned.
Id. Paradise Lost.

Perhaps some cold bank is her bolster now,
Or 'gainst the rugged bark of some broad elm
Leans her unpillowed head, *fraught* with sad fears.
Id. Comus.

Of all our navy none should now survive,
But that the ships themselves were taught to dive,
And the kind river in its creek them hides,
Fraughting their pierced keels with ouzy sides.
Marvell.

And now approached their fleet from India, *fraught*
With all the riches of the rising sun,
And precious sand from southern climates brought.
Dryden.

The bark that all our blessings brought,
Charged with thyself and James, a doubly royal *fraught*. *Id.*

Abdallah and Belfora were so *fraught* with all kinds of knowledge, and possessed with so constant a passion for each other, that their solitude never lay heavy on them. *Addison.*

FRAUSTADT, a town in the grand duchy of Posen, Poland, in a sandy tract on the borders of Silesia. It is subject to Prussia, and is a place of considerable traffic in Polish wool, woollen and linen cloth, stockings and leather. Here are barracks in an old building, formerly the Jesuits' college. The Swedes obtained a signal victory in this neighbourhood over the Saxons and Russians, in February, 1706, and in 1802 a number of houses were destroyed by fire. It is twenty miles north-east of Glogau, and seventy N. N. W. of Breslau. Population 5600, chiefly Germans, but including about 500 Jews.

FRAXINELLA, in botany, see DICTAMNUS. It is remarkable of this odorous plant that, when in full blossom, the air which surrounds it in a still night may be inflamed by the approach of a lighted candle. Dr. Watson doubts whether this inflammability proceeds from an inflammable air exhaled by the plant, or from some of the finer parts of the essential oil of the plant being dissolved in the common atmospherical air. The latter, Cavallo thinks, is most probable, for were it the pure inflammable air, it would, on account of its small specific gravity, leave the plant as soon as it was produced. Common air acquires the property of becoming inflammable, by being transmitted through several essential oils.

FRAXINUS, the ash, a genus of the dicœcia order, and polygamia class of plants: natura-

order forty-fourth, sepiariæ. There is no hermaphrodite calyx, or it is quadripartite; and there is either no corolla, or it is tetrapetalous; there are two stamina; one pistil; one lanceolated seed; and the pistil of the female is lanceolated. There are fifteen species, of which the most useful is the F. excelsior, common ash. If a wood of these trees is rightly managed, it will turn out greatly to the advantage of the owner; for, by the underwood, which will be fit to cut every eight or ten years, there will be a continual income, more than sufficient to pay the rent of the ground, and all other charges; and still there will be a stock preserved for timber, which in a few years will be worth 40*s.* or 50*s.* per tree. This tree flourishes best in groves, but grows very well in a rich soil in open fields. It is found in the highest perfection on dry loamy soils. In moist ground it grows fast, but soon sickens. It will in short grow freely on most kinds of soils, if the situation be tolerably good, excepting on retentive clays or tills. In wet soils it quickly shoots up, but soon languishes and dies. In rich lands its wood is short and brittle; in sandy soils it is tough and reedy: qualities which, for several purposes, very much enhance its value. Much has been said against admitting the common ash as an ornamental tree. Some discard it, because it has no leaf till late in the spring; for the same reason, the oak and the platanus might also be rejected. Others deny it admission, because it sheds its leaves early in autumn; the same objection would apply to the beech, the cherry, and the sycamore. Others again denounce it, because its foliage is thin, and its branches bare and ugly. It forms however an agreeable variety, when judiciously intermingled with other trees; and, as it will bear almost any topping or cutting, it is easily accommodated to its position. Cattle in general are fond of its leaves, and in Lancashire they lop the tops of these trees to feed them in autumn, when the grass is on the decline; the cattle peeling off the bark as food. The wood has the singular property of being nearly as good when young as when old. It is hard and tough, and is much used to make the tools employed in husbandry. The ashes of the wood afford very good potash. The bark is used in tanning calf-skin. A slight infusion of it appears of a pale yellowish color when viewed between the eye and the light; but when placed betwixt the eye and an opaque object, it appears blue. This blueness is destroyed by the addition of an acid, but recovered by alkalies. The seeds are acrid and bitter. Horses, cows, sheep, and goats, eat it: but it spoils the milk of cows.

FRAY, *n. s.* & *v. a.* Fr. *fracas*, *effrayer*, to fright. A battle; a fight; a duel; a combat; a broil; a quarrel; a riot. To fright; to terrify. Fr. *frayer*, to rub.

The panther, knowing that his spotted hide
Doth please all beasts, but that his looks them *fray*,
Within a bush his dreadful head doth hide,
To let them gaze, while he on them may prey.
Spenser.

So diversely themselves in vain they *fray*,
Whilst some more bold to measures him stand nigh.
Id.

I'll speak between the change of man and boy
With a reed voice, and turn two mincing steps
Into a manly stride; and speak of *frays*,
Like a fine bragging youth. *Shakspeare.*

Time tells, that on that ever blessed day,
When Christian swords with Persian blood were dyed,
The furious prince Tancredie from that *fray*
His coward foes chased through forests wide.
Fairfax.

Fishes are thought to be *frayed* with the motion caused by noise upon the water. *Bacon.*

Since, if we fall before the appointed day,
Nature and death continue long their *fray*.
Denham.

The boaster Paris oft desired the day
With Sparta's king to meet in single *fray*.
Pope.

But why should I his childish feats display?
Concourse and noise, and toil he ever fled,
Nor cared to mingle in the clamorous *fray*
Of squabbling imps. *Beattie.*

And so he says no more—but pays his court
To some distinguished strangers in that *fray*,
The Prince de Ligne, and Largeron, and Damas,
Names great as any that the roll of Fame has.
Byron.

FREA, or FRIGGA, the wife of Odin, or Woden, was, next to him, the most revered divinity among the Heathen Saxons, Danes, and other northern nations. As Odin was believed to be father, Frea was esteemed the mother of all the other gods. In the earliest times Frea was the same with the goddess Herthus, or Earth, who was so devoutly worshipped by the Angli, and other German nations. But when Odin, the conqueror of the north, usurped the honors due only to the true Odin, his wife Frea usurped those which had been formerly paid to mother Earth. She was worshipped as the goddess of love and pleasure, who bestowed on her votaries a variety of delights, particularly happy marriages, and easy births. To Frea the sixth day of the week was consecrated, which still bears her name, Friday, or Frea's day.

FREAK, *n. s.* & *v. a.* } Sax. ꝼnæc, fugitive;
FREAK'ISH, *adj.* } Ger. *frech*, saucy; petulant. A sudden and
FREAK'ISHLY, *adv.* } causeless change of
FREAK'ISHNESS, *n. s.* } place. A sudden fancy; a humor; a whim; a capricious prank. Of the verb Dr. Johnson says, 'I suppose Scotch, brought into England by Thomson;' but Milton uses it to variegate; to chequer. Capricious; humorsome.

O! but I fear the fickle *freaks*, quoth she,
Of fortune, and the odds of arms in field.
Faerie Queene.

The white pink and the pansy *freaked* with jet.
Milton. Lycidas.

One grain of true science and sound wisdom in real worth and use doth outweigh loads, if any loads can be of *freakish* wit. *Barrow.*

When that *freak* has taken possession of a fantastical head, the distemper is incurable. *L'Estrange.*

It may be a question, whether the wife or the woman was the more *freakish* of the two; for she was still the same uneasy fop. *Id*

She is restless and peevish, and sometimes in a *freak* will instantly change her habitation.
Spectator

To vex me more, he took a *freak*
To slit my tongue, and make me speak. *Swift.*

There furry nations harbour:
Sables of glossy black, and dark embrowned,
Or beauteous, *freaked* with many a mingled hue.
Thomson.

But the long pomp, the midnight masquerade,
With all the *freaks* of wanton wealth arrayed,
In these, ere trifles half their wish obtain,
The toiling pleasure sickens into pain. *Goldsmith.*

FREAM, *v. n.* Lat. *fremere;* Fr. *fremir.* To growl or grunt as a boar.

FRECK'LE, *n. s.* } Goth. *fræk;* Ger. *flecn,*
FRECK'LED, *adj.* } a spot, whence fleckle,
FRECK'LY, *adv.* } freckle. A spot raised in the skin by the sun. Any small spot or discoloration.

A fewe *fraknes* in his face ysprent,
Betwixen yelwe and blake somdel ymeint.
Chaucer. The Knightes Tale.

The cowslips tall her pensioners be;
In their gold coats spots you see:
Those be rubies fairy favours;
In those *freckles* live their favours.
Shakspeare.

The even mead that erst brought sweetly forth
The *freckled* cowslip,
Wanting the scythe, all uncorrected, rank,
Conceives by idleness. *Id. Henry V.*

The farewell frosts and easterly winds now spot your tulips; therefore cover such with mats, to prevent *freckles.* *Evelyn.*

Sometimes we'll angle at the brook,
The *freckled* trout to take
With silken worms. *Drayton's Cynthia.*

Ruddy his lips, and fresh and fair his hue;
Some sprinkled *freckles* on his face were seen,
Whose dusk set off the whiteness of the skin.
Dryden.

Now thy face charms every shepherd,
Spotted over like a leopard;
And, thy *freckled* neck displayed,
Envy breeds in every maid. *Swift.*

FRECKLES, lentigines, are spots of a yellowish color, of the bigness of a lentile seed, scattered over the face, neck, and hands. Freckles are either natural, or proceed from the jaundice, or the action of the sun upon the part. Heat, or a sudden change of weather, will often make the skin appear of a darker color than is natural, and thereby produce what is called tan, sunburn, and morphew; which seem to differ only in degree, and usually disappear in winter. Persons of a fine complexion, and those whose hair is red, are most subject to freckles, especially in parts exposed to the sun and air. To remove freckles put juice of lemons in a glass phial, and, mixing it with sugar and borax finely powdered, let it digest eight days, and then use it. Homberg proposes bullock's gall mixed with alum, and, after the alum has precipitated, exposed three or four months to the sun in a close phial, as one of the best menstrua for removing freckles.

FRED. The same with peace; upon which our forefathers called their sanctuaries fredstole, i. e. the seats of peace. So Frederick is powerful or wealthy in peace; Winfred, victorious peace; Reinfred, sincere peace.

FREDBERG, or FREDEBERG, a rich and strong town of Germany, in Misnia, remarkable for its mines, and for being the burying-place of the princes and of the house of Saxony. It is a delightful place, seated on the river Multa. Long. 13° 40′ E., lat. 51° 2′ N.

FREDERICIA, a town of Jutland, on the Little Belt, with a custom-house, where all vessels pay a toll on passing the Belt. The walls enclose a large extent of ground, but the population is only 3500. It was founded in 1651, but the fortifications were not completed when it was taken by storm and burnt by the Swedes. After this the town and walls were repaired; but, though the Danish government has made various efforts to induce a resort of population, the want of a good harbour has much counteracted them. Tobacco is cultivated here; but the chief manufactures are silk and woollen. Five miles north of Middlefarth.

FREDERICK, the name of eleven European monarchs, viz. four emperors of Germany, five kings of Denmark, and two kings of Prussia; and part of the names of two other kings of Prussia, and two of Poland. See DENMARK, GERMANY, POLAND, and PRUSSIA. Amongst these we shall here only take notice of the two following:—

FREDERICK I., king of Prussia, the son of Frederick-William the Great, elector of Brandenburg, was born in 1657; and succeeded his father in the electorate, A. D. 1688. In 1700 he entered into a negociation with the emperor, Leopold I., to get Prussia erected into a kingdom; which he at last obtained by a singular accident. While appearances were rather unpromising he received a letter from his minister, written in cyphers, advising him to use the interest of a certain prince; but he, mistaking the cyphers, applied to the emperor's confessor; who, being a Jesuit, was so much struck with the honor done him by a Protestant elector, that he exerted his whole interest, and that of his order, to procure him the desired object. Frederick was accordingly crowned king of Prussia January 18th, 1701. He was endued with many virtues. He was magnificent, generous, constant to his marriage vows, and studied the true interest of his subjects, by preserving his dominions in peace. He was three times married: his second queen was sister to king George I. He founded the university of Halle, and the royal academy at Berlin. He died in 1713.

FREDERICK II., surnamed the Great, king of Prussia, one of the greatest warriors the present age has produced, was the son of Frederick-William, then hereditary prince of Brandenburg, and princess Sophia Dorothea, daughter of king George I. He was born in 1712, the year before his father mounted the throne, who was so far from being a patron of literature, that he regarded nothing but what related to the military art; and most of his generals scarcely knew how to sign their names. His son was of a disposition the very reverse. Being put from his birth under the care of Val de Recoule, a French lady of great merit and understanding, he early acquired a taste for literature, and a predilection for the French language, which were never obliterated. At seven years of age young Frederick was put under the military tuition of general

count de Finkestein, and colonel de Kalkstein, officers renowned for courage and experience. He was taught mathematics and fortification by major Senning; Han de Jendun, a Frenchman, instructed him in other branches of knowledge; and a cadet, of the name of Kenzel, taught him his exercise. At eight he was furnished with a small arsenal, stored with all sorts of arms proportioned to his age and strength, of which his father left him absolute master. Soon after he was named captain and chief of the corps of cadets; and he performed every day, in miniature, with his little soldiers, all the evolutions with which his father exercised his giants. At last he received the command of a company in his father's famous gigantic regiment, composed of men of whom scarcely one was short of seven French feet. Endued, however, with a taste for the arts, he devoted to their cultivation every moment he could escape the vigilance of his guardians. He was particularly fond of poetry and music, and, when he could find a moment's leisure, read French authors or played on the flute; but his father, as often as he surprised him playing or reading, broke his flute and threw his books into the fire. The prince, chagrined at this treatment, and having a great desire to visit Germany, England, France, and Italy, desired permission to travel. This, however, his father refused, but permitted him to accompany himself occasionally into Germany; and, in 1728, took him to Dresden to see the king of Poland. By these little expeditions the prince's desire to travel was only the more inflamed; so that at last he resolved to set out without his father's knowledge. The design was entrusted to two of his young friends, named Kat and Keit; money was borrowed, and the day of departure fixed, when unluckily the whole project was discovered. The old king, implacable in his resentment, and considering his son as a deserter, determined to put him to death. He was shut up in the fortress of Custrin; and it was with difficulty that the count de Seckendorf, sent purposely by the emperor Charles VI., was able to alter the king's resolution. Certain vengeance, however, was determined on both his intended associates. Keit escaped the danger by flying into Holland; but Kat had not that good fortune. The king first directed that he should be tried by a court-martial; but, as they only sentenced Kat to perpetual imprisonment, the revengeful monarch, by an unheard of exercise of his prerogative, caused him to be beheaded. The execution was performed under the windows of the prince, whose face being held towards the scaffold, by four grenadiers, he fainted away at the shocking sight: and, during the remainder of his life, he considered capital punishments with so great a degree of horror that they were rare throughout his dominions while he reigned. When the emperor had succeeded in preventing the execution of Frederick, the old king remarked, that 'Austria would one day see what a serpent she had nourished.' The prince remained prisoner a year at Custrin; during which time his father wished that he should learn the maxims of government and finance. For this purpose M. de Munchow, president of the chamber of domains and finances, was ordered to make him assist at all their assemblies, to consider him as a simple counsellor and to treat him as such. But, though Frederick assisted at their meetings, he did not trouble himself with reading acts or copying decrees. Instead of this he amused himself sometimes with reading French pamphlets, and at others with drawing caricatures of the president or members of the assembly. Munchow was also very favorable to the prince at this time, by furnishing him with books and other articles of amusement, notwithstanding the express prohibition of his father: though in this he certainly ran a great risk of his life. Frederick, after this, was recalled to Berlin, on pretence of being present at the celebration of his eldest sister's marriage with the hereditary prince of Bareith; but the true reason was, that the king had now prepared a match for the prince himself. This was the princess Elizabeth Christina of Brunswick, niece to the empress. Frederick, who was not only totally indifferent to the fair sex in general, but particularly prejudiced against this princess, made some objections; his father, however, overcame all obstacles with 'his usual arguments (says the author of the Life of Frederick), viz. his cane and a few kicks.' But the coldness which Frederick at this time showed for the fair sex was not natural; for as early as 1723, though then only in his eleventh year, he became enamoured of the princess Anne, daughter of king George II. Even at this early period he vowed to refuse every other but her for his consort, nor was his vow ever broken, as far as depended on himself. This marriage might have taken place had it not been for some differences which arose, between the courts of Prussia and Hanover, about a few acres of meadow land, and two or three Hanoverians enlisted by the Prussian recruiters. The princess whom he espoused had a large share of beauty, and, what was still better, an excellent heart; but Frederick is said to have suffered so much in his former amours, that certain insurmountable impediments remained to the completing of his marriage with any woman. On this occasion Frederick received from his father the county of Rupin. He resided in Rupin, the capital, for some time; but afterwards preferred Rheinsberg, which then contained only 1000 inhabitants. Having inscribed over the great gate of the castle FREDIRICO TRANQUILLITATEM COLENTI, his father was displeased with it, and therefore hurried him into the noise and tumult of war. The succession to the crown of Poland had kindled a general war throughout Europe, and the king of Prussia was to send 10,000 auxiliaries to the imperial army, then commanded by prince Eugene. The king conducted his troops in person, and took this opportunity of giving his son an idea of war. At this time, however he learnt but little, and only saw, as he expressed it, the shadow of the great Eugene. That consummate general, however, predicted that he would one day be a great captain. Frederick having gone to reconnoitre the lines at Philipsburg, in his return through a very open wood, was exposed to the cannon of the lines, which thundered incessantly. The balls broke a number of branches on every side of him; notwith-

standing which he never caused his horse to move quicker, nor altered the motion of his hand which held the bridle; but continued to converse calmly with the generals who attended him. During this campaign, the health of the old king was so much impaired, that Frederick was for some time intrusted with signing all the orders in his name. On his recovery the prince was sent to Stetten, under the prince of Dessau, to see the fortifications. He was afterwards sent to Konigsberg to see king Stanislaus, who was no less remarkable for his philosophy and constancy than for his misfortunes. With him Frederick remained for some weeks, and contracted a friendship which was not dissolved but by death. At last he was allowed to return to his peaceful mansion at Rheinsberg, where he remained till the death of his father. In this place his time was occupied alternately by the study of the arts and sciences, and the pleasures of friendship. Philosophy, history, politics, the military art, poetry, and music, agreeably succeeded each other, and had each its stated period. The prince passed the greatest part of the day in his library; and the remainder in the society of a select company of learned men. In these meetings, gaiety generally presided; there were generals to speak of war, musicians to charm the ear, and excellent painters to decorate the apartments. The morning was usually dedicated to study; agreeable conversation prevailed at each repast; and every evening there was a concert. In this retreat Frederick conceived that ardent passion for military glory, for which he became at last so remarkable; and here he formed the most sublime and daring projects. He was fired with a desire of imitating the celebrated heroes of antiquity, of whom he read in ancient authors. He never spoke but with enthusiasm of the great warriors of Greece and Rome; and, when seated on the throne, thought he could not distinguish an able soldier in a more honorable manner, than by conferring on him a Roman surname. Hence he distinguished by the name of Quintus Icilius M. Guichard, who had written some treatises on the military art of the ancients; giving him at the same time a free battalion. In his pursuit of glory Frederick cultivated the friendship of the celebrated poets, and philosophers of his day, and commended, complimented, and even flattered, all the most celebrated literati of Europe. 'The philosopners (says the author of his Life) answered him as a mad lover writes to his mistress. They wrote to him that he was a great poet, a great philosopher, the Solomon of the north. All these hyperboles were printed: and Solomon was not sorry for it, though he had too much understanding to believe in them. Wolff, Rollin, Gravesande, Maupertuis, Algarotti, Voltaire, were honored with his correspondence. The last especially, accustomed to offer up incense to the idol of the day, were it transported from the dunghill to the altar, did not fail to exalt as the first man of the universe a prince who was in expectancy of the throne, and who assured him that he was the greatest philosopher of the age, and the first poet in the world.' That Frederick might keep up his character with the literati, or perhaps from a real predilection for his principles, he patronised the Apology of Wolf, (a philosopher whom his father had banished, for writing a work on pre-established harmony), and had his principal treatises translated into French. He even prevailed upon his father to relax a little in favor of that philosopher. In 1736 a letter was sent to Wolf at Marpourg, inviting him to return; but he did not venture to make his appearance till 1740, when his protector was seated on the throne. During his residence at Rheinsberg, Frederick composed his refutation of the principles of Machiavel, under the title of Anti-Machiavel; of which he sent the MS. to Voltaire to correct, and to get printed. The old king, now worn out with infirmity, saw with regret the predilection his son entertained for men of letters; and, in his peevish fits, often threatened the whole society with confinement in the fortress of Spandau. These threats frequently occasioned a violent alarm among the joyous company at Rheinsberg, which it required all the eloquence of Frederick to quiet. Their apprehensions, however, were removed, in 1740, when the old monarch died on 31st May, and left the throne to his son. The possession of a kingdom did not abate Frederick's passion for literature, though to this he was now obliged to superadd the qualities and labors of a great king. His transactions in this character will be found under the article PRUSSIA; and therefore little more remains to be said here, than to relate some anecdotes by which we may be able to trace the character of this great and singular monarch. Having, soon after his accession, gone into Prussia and Westphalia to receive the homage of the inhabitants, he formed a resolution of proceeding incognito as far as Paris. Being discovered at Strasbourg, however, he laid aside his design, and went to see his states in Lower Germany. Here he wrote the celebrated Voltaire, that he should come incognito to visit him at Brussels; but being seized with an indisposition in the little palace of Meuse, two leagues from Cleves, he wrote again to that philosopher, requesting him to make the first advances. The following curious account is given by him of his reception, &c. 'The only guard I found at the gate was one soldier. The privy counsellor, Bambonet, was cooling his heels in the court; he had large ruffles of dirty linen; a hat full of holes; and an old magisterial peruke, one end of which descended as low as his pockets, and the other scarcely reached his shoulder. I was conducted into his majesty's apartment, where there was nothing but bare walls. I perceived in a cabinet, by the glimmering of a taper, a truckle bed, two feet and a half wide, on which lay a little man, muffled up in a night gown of coarse blue cloth. This was the king, in a strong perspiration, and even trembling under a wretched blanket, in a violent fit of the ague. I bowed to him, and began by feeling his pulse, as if I had been his first physician. The fit over, he dressed himself and sat down to table. Algarotti, Kayserling, Maupertuis, the king's minister to the states general, and myself were of the party; where we conversed profoundly on the immortality of the soul, on liberty, and the Androgynes of Plato.' This rigid economy, and contempt of every

luxury, was maintained by Frederick as long as he lived. The following account, likewise from Voltaire, will give an idea of his manner of living. 'He rose at 5 A.M. in summer, and 6 in winter. A lacquey came to light his fire, and dress and shave him; though indeed he almost wholly dressed himself. His room was not inelegant. A rich balustrade of silver, ornamented with little cupids, seemed to enclose an alcove bed, the curtains of which were visible; but behind them, instead of a bed, there was a library; the king slept on a truckle bed with a slight mattress concealed behind a screen. Marcus Aurelius and Julian, those apostles of Stoicism, did not sleep in a more homely manner. At seven his prime minister arrived with a great bundle of papers under his arm. This prime minister was no other than a clerk, who had formerly been a soldier and valet-de-chambre. To him the secretaries sent all their despatches, and he brought extracts of them, to which the king wrote answers in two words on the margin: and thus the affairs of the whole kingdom were expedited in an hour. At eleven the king put on his boots, reviewed his regiment of guards in the garden, and at the same hour the colonels were following his example in their respective provinces. The princes his brothers, the general officers, and one or two chamberlains, dined at his table; which was as good as it could be in a country where there is neither game, tolerable butcher's meat, nor a pullet, and where the very wheat is brought from Magdebourg. After the repast he retired alone into his cabinet, where he made verses till five or six o'clock. Then came a young man named D'Arget, who read to him. A little concert began at seven, in which the king played on the flute with as much skill as the first performer; and pieces of his composition were frequently executed. Supper was served in a little hall, the most singular and striking ornament of which was a fine picture of Priapus. These repasts were not in general the less philosophic on that account. Never did men converse in any part of the world with so much liberty respecting all the superstitions of mankind, and never were they treated with more pleasantry and contempt. God was respected: but none of those who had deceived men in his name were spared. Neither women nor priests ever entered the palace. In a word, Frederick lived without a court, without counsel, and without religious worship.' As Frederick had espoused his princess contrary to his inclination, it was imagined, that on his accession, he would set himself free from engagements so disagreeable to himself. The queen impressed with suspicions of this kind, was on the point of fainting away when he made his first visit to her. To the surprise of all parties, however, he made her a very affectionate speech, apologising for his indifference, and inviting her to participate with him the throne of which she was worthy. In the first year of his reign, he restored the academy of sciences at Berlin. See ACADEMY. His war with the queen of Hungary, however, which took place almost immediately after his accession, for some time prevented him from taking such an active part in literary matters as he was inclined to do. After the peace, he gave full scope to his passion for literature; and, in the interval betwixt the conclusion of the first war and beginning of that of 1756, he composed most of his works; particularly his History of My own Time. Voltaire was his principal literary correspondent, whom he invited to reside with him. Afraid of losing his liberty, that philosopher hesitated, excused himself, and entered into pecuniary treaties. At last he was determined by seeing a poem from Frederick to M. D'Arnaud, in which the latter was compared to the rising, and Voltaire to the setting, sun. By this Voltaire was so much piqued, that he set out for Berlin without delay, and arrived there in June 1750. He was received in the most magnificent and affectionate manner, and for some time his situation was very agreeable; but the disputes and rivalship which took place betwixt him and Maupertuis soon threw every thing into confusion. In these the king interfered in such a manner as was certainly below his dignity; and he often exercised himself in making a jest of the other men of letters, in a way which induced many of them to leave him. The squabbles with Voltaire were sometimes very diverting. See VOLTAIRE. They ended at last in a final quarrel with that wit, and his departure from the kingdom. The restless disposition of Frederick showed itself after his departure by his attempts to provoke the literati who remained at his court, to quarrel with him as Voltaire had done. But they were of too passive a disposition to gratify him in this respect, choosing rather to suffer the most mortifying strokes of raillery, or to leave the kingdom, than to contend with him. This proved so uneasy to the king, that he one day exclaimed, 'Shall we have no more quarrels then!' The breaking out of the war in 1756, however, put a stop to this diversion, and afforded him as many enemies as he could wish. The exploits he performed, during the seven years which this unequal contest lasted, are almost incredible (See PRUSSIA); and it is amazing how the fortitude and resolution of any man could enable him to sustain the difficulties which during this period he encountered. Once however even the resolution of Frederick was on the point of giving way. After the battle of Colin, when his affairs seemed altogether desperate, he wrote to his sister at Bareith that he was on the point of putting an end to his own life. And, as he wished to have it said that he made verses even on the brink of the grave, he wrote a long poetical epistle to the marquis d'Argens, in which he communicated to him his design, and bade him farewell. His affairs, however, took a better turn, and such desperate thoughts were laid aside. But his constitution was irreparably injured by the excessive fatigues he had sustained. Soon after the peace, his body began to bend, and his head to incline to the right side: by degrees he became very infirm; he was tormented with the gout, and subject to frequent indigestion. All his distempers, however, were borne with invincible patience; and, till a very short time before his death, he never ceased to attend his reviews, or visit the provinces. He has been known to review his troops, and gallop through all the ranks, as if he felt no pain, while

an abscess, which approached to a suppuration, touched the saddle. In August, 1785, he impaired his health still farther by assisting at a review, where he was exposed without a cloak to a heavy rain for four or five hours. On his return to Potsdam he was seized with a fever; and, for the first time, became unable to assist at the military exercises. His malady, however, did not prevent him from dictating the disposition of these exercises during the three days they lasted. About the end of autumn the fever left him, but was succeeded by a violent cough; by which he was greatly weakened and prevented from sleeping; but this did not interrupt either the execution of business, or the routine of his literary exertions; wherein he continued to employ himself till the day before he died. On the 17th and 18th of May, 1786, he was unable to assist at the ordinary reviews. At last his disorder terminated in a dropsy. Being now no longer able to remain in bed, he sat day and night in an arm-chair with springs, which could be moved at pleasure. For nearly a month before his death the swelling of his feet gave him violent pain, so that he wished an incision to be made; but the surgeon refused to perform the operation, suspecting that it might hasten his death. Nature, however, accomplished his desires; his right leg opened, and discharged such a quantity of matter, that he was greatly relieved. But on the 16th August, 1786, his throat began to rattle violently; and he soon after fell into a stupor; though from this he recovered so far as to be able to speak. His respiration and voice became gradually more feeble; and he expired on the morning of the 17th, at nineteen minutes after two, in the seventy-fifth year of his age, and forty-seventh of his reign.—This great monarch was of the middle size, had large blue eyes and a piercing look. He spoke German incorrectly and in a very rough manner; but talked French very fluently and agreeably. His constitution was naturally feeble, but he had greatly improved it by his laborious life. He had the art of relieving every one from that embarrassment, which is apt to occur in accosting a monarch. His universal knowledge enabled him to converse on all subjects. He talked of war with military men, of verses with the poet, of agriculture with the farmer, of jurisprudence with the lawyer, of commerce with the merchant, and politics with the Englishman. He had a very retentive memory; was fond of solitude and gardening; and took great pleasure in dogs, of which animals he constantly kept a number about him, giving them little balls to play with. In company he was fond of asking questions and jesting; in which last he proceeded such lengths as undoubtedly were unbecoming in a superior towards his inferiors. In military affairs he was excessively severe, not to say cruel; of which the following anecdote may serve as an instance. In the first war of Silesia, wishing to make some alteration in his camp during the night, he forbade every person, under pain of death, to keep, after a certain hour, a fire or other light in his tent. He himself went the rounds; and in passing the tent of a captain Zittern he perceived a light. Enterin the tent, he found the captain sealing a letter to his wife, for whom he had a great affection. 'What are you doing there?' said he, 'do not you know the order?' The captain fell on his knees and asked pardon. 'Sit down,' continued the king, 'and add a few words I am going to dictate to you.' Zittern obeyed; and the king dictated 'To morrow I shall die on a scaffold.' The unfortunate man wrote them, and next day was executed. His cruel treatment of Baron Trenck is well known. In matters of domestic legislation, he was more arbitrary than just; of which we have a notable example in the famous case of Arnold the miller. This man had refused to pay the rent of his mill, on pretence that the stream which turned it had been diverted into a fish-pond. But as the water which ran into the pond also ran out of it into the same channel as before, the miller evidently suffered no damage. The judges therefore gave sentence against him, but the king not only reversed their sentence but disgraced them. For this he was celebrated through all the newspapers in Europe; and yet he was in the wrong, and afterwards even acknowledged nimself to have been so: but, notwithstanding this, he not only made no reparation to the parties injured, but allowed them to lie in prison all his life-time. He entertained most unaccountable prejudices against certain places and persons, which neither conduct nor merit could eradicate. One of these unfortunate places was Westphalia, on which he never conferred any bounty; and one day a native of that country, a man of great merit, being proposed to him for a place, he refused, saying, 'He is a Westphalian; he is good for nothing.' Voltaire justly accuses him of ingratitude to the count de Seckendorf; who saved his life, and against whom he conceived the most implacable hatred. His neglect of others who afforded him the most essential service was shameful. When a robust butcher prevented him from falling, horse and all, over a precipice, where both would undoubtedly have been killed, the king only turned about and saying, Thank you friend, rode off without ever enquiring farther about his preserver. With regard to his literary merits, Voltaire boasts of having corrected his works, and others of having furnished him with materials for his history. He has been accused of stealing whole hemistichs of poetry from Voltaire, Boileau, Rousseau, and others; nor does the charge seem void of foundation. Such of his verses, as have undergone no correction, are very indifferent. But while we thus mention the foibles of Frederick, it is but just to record his acts of virtue. Upon his accession he treated his mother with great respect; ordered that she should bear the title of queen mother, and that instead of addressing him as his majesty she should call him son. As he was passing soon after between Berlin and Potsdam, 1000 boys, who had been marked out for military service by his father, surrounded his coach, and cried out 'Merciful king deliver us from our slavery.' He promised them their liberty, and next day ordered their badges to be taken off. He granted a general toleration of religion; and among other concessions allowed the profession of free-masonry. The reign of this monarch was illustrious, as well for the variety of charac-

ters he sustained, as for the important vicissitudes he experienced. But the pacification of Dresden, in 1745, enabled him to appear in a character far more glorious than that of the conqueror of Silesia. He was now entitled to the noblest eulogy, as the wise legislator of his country. Exclusive of his general attention to agriculture, commerce, and manufactures, he peopled, in particular, the deserts of Pomerania, by encouraging, with royal bounties, a great number of industrious emigrants to settle in that province; the face of which, in a very few years, underwent the most agreeable alteration. Above sixty new villages arose amidst a barren waste; and every part of the country exhibited marks of successful cultivation. Those desolate plains, where not a footstep had been seen for ages, were now converted into fields of corn; and the happy peasants, under the protection of a patriot king, sowed their grounds in peace, and reaped their harvests in security.

FREDERICK (Colonel), the son of Theodore, king of Corsica, by an Irish lady, was born in Spain. He came to England in 1754, and taught the Italian language for some years. He afterwards went to the continent, where he obtained the rank of Colonel, and the cross of merit, from the late duke of Wirtemberg; for whom he acted as agent, upon his return, and disposed of a regiment to the East India Company. He married a German lady while abroad, by whom he had a son, who fell in the American war, and also a daughter. His finances falling low at last, he shot himself, at Westminster Abbey, on the 1st February 1796. He was a man of general knowledge, and considerable talents. He wrote 1. Memoires pour servir l'histoire de Corse, 8vo. 1768. 2. The description of Corsica; with an account of its union to the crown of Great Britain, 8vo. &c. 1796.

FREDERICK, a county of Maryland, bounded on the north by Pennsylvania, east by Baltimore, south-west by the Potomac, and west by Washington; extending thirty miles every way. Fredericktown is the capital.

FREDERICK, a county of Virginia, bounded on the north by Berkley, east and south by the Shanandoah, and west by Hampshire; thirty miles long, and twenty broad. It abounds with limestone and iron ore; iron works have been erected in various parts. Winchester is the chief town.

FREDERICKSBURG, a town of Virginia, in Spotsylvania county, on the south-west bank of the Rappahannock, 110 miles from its mouth. The chief street runs parallel with the river. It is fifty miles S. S. W. of Alexandria.

FREDERICKSHALL, a town of Norway in the province of Aggerhuys, on the frontiers of Sweden, and on the extremity of the Swinesund, at the mouth of the Tiste. The harbour is safe and commodious; but the saw-dust brought down the river from the mills occasions an annual expense to clear it. It contains 3000 inhabitants; and lies thirty-one miles south-east of Christiania, and fifty north of Uddevalla.

FREDERICKSTADT, a respectable manufacturing town of Denmark, in the duchy of Sleswick, at the confluence of the Treen and Eyder. Silk, woollen, starch, and oil, are its chief manufactures It was founded in 1621, by a body of Arminians who emigrated from Holland upon the decisions of the synod of Dort. Population 2200. Eighteen miles W. S. W. of Sleswick.

FREDERICKSTEIN, a strong fortress of Norway, on the summit of a rock, which overhangs Frederickshall; famous for the death of Charles XII. killed while besieging it, in 1718.

FREDERICKSWERK, a sea-port of Denmark, in a bay on the north coast of the island of Zealand. Here are a cannon foundry, and manufactures of various military articles, established in the year 1756, by general Classen.

FREDERICKTOWN, a flourishing town of Maryland, capital of Frederick county seated on Caroll's creek, &c. It is forty-seven miles west by north of Baltimore, and 148 south-west of Philadelphia.

FREE, *adj.* & *v. a.*
FREE'DOM, *n. s.*
FREE'LY, *adv.*
FREE'NESS, *n. s.*
} Sax. ꝼꞃeah, ꝼꞃeo; Bel. *vry*; Goth. *fri*; Teutonic *frey*. We shall give the numerous applications of this word, and the illustrations in the usual order, and then present it distinctly in every word in which it is used in composition. At liberty; not a vassal; not enslaved; not a prisoner; not dependent; uncompelled; unrestrained: of choosing, as opposed to bondage or necessity; permitted; allowed; licentious; open; ingenuous; frank; without reserve; liberal; spontaneous; clear from; guiltless; innocent; exempt from; invested with franchises; possessing any thing without vassalage; admitted to the privileges of any body corporate; without expense; a free-school, is a charity-school; to set at liberty; to rescue from slavery or captivity; to manumit; to loose; to rid from; to clear from any thing ill: with *of* or *from*; to clear from impediments or obstructions.

——————This song I have heard say
Was maked of our blisful lady *fre*,
Hire to salue, and eke hire for to prey
To ben our help, and socour, whan we dey.
Chaucer. The Prioresses Tale

And Jason is as coy as is a maide;
He looked pitously, but nought he saiede·
But *frely* yave he to hire counsailers
Yeftes full grete and to hire officers:
As would God, that I leser had and time
By processe, all his woeing for to rime
Id. Legend Hypsipyle and Medea.

In prison though thy bodie be
At large kepe thine herte *fre*
A trewe hert ne will not plie,
For no manace that it mai drie.
Id. Romaunt of the Rose.

Yet shall they not escape so *freely* all;
For some shall pay the price of others guilt:
And he, the man that made Sansfoy to fall,
Shall with his owne blood price that he hath spilt.
Spenser's Faerie Queene.

The laws themselves they do specially rage at, as most repugnant to their liberty and natural *freedom*.
Spenser on Ireland.

Their use of meats was not like unto our ceremonies, that being a matter of private action in common life, where every man was *free* to order that which himself did; but this is a publick constitution for the ordering of the church. *Hooker.*

Do faithful homage, and receive *free* honours,
All which we pine for now. *Shakspeare. Macbeth.*

Glo'ster too, a foe to citizens,
O'erchanging your *free* purses; with large fines,
That seeks to overthrow religion. *Shakspeare.*

If my son were my husband, I would *freelier* rejoice in that absence wherein he won honour, than in the embracements of his bed, where he would show most love. *Id. Coriolanus.*

Who alone suffers, suffers most i' th' mind,
Leaving *free* things and happy shows behind.
Shakspeare.

Make mad the guilty, and appal the *free*,
Confound the ignorant. *Id. Hamlet.*

The child was prisoner to the womb, and is
By law and process of great nature thence
Freed and enfranchised; not a party to
The anger of the king, nor guilty of,
If any be, the trespass of the queen. *Shakspeare.*

These
Are such allowed infirmities, that honesty
Is never *free of*. *Id. Winter's Tale.*

'Tis not to make me jealous;
To say my wife is fair, feeds well, loves company,
Is *free* of speech, sings, plays, and dances well,
Where virtue is, these make more virtuous.
Shakspeare.

Why, sir, I pray, are not the streets as *free*
For me as for you? *Id. Taming of the Shrew.*

We may again
Give to our tables meat, sleep to our nights,
Free from our feasts and banquets bloody knives.
Shakspeare.

By our holy Sabbath have I sworn
To have the due and forfeit of my bond:
If you deny it, let the danger light
Upon your charter and city's *freedom*. *Id.*

We wanted words to express our thanks; his noble *free* offers left us nothing to ask. *Bacon.*

And ever since I strive in vain
My ravished *freedom* to regain. *Cowley.*

It is no marvail, that he could think of no better way to be *freed* of these inconveniences the passions of those meetings gave him, than to dissolve them.
Clarendon.

Defaming as impure what God declares
Pure; and commands to some, leaves *free* to all.
Milton.

Freely they stood who stood, and fell who fell.
Not *free*, what proof could they have given sincere
Of true allegiance, constant faith, or love,
Where only what they needs must do, appeared;
Not what they would? *Milton's Paradise Lost.*

I else must change
Their nature, and revoke the high decree
Unchangeable, eternal, which ordained
Their *freedom*; they themselves ordained their fall.
Milton.

Castalio, I have doubts within my heart;
Will you be *free* and candid to your friend?
Otway.

From which the happy never must be *free*.
Dryden.

Their steeds around,
Free from the harness, graze the flowery ground. *Id.*

The reader may pardon it, if he please, for the *freeness* of the confession. *Id.*

The path to peace is virtue: what I show,
Thyself may *freely* on thyself bestow;
Fortune was never worshipped by the wise;
But, set aloft by fools, usurps the skies. *Id.*

He therefore makes all birds of every sect
Free of his farm, with promise to respect
Their several kinds alike, and equally protect.
Id.

The chaste Sibylla shall your steps convey,
And blood of offered victims *free* the way. *Id.*

Fierce was the fight; but, hast'ning to his prey,
By force the furious lover *freed* his way. *Id.*

Free! what, and fettered with so many chains?
Id.

My hands are guilty, but my heart is *free*. *Id.*

O *freedom!* first delight of human kind!
Not that which bondmen from their masters find,
The privilege of doles; nor yet to inscribe
Their names in this or t' other Roman tribe:
That false enfranchisement with ease is found;
Slaves are made citizens by turning round. *Id.*

The will, *free from* the determination of such desires, is left to the pursuit of nearer satisfactions.
Locke.

How can we think any one *freer* than to have the power to do what he will? *Id.*

I hope it will never be said that the laity, who by the clergy are taught to be charitable, shall in their corporations exceed the clergy itself, and their sons, in *freeness of* giving. *Sprat.*

By nature all things have an equally common use: nature *freely* and indifferently opens the bosoms of the universe to all mankind. *South.*

In every sin by how much the more *free* will is in its choice, by so much is the act the more sinful, and where there is nothing to importune, urge, or provoke the will to any act, there is so much an higher and perfecter degree of *freedom* about that act. *Id.*

Free and familiar with misfortune grow,
Be used to sorrow, and inured to woe. *Prior.*

Should thy coward tongue
Spread its cold poison through the martial throng,
My javelin shall revenge so base a part,
And *free* the soul that quivers in thy heart *Pope.*

I know there are to whose presumptuous thoughts
Those *freer* beauties, e'en in them, seem faults. *Id.*

To gloomy cares my thoughts alone are *free*,
Ill the gay sports with troubled thoughts agree.
Id.

Let such teach others who themselves excel,
And censure *freely* who have written well. *Id.*

Alexandrian verses, of twelve syllables, should never be allowed but when some remarkable beauty or propriety in them atones for the liberty: Mr. Dryden has been too *free of* these in his latter works. *Id.*

This prince first gave *freedom* to servants, so as to become citizens of equal privileges with the rest, which very much increased the power of the people. *Swift.*

FREEDOM OF CONSCIENCE. See TOLERATION.

FREEDOM OF A CORPORATION. See CORPORATION. The freedom of cities, and other corporations, is regularly obtained by serving an apprenticeship: but it is also purchased with money, and sometimes conferred by way of compliment.

FREE-BENCH. See BENCH, FREE.

FREE'BOOTER, *n. s.* } Free and booty.
FREE'BOOTING, *n. s.* } A robber; a plunderer; a pillager; robbery; plunder; the act of pillaging.

Under it he may cleanly convey any fit pillage, that cometh handsomely in his way; and when he goeth abroad in the night on *freebooting*, it is his best and surest friend. *Spenser.*

Perkin was not followed by any English of name, his forces consisted mostly of base people and *freebooters*, fitter to spoil a coast than to recover a kingdom.
Bacon.

The earl of Warwick had, as often as he met with any Irish frigates, or such *freebooters* as sailed under their commission, taken all the seamen. *Clarendon.*

FRE'EBORN, *n. s.* Free and born. Not born a slave; inheriting liberty.

O baseness, to support a tyrant's throne,
And crush your *freeborn* brethren of the world!
Dryden.

I shall speak my thoughts like a *freeborn* subject, such things perhaps as no Dutch commentator could, and I am sure no Frenchman durst. *Id.*

Shall *freeborn* men, in humble awe,
Submit to servile shame;
Who from consent and custom draw
The same right to be ruled by law,
Which kings pretend to reign? *Id.*

FREECHA'PEL, *n. s.* Free and chapel. Such chapels as are of the king's foundations, and by him exempted from the jurisdiction of the ordinary. The king may also license a subject to found such a chapel, and by his charter exempt it from the ordinary's visitation.

FREE'COST, *n. s.* Free and cost. Without expense; free from charges.

We must not vouch any man for an exact master in the rules of our modern policy, but such a one as has brought himself so far to hate and despise the absurdity of being kind upon *freecost*, as not so much as to tell a friend what it is o'clock for nothing.
South.

FRE'EDMAN, *n. s.* Freed and man. Lat. *libertus.* A slave manumitted.

The *freedman* jostles, and will be preferred;
First come, first served, he cries.
Dryden's Juvenal.

FREEFO'OTED, *adj.* Free and foot. Not restrained in the march.

We will fetters put upon this fear,
Which now goes too *freefooted.*
Shakspeare. Hamlet.

FREE'HEARTED, *adj.* Free and heart. Liberal; unrestrained.

Love must *freehearted* be, and voluntary;
And not inchanted, or by fate constrained.
Davies.

FREEHO'LD, *n. s.* Free and hold. That land or tenement which a man holdeth in fee, fee-tail, or for term of life. Freehold in deed is the real possession of lands or tenements in fee, fee-tail, or for life. Freehold in law is the right that a man has to such land or tenements before his entry or seizure. Freehold is sometimes taken in opposition to villenage. Land, in the time of the Saxons, was called either bockland, that is holden by book or writing, or foreland, that is holden without writing. The former was held by far better conditions, and by the better sort of tenants, as noblemen and gentlemen, being such as we now call freehold. The latter was commonly in the possession of clowns, being that which we now call at the will of the lord.

FREEHOLD is extended to offices, which a man holds either in fee, or during life; and, in the register of writs, it is said, that he who holds land upon an execution of a statute-merchant until he is satisfied, the debt holds as freehold to him and his assigns, and the same of a tenant by elegit; but such tenants are not in fact freeholders, only as freeholders for their time, till they have received the profits of the land to the value of their debt. Reg. Judic. 68. 73.

A lease for ninety-nine years, &c., determinable upon a life or lives, is not a lease for life to make a freehold, but a lease for years, or chattel determinable upon life or lives; and an estate for 1000 years is not a freehold, or of so high a nature as an estate for life. Co. Lit. 6. He that hath an estate for the term of his own life, or the life of another hath a freehold, and no other of a less estate; though they of a greater estate have a freehold, as tenant in fee, &c., Lit. 57.

FREEHOLD, or frank tenement; liberum tenementum. See FEE and TAIL.

A FREEHOLD, by the common law, cannot commence in futuro; but it must take effect presently, either in possession, reversion, or remainder. Whatever is part of the freehold goes to the heir; and things fixed thereto may not be taken in distress for rent or in execution, &c. No man shall be disseised of his freehold by statute Magna Charta, cap. 29, but by judgment of his peers, or according to the laws of the land: nor shall any distrain freeholders to answer for their freehold in any thing concerning the same without the king's writ. Freehold estates, of certain value, are required by statutes to qualify jurors, electors of the knights of the shire in parliament, &c.

FREEHOLD, in geography, a town of New Jersey, in Monmouth county, fifteen miles west of Shrewsbury, twenty south-east by south of New Brunswick, and forty-four north-east of Philadelphia. It has an academy. A bloody battle was fought here between the British under Sir H. Clinton, and the Americans under general Washington, on the 28th June, 1778.

FREEHO'LDER, *n. s.* From freehold. One who has a freehold.

No alienation of lands holden in chief should be available, touching the *freehold* or inheritance thereof, but only where it were made by matter of record.
Bacon's Office of Alienation.

As extortion did banish the old English *freeholder*, who could not live but under the law; so the law did banish the Irish lord, who could not live but by extortion. *Davies.*

There is an unspeakable pleasure in calling any thing one's own: a *freehold*, though it be but in ice and snow, will make the owner pleased in the possession, and stout in the defence of it. *Addison.*

My friends here are very few, and fixed to the *freehold*, from whence nothing but death will remove them. *Swift.*

I should be glad to possess a *freehold* that could not be taken from me by any law to which I did not give consent. *Id.*

FREEHOLDERS, in the ancient laws of Scotland, are called milites, knights. In Reg. Judicia, it is expressed, that he who holds lands upon an execution of a statute merchant, until he hath satisfied the debt, tenet ut liberum tenementum sibi et assignatis suis; and the same of a tenant per elegit; the meaning of which seems to be, not that such tenants are freeholders, but as freeholders for the time, till they have received profits to the value of their debt.

FRE'EMAN, *n. s.* Free and man. One not a slave; not a vassal; one partaking of rights, privileges or immunities.

Had you rather Cæsar were living, and die all slaves, than that Cæsar were dead, to live all *freemen?* *Shakspeare.*

He made us *freemen* of the continent,
What nature did like captives treat before.
Dryden.

If to break loose from the conduct of reason, and to want that restraint of examination and judgment which keeps us from chusing or doing the worst, be liberty, true liberty, madmen and fools are the only *freemen.* *Locke.*

What this union was is expressed in the preceding verse, by their both having been made *freemen* on the same day. *Addison.*

FREEMI'NDED, *adj.* Free and mind. Unperplexed; without load of care.

To be *freeminded*, and cheerfully disposed at hours of meat, sleep, and exercise, is one of the best precepts of long lasting. *Bacon.*

FREESCHO'OL, *n. s.* Free and school. A school in which learning is given without pay.

To give a civil education to the youth of this land in the time to come, provision was made by another law, that there should be one *freeschool* at least erected in every diocese. *Davies.*

Two clergymen stood candidates for a small *freeschool*; a gentleman who happened to have a better understanding than his neighbours, procured the place for him who was the better scholar. *Swift.*

FREESPO'KEN, *adj.* Free and spoken. Accustomed to speak without reserve.

Nerva one night supped privately with some six or seven; amongst whom there was one that was a dangerous man, and began to take the like courses as Marcellas and Regulus had done: the emperor fell into discourse of the injustice and tyranny of the former time, and, by name, of the two accusers; and said, What should we do with them, if we had them now? One of them that was at supper, and was a *freespoken* senator, said, Marry, they should sup with us. *Bacon.*

FRE'ESTONE, *n. s.* Free and stone. Stone commonly used in building.

I saw her hand; she has a leathern hand; a *freestone*-coloured hand. *Shakspeare. As You Like It.*

The streets are generally paved with brick or *freestone*, and always kept very neat. *Addison on Italy.*

Freestone is so named from its being of such a constitution as to be wrought and cut freely in any direction. *Woodward.*

FREESTONE is a whitish stone, dug up in many parts of Britain, that works like alabaster, but is more hard and durable; being of great use in building, &c. It is a species of the grit stone, but finer grained, and smoother. The qualities of the several kinds of freestones used in the different parts of Europe vary much. They all agree in this general property indeed, that they are softer while in the quarry, than when they have been some time exposed to the air: but even this general property differs greatly in degree. They have a sort of gray freestone in use in Paris (of which we have not yet met with any in this country), which has the above-mentioned quality in so great a degree, that the expense of working it is in a great measure saved. This stone lies every where on the south side of the river Seine, and is of a coarse and large grit. It is so soft, when newly taken out of the strata, that they fashion it very conveniently with a sort of broad axe, and form as many stones for building in this manner in an hour, as an equal number of our people do in a day or two. Though this stone is as soft as dry clay when first taken up, it is found to harden so considerably in the air, that it becomes more than equal to our ordinary freestone. The Portland stone of the finest kind, which is white, and of a close grit, is very fit for hewing and carving; but it will neither resist water nor fire; while the free-stone of Kent, which is less beautiful to the eye, and is of a grayish color, and considerably close, though of a larger grain, resists the air and water very well. The freestone of Derbyshire, on the other hand, is so brittle as to be unfit for any fine working; and so coarse and open in its texture, that it lets water through; yet it bears the fire extremely well, and is fit for ovens, hearths, &c.

FREETHI'NKER, *n. s.* Free and think. A libertine; a contemner of religion.

Atheist is an old-fashioned word; I'm a *freethinker*, child. *Addison.*

Of what use is freedom of thought, if it will not produce freedom of action, which is the sole end, how remote soever in appearance, of all objections against Christianity? And therefore the *freethinkers* consider it as an edifice, wherein all the parts have such a mutual dependence on each other, that if you pull out one single nail, the whole fabrick must fall to the ground. *Swift.*

FREETHINKER. See DEISM and DEIST.

FREEWI'LL, *n. s.* Free and will. The power of directing our own actions without restraint by necessity or fate; voluntariness; spontaneity.

I make a decree, that all they of the people of Israel in my realm, which are minded of their own *freewill* to go up to Jerusalem, go with thee. *Ezra* vii. 13.

We have a power to suspend the prosecution of this or that desire; this seems to me the source of all liberty; in this seems to consist that which is improperly called *freewill.* *Locke.*

FREEWILL ISLANDS, three small and low islands in the east of the Indian Ocean, discovered by Carteret in 1767. The natives called them Pegan, Onata, and Onella. They are almost entirely surrounded by a reef, except towards the east, where there is a narrow passage through which a canoe can pass. Onata and Onella lie nearly in a direction east and west, and Pegan is about two miles to the north of them. The inhabitants are friendly, and readily exchanged with captain Carteret some cocoa-nuts for small pieces of iron, which they much value. They set a high value on iron, so that for some iron tools captain Carteret thought that they might have purchased every thing upon the island. They are tall copper Indians, with long black hair, and small beards, which they pluck by the roots from their chin and upper-lip. Their features are pleasing, and their teeth good. They are remarkably agile and vigorous in their movements. On their waist they wear a fine matting covering. Their canoes are well constructed, and planked at the sides; with a sail of matting, an outrigger, and ropes and netting. One of the inhabitants insisting on remaining with the ship's crew, was named Joseph Freewill; from whom they learned that there were other islands northward, whose inhabitants

had iron, and who always killed his countrymen. The islands are in long. 137° 51′ E., lat. 0° 50′ S.

FREEWO'MAN, *n. s.* Free and woman. A woman not enslaved.

All her ornaments are taken away of a *freewoman*; she is become a bond slave. 1 *Mac.* ii. 11.

FREEZE, *v. n.* & *v. a.* Belg. *vriesen*; Teut. *freisen*; pret. froze; part. frozen or froze. To be congealed with cold; to be of that degree of cold by which water is congealed; to congeal with cold; to kill by cold; to chill by the loss of power or motion.

And now, though on the sun I drive,
Whose fervent flame all things decays;
His beams in brightness may not strive
With light of your sweet golden rays;
Nor from my breast his heat remove,
The *frozen* thoughts graven by love.
Earl of Surrey.

When we both lay in the field,
Frozen almost to death, how did he lap me,
Even in his garments! *Shakspeare.*

My master and mistress are almost *frozen* to death. *Id.*

Orpheus with his lute made trees
And mountain tops, that *freeze*,
Bow themselves when he did sing. *Id.*

Thou art all ice, thy kindness *freezes*. *Id.*

I have a faint cold fear thrills through my veins,
That almost *freezes* up the heat of life. *Id.*

What was that snaky-headed Gorgon shield
That wise Minerva wore, unconquered virgin,
Wherewith she *freezed* her foes to congealed stone,
But rigid looks of chaste austerity
And noble grace, that dashed brute violence
With sudden adoration and blank awe?
Milton's Comus.

The cynic loves his poverty;
The pelican her wilderness;
And 'tis the Indian's pride to be
Naked on *frozen* Caucasus:
Contentment cannot smart; stoics, we see,
Make torments easie to their apathy.
L'Estrange. Old Song.

Heaven *froze* above severe, the clouds congeal
And through the crystal vault appeared the standing hail. *Dryden.*

Death came on amain,
And exercised below his iron reign;
Then upward to the seat of life he goes;
Sense fled before him, what he touched he *froze*. *Id.*

The *freezing* of water, or the blowing of a plant, returning at equidistant periods in all parts of the earth, would as well serve men to reckon their years by as the motions of the sun. *Locke.*

The aqueous humour of the eye will not *freeze*, which is very admirable, seeing it hath the perspicuity and fluidity of common water. *Ray.*

A thousand and a thousand colours they
Assume, then leave us on our *freezing* way.
Byron.

FREEZING, in philosophy, the same with congelation. See COLD and CONGELATION, where the latest experiments and observations on that subject are detailed. Freezing may be defined the fixing a fluid body into a solid mass, by the action of cold. Water and some other fluids suddenly dilate and expand in the act of freezing, so as to occupy a greater space in the solid than in the liquid state: in consequence of which ice is specifically lighter than water, and floats upon it. Water also loses of its weight by freezing, being found lighter after it is thawed than before it was frozen. And it even evaporates nearly as fast while frozen, as while it is fluid. Water which has been boiled freezes more readily than that which has not been boiled; and a slight disturbance of the fluid disposes it to freeze more speedily; having sometimes been cooled several degrees below the freezing point, without congealing when kept quite still, but suddenly freezing into ice on the least motion or disturbance. Water, covered over with a surface of oil of olives, does not freeze so readily as without it; and nut oil absolutely preserves it under a strong frost, when olive oil would not. Rectified spirit of wine, nut oil, and oil of turpentine, seldom freeze. The surface of water, in freezing, appears all wrinkled; the wrinkles being sometimes in parallel lines, and sometimes like rays, proceeding from a centre to the circumference. Fluids standing in a current of air grow much colder than before. Fahrenheit had long ago observed, that a pond, which stands quite calm, often acquires a degree of cold much beyond what is sufficient for freezing, and yet no congelation ensued: but if a slight breath of air happens in such a case to brush over the surface of the water, it freezes the whole in an instant. It has also been discovered, that all substances grow colder by the evaporation of the fluids which they contain, or with which they are mixed. If both these methods, therefore, be practised upon the same body at the same time, they will increase the cold to almost any degree of intenseness we please.

Although cold, in general, contracts most bodies, and heat expands them, yet there are some instances to the contrary, especially in the extreme cases or states of these qualities of bodies. Thus, though iron, in common with other bodies, expands with heat, yet, when melted, it is always found to expand in cooling again. Thus also, though water expands gradually as it is heated, and contracts as it cools, yet in the act of freezing it suddenly expands again, and that with an enormous force, capable of rending rocks, or bursting the very thick shells of metal, &c. A computation of the force of freezing water was made by the Florentine Academicians, from the bursting of a very strong brass globe or shell by freezing water in it; when, from the known thickness and tenacity of the metal, it was found that the expansive power of a spherule of water, only one inch in diameter, was sufficient to overcome a resistance of more than 27,000 pounds, or thirteen tons and a half. See the experiments on bursting thick bomb-shells, by freezing water in them, by major Edward Williams of the royal artillery, in the Edin. Philos. Trans. vol. 2. Such a prodigious power of expansion, almost double that of the most powerful steam-engines, and exerted in so small a mass, seemingly by the force of cold, was thought a very material argument in favor of those who supposed that cold, like heat, is a positive substance. Dr. Black's discovery of latent heat, however, has afforded an easy and natural explication of this phenomenon. He has shown that, in the act of congelation, water

cooled more than it was before, but rather warmer: that as much heat is discharged and from a latent to a sensible state, as, had it ıpplied to water in its fluid state, would ıeated it to 135°. In this process, the ex-ɔn is occasioned by a great number of mi-bubbles suddenly produced. Formerly were supposed to be cold in the abstract; ɔ be so subtile, that, insinuating themselves he substance of the fluid, they augmented ılk, at the same time that, by impeding the ɔn of its particles upon each other, they ged it from a fluid to a solid. But Dr. ĸ shows, that these are only air extricated ıg the congelation; and to the extrication ıis air he ascribes the prodigious expansive exerted by freezing water. The only ques-therefore, is, by what means this air comes e extricated, and to take up more room than ıturally does in the fluid? To this it may ınswered, that perhaps part of the heat, ch is discharged from the freezing water, com-es with the air in its unelastic state, and, by ɔring its elasticity, gives it that extraordinary e; as is seen also in the case of air suddenly ·icated in the explosion of gun-powder. The ree of expansion of water, in the state of is by some authors computed at about -tenth of its volume. Oil and quicksilver ink and contract after freezing.

If a vessel of water,' says Mr. Cavendish, 'with ıermometer in it, be exposed to the cold, the rmometer will sink several degrees below the ezing point, especially if the water be covered so as to be defended from the wind, and care ·en not to agitate it; and then on dropping in ıit of ice, or on mere agitation, spiculæ of ice ɔot suddenly through the water, and the en-ɔsed thermometer rises quickly to the freezing ·int, where it remains stationary.' In a note, adds, 'that though, in conformity to the com-ɔn opinion, he has allowed that mere agitation ay set the water a freezing, yet some experi-ents made by Dr. Blagden seem to show, that has not much, if any, effect of that kind, herwise than by bringing the water in contact ith some substance colder than itself. Though ı general also the ice shoots rapidly, and the en-osed thermometer is raised very quickly; yet ne nce observed it to rise very slowly, taking up ot less than half a minute, before it ascended to ıe freezing point; but in this experiment the ·ater was cooled not more than one or two de-rees below freezing; and it should seem, that ıe more the water is cooled below the freezing ɔint, the more rapidly the ice shoots and the en-losed thermometer rises.' Mr. Cavendish then ıbserves, 'that from the foregoing experiments ve learn, that water is capable of being cooled ·onsiderably below the freezing point, without ıny congelation taking place; and that, as soon ıs by any means a small part of it is made to ·reeze, the ice spreads rapidly through the whole of the water. The cause of this rise of the ther-mometer is, that all or almost all bodies, by chang-ing from a fluid to a solid state, or from the state of an elastic to that of an unelastic fluid, gene-rate heat; and that cold is produced by the con-trary process. Thus all the circumstances of the phenomenon may be perfectly well explained; for, as soon as any part of the water freezes, heat will be generated thereby, in consequence of the above-mentioned law, so that the newly formed ice and remaining water will be warmed, and must continue to receive heat by the freezing of fresh portions of water, till it is heated exactly to the freezing point, unless the water could be-come quite solid before a sufficient quantity of heat was generated to raise it to that point, which is not the case; and it is evident, that it cannot be heated above the freezing point; for as soon as it comes thereto, no more water will freeze, and consequently no more heat will be generated. The reason why the ice spreads all over the wa-ter, instead of forming a solid lump in one part, is, that, as soon as any small portion of ice is formed, the water in contact with it will be so much warmed as to be prevented from freezing, but the water at a little distance from it will still be below the freezing point, and will consequently begin to freeze. Were it not for this generation of heat, the whole of any quantity of water would freeze as soon as the process of congelation began; and in like manner the cold is generated by the melting of ice; which is the cause of the long time required to thaw ice and snow. It was formerly found that, by adding snow to warm water, and stirring it about until all was melted, the water was as much cooled as it would have been by the addition of the same quantity of wa-ter rather more than 150° colder than the snow; or, in other words, somewhat more than 150° of cold are generated by the thawing of the snow; and there is great reason to believe that just as much heat is produced by the freezing of water. The cold generated in the experiment just men-tioned was the same whether ice or snow was used.'

Freezing Point denotes the point or degree of cold, by a mercurial thermometer, at which certain fluids begin to freeze, or, when frozen, at which they begin to thaw again. See Che-mistry.

Freezing Rain, or raining ice, a very un-common kind of shower, which fell in the west of England, in December 1672, of which we have several accounts in the Philosophical Transac-tions. This rain, as soon as it touched any thing above ground, as a bough or the like, immedi-ately settled into ice; and, by multiplying and enlarging the icicles, broke all down with its weight. The rain that fell on the snow imme-diately froze into ice, without sinking into the snow at all. It made an incredible destruction of trees, beyond any thing in all history. 'Had it concluded with some gust of wind,' says a gentleman who was on the spot, 'it might have been of terrible consequence. I weighed the sprig of an ash tree, of just three quarters of a pound, the ice on which weighed sixteen pounds. Some were frighted with the noise in the air; till they discerned it was the clatter of icy boughs dashed against each other.' Dr. Beale observes, that there was no considerable frost observed on the ground during the whole; whence he con-cludes, that a frost may be very intense and dangerous on the tops of some hills and plains; while in other places it keeps at two,

three, or four feet distant above the ground, rivers, lakes, &c., and may wander about very furious in some places, and remiss in others not far off. The frost was followed by glowing heats, and an unusual forwardness of flowers and fruits.

FREIGHT, *v. a.* & *n. s.* } Fr. *fretter;* pret.
FREIGHTER, *n. s.* } freighted; particip. fraught; which being now used as an adjective, freighted is adopted. To load a ship or vessel of carriage with goods for transportation; to load as the burden: to be the thing with which a vessel is freighted; any thing with which a ship is loaded; the money due for transportation of goods; he who freights a vessel.

I would
Have sunk the sea within the earth, or ere
It should the good ship so have swallowed, and
The *freighting* souls within her. *Shakspeare.*

The princes
Have to the port of Athens sent their ships,
Fraught with the ministers and instruments
Of cruel war.
Shakspeare. Troilus and Cressida. Prologue.

Nor is, indeed, that man less mad than these,
Who *freights* a ship to venture on the seas;
With one frail interposing plank to save
From certain death rolled on by every wave.
Dryden.

He clears the deck, receives the mighty *freight;*
The leaky vessel groans beneath the weight. *Id.*

Freighted with iron, from my native land
I steer my voyage. *Pope's Odyssey.*

A small vessel should not be stuffed with lumber. But if its *freight* be precious, and judiciously stowed, it may be more valuable than a ship of twice its burden. *Mason.*

FREIGHT, in commerce, is the money paid for carriage of goods by sea; or the price paid for the use of a ship to transport goods. Ships are freighted either by the ton, or by the great: and, in respect of time, the freight is agreed for, at so much per month, or at a certain sum for the whole voyage. If a ship freighted by the great, happens to be cast away, the freight is lost; but if a merchant agrees by the ton, or at so much for every piece of commodities, and by any accident the ship is cast away, if part of the goods is saved, she ought to be answered her freight pro rata. The freight is most frequently determined for the whole voyage, without respect to time. Sometimes it depends on the time. In the former case, it is either fixed at a certain sum for the whole cargo; or at so much per ton, barrel-bulk, or other weight or measure; or so much per cent. on the value of the cargo. This last is common on goods sent to America; and the invoices are produced to ascertain the value. The burden of the ship is generally mentioned in the contract, in this manner, 'one hundred tons, or thereby;' and the number mentioned ought not to differ above five tons, at most, from the exact measure. If a certain sum be agreed on for the freight of the ship, it must all be paid, although the ship, when measured, should prove less, unless the burden be warranted. If the ship be freighted for transporting cattle, or slaves, at so much a head, and some of them die on the passage, freight is only due for such as are delivered alive; but, if for lading them, it is due for all that were put on board. When a whole ship is freighted, if the master suffers any other goods besides those of the freighter to be put on board, he is liable for damages. It is common to mention the number of days that the ship shall continue at each port to load or unload. The expression used is work weather days; to signify, that Sundays, holidays, and days when the weather stops the work, are not reckoned. If the ship be detained longer, a daily allowance is often agreed on, in name of demurrage. If the voyage be completed in terms of the agreement, without any misfortune, the master has a right to demand payment of the freight before he delivers the goods. But if the safe delivery be prevented by any fault or accident, the parties are liable, according to the following rules. If the merchant do not load the ship within the time agreed on, the master may engage with another, and recover damages. If the merchant load the ship, and recal it after it has set sail, he must pay the whole freight; but if he unload it before it sets sail, he is liable for damages only. If a merchant loads goods which it is not lawful to export, and the ship be prevented from proceeding on that account, he must pay the freight notwithstanding. If the shipmaster be not ready to proceed on the voyage at the time agreed on, the merchant may load the whole, or part of the cargo, on board another ship, and recover damages; but chance, or notorious accident, by the marine law, releases the master from damages. If an embargo be laid on the ship before it sails, the charter-party is dissolved, and the merchant pays the expense of loading and unloading; but if the embargo be only for a short limited time, the voyage shall be performed when it expires, and neither party is liable for damages. If the shipmaster sails to any other port than that agreed on, without necessity, he is liable for damages; if, through necessity, he must sail to the port agreed on at his own expense. If a ship be taken by the enemy, and retaken, or ransomed, the charter-party continues in force. If the master transfer the goods from his own ship to another, without necessity, and they perish, he is liable for the value; but if his own ship be in imminent danger, the goods may be put on board another ship at the risk of the owner. If a ship be freighted out and home, and a sum agreed on for the whole voyage, nothing is due till it return: and the whole is lost if the ship be lost on the return. If a certain sum be specified for the homeward voyage, it is due, although the factor abroad should have no goods to send home. In the case of a ship freighted to Madeira, Carolina, and home, a particular freight fixed for the homeward voyage, and an option reserved for the factor at Carolina to decline it, unless the ship arrived before 1st of March; the ship-master, foreseeing he could not arrive there within that time, and might be disappointed of a freight, did not go there at all. He was found liable in damages, as the obligation was absolute on his part, and conditional only on the other. If the goods be damaged without fault of the ship or master, the owner is not obliged to receive them and pay freight, but

he must either receive the whole, or abandon the whole; he cannot choose those that are in best order, and reject the others. If the goods be damaged through the insufficiency of the ship, the master is liable; but, if it be owing to stress of weather, he is not accountable. It is customary for shipmasters, when they suspect damage, to take a protest against wind and weather at their arrival. But as this is the declaration of a party, it does not bear credit, unless supported by collateral circumstances. If part of the goods be thrown over-board, or taken by the enemy, the part delivered pays freight. The ship-master is accountable for all the goods received on board, by himself or mariners, unless they perish by the act of God, or of the king's enemies. Ship-masters are not liable for leakage on liquors; nor accountable for the contents of packages, unless packed and delivered in their presence.

FREGOSO (Baptist), doge of Venice, A. D. 1478, was author of several works: as, 1. The Life of Pope Martin V.; 2. A Treatise on Learned Ladies, in Latin: 3. On Memorable Actions; and 4. Against Love, both in Italian. He was deposed for arbitrary conduct, and banished.

FREHER (Marquard), a learned German author, born at Augsburg in 1705. He studied under Cujacius in France, and in his twenty-third year was made professor-at-law, at Heidelburg. He was afterwards made vice-president of court, by Frederic IV. elector palatine, who sent him to other courts as his ambassador. He wrote many works on antiquities, law, and history, though he died in 1614, aged only forty-nine.

FREIGIUS (John Thomas), a learned German, born at Fribourg, in the sixteenth century. He studied under Zasius and Remus, and was made rector of the College at Altorf in 1575. He died at Basil in 1583. He wrote, 1. Questiones Geometricæ et Stereometricæ; 2. Logica Consultorum; 3. A Latin Translation of Frobisher's Voyages; 4. Notes, Historical and Political, &c., on Cicero's Orations.

FREIMERSHEIM, a town of France, in the department of Mont Tonnerre, late of Germany, in the palatinate of the Rhine, taken by the French in 1794. It is four miles N.N.E. of Landau

FREIND (John), a learned English physician and author, born at Croton, in Northamptonshire, in 1675. In 1696 he published, in conjunction with Mr. P. Foulkes, an edition of two Greek orations, viz. of Æschines against Ctesiphon, and Demosthenes de Coronâ, with a new Latin version. In 1699 he wrote a letter to Dr. Sloane concerning a case of hydrocephalus, published in the Philosophical Transactions, and another letter in Latin to the same gentleman, De Spasmi Rarioris Historia, printed in the same Transactions. In 1703 his Emmenologia appeared; which gained him great reputation. In 1704 he was chosen professor of chemistry in the university of Oxford. In 1705 he attended the earl of Peterborough to Spain, as physician to the army there; and upon his return, in 1707, published an account of the earl's expedition. In 1709 he published his Chemical Lectures. In 1712 he attended the duke of Ormond in Flanders, as his physician. In 1716 he was admitted a fellow of the college of physicians in London. The same year he published the first and third books of Hippocrates De Morbis Popularibus, with a Commentary on Fevers, written by himself. He sat M. P. for Launceston in Cornwall in 1722, where he distinguished himself by his opposition to the ministry. In March, 1722, he was committed to the tower on suspicion of being concerned in Atterbury's Plot, but was soon released on bail. While he was under confinement he wrote a Latin epistle to Dr. Mead, De Quibusdam Variorum Generibus; and began his History of Physic, the first part of which was published in 1725, and the second in 1726. Upon the accession of George II. he was appointed physician to the queen, who showed the utmost esteem for him. He died in London in 1728. His works were published together in Latin, folio, 1733, and dedicated to the queen.

FREINSHEMIUS (John), a learned and elegant author, born at Ulm in 1608. He published supplements to Livy, Tacitus, and Quintus Curtius, in sixty books, printed at Strasburg in 1664. He wrote likewise Notes upon Quintus Curtius, Florus, Tacitus, and some other Latin classics; and died in 1660. He was professor at Upsal and Heidelburg.

FREISCHBACH, a town of France, in the department of Mont Tonnerre, late of Germany, in the palatinate of the Rhine, taken by the French in 1794. It is six miles E.N.E. of Landau.

FREJUS, the Forum Julii of ancient history, is a small town on the coast of Provence, France, situated amidst marshes on the river Argens. Its harbour has long been dry, the sea having retired nearly sixteen miles, but anchorage is found in the roadstead; and here are vestiges of an amphitheatre and of a large aqueduct. Frejus was the birth place of Agricola, but is more noted for being, in modern times, the place where Buonaparte landed on his return from Egypt in 1799, and on his more celebrated return from Elba in 1815. Population 2200. Thirty miles south-west of Nice, and forty north-east of Toulon.

FREN, *n. s.* A stranger; an old word wholly forgotten here, but retained in Scotland.

> But now from me his madding mind is start,
> And wooes the widow's daughter of the glen;
> And now fair Rosalind hath bred his smart,
> So now his friend is changed for a *fren*.
>
> *Spenser.*

FRENCH, in geography, a river of the United States, in Massachusetts, which rises from a pond in Worcester county, and runs into the Quinebauge in Connecticut; so named from the French Protestants, who settled on its banks, after the revocation of the Edict of Nantz, in 1685.

French Broad, a navigable river of Tennesse, from 400 to 500 yards broad, formed by several head waters that rise in North Carolina, on the south-east of the Great Iron and Bald Mountains. After running fifty-six miles north-west between

these mountains, and twenty-five miles north, it joins the Holstein eleven miles above Knoxville.

French Creek, a river of North America, the north head water of the Alleghany, into which it falls on the north side of Fort Franklin, eighty miles north-east of Pittsburg.

French Chalk, *n. s.*

French chalk is unctuous to the touch, as steatities is, but harder, and nearer approaching the consistence of stone. *Woodward.*

French chalk is an indurated clay, extremely dense, of a smooth glossy surface, and soft and unctuous to the touch; of a greyish white colour, variegated with a dusky green. *Hill.*

French Language, the language now spoken in France, which, like the English, is not an original language, but a medley of several. Those that prevail most, and are the basis of it, are, 1. The Celtic; whether that were a particular language itself, or whether it were only a dialect of the Gothic, as spoken in the west and North: 2. The Latin, which the Romans carried with them into Gaul, when they conquered it: and 3, The Teutonic, or that dialect of the Teutonic spoken by the Franks, when they passed the Rhine, and established themselves in Gaul. Of these three languages, in the space of about 1300 years, was the modern French gradually formed. Its progress was very slow. Both the Italian and Spanish were regular languages long before the French. Pasquier observes, it was under Philip of Valois that the French tongue first began to be polished; and that, in the register of the chamber of accounts of that time, there is a purity almost equal to that of the present age. However, the French was still very imperfect till the reign of Francis I. The custom of speaking Latin at the bar, and of writing the public acts and instruments of the courts of justice in that language, had made the French overlook their own language. The preceding ages had been remarkable for their ignorance, owing, in a great measure, to the long and calamitous wars in which France had been engaged: whence the French nobility deemed ignorance a kind of merit; and the generals did not regard whether they wrote or talked politely or not, provided they could fight well. But Francis I. restored learning, and changed the face of affairs; and after his time Henry Stevens printed his book, De la Precellence du Language François. The change was become very conspicuous at the end of the sixteenth century; and under Henry IV. Amyot, Coeffetau, and Malherbe, contributed towards bringing it to perfection; which cardinal Richelieu completed, by the establishment of the French Academy; a society of which the most distinguished persons in church and state have been members. Nor did the long reign of Louis XIV. contribute little to the improvement of the language; his taste for the fine arts rendered his court the politest in Europe. Wit and magnificence seemed to vie; and his generals might have disputed with the Greeks, Romans, &c., the glory of writing well, if they could not that of fighting. From the court, the elegance and purity of the language soon spread itself into the provinces; where there are now very few who do not write and speak good French. One character of the French language is, that it is natural and easy. The words are ranged in it much in the same order as the ideas in our minds; in which it differs exceedingly from the Greek and Latin, where the inversion of the natural order of words is reputed a beauty. The Hebrew surpasses even the French in this point, but comes short of it in copiousness and variety. But, as to the analogy of grammar, and the simplicity wherewith the moods of verbs are formed, the English has the advantage not only over the French, but over all the known languages in the world; though the peculiar expressions and idioms of the English are sometimes so quaint and extraordinary, that it loses a good deal of the advantage which its grammatical simplicity gives it over the rest. The French has few compound words, wherein it differs widely from the Greek, high Dutch, and English. This the French authors acknowledge to be a great disadvantage; the Greek and Dutch deriving a great part of their force and energy from the composition of words, and frequently expressing that in one sounding word, which the French cannot express but by a periphrasis. The diminutives in the French are as few as the compounds, the greatest part of those in use having lost their diminutive signification. The French is chiefly admired for its justness, purity, accuracy, and flexibility. It is the most universal and extensive language in Europe. The policy of states and courts has rendered it necessary for the ministers of princes, &c.; and the discoveries and improvements made by the French in arts and sciences have had the same effect among the learned. In Germany, and elsewhere, the princesses and persons of distinction value themselves on understanding French; and, in several courts of Europe, French is almost as much used as the language of the country.

French Republic. See France, Republic, and Revolution.

French River, a river of Upper Canada, which runs from Lake Huron, to Lake Nipissing.

FRE'NCHIFY, *v. a.* From French. To infect with the manner of France; to make a coxcomb.

Has he familiarly disliked
Your yellow starch, or said your doublet
Was not exactly *frenchified*? *Shakspeare.*

They misliked nothing more in king Edward the Confessor than that he was *frenchified*; and accounted the desire of foreign language then to be a foretoken of bringing in foreign powers, which indeed happened. *Camden's Remains.*

FRE'NETIC, *adj.* Fr. *frenetique*; φρενητικος; generally therefore written phrenetic. Mad; distracted.

He himself impotent,
By means of his *frenetick* malady. *Daniel.*

FRE'NZY, *n. s.* Φρενίτις; Lat. *phrenitis* whence phrenetisy, phrenetsy, phrenzy, or frenzy. Madness; distraction of mind; alienation of understanding; any violent passion approaching to madness.

Yet Troilus for all this no worde saide,
But long he laie as still he ded were;

And after this, with siking he abraide,
And to Pandarus voice he lent his ere,
And up his eien cast he. And than in fere
Was Pandarus, lest that in a *frenseye*
He should yfal, or elles sone deye.
Chaucer. Troilus and Creseide.

That knave, Ford, hath the finest mad devil of jealousy in him that ever governed *frenzy*.
Shakspeare.

True fortitude is seen in great exploits,
That justice warrants, and that wisdom guides;
All else is tow'ring *frenzy* and distraction.
Addison.

Why such a disposition of the body induceth sleep, another disturbs all the operations of the soul, and occasions a lethargy or *frenzy*: this knowledge exceeds our narrow faculties. *Bentley.*

FRE'QUENCE, *n. s.* FRE'QUENCY, *n. s.* FRE'QUENT, *adj.* & *v. a.* FREQUENT'ABLE, *adj.* FREQUENT'ER, *n. s.* FRE'QUENTLY, *adv.* Fr. *frequence*; Lat. *frequentia*. Crowd; concourse; assembly; common occurrence; the condition of being often seen or done; often done; often seen; often occurring; used often to practise any thing; full of concourse; to visit often: to be much in any place; to resort often to.

They in latter day,
Finding in itfit ports for fishers' trade,
Gan more the same *frequent*, and further to invade.
Spenser.

There were synagogues for men to resort unto: our Saviour himself and the apostles *frequented* them.
Hooker.

The *frequence* of degree,
From high to low throughout.
Shakspeare. Timon.

This fellow here, this thy creature,
By night *frequents* my house. *Id.*

At that time this land was known and *frequented*.
Bacon.

Thou camest ere while into this senate: who
Of such a *frequency*, so many friends
And kindred thou hast here, saluted thee?
Ben Jonson.

While youth lasted in him, the exercises of that age and his humour not yet fully discovered, made him somewhat the more *frequentable* and less dangerous. *Sidney.*

He, in full *frequence* bright
Of angels, thus to Gabriel smiling spake.
Milton.

Frequent and full. *Id.*

With tears
Watering the ground, and with our sighs the air
Frequenting, sent from hearts contrite, in sign,
Of sorrow unfeigned, and humiliation meek. *Id.*

An ancient and imperial city falls;
The streets are filled with *frequent* funerals.
Dryden.

Should a miracle be indulged to one, others would think themselves equally entitled to it; and, if indulged to many, it would no longer have the effect of a miracle: its force and influence would be lost by the *frequency* of it. *Atterbury.*

Frequent herses shall besiege your gates.
Pope.

Every man thinks he may pretend to any employment, provided he has been loud and *frequent* in declaring himself hearty for the government.
Swift.

I could not, without much grief, observe how *frequently* both gentlemen and ladies are at a oss for questions and answers. *Ia.*

Persons under bad imputations are no great *frequenters* of churches. *Id.*

FREQUENTATIVE, *adj.* Fr. *frequentatif*, Lat. *frequentativus*. A grammatical term applied to verbs, signifying the frequent repetition of an action.

FRERET (Nicholas), a learned French author born at Paris in 1688. At the age of twenty-five his merits recommended him to the Academy of Inscriptions, of which he became a member. On that occasion he presented the society with a dissertation on the origin of the French, which though learned, was so bold, that he was rewarded for it with a place in the Bastile. His subsequent writings were mostly against revelation. He died in 1749.

FRERON (Elias Catherine), an eminent French author and reviewer, born at Quimper in 1719. He was educated among the Jesuits, but quitted their society in 1739. His critical works were much esteemed, but containing some free strictures upon M. Voltaire's writings, that satirist attacked him with his usual asperity. In 1749 Freron commenced his Letters on certain Writings of the Times, which extended to thirteen volumes. He then began his Années Literaires, which he continued till his death in 1776. He was an able opponent of the new philosophy, and an acute critic. Besides the above he wrote, 1. Miscellanies; 2. Les Vrais Plaisirs; and 3. Part of a Translation of Lucretius.

FRESCATI, or FRASCATI, an episcopal town of Italy, seated on the brow of a hill, in the Campagna di Roma. It derives its name from the coolness of the air, and fresh verdure of the fields around. It is built on the ruins of the ancient Tusculum; two miles from the Tusculan villa where Cicero wrote his famous questions, now called Grotta Ferrata. There is a very fine prospect from this town into the neighbouring country. It is surrounded by some of the most beautiful villas in Italy; the principal of which are the villa of Aldobrandini, belonging to prince Pamfili; villa Taberna, belonging to prince Borghese; and villa Ludovisi, to the family of Colonna. Frescati, Tivoli, and Albano, are the favorite abodes of the landscape painters, who travel into Italy for improvement. Nothing can surpass the admirable assemblage of hills, meadows, lakes, cascades, gardens, ruins, groves, and terraces, which charm the eye while wandering among the shades of these delightful villages. It is ten miles south-east of Rome. Long. 11° 42′ E., lat. 41° 48′ N.

FRESCLONE, a town of Naples, in the province of Molise, two miles south-west of Molise.

FRES'CO, *n. s.* Ital. Coolness; shade; duskiness; like that of the evening or morning: to paint in fresco is to throw the scene or the object into duskiness, as distinguished from glaring light.

Hellish sprites
Love more the *fresco* of the nights. *Prior.*

Here thy well-studied marbles fix our eye;
A fading *fresco* here demands a sigh. *Pope.*

Fresco, a method of painting in relievo on walls, so as to endure the weather. It is performed with water colors on fresh plaster, or on a wall laid with mortar not yet dry. This sort of painting has a great advantage by its incorporating with the mortar, and, drying along with it, becomes very durable. The Italians, from whom we borrow the term, call it fresco, because it is frequently used for walls, alcoves, and other buildings in the open air. Vitruvius (lib. vii. cap. 4) calls it udo tectorio. In executing paintings in fresco, the necessary preparations are the sketch, the cartoon, in full size, cut in suitable pieces, the colors, prepared only with water, and the two sorts of plaster, the rendering and finishing coats on which the picture is to be painted. Every part must be determined upon, as no alteration or amendment can take place; and the painter must be well acquainted with the qualities of his colors, as they dry lighter than when laid on. There are two operators in constant attendance, the plasterer, and the painter, who follows him, and dyes his colors into the very body of the plaster while yet wet; the plasterer first renders the wall with a coat of coarse stucco formed of lime and sand, and finishes with the finer to such a surface as the artist requires; who then pricks his outline through the cartoon, and draws it with a style, to prevent the colors running beyond them. The colors must then be dashed on at once in a broad, bold, and general manner, that, by an able artist, must produce a grand style. Painting in fresco is very ancient, having been practised in the earliest ages of Greece and Rome.

FRESH, *adj.* & *n. s.*
Fresh'en, *v. a.* & *v. n.*
Fresh'et, *n. s.*
Fresh'ly, *adv.*
Fresh'ness, *n. s.*
Fresh-wa'ter, *n. s.*

Saxon ꝼꞃeꞅc; Fr. *fraische*. Cool; not vapid with heat; not salt; new; not had before; not impaired by time; recent; recency; re-invigorated; brisk; strong; cheerful; unfaded; unimpaired; florid; ruddy; sweet, as opposed to stale or stinking; pure, not salt-water. Freshet signifies a pool of fresh-water; and fresh-water is a compound word of fresh and water, used as an adjective. Raw; unskilled; unacquainted. A low term borrowed from the sailors, who stigmatise those who come first to sea as fresh-water men, or novices.

Upon his hede he wered of laurer grene,
A gerlond *freshe* and lusty for to sene.
Chaucer. The Knightes Tale.

As oft as I behold, and see
The sovereign beauty that me bound;
The nigher my comfort is to me,
Alas the *fresher* is my wound. *Surrey.*

And wise Cambina taking by her side
Faire Canacee, as *fresh* as morning rose,
Unto her coch remounting, home did ride,
Admired of all the people, and much glorifide.
Spenser. Faerie Queene.

And chalenging the virgin as his dew
His foe was soone addrest: the trumpets *freshly* blew.
Id.

The weeds of heresy being grown unto such ripeness as that was, do, even in the very cutting down, scatter oftentimes those seeds which for a while lie unseen and buried in the earth; but afterwards *freshly* spring up again no less pernicious than at the first. *Hooker.*

Those nobility, as *freshwater* soldiers which had never seen but some light skirmishes, in their vain bravery made light account of the Turks. *Knolles.*

Then shall our names,
Familiar in their mouth as household words
Be in their flowing cups *freshly* remembered.
Shakspeare.

He shall drink nought but brine; for I'll not shew him
Where the quick *freshes* are. *Id. Tempest.*

Tell me
Hast thou beheld a *fresher* gentlewoman,
Such war of white and red within her cheeks?
Shakspeare.

Looks he as *freshly* as he did the day he wrestled?
Id.

They are now *freshly* in difference with them.
Bacon.

Most odours smell best broken or crushed; but flowers pressed or beaten, do lose the *freshness* and sweetness of their odour. *Id.*

This pope is decrepid, and the bell goeth for him; take order that when he is dead there be chosen a pope of *fresh* years, between fifty and threescore.
Id. Holy War.

The Scots had the advantage both for number and *freshness* of men. *Hayward.*

Think not, 'cause men flattering say,
Ye are *fresh* as April, sweet as May,
Bright as is the morning star,
That you are so. *Carew.*

They keep themselves unmixt with the salt water; so that, a very great way within the sea, men may take up as *fresh* water as if they were near the land.
Abbot's Desc. of the World.

All fish from sea or shore,
Freshet or purling brook, or shell or fin.
Milton.

Thou sun, said I, fair light!
And thou enlightened earth, so *fresh* and gay!
Id.

Fresh gales and gentle airs
Whispered it to the woods, and from their wings
Flung rose, flung odours, from the spicy shrub
Disporting! *Id.*

This second source of men, while yet but few,
And while the dread of judgment past remain
Fresh in their minds, fearing the Deity,
With some regard to what is just and right,
Shall lead their lives. *Id. Paradise Lost.*

With such a care
As roses from their stalks we tear,
When we would still preserve them new,
And *fresh* as on the bush they grew. *Waller.*

As a *fresh* gale of wind fills the sails of a ship.
Holder

No borrowed bays his temples did adorn,
But to our crown he did *fresk* jewels bring.
Dryden.

Amidst the spirits Palinurus pressed;
Yet *fresh* from life, a new admitted guest. *Id.*

Fresh from the fact, as in the present case,
The criminals are seized upon the place;
Stiff in denial, as the law appoints,
On Engines they distend their tortured joints. *Id.*

Nor lies she long; but as her fates ordain,
Springs up to life, and *fresh* to second pain;
Is saved to-day, to-morrow to be slain. *Id.*

That love which first was set, will first decay;
Mine of a *fresher* date will longer stay. *Id.*

Say, if she please, she hither may repair,
And breathe the *freshness* of the open air. *Id.*

For the constant *freshness* of it, it is such a pleasure as can never cloy or overwork the mind; for surely

a was ever weary of thinking that he had done virtuously. *South.*

She laid her down to rest,
d to the winds exposed her glowing breast,
take the *freshness* of the morning air.
Addison.

represent to themselves a thousand poor, nocent, *fresh* coloured young gentlemen. *Id.*

ll cull the farthest mead for thy repast;
choicest herbs I to thy board will bring,
draw thy water from the *freshest* spring.
Prior.

secret venom, circling in her veins,
through her skin, and bursts in bloating stains;
eeks their *freshness* lose and wonted grace,
a unusual paleness spreads her face.
Granville.

eshening breeze the magick power supplied,
the winged vessel flew along the tide. *Pope.*

reclusive drops let all their moisture flow
arge effusion o'er the *freshened* world.
Thomson.

at no one doubted on the whole, that she
what her dress bespoke, a damsel fair
fresh, and beautiful exceedingly,
with the brightest Georgias might compare.
Byron.

ISH DISSEISIN, in law, such a disseisin, as may defeat of himself, as where it is within days.

ISH SHOT, in sea language, the falling down large river into the sea, whereby the sea esh water a great way from its mouth.

FRESHEN the hawse, in nautical language, es to change the old canvas, &c., which ally wrapped round the cable, to prevent ng worn through by the friction against the f the vessel, &c., in heavy seas.

ESHES, a local term signifying annual inun- s from the rivers being swollen by the l snows and other fresh waters from the ds, as in the Nile, &c., from periodical pical rains. As a sailor's term, it is opposed arine or salt-water floodings, tides, &c. ord is of common use in America, where undations so called are of great service. bring down the soil to the intervales below, orm a fine mould, producing corn, grain, erbage in the most luxuriant plenty. They afford another benefit, in regard to many in America, viz. in equalising the surface stream, where rapid falls, or cascades, act the navigation; so that rafts of timber ther gross produce are floated down to the orts in great quantities.

RESNE (Charles de), Sieur du Cange, one most learned writers of his time, was born niens in 1610, and studied at the Jesuits' ge in that city. He afterwards studied the t Orleans, and gained great reputation by orks; among which are, 1. The History of tantinople under the French Emperors. 2. Cinnamus's History of the affairs of John Manuel Comnenus, in Greek and Latin, historical and philological notes. 3. Glos- m ad Scriptores Mediæ et Infimæ Latini- ; 6 vols. folio. 4. A Greek Glossary, con- g of curious passages from rare MSS. 2 folio. He died in 1688, aged seventy-eight. s XIV. settled pensions on his four children.

RESNOY (Charles Alphonso du), an excellent poet and painter, born at Paris in 1611. He was instructed by Perrier and Simon Vonet in painting, but, as soon as he fixed himself at Rome, he made the works of Titian his models. He was, however, more celebrated as a poet than as a painter; and is better known by his incomparable poem De Arte Graphicâ, than by his performances on the canvas. He bestowed so much pains on it, that he died in 1665, before it was published. It was printed afterwards with a French prose translation and notes, by M. de Piles; and was translated into English by Mr. Dryden, who prefixed an original preface with a parallel between painting and poetry.

FRET, *n. s.*, *v. a.* & *v. n.*
FRET'FUL, *adj.*
FRET'FULLY, *adv.*
FRET'FULNESS, *n. s.*
FRET'TY, *adj.*

Of this word, as Dr. Johnson says, the etymology is doubtful: 'some derive it from ᵹnetan to eat; others from ᵹnetpan to adorn; some from φρίττω; Skinner more probably from *fremo*, or the Fr. *fretiller*: perhaps it comes immediately from the Lat. *fretum*.' Mr. Todd suggests a more probable origin of it; i. e. from Sax. ᵹneoðan, or the Fr. *frotter*, to rub. A frith, or strait of the sea, where the water by confinement is always rough. The first idea is fermentation; commotion; agitation; applied to water; to liquors; to vibrations; attrition; corrosion; however occasioned: also to protuberances, excrescences, or ornaments, resembling the effects which are visible on an agitated surface. Whatever interrupts smoothness, or diversifies appearances, giving such a variety as motion often does to liquids. It is also applied to the agitations of the mind; to the peevishness and discontent which wear away the patience of others and destroy our own peace. Fretfulness is self-vexation, as distinguished from being vexed: Chaucer also makes use of it in the sense of eating or devouring.

His heart *fretteth* against the Lord. *Prov.* xix. 3.

Men mighten asken, why she was not slain?
Eke, at the feste, who might hire body save?
And I answer to that demand again,
Who saved Daniel in that horrible cave
Ther every wight but he master or knave,
Was with the leon *frette* or he asterte?
No wight but God, that he bare in his herte.
Chaucer. The Man of Lawes Tale.

Ther I saw I Atteon an hart ymaked,
For vengeance that he saw Diane all naked:
I saw how that his houndes have him caught,
And *freten* him; for that they knew him naught.
Id. The Knightes Tale.

Yet, saw I brent the shippes hoppesteres;
The hunte ystrangled with the wild beres;
The sow *freting* the child right in the cradel. *Id.*

There Saintes have hir cominge and resorte,
To seen the kinge so riolly besene
In purple clad and eke the queene in sorte;
And on hir heddes sawe I crownes tweine
With stones *fret*: so that it was no peine
Withouten mete and drinke to stand and see
The kinges honor and the rialte.
Id. The Court of Love.

Helpless, what may it boot
To *fret* for anger, or for grief to moan!
Faerie Queene.

They trouble themselves with *fretting* at the ignorance of such as withstand them in their opinion.
Hooker.

We are in a *fretting* mind at the church of Rome, and with angry disposition enter into cogitation. *Id.*

Their wounded steeds
Fret fetlock deep in gore, and with wild rage
Yerk out their armed heels at their dead masters.
Shakspeare. Henry V.

Be lion-mettled, proud, and take no care
Who chafes, who *frets*, or where conspirers are.
Id. Macbeth.

Are you positive and *fretful*?
Heedless, ignorant, forgetful?
Shakspeare.

You may as well forbid the mountain pines
To wag their high tops, and to make a noise
When they are *fretted* with the gusts of heaven.
Id.

Yon grey lines,
That *fret* the clouds, are messengers of day. *Id.*

Thy knotty and combined locks to part,
And each particular hair to stand on end,
Like quills upon the *fretful* porcupine. *Id.*

Where's the king?
—Contending with the *fretful* elements;
Bids the wind blow the earth into the sea. *Id.*

Antony
Is valiant and dejected; and, by starts,
His *fretted* fortunes give him hope and fear
Of what he has and has not.
Id. Antony and Cleopatra.

It requireth good winding of a string before it will make any note; and, in the tops of lutes. the higher they go, the less distance is between the *frets*.
Bacon.

The *frets* of houses, and all equal figures, please; whereas unequal figures are but deformities. *Id.*

Take a piece of glover's leather that is very thin, and put your gold therein, with sal armoniac, binding it close, and then hang it up; the sal armoniac will *fret* away, and the gold remain behind.
Peacham.

In the banks of rivers, with the washings of the water, there were divers times *fretted* out big pieces of gold. *Abbot.*

Calmness is great advantage: he that lets
Another chafe, may warm him at his fire,
Mark all his wand'rings, and enjoy his *frets*,
As cunning fencers suffer heat to tire. *Herbert.*

The painful husband, plowing up his ground,
Shall find all *fret* with rust, both pikes and shields,
And empty helms under his harrow sound.
Hakewill.

You, too weak the slightest loss to bear,
Are on the *fret* of passion, boil and rage.
Creech.

The harp
Had work, and rested not: the solemn pipe
And dulcimer, all organs of sweet stop,
All sounds on *fret* by string or golden wire,
Tempered soft tunings, intermixed with voice
Choral or unison.
Milton's Paradise Lost.

Nor did there want
Cornice or freeze, with bossy sculptures graven:
The roof was *fretted* gold. *Id.*

The better part with Mary and with Ruth
Chosen thou hast; and they that overween,
And at thy growing virtues *fret* their spleen,
No anger find in thee but pity and truth.
Milton.

Hudibras *fretting*
Conquest should be so long a getting,
Drew up his force. *Hudibras.*

Euripus generally signifieth any strait, *fret*, or channel of the sea, running between two shores.
Browne.

He swells with wrath, he makes outrageous moan,
He *frets*, he fumes, he stares, he stamps the ground.
Dryden.

These do but indeed scrape off the exuberances, or *fret* into the wood, and therefore they are very seldom used to soft wood. *Moxon.*

They are fitted to answer the most variable harmony: two or three pipes to all those of a church-organ, or to all the strings and *frets* of a lute.
Grew's Cosmol. Sac.

The incredulous Pheac, having yet
Drank but one round, replied in sober *fret*.
Tate.

No benefits whatsoever, shall ever alter or allay that diabolical rancour, that *frets* and ferments in some hellish breasts, but that it will foam out in slander and invective. *South.*

Of this river the surface is covered with froth and bubbles; for it runs along upon the *fret*, and is still breaking against the stones that oppose its passage.
Addison on Italy.

We take delight in a prospect well laid out, and diversified with fields and meadows, woods and rivers, in the curious *fret*-works of rocks and grottos.
Id. Spectator.

Such an expectation, cries one, will never come to pass: therefore I'll even give it up, and go and *fret* myself, *Collier.*

Before I ground the object-metal on the pitch, I always ground the putty on it with the concave copper, 'till it had done making a noise; because, if the particles of the putty were not made to stick fast in the pitch, they would, by rolling up and down, grate and *fret* the object-metal, and fill it full of little holes.
Newton's Opticks.

It inflamed and swelled very much; many wheals arose, and *fretted* one into another with great excoriation. *Wiseman.*

Injuries from friends *fret* and gall more, and the memory of them is not so easily obliterated.
Arbuthnot.

The blood, in a fever, if well governed, like wine upon the *fret*, dischargeth itself of heterogeneous mixtures. *Derham.*

How should I *fret* to mangle every line,
In reverence to the sins of thirty-nine. *Pope.*

Yet then did Dennis rave in furious *fret*;
I never answered, I was not in debt. *Id.*

The' adjoining brook that purls along
The vocal grove, now *fretting* o'er a rock,
Now scarcely moving through a reedy pool.
Thomson.

A bad old woman making a worse will,
Which leaves you minus of the cash you counted
As certain;—these are paltry things, and yet
I've rarely seen the man they did not *fret*.
Byron.

FRET, in heraldry, one of the sub-ordinaries composed of a saltier and mascle; it has been called by some a true lover's knot. Guillim asserts that its origin may be found in the net-work used to fasten the raw hides on the ancient turrets as a defence against the arrows of the enemy. See diagram.

FRETTS, in mineralogy, a term used by miners to express the worn side of the banks of the rivers in mine countries, where they search

for the shoad stones or grewts washed down from the hills, in order thence to trace out the running of the shoad up to the mine.

FRET-WORK, work adorned with frets. It is sometimes used to fill up and enrich flat empty spaces; but it is mostly practised in roofs which are fretted over with plasterwork.

FREUDENSTADT, a fortified town of Wirtemberg, founded in 1600, as an asylum for the persecuted German Protestants. It is seated in the Black Forest, twenty-four miles south-east of Strasburg, and thirty-six south-west of Stuttgard. A part of the French army, under general Jourdan, were posted here on the 7th April 1799, when they attacked the Austrians under the archduke Charles, but were forced to retreat. Population about 2400.

FREUDENTHAL, a town of Silesia, in Troppau, famous for fine linen and good horses. It is eleven miles south-west of Jagendorf, and seventeen west of Troppau.

FREYE-ÆMTER, a territory of Switzerland, surrounded by the cantons of Zurich, Bern, Lucern, and Zug; anciently called Rori and Waggenthal. The Swiss took it from count Hapsburg in 1415. It is twenty-four miles long, and twelve broad, and was united in 1803 to the canton of Argau. The soil is fertile, and the population, chiefly Catholics, about 20,000 souls.

FREYBERG, a celebrated mining town of Saxony, the capital of the Erzgebirg. It is situated 1200 feet above the level of the sea, on a small river called the Freybergische-Mulda. It is tolerably well built, and contains 9000 inhabitants, and the officers here have the superintendance of all similar establishments throughout Saxony. A mining academy was founded in 1765, and has been superintended or distinguished by the researches of Werner, Charpentier, Lampe, &c. There are attached to it a library, a cabinet, and a collection of models. A part of the students are educated gratis. The mines in the neighbouring district, 250 in number, employ about 5000 men. The establishment for amalgamation is said to be the most perfect in Europe. About a mile from the town are silver mines, of which the annual produce is from 10,000 to 15,000 lbs. of lead; the Freyberg mines yield only 1000 lbs.: they afford also copper, tin, silver, and vitriol. Here are also manufactures of hardware and cloth. Freyberg was the scene of a victory gained by Prince Henry of Prussia in 1762. It is eighteen miles S.S.W. of Meissen, and nineteen W.S.W. of Dresden.

FREYBERG, or Przibor, a town of Moravia, twenty-eight miles E.N.E. of Prerau, and thirty-six east of Olmutz, with 3500 inhabitants.

FREYBURG, or FRIBURG, a well built town of Baden, in the entrance of the Black Forest, at the foot of a mountain. It was till lately the capital of Brisgau, and now of the circle of the Treisam. It has a population of about 10,000, and was formerly fortified, but was dismantled by the French in 1744. It is the seat of a university founded in 1456, and still flourishing.

FREYSINGEN, a town and bishopric of Bavaria, formerly an independent bishopric, now the chief place of a district in the circle of the Iser. It stands in a valley between two eminences, and there is a bridge here across the Iser. The town is well built: population 3500. The territory of Freysingen was given to Bavaria in 1802, and then contained 27,000 inhabitants. The bishopric, now become strictly a spiritual dignitary, was transferred in 1817 to Munich. Seventeen miles N.N.E. of Munich, and eighteen south-west of Landshut.

FREYSINGEN, or FRIESINGEN, an ecclesiastical principality of Germany in Bavaria, between Munich and Landshut. It comprehends the counties of Ismaning and Werdenfels, and the lordship of Burgkrain.

FRI'ABILITY, *n. s.* } Fr. *friable*; Lat. *fri-*
FRI'ABLE, *adj.* } *abilis*. Easily crumbled; easily reduced to powder. The noun designates the capacity or tendency to such reduction.

A spongy excrescence groweth upon the roots of the laser-tree, and sometimes on cedar, very white, light, and *friable*, which we call agarick. *Bacon.*

Hardiness, *friability*, and power to draw iron, are qualities to be found in a loadstone.

The liver, of all the viscera, is the most *friable*, and easily crumbled or dissolved. *Arbuthnot on Diet.*

FRI'AR, *n. s.* } A corruption of the
FRI'AR-LIKE, *adj.* } French *frère*, A reli-
FRI'ARLY, *adj.* } gious; a brother of
FRI'ARY, *n. s.* & *adj.* } some regular order in the church of Rome. The derivatives have all a direct or remote relation to this etymon: thus friar-like is monastic, after the manner of those who are secluded in religious houses, unskilled in the world. So also, friarly and friary, except that the latter is used as a noun, and signifies a monastery or convent of friars.

A *Frere* there was, a wanton and a mery,
A limitour, a full solempne man,
In all the ordres foure is non that can
So moche of daliance and fayre langage.
He hadde ymade ful many a mariage
Of yonge wimmen at his owen cost;
Until his ordre he wos a noble post.
Chaucer. Prologue to the Cant. Tales.

Their *friarlike* general would the next day make one holyday in the Christian calendars, in remembrance of thirty thousand Hungarian martyrs slain of the Turks. *Knolles.*

Holy Franciscan *friar*! brother! ho!
Shakspeare.

All the priests and *friars* in my realm,
Shall in procession sing her endless praise. *Id.*

Francis Cornfield did scratch his elbow when he had sweetly invented to signify his name, St. Francis, with a *friary* cowl in a corn field. *Camden's Remains.*

Seek not proud riches, but such as thou mayest get justly, use soberly, distribute cheerfully, and leave contentedly; yet have no abstract nor *friarly* contempt of them. *Bacon's Essays.*

He's but a *friar*, but he's big enough to be a pope.
Dryden.

Many jesuits and *friars* went about in the disguise of Presbyterian and Independent ministers to preach up rebellion. *Swift.*

FRIAR, or FRIER. Lat. *frater*; Ital. *fra*; and Fr. *frère*, i. e. brother. A term common to monks of all orders, founded on the supposition that there is a kind of brotherhood presumed between the religious persons of the same monastery. Friars are generally distinguished into

these four principal branches, viz. 1. Franciscans, minors, or gray friars; 2. Augustines; 3. Dominicans, or black friars; 4. Carmelites, or white friars. From these four the rest of the orders descend. See these articles.

Friar, in a more peculiar sense, is restrained to such monks as are not priests; for those in orders are usually dignified with the appellation of father.

Friars Observant (fratres observantes) were a branch of the Franciscans; thus called because not combined together in any cloister, convent, or corporation, as the conventuals are; but only agreeing among themselves to observe the rules of their order more strictly than the conventuals did, from whom they separated themselves out of a singularity of zeal, living in certain places of their own choosing.

FRI'ARSCOWL, *n. s.* Friar and cowl. A plant. It agrees with arum, from which it differs only in having a flower resembling a cowl.

FRIB'BLE, *v. n.* & *n. s.* } Fr. *frivole*; Lat.
Frib'bler, *n. s.* } *frivolus*, trifling.
To trifle: a trifler; a fop; an imbecile.

Though cheats, yet more intelligible
Than those that with the stars do *fribble*.
Hudibras.

A *fribbler* is one who professes rapture for the woman, and dreads her consent. *Spectator.*

FRIBOURG, a canton of Switzerland, between that of Berne and the Pays de Vaud: its extent is computed at 2836 square miles; and its population at 68,000. The north division contains extensive and fertile plains: southward it is mountainous and sterile. Its principal river is the Sane, which flows northward through the centre of the canton. Pasturage is the chief occupation of the inhabitants, who export cattle, butter, and cheese, particularly that known throughout the continent by the name of gruyere, and import much of their corn from France. The inhabitants are chiefly Catholics, the Calvinists not exceeding 8000: in some parts they speak German, in others a corrupt French. There are few manufactures; and the government is a mixture of aristocracy and democracy: in 1803 the canton was divided into the five districts of Fribourg Proper, Marten, Bulle, Romont, and Estavayer.

Fribourg, a large town of Switzerland, the capital of the foregoing canton, situated on the Sane, in a most singular and picturesque situation, thus elegantly described by Mr. archdeacon Coxe:—

'It stands partly in a small plain, partly on bold acclivities on a ridge of rugged rocks, half encircled by the Sane; and is so entirely concealed by the circumjacent hills, that the traveller scarcely catches the smallest glimpse, until he bursts upon a view of the whole town from the overhanging eminence. The fortifications, which consist of high stone walls and towers, enclose a circumference of about four miles; within which space the eye comprehends a singular mixture of houses, rocks, thickets, and meadows, varying instantly from wild to agreeable, from the bustle of a town to the solitude of the deepest retirement. The Sane winds in such a serpentine manner as to form in its course, within the space of two miles, five obtuse angles, between which the intervening parts of the current are parallel to each other. On all sides the descent to the town is extremely steep: in one place the streets even pass over the roofs of the houses. Many of the edifices are raised in regular gradation, like the seats of an amphitheatre; and many overhang the edge of a precipice in such a manner that, on looking down, a weak head would be apt to turn giddy. But the most extraordinary point of view is from the Pont-neuf. On the north-west a part of the town stands boldly on the sides and the piked back of an abrupt ridge; and from east to west a semicircle of high perpendicular rocks is seen, whose base is washed and undermined by the winding Sane, and whose tops and sides are thinly scattered with shrubs and underwood. On the highest point of the rocks, and on the very edge of the precipice, appears, half hanging in the air, the gate called Bourguillon: a stranger standing on the bridge would compare it to Laputa, or the Flying Island in Gulliver's Travels; and would not conceive it to be accessible but by means of a cord and pulleys. The houses, constructed with a gray sandstone, are neat and well built; and the public edifices, particularly the cathedral, are extremely elegant.' Population 6500. Fribourg lies sixteen miles south-west of Bern, and seventy-five of Zurich. The best buildings are the Jesuits' church, and the cathedral of St. Nicholas; the principal seminary for education is called the college of St. Michael. This town was taken by the French in 1798.

FRICASSEE', *n. s.* Fr. A dish made by cutting chickens or other small things in pieces, and dressing them with strong sauce.

Oh, how would Homer praise their dancing dogs,
Their stinking cheese, and *fricacy* of frogs;
He'd raise no fables, sing no flagrant lie,
Of boys with custard choaked at Newberry. *King.*

FRICA'TION, *n. s.* Lat. *fricatio*. The act of rubbing one thing against another.

Gentle *frication* draweth forth the nourishment, by making the parts a little hungry, and heating them: this *frication* I wish to be done in the morning.
Bacon's Natural History.

Resinous or unctuous bodies, and such as will flame, attract vigorously, and most thereof without *frication*, as good hard wax, which will convert the needle almost as actively as the loadstone. *Browne.*

FRICKTHAL, a district in the canton of Aargau, Switzerland, on the south side of the Rhine, extending from Augst to Botzberg. Population about 20,000; chiefly Catholics. This district, important as a military position, belonged to the Brisgau until 1801.

FRICTION, Fr. *friction*, *frictio*, from Latin *frico*; à Gr. φρικη, cold (because those who are cold rub themselves).—Ainsworth. The act of rubbing two bodies together; the resistance in machines caused by the motion of one body upon another; medical rubbing with the flesh-brush or cloths.

Frictions make the parts more fleshy and full, as we see both in men and in the currying of horses; so that they draw a greater quantity of spirits to the parts. *Bacon.*

not all bodies which abound with terrestrial and especially with sulphureous ones, emit s often as those parts are sufficiently agitated, er the agitation be made by heat, *friction*, per-ı, putrefaction, or by any vital motion?

Newton's Opticks.

ICTION is called also attrition. The phe na arising upon the friction of divers bo- under different circumstances, are very nu- ıs and considerable. Mr. Hawksbee gives nber of experiments of this kind; particu- of the attrition or friction of glass, under us circumstances, the result of which was t yielded light and became electrical All s by friction are brought to conceive heat; of them to emit light; particularly a cat's , sugar, beaten sulphur, mercury, sea water, copper, &c. but above all diamonds, which ı briskly rubbed against glass, gold, or the yield a light equal to that of a live coal ı blowed by the bellows. See ELECTRICITY. ıICTION, in mechanics, arises from the hness or asperity of the surface of the body ed on, and that of the body moving: or surfaces consisting alternately of eminences cavities, either the eminences of the one t be raised over those of the other, or they t be both broken and worn off; but neither happen without motion, nor can motion be luced without a force impressed. Hence the e applied to move the body is either wholly artly spent to this effect; and consequently e arises a resistance, or friction, which will reater, cæteris paribus, as the eminences are greater and the substance the harder: and he body, by continual friction, diminishes. ssrs. Amontons, De la Hire, Camus, Desa- ers, Muschenbroek, Ferguson, Euler, and r mechanicians, have made a number of in- ious experiments to settle a principle for the ct calculation of the quantity of friction. But most successful set of experiments made on subject are those of the Rev. Samuel Vince, M. of Cambridge; published in the 75th vo- e of the Philosophical Transactions, p. 165. Emerson, in his Principles of Mechanics, also made several important remarks on friction of wood and metals. See MECHANICS. 'RICTION, in medicine and surgery, is per- ned with oils, unguents, or other matters, to eve or cure a diseased part. Frictions with curial ointment are much used in venereal es. The application of mercury externally friction is preferred to giving it internally, raise a salivation. Frictions with the h-brush, a linen cloth, or even the hand ne, contribute greatly to health, in all diseases ere the circulation of the blood and humors mpeded, or the power of the nerves weakened. sons therefore of weak nerves, and sedentary s, should supply the want of other exercise spending half an hour, morning and night, in bing their whole body, especially their limbs, h a flesh-brush. This is most advantageously formed when the primæ viæ are most pty.

FRI'DAY, *n. s.* Sax. ꝼꞃıȝe ꝺæȝ. The sixth of the week, so named of Freya, a Saxon ty.

Right as the *Friday*, sothly for to tell,
Now shineth it, and now it raineth fast;
Right so can gery Venus overcast
The hertes of hire folk; right as hire day
Is gerfull, right so changeth she aray:
Selde is the *Friday* all the weke ylike.

Chaucer. The Knightes Tale.

An' she were not kin to me, she would be as fair on *Friday* as Helen is on Sunday. *Shakspeare.*

For Venus, like her day, will change her cheer,
And seldom shall we see a *Friday* clear. *Dryden.*

FRIDAY, by the Romans, was called dies Veneris. See FREA.

FRIDSTOL, one of the ancient immunities granted to churches. The word signifies a seat, chair, or place of peace and security, where criminals might find safety and protection. Of these there were many in England; but the most famous were those at Beverly, and in St. Peter's church at York, granted by charter of king Henry I.

FRIEDLAND, a town of Mecklenburg, in Stargard. It contains 3400 inhabitants; but the neighbourhood is marshy. It is fourteen miles north-east of New Brandenburg, and twenty-five south-east of Demmin.

FRIEDLAND, a town in the circle of Konigsberg, East Prussia, on the Alle, famous for a battle gained by Buonaparte over the Russians and Prussians on the 14th of June 1807, which led to the peace of Tilsit. Inhabitants 2120. The loss of the allies, in killed and wounded, was nearly 20,000 men.

FRIEND, *n. s.* & *v. a.*
FRIEND'ED, *adj.*
FRIEND'LESS, *adj.*
FRIEND'LINESS, *n. s.*
FRIEND'LY, *adj.* & *adv.*
FRIEND'SHIP, *n. s.*

Saxon ꝼꞃeoꝺ; Belg. *vriend. vriendschap*; Goth. *frænd*; Dan. *frende*; Scot. *frend*, all probably from Gothic *fræ*, *fræn*, Swed. *vred*. This word, with its derivatives, is pronounced frend, frendly: the *i* totally neglected. One united to another in mutual benevolence and intimacy; one reconciled to another: distinguished from an enemy or one that has hostile intentions; a favorer of our persons or interests; a familiar compellation. The derivatives speak for themselves, or their illustrations will explain them.

Friend, how camest thou in hither?

Matt. xxii. 12.

Some man is a *friend* for his own occasion, and will not abide in the day of thy trouble. *Eccl.* vi. 8.

Forsoth nature driveth us to love our *frendes*; and, parfay, our enemies have more nede of love than our *frendes*, and they that more nede have, certes to hem shal men do goodnesse.

Chaucer. The Persones Tale.

Than cometh discord that unbindeth all manner of *friendship*. *Id.*

Be careful to make *friendship* the child, and not the father of virtue; for many strongly knit minds are rather good *friends* than good men; so although they do not like the evil their *friend* does, yet they like him who does the evil. *Sir P. Sidney.*

For Rhodoricke, whose surname shal be Great,
Shall of himselfe a brave ensample shew,
That Saxon kings his *friendship* shall intreat;
And Howell Dha shall goodly well endew
The salvage minds with skill of just and trew.

Spenser's Faerie Queene.

Raw captains are usually sent, only preferred by *friendship*, and not chosen by sufficiency. *Spenser.*

God's benison go with you, and with those
That would make good of bad, and *friends* of foes.
Shakspeare.

Who comes so fast in silence of the night?
—A *friend.*
—What *friend*? Your name. *Id.*

Here between the armies,
Let's drink together *friendly*, and embrace;
That all their eyes may bear those tokens home
Of our restored love and amity. *Id. Henry IV.*

Not *friended* by his wish to your high person,
His will is most malignant, and it stretches
Beyond you to your friends. *Shakspeare.*

I know that we shall have him well to *friend.* *Id.*

When vice makes mercy, mercy 's so extended,
That, for the fault's love, is the' offender *friended.*
Id.

Gracious, my lord, hard-by here is a hovel:
Some *friendship* will it lend you 'gainst the tempest:
Repose you there. *Id. King Lear.*

There is little *friendship* in the world, and least of all between equals, which was wont to be magnified; that that is, is between superior and inferior, whose fortunes may comprehend the one the other. *Bacon.*

If she repent, and would make me amends,
Bid her but send me hers, and we are *friends.*
Carew.

False *friendship*, like the ivy, decays, and ruins the walls it embraces; but true *friendship* gives new life and animation to the object it supports. *Burton.*

Hope! thou sad lover's only *friend!*
Thou way that may'st dispute it with the end!
For love I fear 's a fruit that does delight
The taste itself less than the smell than sight.
Cowley.

Let all the intervals be employed in prayers, charity, *friendliness* and neighbourhood, and means of spiritual and corporal health. *Taylor.*

Not that Nephente, which the wife of Thone
In Egypt gave to Jove-born Helena,
Is of such power to stir up joy as this,
To life so *friendly*, or so cool to thirst. *Milton.*

What supports me, dost thou ask?
The conscience, *friend*, t' have lost mine eyes o'erplyed
In liberty's defence. *Id.*

Thou to mankind
Be good and *friendly* still, and oft return. *Id.*

The *friendly* loadstone has not more combined
Than bishops cramped the commerce of mankind.
Marvell.

Such a liking and *friendliness* as hath brought forth the effects. *Sidney.*

We know those colours which have a *friendship* with each other, and those which are incompatible, in mixing together those colours of which we would make trial. *Dryden's Dufresnoy.*

My sons, let your unseemly discord cease,
If not in *friendship*, live at least in peace.
Dryden.

The king ordains their entrance, and ascends
His regal seat, surrounded by his *friends.* *Id.*

To some new clime, or to thy native sky,
Oh *friendless* and forsaken Virtue fly. *Id.*

Every man is ready to give in a long catalogue of those virtues and good qualities he expects to find in the person of a *friend*; but very few of us are careful to cultivate them in ourselves. *Spectator.*

Woe to him that is alone, is verified upon none so much as upon the *friendless* person. *South.*

Learn to dissemble wrongs, to smile at injuries,
And suffer crimes thou want'st the power to punish:
Be easy, affable, familiar, *friendly.* *Rowe's Ulysses.*

Let the Naussau-star in rising majesty appear,
And guide the prosperous mariner,
With everlasting beams of *friendly* light. *Prior.*

Yet there are watchmen, who with *friendly* light
Will teach thy reeling steps to tread aright,
For sixpence will support thy helpless arm
And home conduct thee safe from nightly harm.
Gay.

Like *friendly* colours found our hearts unite,
And each from each contract new strength and light.
Pope

To what new crime, what distant sky,
Forsaken, *friendless*, will ye fly? *Id.*

His *friendships*, still to few confined,
Were always of the middling kind. *Swift.*

What watchful care must fence that weary state,
Which deadly foes begirt with cruel siege;
And frailest wall of glass, and trait'rous gate
Strive which should first yield up their woeful siege?
By enemies assailed, by *friends* betrayed
When others hurt, himself refuses aid:
By weakness 'self, his strength is foiled and overlayed. *Fletcher's Purple Island.*

At the same time that you carefully decline the *friendship* of knaves and fools, if it can be called *friendship*, there is no occasion to make either of them your enemies, wantonly and unprovoked; for they are numerous bodies; and I would rather choose a secure neutrality, than an alliance or war, with either of them. *Chesterfield.*

How bright soe'er the prospect seems,
All thoughts of *Friendship* are but dreams
If envy chance to creep in;
An envious, if you succeed,
May prove a dangerous foe indeed,
But not a *Friend* worth keeping. *Cowper.*

Hail to the welcome shout!—the *friendly* speech!
When hand grasps hand uniting on the beach;
The smile, the question, and the quick reply,
And the heart's promise of festivity!
Byron. Corsair.

FRIENDLY ISLANDS, a group, or archipelago of islands in the Southern Pacific Ocean, of very considerable extent, and consisting of more than 100 islands, the greater part of which are either bare rocks or shoals, or barren and desert. The following are the most important that have been enumerated:—Amsterdam, as it was called by Tasman, who discovered it in 1642, now more generally known by the native names Tonga, or Tongataboo; Annamooka, or Rotterdam, according to Tasman; Eooa, called by Tasman, Middleburgh; the Hapaee Islands, namely, Haanno, Foa, Lefooga, and Hoolawa; Mayorga, a group of islands about 100 miles north of Hapaee, discovered in 1781 by Maurelle, the Spanish navigator, and visited by Edwards in 1791, by whom the group was named Howe's Islands; Neootabootaboo, and Kootahe, discovered by Schouten and Lemaire in 1616, and visited by captain Wallis in 1767, who called them Keppel's and Boscawen's Islands; Toofoa, or Amattafoa; Hamoa and Vavaoo. The Fedjee Islands have also been sometimes included. Captain Cook gave them this name from what he observed of their friendly disposition; and to his Voyages we owe the principal knowledge of them: but more modern navigators have, as we shall see, considerably qualified his eulogium on their character. The general appearance of these islands is throughout very similar.

gataboo, i. e. Sacred Island, is the largest
:st known of the group, being twenty
; in circumference E. S. E. and W.N.W.
uth, east, and west, shores are formed of
:oral rocks, ten to twelve feet high, with
ls of sandy beach, on which, at low water,
of black rocks is observed. The north
s level with the water, bordered by a sandy
and lined with shoals and islets. The
island is low and level, and its appearance
s an idea of the most exuberant fertility;
tire surface being covered with verdure,
nongst the trees the cocoa palm raises its
pre-eminent; unhappily, however, the
is deficient in fresh water, and what there
;eneral, is very indifferent.

coral rock, which forms the base of the
, is in many places naked; but the soil in
parts is of considerable depth, and is in the
ited grounds a black vegetable mould over
stratum of clay. In the lowest ground the
a mere coral sand, but still covered with
tion. The only stones, except coral, ob-
on the island, are small blue pebbles, and
oth black stone, lapis lydius, of which the
s make their hatchets; but it is not certain
oth these are not brought from other islands.
following description of a village, from
n Cook, will give a general idea of the
ings of the natives:—

is delightfully situated on the bank of the
where all or most of the principal persons
island reside, each having his house in the
of a small plantation, with lesser houses
offices for servants. These plantations are
fenced round, and, for the most part, have
one entrance. This is by a door fastened
e inside by a prop of wood, so that a per-
as to knock before he can get admittance.
c roads and narrow lanes lie between each
ation, so that no one trespasseth upon
er. Great part of some of these enclosures
d out in grass-plats, and planted with such
s as seem more for ornament than use; but
y any were without the kava-plant, from
h they make their favorite liquor. Every
e of the vegetable produce of the island
nded in others of these plantations; but
, I observed, are not the residence of people
ie first rank. There are some large houses
the public roads, with spacious smooth
-plats before them, and unenclosed. These,
s told, belonged to the king; and, probably,
are the places where their public assemblies
ield.' This island has the best harbour of
group, within several islands and reefs on the
h side.

nnamooka, the Rotterdam of Tasman, is more
ated than the small islands which surround
ut still can be considered only as a low
d. In the centre is a salt lake, one mile and
lf broad, round which the land rises with a
lual ascent, and its surface is covered with
l ducks. The north shore is composed of
p coral cliffs, nine or ten feet high, with some
rvals of sandy beach. There is no stone but
l on the island, except a single rock twenty
hirty feet high, of a yellow calcareous and
v hard stone. The population captain Cook
estimated at 2,000. The water on the island is better than that at Tongataboo, but yet is indifferent: the best is procured by digging holes near the side of the lake. Fruit is more abundant on this island than on the former, and the undulating surface gives it a more pleasingly varied appearance.

Eooa, the Middleburg of Tasman, may be considered as an elevated island, in comparison with the generality of those of these seas, being visible twelve leagues. The highest part is on the south-east, and is almost flat, whence it declines very gently towards the sea, and presents an extensive prospect, where groves of trees are only interspersed at irregular distances, in beautiful disorder, and the rest of the land covered with grass. Near the shore it is shaded with trees, among which the natives dwell. On the north-west side is English Road, where boats may always land; and captain Cook found some good water in this direction.

Happee, though considered by the natives as one island, is in reality composed of four very low islands, about half a mile distant from each other, lying north-east and south-west, but all joined by coral reefs, which are dry at low water. The whole occupies a space of nineteen miles in length, and each island is about six or seven miles long, and two to four miles broad. Lefooga is well cultivated and inhabited. Hoolaiva, on the contrary, is entirely desert and abandoned. On each of these islands is an artificial mount, said by the natives to be erected in memory of some of their chiefs. The only water either of these islands possesses is from very brackish wells.

Between Happee and Annamooka the sea is sprinkled with islets and reefs, two of which only deserve notice, Toofooa and Kao. The former is a volcano, which, according to the natives, sometimes throws out large stones; and while captain Cook was here smoke and flames issued from it. It is inhabited.

Kao is north-west two miles and a half from Toofooa, and is a vast rock of a conical figure. The other islands in the vicinity are mere coral reefs, from a mile to half a mile in circumference, but all covered with verdure, and particularly cocoa palms.

Komango has a pretty large pond of tolerable water, but no appearance of a running stream.

Kootoo is two miles long, and nearly the same breadth. Its north-west end is low, but it rises suddenly towards the middle; and on the south-east it terminates in reddish clayey cliffs. It is cultivated and inhabited. Its only water is from dirty and brackish ponds.

From the situation of the Friendly Islands towards the tropic, the climate is more variable than nearer the equator. The winds are usually from some point between south and east, and when moderate the weather is fair, but when fresh there is often rain. They sometimes veer to the north, and even north-west, with hot sultry weather, and heavy rain; but these winds never last long, nor blow fresh. All the vegetable productions are evergreens: of cultivated fruits the principal are plantains, of which there are thirteen varieties; the bread-fruit, the jambu, and

ellvee, the latter a kind of plum, and the shaddock. Besides cocoa-nuts, they have three other kinds of palms. There is also a species of wild fig, which is sometimes eaten. The other cultivated vegetables are sugar-cane, bamboo, gourds, turmeric, yams of two sorts, one black and very large, the other white and small. A large root called kappe, and one not unlike our white potatoe, the manioc, and the jee jee.

The only quadrupeds, besides hogs, are a few rats, and some dogs, which are not originally natives of this group, but were introduced by captain Cook in his second voyage; and some were also brought from the Fidjee Islands. A large breed of fowls is found in a domestic state. The birds are parrots and parroquets, owls, cuckoos, kingfishers, and a bird the size of a thrush, which is the only one that sings, but which compensates the want of others by the strength and melody of its notes. The other land birds are rails, of two kinds, one as large as a pigeon, the other not bigger than a lark; coots, fly-catchers, a very small swallow, and three sorts of pigeons, one of which is the bronze-winged. The water fowl are ducks, blue and white herons, tropic birds, noddies, two species of terns, a small curlew, and a large plover spotted with yellow. There are also the large bat, or flying fox, and the common sort The only noxious or disagreeable reptiles and insects are sea-snakes, scorpions, and centipedes, guanas, and small lizards. Amongst the insects are beautiful moths, butterflies, and very large spiders, making in the whole about fifty species.

The fish of the coasts and reefs are abundant, and the shell-fish in particular, in great variety: among them are the true hammer, and pearl-oyster.

In all the islands good water is scarce. It is indeed to be found in most of them, but either in so small a quantity, or in situations so inconvenient, as rarely to serve the purpose of navigators.

The natives of the Friendly Islands seldom exceed the middle size, but are strong, well-made, and of very various features: among them, we are told, are many true European countenances, and Roman noses. Their eyes and teeth are good, but the latter not very white, or well set. The women are not so much distinguished from the men by their features as by their shape, which is much more delicate; and, though there are some very beautiful females to be met with, they are not common. The general color is a shade deeper than the copper brown, but many of both sexes have an olive complexion, and some of the women are even much fairer. Their hair is in general straight, thick, and strong, though a few have it brushy or frizzled: the men cut their beards short, and both sexes eradicate the hair from under their arms. Both men and women are partially tattooed. The natural color is black, but most of the men, and some of the women, have it stained of a brown, or purple color, and a few of an orange cast. Their countenances express cheerfulness, mildness, and good nature, though sometimes in the presence of their chiefs they assume an air of gravity, which, however, is evidently foreign to their general character.

The graceful air and firm step with which they in general walk, are proofs of their personal accomplishments, and their moral qualities have been described as highly estimable: captain Cook found them frank, good humored, industrious, ingenious, and persevering; above all, most hospitable, and courting an intercourse by barter, which they seemed to understand perfectly. Both sexes and all ages are said, however, to exhibit a strong propensity to thieving from strangers, but thefts among themselves seem to be uncommon.

There are few natural defects or deformities to be found amongst them, nor do they appear subject to numerous, or acute diseases. Amongst those with which they are occasionally afflicted are a sort of blindness, caused by a disease of the cornea, the ring-worm, and an indolent swelling of the legs and arms.

The dress of both sexes consists of a piece of cloth, or matting, wound once and a half round the waist, where it is confined by a girdle or cord; it is double before, and hangs down like a petticoat to the middle of the leg; the upper part above the girdle is formed into several folds, so that there is sufficient cloth to draw up and wrap round the shoulders. The size of this garment is in proportion to the consequence of the wearer, the inferior class being content with very small ones, and often wearing nothing but a piece of narrow cloth, or matting, like a sash, and called a maro, which they pass between the thighs, and wrap round the waist, but the use of it is chiefly confined to the men. In their great entertainments they have dresses made for the purpose of the same form, but covered with red feathers. Both men and women shade their faces from the sun with little bonnets of various materials. The ornaments of both sexes are necklaces of the fruit of the pandanus, and various sweet-smelling flowers, of small shells, sharks' teeth, and other things. On the upper part of the arm they sometimes wear a polished mother of pearl shell ring, rings of tortoise-shell on the fingers, and a number of these joined together as bracelets. The lobes of the ears, though most frequently but one, are perforated with two holes, in which they wear cylindrical bits of ivory or reed, three inches long, thrust in at one hole, and out at the other. The women rub themselves all over with the powder of turmeric. They frequently bathe in the fresh water ponds, though the water in most of them stinks intolerably, and these they prefer to the sea-water, which they think hurts their skin. They rub their bodies all over, and particularly their heads, with cocoa-nut oil, which preserves the skin smooth and soft.

Their mode of life is a medium between indolence and labor. The climate, and the natural fertility of the soil, render the latter unnecessary, and their active disposition is a bar to the former. The female employments are generally confined to domestic concerns, and the manufacturing cloth and mats, which latter are used for dress, for sleeping on, and for mere ornament: the last being made from the tough membraneous part of the stock of the plantain-tree, and those for clothing of the pandanus, cultivated for that purpose.

The men are laborious agriculturists, architects, and fishermen: boat-building is also one of their principal employments.

Cultivated roots forming the chief part of their food, they have brought them to considerable perfection. Their plantain walks and yam fields are very extensive, and are enclosed by neat reed fences. These vegetables are planted in regular lines, with a kind of wooden spade, three or four inches broad. The cocoa-nut and bread-fruit are scattered without regularity, and require no trouble after they are at a certain height.

Their habitations, particularly of the lower class, are but very poor, scarcely capable of sheltering them from the weather; those of the higher orders are neither agreeable nor comfortable. The dimensions of one of a middle size are about thirty feet long, twenty broad, and twelve high: it is a kind of thatched shed, supported by posts and rafters, and roofed with matting and branches of the cocoa-nut tree. The whole of their furniture consists of a bowl or two (in which they make their kava), gourds, cocoa-nut shells, small wooden stools, which serve for pillows, and a large stool for the head of the family to sit on. Their houses are, however, of little other use than to sleep in, and shelter them from the weather, for they usually take their meals in the open air. In the construction of their boats they show much ingenuity and dexterity, though their tools are only adzes of a smooth black stone, augers of sharks' teeth, and rasps of the rough skin of a fish, fixed on flat slips of wood. The implements which they use as knives are of shells. Their fishing-lines are made from the fibres of the cocoa-nut husk, plaited; and the large cordage, by twisting several of these plaits together Their small fishing-hooks are entirely of pearl shell, but the large ones are only covered with i on the back, the points or barbs being of tortoise-shell. They have also nets, some of which are of a very delicate texture: these they use to catch the fish which remain in the holes of the reefs, when the tide is out.

The other employments are making musical reeds, flutes, warlike weapons, and stools, or pillows. The reeds have eight, nine, or ten pieces placed parallel to each other, but not in any regular progression, so that none of them have more than six notes; and the flutes are a joint of bamboo, close at both ends, with six holes, three of which only are used in playing, which is done by applying the thumb of the left hand to the left nostril, and blowing into one of the holes with the other; and though the notes are but three, they produce a pleasing simple music. Their weapons are clubs, highly carved, spears, darts, and bows and arrows, which latter, however, seem to be used only to kill birds, and not in war.

Of their animal food, the chief articles are hogs, fowls, fish, and all sorts of shell-fish. The lower people also eat rats and dogs. Fowl and turtle seem to be only occasional dainties reserved for their chiefs. Their meat is in general drest by baking, and is eaten without any kind of sauce; their beverage at their meals is confined to water, or cocoa-nut milk. Their food is divided into portions, each to serve a certain number, and these portions are again subdivided so that seldom more than two or three persons are seen eating together at their repasts. The women and men in general eat together, but there are certain ranks that can neither eat nor drink in company. They seem to have no set time for their meals, but they all take one during the night. They go to rest as soon as it is dark, and rise with the dawn. They are fond of society, and form conversation parties at one another's houses. Their other amusements are singing, dancing, and music performed by the women. Their public diversions are single combats and wrestling, in which women as well as men exhibit; dances, in which upwards of 100 men sometimes are engaged, to the music of hollow pieces of wood, beat on with sticks, and accompanied by a chorus of vocal music: the women also perform in their public dances.

One of their chief pleasures is the drinking kava, a beverage composed of the root of a species of pepper; the process of brewing which is not very delicate. A company being assembled, the root is produced, and being broken in small pieces, and the dirt scraped off by servants, each person receives a piece, which, after chewing, he spits into a plantain leaf. The person appointed to prepare the liquor receives all the mouthfuls into a wooden bowl, and adds as much water as will make it of a proper strength; it is then well mixed with the hands, and some loose stuff, of which the mats are made, is thrown on the surface, which intercepts the fibres, and is wrung hard to get as much liquor out of it as possible. It is then served out to the company in cups of about a quarter of a pint each. This liquor has an intoxicating, or rather stupifying effect, on those not used to it; and it is so disagreeable, that even the natives, though they drink it several times in the forenoon, cannot swallow it without making wry faces.

Polygamy is not common, but is practised by the chiefs; and though female chastity in the unmarried of the lower order is in little estimation, those of the higher orders are discreet, it is said, and conjugal infidelity is rare.

Their mourning is singularly severe and barbarous; consisting in cutting and burning their flesh, beating their teeth with stones, and inflicting on themselves every kind of torment. The dead are buried, wrapped up in mats or cloth.

Round the graves of their kings and principal chiefs they often mangle one another in a kind of bacchanalian frenzy, of which the following account is given by one of the missionaries, who resided here lately for several years:—'The space round the tomb was, on this occasion, a palæstra for savage gladiators. Hundreds ran about it with ferocious emulation, to signalise their grief for the venerated chief, or their contempt of pain and death, by inflicting on themselves the most ghastly wounds, and exhibiting spectacles of the greatest horror. Thousands, ere the period of mourning was over, fought with each other, and cut themselves with sharp instruments. It was an awful scene indeed! Night after night we heard, for some weeks, the horrid sound of the conch-shell rousing these deluded creatures to these dreadful rites of mourning for the dead;

and shrieks and clashing arms, and the rushing and violence of the multitude, re-echoed round our abode, and rendered it a scene of continual horror and alarm.' When they labor under any severe and dangerous malady, they cut off one, or both of their little fingers, which they think the divinity will accept in lieu of their bodies.

They have no priests, but are not, therefore, without religious ideas; and, though they seem to have no notion of future punishment, they believe that they are justly punished on earth. Each district, and every family of the higher orders, has its respective tutelary god, and each individual his odooa, or attendant spirit, who partakes more of the evil than the good genius, being supposed to inflict diseases, and who is, therefore, propitiated by sacrifices, and even sometimes by human ones.

The greatest of their gods is Higgo-layo, the lord of the country of the dead, which lies far distant, and whither the souls of their chiefs, on their release, are immediately conveyed in a fast-sailing canoe, there to riot for ever in the enjoyment of all sensual pleasures. As to the souls of the lower class, they are eaten by an imaginary bird, which walks on their graves: they seem to represent the pleasures of their future Paradise as above the conception of the vulgar.

The elements have their subordinate deities who are often at variance with each other. The goddess of the wind is named Cala Filatonga, and is believed to cause the hurricanes which sometimes visit the islands. Their islands they suppose to rest on the shoulders of the god Mowee, who, being tired of his burden, often endeavours to shake it off, which produces the earthquakes, to which the islands are also subject. The same religious system is not, however, prevalent throughout all the islands, but the general ideas are the same Their morais, or burying-grounds, are also places of religious worship.

The missionaries were not able to learn what ideas they form of the origin of their existence, or of any other parts of the creation; when spoken to on these subjects, they seem quite lost. Among their superstitious practices may be mentioned the 'taboo,' which means, in its literal signification, prohibited, or set apart from common use. Thus a house becomes tabooed by the king's presence in it, and can no longer be inhabited even by its owner; and hence there are generally houses provided in every quarter for the use of his majesty. A space of ground, or any article of food may be tabooed; and in this case the ground cannot be passed, nor is it lawful to use the food until the taboo be taken off. By assisting at a funeral, or touching a dead body, the hands are tabooed, and cannot be employed in taking food; and in this case the person is fed by others.

Their form of government somewhat resembles the feudal system of our forefathers, being composed of a king, several powerful hereditary chiefs, almost independent of the king, and numerous smaller dependent chiefs. As to the lower class, they are almost the slaves of these chiefs, to whom they are profoundly submissive. The peculiar honors paid to the king are, that no one is allowed to walk over his head, and, whenever he walks out, every one must sit down till he is past. The method of saluting his majesty is by sitting down before him, bowing the head to the sole of his foot, and touching it with the upper and under sides of the fingers of both hands. After thus saluting the king, or any great chief, the hands must not touch food of any kind, until they are washed or rubbed with the leaves of plants, as a substitute for water.

The language of the Friendly Islanders, which is from the Malay root, is sufficiently copious for all the ideas of the people; harmonious in conversation; and is adapted both to song and recitative. Its construction is simple, and in some of its rules it agrees with other languages; as, for instance, in the degrees of comparison, but the nouns or verbs seem to have no inflections. The whole extent of their verbal numeration is 100,000.

The cloth of their garments is made of the bark of the slender stalks of the paper mulberry, cultivated for the purpose, which is thus performed:—The outer rind of the bark being scraped off, the inner is rolled up to make it flat, and is macerated in water for a night; it is then laid on the trunk of a tree, squared, and beaten with a wooden instrument full of grooves on all sides, until a piece of cloth is produced, and the longer it is beaten, the finer and closer is the cloth. When this operation is finished, the pieces, which are usually from four to six feet in length, and half as broad, are spread out to dry, and are afterwards joined together by smearing the edges with the viscous juice of a berry. Having been thus lengthened, they are laid over a large piece of wood with a kind of stamp between made of a fibrous substance closely interwoven. They then take a bit of cloth, and, dipping it in a certain juice expressed from the bark of a tree, rub it briskly over the cloth, which gives it a dull brown color and a dry gloss.

The earlier navigators who have described these islanders have, as we have intimated, represented their moral character in terms of higher approbation than experience seems to warrant. The account of their unprovoked attack and seizure of the ship Port au Prince, by Mr. Mariner, and the murder of all the crew in 1806, with circumstances of extraordinary barbarity, stamps upon them a character of cruelty rarely exceeded in the annals of savage life; and their wars are said also to present all the usual features of absolute barbarism. The charge of cannibalism, too, has been brought against them under such circumstances as leaves little reason to doubt the fact. Several missionaries who landed on these islands have also fallen victims either to the barbarity or superstition of the natives. One of them who had adopted their customs, and joined in their expeditions, says, 'Spectacles too shocking for humanity to contemplate soon sickened my sight, and sunk my spirits: I beheld, with shaking horror, large stacks of human bodies piled up, by being laid transversely upon each other, as a monumental trophy of the victory. Proceeding a little farther,

a horrid spectacle almost froze my blood. It was a woman in a sitting posture, with folded arms, holding a child to her breast, as in the act of suckling it. Upon approaching them, I found both the mother and child cold and stiff with death. The enemy had killed them while in this posture, and indulged their savage revenge in amusing themselves with placing the dead bodies in this affecting attitude.' He elsewhere states that 'one of the common modes of warfare among them is to tootang, as they express it; that is to come upon the adverse party by surprise, to massacre in secret, to carry off plunder, to cut down the plantains and cocoa-trees, and to commit every species of devastation. Women, children, and prisoners, are murdered without mercy; and the dead bodies, after being exposed to the most brutal indignities, are roasted and devoured with voracious satisfaction.'

FRIENDLY SOCIETIES. See SOCIETIES, FRIENDLY.

FRIENDS or Quakers, a numerous and respectable religious society, which took its rise about the middle of the seventeenth century, and spread very quickly into the British colonies in North America, as well as into various countries in Europe. The members called themselves at first Seekers, from their seeking the truth; but after their society was formed assumed the name of Friends. The name of Quakers was given them in derision, and though it is, perhaps to the reproach of those who use it, the appellation by which they are generally designated, we here prefer to describe the history and peculiarities of the sect under the denomination and principally in the terms they themselves admit. George Fox, sometimes described as a shoemaker, but originally intended for the church, is generally allowed to have been the founder of this society. They were soon after joined by a number of learned, ingenious, and pious men. The chief of these were George Keith, the justly celebrated William Penn (see PENN), and Robert Barclay of Ury. See BARCLAY. Keith, after associating with them for nearly thirty years, became the author of the only schism among them, of which we have read. He was a native of Scotland, and educated at Aberdeen; and being imprisoned as a Quaker, in 1664, and having, in 1675, assisted Barclay in a public disputation against the students at Aberdeen, he attracted notice, and wrote much in defence of the principles of the Quakers, which he thoroughly understood: he was also employed in the education of their youth; but was thought by them to have indulged too much in curious and useless speculations. Being again repeatedly imprisoned, he removed to America about 1684. Here, after some previous general censure of his friends, he accused several, in particular, of gross error in doctrine; the pretext for which was, their holding (as he himself had done) that the knowledge and belief of the history of Christ is not necessary for the salvation of those who have no possible means of acquiring it. His complaints against individuals leading to more general contention, the Friends in England interfered, and the parties were heard before the yearly meeting in London, which decided the cause against Keith, and he remained under the 'disownment' pronounced against him in America. He now set up a separate Quakers' meeting in London, attacked the principles he had formerly defended (on which occasions the Friends replied by quotations from his own works), and finally entered into the church of England. He was soon after ordained priest, and sent as a missionary to America, to bring over his former brethren. But his efforts, though for a while troublesome to the Friends, were attended with very little success; he returned to England, sunk into obscurity on a small living in Sussex, and his party soon disappeared.

Of the Religious Doctrine of Friends.—The Friends may be said to be chiefly distinguishable from other sects as to doctrine in asserting the continuance, to the present time, of immediate revelation, or the communication of divine instruction to the mind, by the testimony of the Spirit of God. This revelation they affirm to be necessary for the production of true faith, while they also say it neither does nor can contradict the outward testimony of the Scriptures or right and sound reason. Their doctrine on this subject has been often misunderstood; and they have in consequence been subjected to much obloquy. It is, however, the principal feature in that peculiar view of Christianity which has occasioned their separation from other churches. A publication placed in our hands by a member of this society, and originally drawn up by Mr. J. G. Bevan, we believe, thus states their doctrine.

'We believe in God the Father Almighty, the creator and preserver of the universe, in Jesus Christ his Son, the Messiah and mediator of the new covenant, and in the Holy Spirit, the comforter, or Spirit of Truth. The divinity of Christ, and his oneness with the Father, we acknowledge and assert according to the Scriptures; we also believe in Him as the sacrifice and propitiation for the sins of the whole world, whereby mankind are placed in a capacity for salvation; and that, as each individual submits unreservedly to the purifying operations of the Holy Spirit, he comes fully to partake of the benefits of redemption, and to experience 'the blood of Jesus Christ to cleanse him from all sin.' In expressing ourselves on the subject of the gracious display of the love of God to mankind in the coming of our Saviour, we include a belief in his miraculous conception, birth, life, miracles, death, resurrection, and ascension. We may add, that in reference to these, to the foregoing, and to other points of Christian doctrine, we prefer the use of such terms as we find in Scripture; and contented with that knowledge which divine wisdom hath seen meet to reveal, we attempt not to explain those mysteries which remain under the veil.'

In an early confession of their faith (that of 1673) they thus further explain themselves on these important points. 'We sincerely profess faith in God by his only-begotten son Jesus Christ, as being our light and life, our only way to the Father, and also our only mediator and advocate with the Father;—that God created

all things, he made the worlds by his son Jesus Christ, he being that powerful and living Word of God by whom all things were made; and that the Father, the Word, and the Holy Spirit, are one, in divine being inseparable; one true, living, and eternal God blessed for ever;—yet that this Word, or Son of God, in the fulness of time, took flesh, became perfect man, according to the flesh descended and came of the seed of Abraham and David, but was miraculously conceived by the Holy Ghost, and born of the Virgin Mary, and also, farther, declared powerfully to be the Son of God, according to the Spirit of sanctification, by the resurrection from the dead;—that, as man, Christ died for our sins, rose again, and was received up into glory in the heavens; he having, in his dying for all, been that one, great, universal offering and sacrifice for peace, atonement, and reconciliation between God and man; and he is the propitiation not for our sins only, but for the sins of the whole world; we were reconciled by his death, but saved by his life;—that divine honor and worship is due to the Son of God; and that he is in true faith to be prayed unto, and the name of the Lord Jesus Christ called upon (as the primitive Christians did), because of the glorious union or oneness of the Father and the Son.' Sewel's History, p. 643.

We resume Mr. Bevan's summary statement. 'To Christ alone we give the title of the Word of God, and not to the Scriptures; although we highly esteem these sacred writings, in subordination to the Spirit from which they were given forth; and we hold, with the apostle Paul, that they 'are able to make wise unto salvation, through faith which is in Christ Jesus.'

'We revere those most excellent precepts which are recorded in Scripture to have been delivered by our great Lord, and we firmly believe that they are practicable, and binding on every Christian: and that in the life to come every man will be rewarded according to his works. And further it is our belief, that, in order to enable mankind to put in practice these sacred precepts, many of which are contradictory to the unregenerate will of man, every man coming into the world is endued with a measure of the light, grace, or good Spirit of Christ; by which, as it is attended to, he is enabled to distinguish good from evil, and to correct the disorderly passions and corrupt propensities of his fallen nature, which mere reason is altogether insufficient to overcome. For all that belongs to man is fallible, and within the reach of temptation; but this divine grace, which comes by Him who hath overcome the world, is, to those who humbly and sincerely seek it, an all-sufficient and present help in time of need. By this the snares of the enemy are detected, his allurements avoided, and deliverance is experienced through faith in its effectual operation; whereby (as before in other words expressed), the soul is translated out of the kingdom of darkness, and from under the power of Satan, into the marvellous light and kingdom of the Son of God. Being thus persuaded, that man, without the Spirit of Christ inwardly revealed, can do nothing to the glory of God, or to effect his own salvation, we think this influence especially necessary to the performance of the highest act of which the human mind is capable; even the worship of the Father of lights and of spirits, in spirit and in truth: therefore we consider as obstructions to pure worship all forms which divert the attention of the mind from the secret influence of this 'unction from the Holy One.' Yet, although true worship is not confined to time and place, we think it incumbent on Christians to meet often together, in testimony of their dependence on their heavenly Father, and for a renewal of their spiritual strength: we therefore, in common with almost all who profess the Christian name, are in the practice of assembling for this purpose on the first day of the week; and it is also our practice to hold a meeting for worship on some other day, about the middle of the week.—The due observance of one day in seven as a day of rest, and a day more especially set apart for the purpose of public worship, and for other duties of a religious nature, we believe to be incumbent on a Christian community, agreeably to the authority of Holy Scripture; and of incalculable importance in its results. Although we have thus our stated times for assembling together for the performance of public worship, nevertheless, we dare not depend, for our acceptance with God, on a formal repetition of the words and experiences of others: but we believe it to be our duty to lay aside the activity of the imagination, and to wait in silence to have a true sight of our condition bestowed upon us: believing even a single sigh, arising from such a sense of our infirmities, and of the need we have of divine help, to be more acceptable to God, than any performances, however specious, which originate in the will of man.

'From what has been said respecting worship, it follows, that the ministry we approve must have its origin from the same source; for that which is needful for a man's own direction, and for his acceptance with God, must be eminently so to enable him to be helpful to others. Accordingly we believe that the renewed assistance of the light and power of Christ is indispensably necessary for all true ministry; and that this holy influence is not at our command, or to be procured by study, but is the free gift of God to chosen and devoted servants.—Hence arises our testimony against preaching for hire, in contradiction to Christ's positive command, 'Freely ye have received, freely give;' and hence our conscientious refusal to support such ministry, by tithes or other means.

'As we dare not encourage any ministry, but that which we believe to spring from the influence of the Holy Spirit, so neither dare we attempt to restrain this ministry to persons of any condition in life, or to the male sex alone; but, as male and female are one in Christ, we hold it proper that such of the female sex as we believe to be endued with a right qualification for the ministry, should exercise their gifts for the general edification of the church: and this liberty we esteem a peculiar mark of the gospel dispensation, as foretold by the prophet Joel, and noticed by the apostle Peter.

There are two ceremonies in use among most professors of the Christian name, Water-Baptism, and what is termed the Lord's Supper. The first of these is generally esteemed the essential means of initiation into the church of Christ; and the latter of maintaining communion with him. But as we have been convinced that nothing short of his redeeming power, inwardly revealed, can set the soul free from the thraldom of sin; by this power alone we believe salvation to be effected. We hold that as there is one Lord and faith, so his baptism is one, in nature and operation; that nothing short of it can make us living members of his mystical body; and that the baptism with water, administered by his forerunner John, belonged, as the latter confessed, to an inferior and decreasing dispensation. With respect to the other rite, we believe that communion between Christ and his church is not maintained by that, or by any other external performance, but only by a real participation of his divine nature through faith; that this is the supper alluded to in the Revelation, 'Behold I stand at the door and knock, if any man hear my voice and open the door, I will come in to him, and will sup with him, and he with me;' and that where the substance is attained, it is unnecessary to attend to the shadow; which doth not confer grace, and concerning which, opinions so different, and animosities so violent, have arisen.

'Now, as we thus believe that the grace of God, which comes by Jesus Christ, is alone sufficient for salvation, we can neither admit that it is conferred on a few only, whilst others are left without it; nor, thus asserting its universality, can we limit its operation to a partial cleansing of the soul from sin, even in this life. We entertain worthier notions both of the power and goodness of our heavenly Father, and believe that he doth vouchsafe to assist the obedient to experience a total surrender of the natural will, to the guidance of his pure unerring spirit; through whose renewed assistance they are enabled to bring forth fruits unto holiness, and to stand perfect in their present rank.

'There are not many of our tenets more generally known than our testimony against oaths and against war. With respect to the former of these, we abide literally by Christ's positive injunction, delivered in his sermon on the mount, 'Swear not at all.' From the same sacred collection of the most excellent precepts of moral and religious duty, from the example of our Lord himself, and from the correspondent convictions of his Spirit in our hearts, we are confirmed in the belief that wars and fightings are, in their origin and effects, utterly repugnant to the gospel; which still breathes peace and good-will to men. We also are clearly of the judgment, that if the benevolence of the gospel were generally prevalent in the minds of men, it would effectually prevent them from oppressing, much more from enslaving, their brethren (of whatever color or complexion), for whom, as for themselves, Christ died; and would even influence their conduct in their treatment of the brute creation; which would no longer groan the victims of their avarice, or of their false ideas of pleasure.

'Some of our tenets have in former times, as hath been shown, subjected our friends to much suffering from government; though to the salutary purposes of government, our principles are a security. They inculcate submission to the laws in all cases wherein conscience is not violated. But we hold, that as Christ's kingdom is not of this world, it is not the business of the civil magistrate to interfere in matters of religion; but to maintain the external peace and good order of the community. We therefore think persecution, even in the smallest degree, unwarrantable. We are careful in requiring our members not to be concerned in any illicit trade, nor in any manner to defraud the revenue.

'It is well known that the society, from its first appearance, has disused those names of the months and days, which having been given in honor of the heroes or false gods of the heathen, originated in their flattery or superstition; and also the custom of speaking to a single person in the plural number, as having likewise arisen from motives of adulation. Compliments, superfluity of apparel, of furniture, and of provision for the table, outward shows of rejoicing and mourning, and the observation of days and times, we esteem to be incompatible with the simplicity of a Christian life; and public diversions, gaming, and other vain amusements of the world, we cannot but condemn. They are a waste of that time which is given us for nobler purposes; and divert the attention of the mind from the sober duties of life, and from the reproofs of instruction, by which we are guided to an everlasting inheritance.

'To conclude: although we have exhibited the several tenets, which distinguish our religious society, as objects of our belief; yet we are sensible that a true and living faith is not produced in the mind of man by his own effort; but is the free gift of God in Christ Jesus, nourished and increased by the progressive operation of his Spirit in our hearts, and our proportionate obedience. Therefore, although for the preservation of the testimonies given us to bear, and for the peace and good order of the society, we deem it necessary that those who are admitted into membership with us, should be previously convinced of those doctrines which we esteem essential; yet we require no formal subscription to any articles, either as a condition of membership, or a qualification for the service of the church. We prefer judging of men by their fruits, and depending on the aid of Him, who, by his prophet, hath promised to be 'for a spirit of judgment to him that sitteth in judgment.' Without this, there is a danger of receiving numbers into outward communion, without any addition to that spiritual sheepfold, whereof our blessed Lord declared himself to be both the door and the shepherd; that is, of such as know his voice, and follow him in the paths of obedience.'

The *discipline* of the Society is thus stated in the same document:—

'The purposes which our discipline hath chiefly in view, are, the relief of the poor,—the maintenance of good order,—the support of the testimonies which we believe it is our duty to

bear to the world,—and the help and recovery of such as are overtaken in faults:—in a few words, the promotion of piety and charity. In the practice of discipline, we think it indispensable that the order recommended by Christ himself be invariably observed: 'If thy brother shall trespass against thee, go and tell him his fault between thee and him alone: if he shall hear thee, thou hast gained thy brother; but if he will not hear thee, then take with thee one or two more, that, in the mouth of two or three witnesses, every word may be established: and, if he shall neglect to hear them, tell it unto the church.'

'To effect the salutary purposes of discipline, meetings were appointed at an early period of the society, which, from the times of their being held, were called quarterly-meetings. It was afterwards found expedient to divide the districts of those meetings, and to meet more frequently; from whence arose monthly-meetings, subordinate to those held quarterly. At length, in 1669, a yearly-meeting was established, to superintend, assist, and provide rules for the whole: previously to which, general meetings had been occasionally held.

'A monthly-meeting is usually composed of several particular congregations, situated within a convenient distance from each other. Its business is to provide for the subsistence of the poor, and for the education of their offspring; to judge of the sincerity and fitness of persons appearing to be convinced of the religious principles of the society, and desiring to be admitted into membership; to excite due attention to the discharge of religious and moral duty; and to deal with disorderly members. Monthly-meetings also grant, to such of their members as remove into other monthly-meetings, certificates of their membership and conduct; without which they cannot gain membership in such meetings. Each monthly-meeting is required to appoint certain persons, under the name of overseers, who are to take care that the rules of our discipline be put in practice; and when any case of complaint, or disorderly conduct, comes to their knowledge, to see that private admonition, agreeably to the gospel rule before mentioned, be given, previously to its being laid before the monthly-meeting. When a case is introduced to the monthly-meeting, it is usual for a small committee to be appointed to visit the offender, in order to endeavour to convince him of his error, and induce him to forsake and condemn it. Time is allowed to judge of the effect of this labor of love, and, if needful, the visit is repeated. If the endeavours prove successful, the person is by minute declared to have made satisfaction for the offence; if not, he is disowned as a member of the society. In disputes between individuals, it has long been the decided judgment of the society, that its members should not sue each other at law. It therefore enjoins all to end their differences by speedy and impartial arbitration, agreeably to rules laid down. If any refuse to adopt this mode, or, having adopted it, to submit to the award, it is the direction of the yearly-meeting that such be disowned. To monthly-meetings also belong the allowing of marriages; for our society hath always scrupled to acknowledge the exclusive authority of the priests in the solemnisation of marriage. Those who intend to marry, appear together and propose their intention to the monthly-meeting; and, if not attended by their parents or guardians, produce a written certificate of their consent, signed in the presence of witnesses. The meeting then appoints a committee to enquire whether they are clear of other engagements respecting marriage; and if at a subsequent meeting no objections are reported, they have the meeting's consent to solemnise their intended marriage. This is done in a public meeting for worship, towards the close whereof the parties stand up, and solemnly take each other for husband and wife. A certificate of the proceedings is then publicly read, and signed by the parties, and afterwards by the relations and others as witnesses. Of such marriages the monthly-meeting keeps a record; as also of the births and burials of its members. A certificate of the date, of the name of the infant, and of its parents, signed by those present at the birth, is the subject of one of these last-mentioned records; and an order for the interment, countersigned by the grave-maker, of the other. The naming of children is without ceremony. Burials are also conducted in a simple manner. The body, followed by the relations and friends, is sometimes, previously to interment, carried to a meeting; and at the grave a pause is generally made; on both which occasions it frequently occurs that one or more friends present have somewhat to express for the edification of those who attend; but no religious rite is considered as an essential part of burial.

'Several monthly-meetings compose a quarterly-meeting. At the quarterly-meeting are produced written answers from the monthly-meetings, to certain queries respecting the conduct of their members, and the meeting's care over them. The accounts thus received are digested into one, which is sent also, in the form of answers to queries, by representatives to the yearly-meeting. Appeals from the judgment of monthly-meetings are brought to the quarterly-meetings; whose business also it is to assist in any difficult case, or where remissness appears in the care of the monthly-meetings over the individuals who compose them.

The yearly-meeting has the general superintendence of the society in the country in which it is established; and therefore, as the accounts which it receives discover the state of inferior meetings, as particular exigencies require, or as the meeting is impressed with a sense of duty, it gives forth its advice, makes such regulations as appear to be requisite, or excites to the observance of those already made; and sometimes appoints committees to visit those quarterly-meetings which appear to be in need of immediate advice. Appeals from the judgment of quarterly-meetings are here finally determined; and a brotherly correspondence, by epistles, is maintained with other yearly-meetings. There are nine yearly meetings, viz. 1. London, to which come representatives from Ireland; 2. New-England; 3. New-York; 4. Pennsylvania and New-Jersey; 5. Maryland; 6. Virginia; 7 The Carolinas and Georgia; 8. Ohio; 9. Indiana.

this place it is proper to add that, as we
: women may be rightly called to the work
ministry, we also think that to them be-
a share in the support of our Christian
line; and that some parts of it, wherein
wn sex is concerned, devolve on them with
ar propriety. Accordingly they have
ly, quarterly, and yearly-meetings of their
:x, held at the same time with those of the
but separately, and without the power of
g rules: and it may be remarked that
; the persecutions, which formerly oc-
ed the imprisonment of so many of the
the care of the poor often fell on the women,
as by them satisfactorily administered.

order that those who are in the situation
nisters may have the tender sympathy and
el of those of either sex, who, by their ex-
ice in the work of religion, are qualified for
ervice, the monthly-meetings are advised to
such, under the denomination of elders.
:, and ministers approved by their monthly-
ngs, have meetings peculiar to themselves,
l meetings of ministers and elders; in
they have an opportunity of exciting
other to a discharge of their several duties,
of extending advice to those who may ap-
to be weak, without any needless exposure.
meetings are generally held in the compass
ch monthly, quarterly, and yearly-meeting.
are conducted by rules prescribed by the
y-meeting, and have no authority to make
alteration or addition to them. The mem-
of them unite with their brethren in the
ings for discipline, and are equally account-
to the latter for their conduct.

t is to a meeting of this kind in London,
d the second-day's morning-meeting, that the
sal of manuscripts concerning our principles,
iously to publication, is intrusted by the
ly-meeting held in London; and also the
ting, in the intervals of the yearly-meeting,
ertificates of approbation to such ministers as
concerned to travel in the work of the minis-
in foreign parts; in addition to those granted
heir monthly and quarterly-meetings. When
isit of this kind doth not extend beyond
at Britain, a certificate from the monthly-
eting of which the minister is a member is
icient; if to Ireland, the concurrence of the
rterly-meeting is also required. Regulations
similar tendency obtain in other yearly-
etings.

The yearly-meeting of London, in the year
75, appointed a meeting to be held in that
, for the purpose of advising and assisting in
es of suffering for conscience sake, which hath
ntinued with great use to the society to this
. It is composed of friends under the name
correspondents, chosen by the several quarterly-
etings, and who reside in or near the city.
e same meetings also appoint members of
ir own in the country as correspondents, who
to join their brethren in London on emer-
ncy. The names of all these correspondents,
eviously to their being recorded, are submitted
the approbation of the yearly-meeting. Such
en as are approved ministers are also members
this meeting, which is called the meeting for
sufferings; a name arising from its original pur-
pose, and which is not yet become entirely obso-
lete. The yearly-meeting has intrusted the
meeting for sufferings with the care of printing
and distributing books, and with the manage-
ment of its stock; and, considered as a standing
committee of the yearly-meeting, it hath a gene-
ral care of whatever may arise, during the inter-
vals of that meeting, affecting the society, and re-
quiring immediate attention: particularly of
those circumstances which may occasion an ap-
plication to government. The stock here men-
tioned is an occasional voluntary contribution,
expended in printing books,—salary of a clerk
for keeping records,—the passage of ministers
who visit their brethren beyond sea,—and some
small incidental charges: but not, as has been
falsely supposed, the reimbursement of those who
suffer distraint for tithes and other demands with
which they scruple to comply.

'There is not in any of the meetings which
have been mentioned, any president, as we be-
lieve that divine Wisdom alone ought to preside;
nor hath any member a right to claim pre-
eminence over the rest. The office of clerk, with
a few exceptions, is undertaken voluntarily by
some member; as is also the keeping of the
records. Where these are very voluminous, and
require a house for their deposit (as is the case in
London, where the general records of the society
in Great Britain are kept), a clerk is hired to
have the care of them; but except a few clerks
of this kind, and persons who have the care of
meeting-houses, none receive any stipend or
gratuity for their services in our religious so-
ciety.'

The Friends trace the origin and *history* of
their society to the beginning of the seventeenth
century, when, as they state, many pious persons
had been dissatisfied with the settlement of the
church of England in the reign of queen Eliza-
beth; and, though various societies of dissenters
had arisen, they seem to have stopped short in
their progress towards a complete reformation.
Hence, they say, some of 'their most enlightened
members lamented the want of something more
instructive and consolatory to the soul,' until,
finding the insufficiency of them all, they with-
drew from the communion of every visible
church.

'These people were at first hidden from each
other, and each probably conceived his own
heart to be the single repository of a discovery
so important; but it did not consist with divine
goodness, that the candle thus lighted should
always remain under the bed, or the bushel.
Our honorable elder George Fox, who had
signally experienced the afflicting dispensations
which we have described, and had also been
quickened by the immediate touches of divine
love, could not satisfy his apprehensions of duty
to God, without bearing public testimony against
the common modes of worship, and directing the
people where to find the like consolation and in-
struction. As he travelled in this service, he met
with divers of those seeking persons who had
been exercised in a similar manner; these readily
received his testimony; several of them also be-
came preachers of the same doctrine; multitudes

were convinced of the reality of this inward manifestation; and many meetings were settled.'

Laws, made either in the times of popery, or since the Reformation, against non-conformists, served as the means of gratifying the jealousy of the priests, and the intolerance of the magistrates, against our first Friends. Indeed, at the time Friends first attracted public notice, legal pretences were not always thought necessary to justify the abuse which they suffered. It was during the time of the commonwealth, when opposition to a national ministry, which was supposed to be peculiarly reformed, was deemed an offence of no small import. Much personal abuse was accordingly bestowed; imprisonment was common, and corporal punishment frequent. Imprisonment was often rendered more severe and disgusting by the cruelty of particular magistrates, and from the numbers which were confined together; and stripes, under pretence of vagrancy, were inflicted without regard to sex, and on persons of unimpeached character, and of good circumstances in the world.

Cromwell, though he did not employ his authority to put a stop to persecution, gave several friends access to him: persecution however continued; but when Charles II., on the prospect of his restoration, issued from Breda, amongst other things, his declaration for liberty of conscience, it might well have been expected that Friends would be permitted to exercise their religion without molestation. Yet, during this reign, they not only were harassed with the oath of allegiance, which, in common with all oaths, they scrupled to take, and by which they often incurred tedious imprisonment, and not unfrequently premunire; but new laws (16 Car. II. cap. 4.; 22 Car. II. cap. 1.; also 13 & 14 Car. II. cap. 1) were made, by which even their meetings for worship subjected them to punishment.

Still the monarch, when he acted independently of the parliament, was the means of affording relief in the most sanguinary persecution which the Friends ever experienced, i. e. that in New-England, where it was made penal for a Friend even to reside.

The first Friends who arrived at Boston were women. These were imprisoned, and otherwise cruelly treated. The date of this transaction is 1656. The following year the scourge was employed, and a woman is also recorded to have been the first who suffered stripes. She was the wife of a tradesman in London, and had made a voyage to Boston, to warn the people against persecution. Great numbers underwent this punishment; but stripes proving insufficient to deter our Friends from the exercise of their religious duty, in going to such places, and performing such services, as they believed to be required by the divine will; it was next attempted to discourage them by a law for cutting off their ears. This was executed in vain; and accordingly the intolerance of the persons in power produced another, which subjected Friends to banishment on pain of death. Their constancy, however, was not thus to be shaken, and four Friends, amongst whom also was a woman, were hanged at Boston.

In 1659 they stated to parliament that 2000 individuals had suffered imprisonment as quakers, and 164 Friends offered themselves at this time by name to the government to be imprisoned in the place of an equal number, who were, as they conceived, in danger of death from the confinement.

In 1665, 120 quakers were in Newgate, sentenced to transportation, under an act recently made 'to prevent and suppress seditious conventicles.' The masters of ships generally refusing to carry them, an embargo was laid, and it was made a condition of sailing to the West Indies, that some quakers should be taken thither by every vessel. A mercenary wretch being at length found for the service, the quakers, unwilling to be active in their own banishment, refused to walk on board, as did also the seamen to hoist them in. By the help of soldiers from the Tower, fifty-five of them were at length shipped. But the master was now in prison for debt; and the ship after seven months' detention quitting the coast was immediately taken by a Dutchman, and twenty-eight of the prisoners (the remainder having died of the plague) were liberated in Holland and sent home. Other parties of quakers were set on shore again from different vessels, so that the number which actually reached the West Indies was small.

James II. it is well known, to favor the Catholics, suspended the operation of the penal laws against all dissenters. Our Friends had their share in the benefit arising from this measure; but it was not until the reign of William and Mary, that they obtained some degree of legal protection. Besides their disuse of the national forms of worship, their refusing to swear and to pay tithes had been among the principal causes of their sufferings. In the reign of king William an act was made, which, with a few exceptions, allowed to their affirmation the legal force of an oath; and provided a less oppressive mode of recovering tithes, under a stated amount. These provisions were made perpetual in the reign of George I., and thus Friends, who received the advantage of the act of toleration, in common with other dissenters, have been in a great measure relieved from persecution.

In Ireland also the Friends propagated their principles, settled meetings, suffered persecution and were at length relieved by law.

They regard their persecutions as still not wholly removed, as they are yet liable to suffer in the exchequer, and the ecclesiastical court, under distraint for tithes, militia dues, &c.: but this must be understood only with respect to Great Britain and Ireland; for in America the people at present are not bound to support a national ministry; nor, when this was in some parts the case, were methods of enforcing payment employed, so tedious and so severe, they say, as those which have been sometimes resorted to in England.

It is due to them to add, that the Friends are generally allowed to excel in their morals, their prudence, and industry, and the branches of education which they cultivate. The children of their poor commonly obtain a plain but solid education, by means of which they rise generally

society. They have several excellent hments for this purpose: the principal of situated at Ackworth in Yorkshire, con- 300 children, of both sexes, and was l in 1778, at the instance of Dr. Fother- But they have few accomplished men in ther branches of literature and science: years, however, many of them have cul- natural philosophy with success. In its history, the society, including many men of r scholastic education, who had joined it nciple, had of course the advantage, in f theological knowledge, over the modern s.

must record, in conclusion, their noble and ering efforts in modern times, for the ac- ishment of the abolition of the slave trade, ich they materially contributed; and their support of the Bible Society throughout untry.

IESLAND is a name which, in the ancient aphy of Europe, comprehended all the ry extending northward from the Scheldt e Weser, including not only the seven l provinces, but a part of Germany. The er Zee divided it into West and East land. At present this name is confined to portions of this tract, viz. a Dutch province ted to the west of Groningen, and a German ipality, or maritime district, lying eastward roningen.

utch Friesland has for its boundaries the ler Zee on the west, and the German Ocean ne north; and contains about 1200 square s, and 176,500 inhabitants. Its general ap- ance is that of all the Netherlands: secured nst the sea by large old dikes, which were iderably improved in the sixteenth century; enclosing land much fitter for pasture than ge. The chief exports are butter and cheese. the higher grounds wheat and oats are pro- ed; and peas are extensively cultivated. f is dug in several parts for fuel; but it is of rior quality. In the south-east are extensive ths and woods; and in the south-west a nber of small lakes. The chief manufacture ailcloth and linen, also the coarse woollen th called from this province frieze.

The province is divided into the three districts Leeuwarden, Sneek, and Heerenveen; Leeu- rden being the capital. It is throughout inter- ted with canals, which mostly run east and st, connecting Harlingen, Franeker, Leeuwar- n, and Dokkum, the chief towns of the vince. The Frieslanders are much attached fishing in general, and many are engaged in Greenland trade. They are principally Cal- nists; part of them, however, are Baptists and tholics. Their chief peculiarity is the preser- tion of their ancient dialect, which differs nsiderably from the Dutch, and much resem- es the English.

East or German Friesland borders on West- alia, and is separated from the Dutch province Groningen: on the south it has the princi- ality of Munster. Its extent is computed at 155 square miles, and its population at 120,000. he atmosphere is in general foggy, but not un- ealthy; the soil good, and very similar in its character and productions, as is the whole of this province in its general features and appearance, to those of the preceding one. But here is a strong breed of horses, of which it is reckoned that an annual export of 3000 takes place to France, Italy, and other parts of Europe; horned cattle are likewise exported, together with corn, butter, and cheese. The manufactures are inconsiderable. The inhabitants are generally Calvinists, but in part Catholics and Baptists. Embden, at the mouth of the river Ems, is the chief and almost only sea-port. Along the coast a succession of small islands extends from east to west.

This principality, once governed by its own counts, became in 1744, on their ancient line becoming extinct, a subject of dispute between Prussia and Hanover: in which the former prevailed; and Prussia held the province until ejected by Napoleon in 1806, when it was first annexed to the kingdom of Holland, and afterwards to the French empire. Regained by Prussia in the peace of 1814, it was soon after ceded to Hanover; and its states now form part of the Hanoverian diet. Aurich is the chief town next to Embden.

FRIESLAND is also the name of a flat tract of land in the duchy of Sleswick and peninsula of South Jutland, on the German Ocean.

FRIEZE, *n. s.* } Fr. *drap de frise*. A
FRIEZED, *adj.* } coarse warm cloth, made
FRIEZE'LIKE, *adj.* } perhaps first in Friesland. Shagged, or napped, after the fashion of this kind of cloth. Resembling it.

If all the world
Should in a pet of temperance feed on pulse,
Drink the clear stream, and nothing wear but *frieze*,
The All-giver would be unthanked. *Milton.*

The captive Germans of gigantic size,
Are ranked in order, and are clad in *frieze*.
Dryden.

He could no more live without his *frieze* coat than without his skin. *Addison's Guardian.*

I have seen the figure of Thalia, the comick muse, sometimes with an entire headpiece and a little *frieze-like* tower, running round the edges of the face, and sometimes with a mask for the face only.
Id. on Italy.

See how the double nation lies,
Like a rich coat with skirts of *frieze*;
As if a man, in making posies,
Should bundle thistles up with roses. *Swift.*

FRIEZE, } In architecture, is a large flat
FRIZE. } member which separates the architrave from the cornice; of which there are as many kinds as orders of columns.

I saw raysde up on yvorie pillowes tall,
Whose bases were of richest mettals warke,
The chapters alabaster, the *fryses* christall,
The double front of a triumphiall arke:
On each side purtraid was a Victorie,
Clad like a nymph, that wings of Silver weares,
And in triumphant chayre was set on hie,
The auncient glory of the Romaine peares.
Spenser. Visions of Bellay.

No jutting *frieze*,
Buttrice, nor coigne 'vantage, but this bird
Hath made his pendant-bed, and procreant cradle.
Shakspeare.

Nor did there want
Cornice or *frieze* with bossy sculptures graven;
The roof was fretted gold. *Milton's Paradise Lost.*

Polydore designed admirably well, as to the practical part, having a particular genius for *friezes.*
Dryden's Dufresnoy.

FRIG'AT, or FRIG'ATE, *n. s.* Fr. *frigate*; Ital. *fregata.* A small ship. Ships under fifty guns are generally termed frigates. Used by Spenser to designate a diminutive vessel in the water.

Behold the water work and play
About her little *frigat*, therein making way.
Faerie Queene.

The treasure they sought for was, in their view, embezzled in certain *frigats.* *Raleigh's Apology.*

On high-raised decks the haughty Belgians ride,
Beneath whose shades our humble *frigats* go.
Dryden.

FRIGATES are usually of two decks light built, designed for swift sailing. When smaller, with but one deck, they are called light frigates. Those mounting from twenty to forty-four guns are esteemed excellent cruisers. The name was formerly known only in the Mediterranean, and applied to a long kind of vessel navigated in that sea with sails and oars. The English were the first who appeared on the ocean with these ships, equipped for war as well as for commerce.

FRIGATE-BUILT, denotes the disposition of the decks of such merchant ships as have a descent of four or five steps from the quarter deck and fore castle into the waist: in contradistinction to those whose decks are on a continued line for the whole length of the ship, which are called galley-built.

FRIGATOON, a Venetian vessel commonly used in the Adriatic, built with a square stern, and without any fore-mast, having only a main mast, mizen mast, and a bow sprit.

FRIGEFAC'TION, *n. s.* Lat. *frigus* and *facio.* The act of making cold.

FRIGHT, *v. a.* & *n. s.*
FRIGHT'EN, *v. a.*
FRIGHT'FUL, *adj.*
FRIGHT'FULLY, *adv.*
FRIGHT'FULNESS, *n. s.*
Sax. ꝼꞃıꝺꝼꞇan; Teut. *furcht*, fear; Danish *fryght*; implying a state of fear. To terrify; to disturb with fear; to shock with fear; to daunt; to dismay. This was in the old authors more frequently written affright, as it is always found in the Scripture. Fright is a sudden terror: to frighten is to shock with dread: frightful, full of what causes fright or apprehension. Johnson says it is a cant word among women for any thing unpleasing.

I pray you that ye take it not agrefe:
By God me mette I was in swiche mischefe,
Right now that yet min herte is sore *afright.*
Chaucer. The Nonnes Preestes Tale.

Tho when that villayn he aviyed, which late
Affrighted had the fairest Florimell,
Full of fierce fury and indiguant hate
To him he turned, and with rigor fell
Smote him so rudely on the pannikell
That to the chin he clefte his head in twaine.
Spenser. Faerie Queene.

Tetchy and wayward was thy infancy,
Thy school days *frightful*, desperate, wild, and furious.
Shakspeare.

The herds
Were strongly clam'rous in the *frighted* fields.
Id. Henry IV.

And I ha' been choosing out of this skull
From charnel-houses, that were full,
From private grots, and public pits,
And *frighted* a sexton out of his wits. *Jonson.*

Such a numerous host
Fled not in silence through the *frighted* deep,
With ruin upon ruin, rout on routs,
Confusion was confounded. *Milton.*

Cherubic watch, and of a sword the flame
Wide-waving, all approach far off to *fright*,
And guard all passage to the tree of life. *Id.*

This will make a prodigious mass of water, and looks *frightfully* to the imagination; 'tis huge and great. *Burnet.*

Without aid you durst not undertake
This *frightful* passage o'er the Stygian lake.
Dryden.

You, if your goodness does not plead my cause,
May think I broke all hospitable laws,
To bear you from your palace-yard by might,
And put your noble person in a *fright.* *Id.*

The mind *frights* itself with any thing reflected on in gross, and at a distance: things thus offered to the mind, carry the shew of nothing but difficulty.
Locke.

The rugged bear's, or spotted lynx's brood,
Frighten the valleys and infest the wood. *Prior.*

Then to her glass; and Betty, pray,
Don't I look *frightfully* to-day? *Swift.*

Whence glaring oft with many a broadened orb,
He *frights* the nations. *Thomson's Autumn.*

His sense, he dare not trust (nor eyes, nor ears);
And, when no other cause of *fright* appears,
Himself he much suspects, and fears his causeless fears. *Fletcher's Purple Island.*

FRIGHT, or terror. See FEAR. Sudden fear is frequently productive of very remarkable effects upon the human system. Of this many instances occur in medical writings. In general the effects of terror are a contraction of the small vessels and a repulsion of the blood in the large and internal ones: hence proceed general oppression, trembling, and irregularity in the motions of the heart; while the lungs are also overcharged with blood. Frights often occasion incurable diseases, as epilepsy, stupor, madness, &c. We have also accounts of persons absolutely killed by terror, when in perfect health at the time of receiving the shock. Persons ordered to be led to execution, but with private orders to be reprieved on the scaffold, have expired at the block without a wound. Out of many instances of the fatal effects of fear, the following is selected as one of the most singular:—George Grochantzy, a Polander, who had enlisted as a soldier in the service of the king of Prussia, deserted during the war. A small party was sent in pursuit of him, and, when he least expected it, surprised him singing and dancing among a company of peasants in an inn. This event so sudden, and so dreadful in its consequences, struck him in such a manner, that giving a loud cry, he became altogether stupid and insensible, and was seized without the least resistance. They carried him away to Glocau, where he was brought before the council of war, and received sentence as a deserter. He suffered himself to be led and disposed of, at the will of those about him, without uttering a word, or giving the least sign that he knew what had happened or would happen to him. He re-

mained immoveable as a statue wherever he was placed, and was wholly passive with respect to all that was done to him or about him. During all the time that he was in custody, he neither eat, nor drank, nor slept, nor had any evacuation. Some of his comrades were sent to see him; after that he was visited by some officers of his corps, and by some priests; but he still continued in the same state, without discovering the least signs of sensibility. Promises, entreaties, and threatenings, were equally ineffectual. It was at first suspected, that those appearances were feigned; but these suspicions gave way, when it was known that he took no sustenance, and that the involuntary functions of nature were in a great measure suspended. The physicians concluded that he was in a state of hopeless idiocy; and after some time they knocked off his fetters, and left him at liberty to go whither he would. He received his liberty with the same insensibility that he had shown upon other occasions; he remained fixed and immoveable; his eyes turned wildly here and there without taking cognizance of any object, and the muscles of his face were fallen and fixed like those of a dead body. He passed nineteen days in this condition, without eating or any evacuation, and died on the twentieth day. He had been sometimes heard to fetch deep sighs; and once he rushed with great violence on a soldier, who had a mug of liquor in his hand, forced the mug from him, and having drunk the liquor with great eagerness let the mug drop to the ground. Yet frights have been known to cure, as well as to cause diseases. Mr. Boyle mentions agues, gout, and sciatica thus cured. Among the ludicrous effects of fear, the following instance, quoted from a French author, shows upon what slight occasions this passion may be sometimes excited in a very high degree. When Charles Gustavus was besieging Prague, a boor of most extraordinary visage desired admittance to his tent; and, being allowed entrance, offered, by way of amusing the king, to devour a whole hog of 100 cwt. in his presence. The old general, Konigsmark, who stood by the king's side, and who, soldier as he was, had not got rid of the prejudices of his childhood, hinted to his royal master that the peasant ought to be burnt as a sorcerer. 'Sir,' said the fellow, irritated at the remark, 'if your majesty will but make that old gentleman take off his sword and his spurs, I will eat him immediately before I begin the hog.' Konigsmark (who had, at the head of a body of Swedes, performed wonders against the Austrians, and who was looked upon as one of the bravest men of the age) could not stand this proposal, especially as it was accompanied by a most hideous and preternatural expansion of the frightful peasant's jaws. Without uttering a word, the veteran suddenly turned round, ran out of the court, and thought not himself safe until he had arrived at his quarters; where he remained above twenty-four hours locked up securely, before he had got rid of the panic which had so severely affected him. The ingenious Dr. Beattie observes, in his Elements of Moral Science, that fear should not rise higher than to make us attentive and cautious; when it gains an ascendancy in the mind it becomes an insupportable tyranny, and renders life a burden. The object of fear is evil; and to be exempt from fear, or at least not enslaved to it, gives dignity to our nature, and invigorates all our faculties. Yet there are evils which we ought to fear. Those that arise from ourselves, or which it is in our power to prevent, it would be madness to despise, and audacity not to guard against. External evils, which we cannot prevent, or could not avoid without a breach of duty, it is manly and honorable to bear with fortitude. Insensibility to danger is not fortitude any more than the incapacity of feeling pain can be called patience; and to expose ourselves unnecessarily to evil is worse than folly, and very blameable presumption.

FRIG'ID, *adj.* } Lat. *frigidus, frigiditas.*
FRIGID'ITY, *n. s.* } Cold; wanting warmth.
FRIG'IDLY, *adv.* } It is usually applied to the
FRIG'IDNESS, *n. s.* } human mind, body, and heart; thus it is dull, without fire of fancy, or intellectual energy; impotent; destitute of animal warmth; unaffectionate; not easily moved to friendship or love.

Driving at these as at the highest elegancies, which are but the *frigidities* of wit.
Browne's Vulgar Errours.

The boiling blood of youth hinders that serenity which is necessary to severe intenseness; and the *frigidity* of decrepit age is as much its enemy, by reason of its dulling moisture. *Glanville's Scepsis.*

In the torrid zone the heat would have been intolerable, and in the *frigid* zones the cold would have destroyed both animals and vegetables.
Cheyne's Philosophic Principles.

Of the two extremes, one would sooner pardon phrenzy than *frigidity*. *Pope.*

If justice Philip's costive head
Some *frigid* rhymes disburses,
They shall like Persian tales be read,
And glad both babes and nurses. *Swift.*

FRIGID ZONE. See ZONE.

FRIGORIF'IC, *adj.* Of the same derivation and signifies causing cold.

Frigorifick atoms or particles mean those nitrous salts which float in the air in cold weather, and occasion freezing. *Quincy.*

FRILAZIN, a class or rank of people among the Anglo-Saxons, consisting of those who had been slaves, but had obtained their liberty, either by purchase or otherwise. Though these were in reality freemen, they were not considered as of the same rank and dignity with those who had been born free, but were still in a more dependent condition, either on their former masters or on some new patrons. This custom the Anglo-Saxons seem to have derived from their ancestors in Germany, among whom those who had been made free did not differ much in point of dignity or importance from those who continued in servitude. This distinction, between those who had been born free and those who enjoy freedom by descent from a long race of freemen, still prevails in many parts of Germany; and particularly in the original seats of the Anglo-Saxons Many of the inhabitants of towns and cities in England, in that period, seem to have been of this class of men, who were in a kind of middle state between slaves and freemen.

FRILL, *v. n.* Fr. *frilleux.* To quake or shiver with cold. Used of a hawk; as 'the hawk frills.'

FRINGE, *n. s.* & *v. a.* Fr. *frange;* Ital. *frangia;* Belg. *frange*, of Goth. *rens, rans;* whence rand, the border of a shoe. Ornamental appendages added to dress or furniture; chiefly that which adorns the edge or the extremity of any thing: to fringe is thus to decorate: the eyelids are metaphorically said to be the fringes of the eyes.

Of silver wings he took a shining pair,
Fringed with gold. *Fairfax.*

Those offices and dignities were but the facings or *fringes* of his greatness. *Wotton.*

Either side of the bank, *fringed* with most beautiful trees, resisted the sun's darts. *Sidney.*

Then from a cloud, *fringed* round with golden fires,
Were timbrels heard, and Berecynthian choirs.
Dryden.

The golden *fringe* even set the ground on flame,
And drew a precious trail. *Id. Flower and Leaf.*

The shadows of all bodies, in this light, were bordered with three parallel *fringes*, or bands of coloured light, whereof that which was contiguous to the shadow was broadest and most luminous; and that which was remotest from it was narrowest, and so faint as not easily to be visible. *Newton's Opticks.*

Here, by the sacred bramble tinged,
My petticoat is doubly *fringed.* *Swift.*

FRINGILLA, in ornithology, a genus belonging to the order of passeres. The bill is conical, straight, and sharp pointed. There are no less than 112 species comprehended under this genus, distinguished principally by varieties in their color. The following are the most noted:—

F. amandava, the amaduvade bird, about the size of a wren. The color of the bill is of a dull red; all the upper parts are brown, with a mixture of red; the under the same, but paler, the middle of the belly darkest; all the feathers of the upper wing-coverts, breasts, and sides, have a spot of white at the tip; the quills are of a gray brown; the tail is black; and the legs are of a pale yellowish white. It inhabits Bengal, Java, Malacca, and other parts of Asia; and feeds on millet.

F. cælebs, the chaffinch, has black limbs, and the wings white on both sides, the first three feathers of the tail are without spots, but the two chief ones are obliquely spotted. It has its name from its delighting in chaff. This species entertains us agreeably with its song very early in the year, but towards the end of summer assumes a chirping note; both sexes continue with us the whole year. In Sweden the females quit that country in September, migrate in flocks into Holland, leaving their mates behind; aud return n spring. Their nest is almost as elegantly constructed as that of the goldfinch, and of much the same materials, only the inside has the addition of some large feathers. They lay four or five eggs of a dull white color, tinged and spotted with deep purple. They are caught in plenty in flight-time; bu their nests are rarely found, though they build in hedges and trees, and have young ones thrice a-year. They are seldom bred from the nest, being not apt to learn another bird's song, nor to whistle; so that it is best to leave the old ones to bring them up. The Essex finches are generally allowed to be the best, both for length and variety of song, ending with several very fine notes. They are hardy, and will live almost upon any seeds.

F. Canaria, the Canary bird, has a whitish body and bill, with the prime feathers of the wings and tail greenish. The Canary bird, as found in the island from which it derives its name, is of a plain gray color, with the down at the base of the feathers blackish, the tail somewhat forked, and the legs pale. It was originally peculiar to those isles to which it owes its name. Though the ancients celebrate the isle of Canaria, for its multitude of birds, they have not mentioned any in particular. It is probable, then, that our species was not introduced into Europe till after the second discovery of these isles in 1402. Belon, who wrote in 1555, is silent in respect to these birds: Gesner is the first who mentions them; and Aldrovand speaks of them as rarities, observing that they were very dear on account of the difficulty attending the bringing them from so distant a country, and that they were purchased by people of rank alone. They are still found on the same spot to which we were first indebted for the production of these charming songsters; but they are now become so numerous in our own country, that we are under no necessity of crossing the ocean for them. They are reared principally by the Germans and Italians, who are celebrated for their skill in improving the note of these birds by tuition. Most of the Canary birds that are imported from the Tyrol, have been brought up by parents instructed by the nightingale; but our English Canary birds have commonly more of the tit-lark note. Those brought from Germany are generally variegated or mottled, and are the least valued, because the heat of the houses in that country renders the birds bred there tender and short-lived. German birds seldom live above two or three years in this country: whereas the Canary birds bred in England in the usual way are said to live eight, ten, or fifteen years. The birds that come from the junction of the citril, the fiskin, and the goldfinch, with a hen Canary bird, are generally stronger than those from a cock and hen Canary bird. They sing longer; and their voice is more sonorous and strong, but they are taught with difficulty. The fiskin alone will breed with the Canary bird equally well, whether male or female; the hen Canary bird produces likewise easily enough with the male goldfinch; not quite so easily with the male linnet; and it will breed, though more reluctantly, with the males of the chaffinch, the yellow-hammer, and sparrow. Among a variety of other sorts, there are two kinds of Canary birds much esteemed among breeders; namely, those birds which are all yellow, called gay birds, and those which are mottled and have a yellow crown; called spangled, or fancy birds. The fancy breed are esteemed the strongest, and have the boldest song. We find it stated in the Memoirs of the Society of Natural History of Wetterau, that a Mr. Schæpf of Gottorp, reared a featherless Canary bird, which continued living and in good health for upwards of three years.

F. cannabina, the greater red-pole, is rather

n the common linnet, and has a blood- spot on the forehead, and the breast of le is tinged with a fine rose-color. It is a n fraud in the bird shops in London, . male bird is distinguished from the fe- y a red breast, as in this species, to paint thers, so that the deceit is not easily dis- l. These birds are frequent on our coasts; e often taken in flight time near London.

arduelis, the goldfinch, with the quill fea- red forwards, and the outermost without ots; the two outermost are white in the , as the rest are at the point. The young efore it moults is gray on the head; and it is termed by the bird-catchers a gray- There is a variety of this species, called London bird-catchers a cheverel, from the er in which it concludes its jerk. It is dis- shed from the common sort by a white , or by two, sometimes three, white spots the throat. Their note is very sweet, and are much esteemed on that account, as well their great docility. Towards winter, they ble in flocks; and feed on various seeds, ularly those of the thistle. They are fond chards, and often build in apple or pear

Their nests are very elegantly formed of moss, liverworts, and bents, on the outside; first with wool and hair, and then with the ng or cotton of the sallow. The hen lays white eggs, marked with deep purple spots he upper end: and has two broods in the . When kept in cages they are commonly much on hemp seed, which they eat freely, which is said to make them grow black, lose both their red and yellow. Gold- es often attain the age of twenty years. y abound throughout Europe; and are met with in Asia and Africa, but less com- ly.

. domestica, the sparrow, has the prime fea- s of the wings and tail brown, the body va- ated with gray and black, and a single white ak on the wings. These birds are proverbi- salacious, and have three broods in a year. y are every where common about our houses, re they build in every place they can find ad- tance; under the roof, corner of the brick- k, or in holes of the wall. They make a slo- ly nest; generally a little hay ill put together, lined well with feathers; where they lay five or eggs of a reddish white color, spotted with wn. They sometimes build in trees, in which e they take more pains with the nest; and n expel the martins from theirs, to save the uble of constructing one of their own. Spar- ws, from frequenting only habitations and rts adjacent, may be said to be chiefly fed from man industry, for, in spite of every precaution, y will partake with the pigeons, poultry, &c. the food thrown out to them, grain of all kinds ing most agreeable to their taste, though they ll eat refuse from the kitchen of most kinds. ey are familiar but crafty, and do not so easily me into a snare as many others. In autumn ey often collect into flocks, and roost in num- rs on the neighbouring trees, when they may shot by dozens, or caught in great numbers at ght by a bat fowling net. The flesh is accounted tolerable by many. The sparrow has no song, only a chirp or two frequently repeated. This species is found every where throughout Europe; and is also met with in Egypt, Senegal, Syria, and other parts of Africa and Asia.

F. linaria, the less red-pole, is about half the size of the greater red-pole, and has a rich spot of purplish red on the forehead: the breast is of the same color, but less bright. The female is less lively in color; has no red on the breast; and the spot on the forehead is of a saffron hue. This species is common in England; and lays four or five eggs of a bluish green, thickly sprinkled near the blunt end with small reddish spots. Pennant mentions an instance of this bird being so tenacious of her nest, as to suffer herself to be taken off by the hand; and when released she would not forsake it. This species is known about London by the name of the stone red pole. Whole flocks of them, mixed with the fiskin, frequent places where alders grow, for the sake of picking the catkins: they generally hang like the titmouse, with the back downwards; and in this state are so intent on their work, that they may be entangled by dozens, by means of a twig smeared with birdlime fastened to the end of a long pole. This species seems to be plentiful throughout Europe, from the extreme parts of Russia to Italy. It is very common in Greenland, and in America it is likewise well known.

F. linota, the linnet, has the bottom of the breast of a fine blood red, which heightens as the spring advances. These birds are much esteemed for their song. They feed on seeds of different kinds, which they peel before they eat; the seed of the linum, or flax, is their favorite food, from whence they derive their name. They breed among furze and white thorn: the outside of their nests is made with moss and bents, and lined with wood and hair. They lay five whitish eggs, spotted like those of the goldfinch. They are remarkable for their attachment to their young, and the following instance is given by a Mr. Strang, of the Isle of Sanda, Orkney, in the Edinburgh Philosophical Journal:—'During the summer of 1818,' says Mr. Strang, 'my children having found a linnet's nest, containing four young ones nearly fledged, resolved to carry home nest and brood, with the view of feeding and taming the young birds. The parent birds, attracted by the chirping of their young, continued fluttering around the children until they reached the house. The nest was carried up stairs to the nursery, and placed outside the window. The old birds soon afterwards made their appearance; approached the nest, and fed their family, without showing alarm. This being noticed, the nest was soon afterwards placed on a table in the middle of the apartment, and the window left open. The parent birds came boldly in, and fed their offspring as before. I was called up stairs to witness this remarkable instance of strong parental attachment. To put it still further to the test, I placed the nest and young within a bird-cage; still the old ones returned, entered boldly within the cage, and supplied the wants of their brood as before; nay, towards evening, the parent birds actually perched on the cage, regardless of the noise made around them by several

children. This pleasing scene continued for several days; when an unlucky accident put an end to it, to the great grief of my young naturalists. The cage had been again set on the outside of the window, and was unluckily left exposed to one of those sudden and heavy falls of rain which often occur in the Orkneys; the consequence was, that the whole of the young were drowned in the nest. The poor parents, who had so boldly and indefatigably performed their duty, continued hovering around the house, and looking wistfully in at the window for some days, and then disappeared.'

F. montifringilla, the brambling, has a yellow bill tipt with black; the head, hind part of the neck, and back, are black; the throat, fore part of the neck, and breast, pale rufous orange; lower part of the breast and belly white; the quill-feathers brown, with yellowish edges; the tail a little forked; the legs gray. This species migrates into England at certain seasons, but does not build. It is frequently found among chaffinches, and sometimes comes in vast flocks. They are also seen at certain times in vast clouds in France, insomuch that the ground has been quite covered with their dung, and more than 600 dozen were killed each night. They eat various seeds, but are particularly fond of beech mast. They are said to breed about Luxemburg, making their nests on the tall fir-trees, composed of long moss without, and lined with wool and feathers within: the hen lays four or five eggs, yellowish and spotted; and the young are fledged at the end of May. This species is found more or less throughout Europe; and is common in the pine forests of Russia and Siberia, but those of the last are darker in color and less in size.

F. montium, the twite, is about the size of a linnet. It has the feathers of the upper part of the body dusky; those on the head edged with ash-color, the others with brownish-red; the rump is pale crimson; the wings and tail are dusky, the tips of the greater coverts and secondaries whitish; the legs pale brown. The female wants the red mark on the rump. Twites are taken in the flight season near London, along with linnets. The name seems to have been taken from their twittering note, and bird-catchers tell at some distance whether there be any twites among linnets, merely from this. The twite is supposed to breed in the more northern parts of Britain.

F. Senegala, the Senegal finch, is a very little bigger than the wren. The bill is reddish, edged all round with brown; on the ridge of the upper, and beneath the under mandible, is a line of brown quite to the tip: the upper parts of the body are of a vinaceous red color; the lower parts, with the thighs and under tail-coverts, of a greenish-brown; the hind part of the head and neck, the back, scapulars, and wing coverts, are brown; the tail is black, and the legs are pale gray. It inhabits Bengal, and feeds on millet. The natives catch them by supporting a large hollowed gourd, bottom uppermost, on a stick, with a string leading to some covered place, and strewing under it some millet; the little birds, hastening in numbers to pick it up, are caught beneath the trap, by pulling away the stick The females sing nearly as well as the males They are familiar, and, when once used to the climate, frequently live five or six years in a cage. They have been bred in Holland.

F. spinus, the siskin, has the prime feathers of the wings yellow in the middle, and the first four chief tail feathers without spots; but they are yellow at the base, and black at the points. Mr. Willoughby says that this is a song bird; and that in Sussex it is called the barley bird, because it comes to them in barley seed time. It visits these islands at very uncertain times, like the gross-beak, &c. It is to be met with in the bird-shops in London; and, being rather scarce, sells at a higher price than the merit of its song deserves: it is known there by the name of the aberdavine. It is very tame and docile; and is often kept and paired with the Canary bird, with which it breeds freely. Dr. Kramer informs us that this bird conceals its nest with great art; and though there are infinite numbers of young birds in the woods on the banks of the Danube, which seem just to have taken flight, yet no one could discover it.

FRINGY BAZAR, a town in the district of Dacca, Bengal, situated on the western bank of the Dullasery, near its junction with the Megna River. This town was founded in 1666 by the nabob Shaista Khan, after the reduction of Chittagong, for the residence of a colony of Indian Portuguese. Some of their descendants are still to be found in the vicinity, but the greater number of them have emigrated to Hooghly, and other European settlements. During the rainy season the waters of the rivers near swell to an amazing extent.

FRIP'PERER, *n. s.* } Fr. *fripper, fripperie;*
FRIP'PERY, *n. s.* } Ital. *fripperia;* 'from *fraporre*, cont. of Lat. *infra ponere*, to piece.'—Thomson. One who deals in old things vamped up: hence frippery either signifies old cloaths, cast dresses fantastically decorated, or tattered rags. It was formerly applied to the place where such merchandise is disposed of.

We know what belongs to a *frippery*. *Shakspeare.*

The fighting-place now seamens' rage supply,
And all the tackling is a *frippery*. *Donne.*

Poor poet ape, that would be thought our chief,
Whose works are even the *frippery* of wit;
From brocage is become so bold a thief,
As we, the robbed, leave rage, and pity it.
Ben Jonson.

Lurana is a *frippery* of bankrupts, who fly thither from Druina to play their after-game. *Howel.*

Ragfair is a place near the Tower of London, where old cloaths and *frippery* are sold. *Pope.*

FRISCH (John Leonard), an eminent naturalist of the last century, was born at Sultzbach in the Palatinate in 1666. He travelled through France and Switzerland, and then succeeded to the preachership at Neusol, in Hungary; but, being persecuted, left the place, and became, during the Turkish war, an interpreter. He finally settled at Berlin, where he was appointed rector of the Gray Convent gymnasium. He was also chosen, through the recommendation of Leibnitz, a member of the Royal Academy of Sciences, and of the Imperial Academy of the

hes into Nature. Here he died in 1743. said to have been the first person who cul- d mulberry-trees in the neighbourhood of n, and he was the founder of the silk ma- tory in this vicinity. His works are, a ian and Latin Dictionary; Dictionnaire eau des Passagers, François-Allemand et iand-François; Descriptions of all the ian Insects, with Observations, and the ne- ry Figures, &c.

ISCHLIN (Nicodemus), a learned German c and poet, born at Balingen, in the duchy of emberg, in 1547: he was educated by his fa- vith great care, and sent to the university of igen, where he made a rapid progress, and ne a composer of Greek verse at the age of en. At twenty years of age he obtained a ssorship at this university, and soon after a work against former systems of grammar, ed Strigil Grammmatica. In 1580 he shed an Oration in praise of a Country with a Paraphrase upon Virgil's Eclogues Georgics, in which he indulged much acri- against the manners of the great, and bliged, in consequence, to quit the univer-

He now composed sixteen books of elegies, tragedies, seven comedies, and innumer- odes, anagrams, &c. His comedy of Rebecca ned for him the golden laurel, and title of ned poet, from the emperor Rodolph. ng, however, made a pecuniary application e duke of Wirtemberg, it was refused, and rote back an answer so full of abuse, that as arrested and imprisoned in the prison of ch. Attempting to escape from hence by s not strong enough to support him, he fell a prodigious precipice, and was dashed to s: this happened in 1590. He left com- aries upon the Epistles of Horace and the es of Persius, and translations of Aristo- es, Callimachus, Heliodorus, and Oppian.

RISK, *v. n.* & *n. s.* } Ital. *frizzare*. To leap; to skip; to whisk; to gambol; to frolic; to move wantonly: liveli- ; gaiety; gay; airy; wanton.

RISK'ER, *n. s.*

RISK'INESS, *n. s.*

RISK'Y, *adj.*

en doe the salvage beasts begin to play
pleasant *friskes*, and loathe their wonted food:
lyons rore; the tygers loudly bray;
raging buls rebellow through the wood,
breaking forth dare tempt the deepest flood.
Spenser's Faerie Queene.

e are as twinned lambs, that did *frisk* in the sun,
bleat the one at the other: what we changed,
innocence for innocence; we knew not
doctrine of ill-doing.
Shakspeare. Winter's Tale.

ow I will wear this, and now I will wear that;
I will wear I cannot tell what:
new fashions be pleasant to me:
I am a *frisker*, all men on me look;
it should I do but set cock on the hoop?
Camden.

ut water into a glass, and wet your finger, and
it round about the lip of the glass, pressing it
ewhat hard; and, after drawing it some few times
it, it will make the water *frisk* and sprinkle up in
e dew. *Bacon's Natural History.*

About them *frisking* played
beasts of the earth, since wild, and of all chace,
rood or wilderness, forest or den. *Milton.*

Watch the quick motions of the *frisking* tail,
Then serve their fury with the rushing male.
Dryden.

So Bacchus through the conquered Indies rode,
And beasts in gambols *frisked* before their honest god.
Id.

A wanton heifer *frisked* up and down in a meadow, at ease and pleasure. *L'Estrange.*

Whether every one hath experimented this trouble- some intrusion of some *frisking* ideas, which thus im- portune the understanding, and hinder it from being better employed, I know not. *Locke.*

Oft to the mountains' airy tops advanced,
The *frisking* satyrs on the summits danced. *Addison.*

Those merry blades,
That *frisk* it under Pindus' shades. *Prior.*

When the meridian sun contracts the shade,
And *frisking* heifers seek the cooling shade;
Or when the country floats with sudden rains,
Or driving mists deface the moistened plains;
In vain his toils the unskilful fowler tries,
While in thick woods the feeding partridge lies.
Gay's Rural Sports.

Peg faints at the sound of an organ, and yet will dance and *frisk* at the noise of a bagpipe.
Arbuthnot.

Sly hunters thus, in Borneo's Isle,
To catch a monkey by a wile,
The mimick animal amuse:
They place before him gloves and shoes;
Which when the brute puts aukward on,
All his agility is gone:
In vain to *frisk* or climb he tries;
The huntsmen seize the grinning prize. *Swift.*

He went forth with the lovely Oaltilis-ques,
At the given signal joined to their array;
And though he certainly ran many risks,
Yet he could not at any time keep by the way
(Although the consequences of such *frisks*
Are worse than the worst damages we pay
In moral England, where the thing's a tax)
From ogling all their charms from breasts to backs.
Byron.

FRISRUTTER, an instrument of iron, used for the purpose of blocking up a haven, or river. The following description of it is given by general Monk:—The beams through which the up- right bars pass must be twelve feet in length, and the upright bars that go through the beam must be of such a length that when one of these frisrutters is let down into a haven, or river, the perpendi- cular bars shall be deep enough to reach, at high water, within five feet of the surface.

FRIT, or FRITT, in the glass manufacture, is the matter or ingredients whereof glass is to be made, when they have been calcined or baked in a furnace. A salt drawn from the ashes of the plant kali, or from fern or other plants, mixed with sand or flint, and baked together, makes an opaque mass, called by glass-men frit; and by the ancients ammonitrum, of *αμμος*, sand, and *νιτρον*, nitre; under which name it is thus described by Pliny:—fine sand from the Volturnian sea, mixed with three times the quantity of nitre, and melted, makes a mass called ammoni- trum, which being rebaked, makes pure glass. Frit, Neri observes, is only the calx of the mate- rials that make glass; which, though they might be melted, and glass be made, without thus calcining them, yet it would take much more time. This calcining, or making of frit, serves to mix and incorporate the materials to-

gether, and to evaporate all the superfluous humidity. The frit, once made, is readily fused and turned into glass. There are three kinds of frits: 1. The crystal frit, or that for crystal metal, made with salt of pulverine and sand. 2. The ordinary frit, made with bare ashes of pulverine, or barilla, without extracting the salt from them. This makes the ordinary white, or crystal metal. 3. The frit for green glasses, made of common ashes, without any preparation. This last requires ten or twelve hours baking. The materials in each are to be finely powdered, washed, and searced, then equally mixed, and frequently stirred together in the melting-pot. See GLASS.

FRITH, *n. s.* Lat. *fretum;* Ital. *freto.* A straight of the sea, where the water being confined is rough. It once signified a kind of net; but this sense is obsolete.

The Wear is a *frith,* reaching through the Ose, from the land to low water mark, and having in it a hunt or cod with an eye hook; where the fish entering, upon their coming back with the ebb, are stopt from issuing out again. *Carew.*

Into this wild abyss the wary fiend
Stood on the brink of hell and looked a while,
Pondering his voyage; for no narrow *frith*
He had to cross. *Milton.*

What desperate madman then would venture o'er
The *frith,* or haul his cables from the shore?
Dryden's Virgil.

Batavian fleets
Defraud us of the glittering finny swarms
That heave our *friths,* and crowd upon our shores.
Thomson.

FRITILLARIA, in botany, a genus of the monogynia order, and hexandria class of plants; natural order tenth, coronariæ: COR. hexapetalous and campanulated, with a nectariferous cavity above the heel in each petal: the stamina are as long as the corolla. There are eight species, all bulbous-rooted flowery perennials, producing annual stalks from about one foot to a yard or more high, terminated by large, bell-shaped, liliaceous flowers, of a great variety of colors. They are all propagated by offsets, which they furnish abundantly from the sides of their roots, and which may be separated every second or third year. They are hardy plants, and will thrive in any of the common borders.

FRITIL'LARY, *n. s.* Fr. *fritillaire.* A plant.

FRITI'NANCY, *n. s.* Lat. *fritinio.* The scream of an insect, as the cricket or cicada.

The note or *fritinancy* thereof is far more shrill than that of the locust, and its life short.
Browne's Vulgar Errours.

FRITTER, *n. s.* & *v. a* Fr. *friture.* A smaller kind of pancake; a fragment; a small piece. On the authority of Ainsworth, Johnson adds, a cheesecake; a wig: but gives no illustrations. To fritter is to cut into small pieces to be fried; to break into small fragments; to diminish any larger substance by slow degrees, and in minute particles: thus, to fritter away any thing is imperceptibly to dissipate it till all is gone one knows not how.

Maids, *fritters* and pancakes ynow see ye make;
Let Slut have one pancake for company sake.
Tusser.

Sense and putter! have I lived to stand in the taunt of one that makes *fritters* of English?
Shakspeare. Merry Wives of Windsor.

If you strike a solid body that is brittle, as glass or sugar, it breaketh not only where the immediate force is, but breaketh all about into shivers and *fritters;* the motion, upon the pressure, searching all ways, and breaking where it findeth the body weakest.
Bacon's Natural History.

Our eating of *fritters,* whipping of tops, roasting of herrings, jack of lents, &c., they were all in imitation of church works, emblems of martyrdom. *Selden.*

The ancient errant knights
Won all their ladies hearts in fights
And cut whole giants into *fritters,*
To put them into amorous twitters.
Hudibras.

Joy to great Chaos! let Division reign!
My racks and tortures soon shall drive them hence,
Break all their nerves, and *fritter* all their sense.
Dunciad.

How prologues into prefaces decay,
And these to notes are *frittered* quite away.
Pope.

FRITZLAR, a district of Hesse-Cassel, lying in Lower and Upper Hesse, containing 137 square miles. The population, chiefly Catholics, was, in 1812, 15,328. It belonged formerly to the elector of Mentz, but in 1802 was made over to Hesse-Cassel.

FRITZLAR, a town of Hesse-Cassel, the capital of the district of that name, is situated on the Edder, and has 2600 inhabitants, many of whom are Jews. Here are manufactures of tobacco and earthenware. It is thirteen miles S.S.W. of Cassel.

FRIULI, a considerable province of Italy, now subject to Austria, bounded on the north by the Tyrol and Carinthia; east by Carniola and Gradisca; south by the Adriatic, and west by the Trevisan, Feltrin, and Bellunese. It has an area of 2500 square miles, containing four cities, twenty towns and boroughs, and 600 villages, and a population of 120,000 Germans, Italians, and Sclavonians, intermixed. The country is partly level and partly mountainous. The former is very fertile, producing all kinds of corn, wine, fruits, &c.; but the mountains produce only timber and game; and the roads through them are in many places hardly passable, either on foot or horseback. The chief rivers are the Tagliamento, Meduna, Cellina, and Stellar. Cattle are numerous, and the culture of silk is extensive The inhabitants, called Furlani or Friulani, are reckoned, says Dr. Oppenheim, the wildest in Italy. They speak a dialect resembling the ancient French, and widely differing from both the modern Italian and German. This country was called by the Romans Forum Julii. It was taken from the Lombards by Charlemagne, but belonged to the Venetians from 1420 till its partial alienation to Austria in the following century. In 1797 she obtained the whole by the treaty of Campo Formio, but ceded it to France by that of Presburg in 1806. In 1814 Friuli fell once more into the possession of Austria: it is now divided into two parts, the circle of Goritz, or Austrian Friuli, and the legation of Udina, corresponding to Venetian Friuli: the former belongs to the Illyrian, the

the Lombard part of the Austrian do-
The emperor wears the title and arms
of Friuli, but the name is not otherwise

LI, Cividad, or Cividad di. See Ci-
This town, anciently called Forum Ju-
ckoned the second capital of the above
, and contained 4000 inhabitants in 1795.

OLITY, *n. s.* } Fr. *frivole*; Ital. Sp.
OLOUS, *adj.* } and Port. *frivolo*; Lat.
OLOUSNESS, *n. s.* } *frivolus*, most probably
OLOUSLY, *adv.* } from *frio*, to crumble
t; signifying reduced to nothing. French
slight; trifling; of no moment; without
importance, or consideration.

seem very *frivolous* and fruitless; for, by the
f them, little damage can come to the com-
th. *Spenser.*

rivolous to say we ought not to use bad cere-
f the church of Rome, and presume all such
pleaseth themselves to dislike. *Hooker.*

had the huntress Dian her dread bow,
er-shafted queen for ever chaste,
ith she tamed the brinded lioness
tted mountain pard, but set at nought
olous bolt of Cupid; gods and men
her stern frown, and she was Queen o' the
voods. *Milton's Comus.*

Business the *frivolous* pretence
human lusts to shake off innocence.
Cowley.

ie impeachments in Greece and Rome agreed
tion of being concerned, in point of honour,
mn whatever person they impeached, however
the articles, or however weak the proofs.
Swift.

not defend any mistake, and do not think
obliged to answer every *frivolous* objection.
Arbuthnot.

I reflect on what I have seen, what I have
nd what I have done, I can hardly persuade my-
all that *frivolous* hurry and bustle of pleasure
orld had any reality; but I look upon all that
as one of those romantic dreams which opium
ly occasions, and I do by no means desire to
he nauseous dose. *Chesterfield.*

an endless and *frivolous* pursuit to act by any
le than the care of satisfying our own minds.
Steele.

ZING of Cloth, a term in the woollen
ictory, applied to the forming of the nap
f into a number of little hard burrs or
iences, covering almost the whole ground
. Some cloths are only frized on the
as black cloths; others on the right side,
ored and mixed cloths, ratteens, bays,
&c. Frizing may be performed two
one with the hand, by two workmen, who
t a kind of plank that serves for a frizing
nent; the other, by a mill, worked either
ter or a horse, and sometimes by men.
tter is esteemed the better way; as, the
being uniform and regular, the little
are formed more equably and regularly.
ructure of this useful machine is as follows:
ee principal parts are the frizer, or crisper,
zing table and the drawer, or beam. The
st are two equal planks, or boards, each
ten feet long and fifteen inches broad;
ng only in this, that the frizing table is
or covered with a kind of coarse woollen stuff, of a rough sturdy nap; and the frizer is incrustated with a kind of cement, composed of glue, gum arabic, and a yellow sand, with a little aqua vitæ, or urine. The beam, or drawer, thus called because it draws the stuff from between the frizer and the frizing table, is a wooden roller, beset all over with little, fine, short points or ends of wire, like those of cards used in carding of wool. The disposition and use of the machine are thus: the table stands immoveable, and bears or sustains the cloth to be frized, which is laid with that side uppermost on which the nap is to be raised; over the table is placed the frizer, at such a distance from it as to give room for the stuff to be passed between them: so that the frizer, having a very slow semicircular motion, meeting the long hairs or naps of the cloth, twists and rolls them into little knobs or burrs; while, at the same time, the drawer, which is continually turning, draws away the stuff from under the frizer, and winds it over its own points. All that the workman has to do, while the machine is going, is to stretch the stuff on the table, as fast as the drawer takes it off, and from time to time to take off the stuff from the points of the drawer. The design of having the frizing table lined with stuff of a short, stiff, stubby nap is that it may detain the cloth between the table and the frizer long enough for the grain to be formed, that the drawer may not take it away too readily, which must otherwise be the case, as it is not held by any thing at the other end. It is unnecessary to say any thing particular of the manner of frizing stuffs with the hand, it being the aim of the workmen, to imitate as near as they can, with their wooden instrument, the slow, equable, and circular motion of the machine. We need only add, that their frizer is but about two feet long, and one broad; and that, to form the nap more easily, they moisten the surface lightly with water, mingled with whites of eggs or honey.

FRIZ'ZLE, *v. a.* } Fr. *friser*. To curl in
FRIZ'ZLER, *n. s.* } short curls like nap of frieze. A crisp kind of curl induced by heat.

They *frizled* and curled their hair with hot irons.
Hakewill.

——————up stood the corny reed
Embattled in her field, and the' humble shrub,
And bush with *frizzled* hair implicit. *Milton.*

I doffed my shoe, and swear
Therein I spied this yellow *frizzled* hair. *Gay.*

The chiefs were set, while o'er their head
The furze its *frizzled* covering spread. *Beattie.*

FRO, *adv.* Of Sax. fra. Backward; regressively It is only used in opposition to the word *to*: *to* and *fro*, backward and forward; *to* and *from*. As a contraction of *from* it is not now used.

The fayrnesse of a lady that I se
Yond in the gardin, roming to and *fro*,
Is cause of all my crying and my wo.
Chaucer. The Knightes Tale.

For those same islands, seeming now and then
Are not firme land nor any certein wonne,
But stragling plots, which to and *fro* doe ronne
In the wide waters; therefore are they hight
The wandrings Islands: therefore doe them shonne;
For they have oft drowne many a wandring wight
Into most deadly daunger and distressed plight.
Spenser. Faerie Queene.

They turn round like grindlestones,
Which they dig out *fro'* the delves,
For their bairns' bread, wives, and selves.
B. Jonson.

As when a heap of gathered thorns is cast,
Now to, now *fro*, before the autumnal blast,
Together clung, it rolls around the field. *Pope.*

And others hurried to and *fro* and fed
Their funeral piles with fuel, and looked up
With mad disquietude on the dull sky.
Byron. Darkness.

FROBENIUS (John), an eminent printer of the sixteenth century, born at Hammelburg in Franconia. He studied in the university of Basil, where he acquired great reputation for learning; and, setting up a printing-house in that city, was the first of the German printers who brought that art to any degree of perfection. The great character of this printer was the principal motive which induced Erasmus to reside at Basil, in order to have his works printed by him. A great number of valuable books were printed by him with care and accuracy. He died in 1527. Erasmus wrote his epitaph in Greek and Latin. John Frobenius left a son named Jerome Frobenius, and a daughter married to Nicholas Episcopius; who, joining in partnership, continued Frobenius's printing-house with reputation, and printed very correct editions of the Greek Fathers.

FROBISHER, or FORBISHER (Sir Martin), a celebrated navigator and sea officer of the sixteenth century, born at Doncaster in Yorkshire, and from his youth brought up to navigation. He was the first Englishman who attempted to find a north-west passage to China; and, in 1576, he sailed with two barks and a pinnace for that purpose. In this voyage he discovered a cape, to which he gave the name of Queen Elizabeth's Foreland, and the next day a strait, to which he gave his own name. This voyage proving unsuccessful, he attempted the same passage in 1577; but, discovering some ore in an island, and his commission directing him only to search for ore, he returned to England with it. He sailed again with fifteen ships, and a great number of adventurers, to form a settlement; but, being obstructed by the ice, and driven out to sea by a violent storm, they, after encountering many difficulties, returned home, without making any settlement, but with a large quantity of ore. He afterwards commanded the Aid, in Sir Francis Drake's expedition to the West Indies, in which St. Domingo, Carthagena, and Santa Justina, in Florida, were taken and sacked. In 1588 he bravely exerted himself against the Spanish armada, when he commanded the Triumph, one of the largest ships in that service; and, as a reward for his distinguished bravery, received the honor of knighthood from the lord high admiral at sea. He afterwards commanded a squadron which cruised on the Spanish coast; and, in 1592, took two valuable ships and a rich carrac. In 1594 he was sent to the assistance of Henry IV., king of France, against a body of the Leaguers and Spaniards, who had strongly entrenched themselves at Croyzon, near Brest; but in an assault upon that fort, on the 7th of November, he was unfortunately wounded with a ball, of which he died soon after he had brought back the fleet to Plymouth, and was buried in that town.

FROCK, *n. s.* Fr. *froc*. A dress; a coat; a kind of gown for children.

That monster, custom, is angel yet in this,
That to the use of actions fair and good,
He likewise gives a *frock* or livery,
That aptly is put on. *Shakspeare. Hamlet.*

Chalybean tempered steel, and *frock* of mail
Adamantean proof. *Milton's Agonistes.*

I strip my body of my shepherd's *frock*. *Dryden.*

FRODSHAM, a market town of Cheshire, noted for its ancient castle. It has a stone bridge over the Weaver, near its conflux with the Mersey, and a harbour for ships of good burden. By the late inland navigation, it has communication with the rivers Dee, Ribble, Darwent, Ouse, Trent, Severn, Humber, Thames, Avon, &c., which navigation, including its windings, extends about 500 miles in the counties of Lincoln, Nottingham, York, Lancaster, Westmoreland, Stafford, Warwick, Leicester, Oxford, Worcester, &c. Frodsham is ten miles north-east of Chester, and 193 N.N.W. of London.

FROG, *n. s.* Sax. frogga; Swedish *frod;* Teut. *frosch;* Goth. *freja*. A small animal with four feet, living both by land and water, and placed by naturalists among mixed animals, as partaking of beast and fish; famous in Homer's poem. The hollow part of a horse's hoof.

Poor Tom, that eats the swimming *frog*, the toad the tadpole. *Shakspeare. King Lear.*

The screech-owl's eggs and the feathers black;
The blood of the *frog* and the bone in his back,
I have been getting: and made of his skin
A purset to keep sir Cranion in. *Ben Jonson.*

Auster is drawn with a pot or urn, pouring forth water, with which shall descend *frogs*. *Peacham.*

FROG'-BIT, *n. s.* Frog and bit. An herb.

FROG'-FISH, *n. s.* Frog and fish. A kind of fish.

FROG'-GRASS, *n. s.* Frog and grass. A kind of herb.

FROG'-LETTUCE, *n. s.* Frog and lettuce. A plant.

FROISE, *n. s.* From the Fr. *froisser*, as the pancake is crisped or crimpled in frying. A kind of food made by frying bacon enclosed in a pancake.

FROISSARD, or FROISSART (John), an eminent English chronicler and poet, was born at Valenciennes in 1337. He was canon and treasurer of Chimay in Hainault. His chief work is a Chronicle of the Transactions in France, Spain, and England, from 1326 to 1400: which is reckoned very accurate, and highly valued by all earnest students of ancient manners. The best edition is that of Lyons in 4 vols. folio, 1559. Sleidan abridged it, and Monstrelet continued it down to 1466. It was translated in the reign of Henry VIII. by lord Berners, and latterly by Mr. Johnes of Hafod. Froissard resided long in the court of queen Phillippa, wife of Edward III. He has often been accused of partiality to the English. He died about 1410.

ROL'IC, *adj.* & *n. s.* } Belgic *vrolyk*; Teut. *frohlich, frok*, joy; Goth. *froleica, fro*. Gay; full of levity and of wild
ROL'ICLY, *adv.*
ROL'ICSOME, *adj.*
ROL'ICSOMENESS, *n. s.*
ROL'ICSOMLY, *adv.*
ks; a flight of whim and wild joyousness.

And, for more joy, that captive lady faire,
e faire Pœana, he enlarged free,
And by the rest did set in sumptuous chaire
feast and *frolicke*; nathemore would she
ew gladsome countenance nor pleasant glee.
Spenser's Facrie Queene.

We fairies, that do run
By the triple Hecate's team,
From the presence of the sun,
Following darkness like a dream,
Now are *frolick*. *Shakspeare.*

Whether, as some sages sing,
The *frolick* wind that breathes the Spring,
Zephyr with Aurora playing,
As he met her once a Maying;
There on beds of violets blue,
And fresh-blown roses washed in dew,
Filled her with thee a daughter fair,
So buxom, blithe, and debonnair. *Milton.*

Who ripe, and *frolick* of his full-grown age,
oving the Celtic and Iberian fields,
t last betakes him to this ominous wood. *Id.*

anly spirit and genius plays not tricks with
ls, nor *frolicks* with the caprices of a frothy ima-
tion. *Glanville.*

He would be at his *frolick* once again,
And his pretensions to divinity. *Roscommon.*

he gay, the *frolick*, and the loud. *Waller.*

Then to her new love let her go,
And deck her in golden array;
Be finest at every fine show,
And *frolick* it all the long day. *Rowe.*

have heard of some very merry fellows, among
m the *frolic* was started, and passed by a great
ority, that every man should immediately draw
oth. *Steele.*

Alcibiades, having been formerly noted for the
frolicks and excursions, was immediately accused
his. *Swift.*

While rain depends, the pensive cat gives o'er
frolicks, and pursues her tail no more. *Id.*

From morn till night, from night till startled morn,
eps blushing on the Revel's laughing crew,
The song is heard, the rosy garland worn,
vices quaint, and *frolicks* ever new,
Tread on each other's kibes.
Byron. Childe Harold.

FROM, *prep.* Sax. and Scott. ꝼnam. Of s monosyllable, Dr. Johnson has given no ver than twenty meanings, and to these he has ded twenty-two other manners of using it, ac-mpanying each with instances sufficiently merous as proofs; yet in all his instances *m* continues, says Tooke (in his Diversions of urley), to retain invariably one and the same gle meaning. See the following quotation. roceeding 'on the basis of Dr. Johnson's dic-nary,' we give his entire article; but must re again advertise the reader that we consider r. Tooke to have demonstrated the utter fallacy his numerous distinctions.

Mr. Tooke first notices Mr. Harris's view of hat he considers the three different relations of is word, the two last of which are in absolute ontradiction to each other. He then adduces the following illustrations of these different relations:—'FROM,' he says, 'denotes the detached relation of body; as when we say—*these figs came* FROM *Turkey*. So as to *motion* and *rest*, only with this difference, that here the preposition *varies its character with the verb*; thus if we say, *that lamp hangs* FROM *the ceiling*, the preposition *from* assumes a character of quiescence; but if we say, *that lamp is falling* FROM *the ceiling*, the preposition in such case assumes a character of *motion*.' And to the whole he thus replies:—'I take the word *from* to have as clear, precise, and at all times, as uniform and unequivocal meaning as any word in the language. FROM means merely beginning and nothing else. It is simply the Anglo-Saxon and Gothic noun ꝼnum, FRUM, *beginning, origin, source, fountain, author*. Now then, if you please, we will apply this meaning to Mr. Harris's formidable instances, and try whether we cannot make FROM speak clearly for itself, without the assistance of the *interpreting* verbs; which are supposed by Mr. Harris, to *vary its character* at will, and make the preposition appear as inconsistent and contradictory as himself.

Figs *came* FROM Turkey.
Lamp *falls* FROM ceiling.
Lamp *hangs* FROM ceiling.

Came is a complex term for one species of motion.

Falls is a complex term for another species of motion.

Hangs is a complex term for a species of attachment.

Have we occasion to communicate or mention the COMMENCEMENT OF BEGINNING of these motions and of this attachment; and the *place* where these motions and this attachment commence or begin? It is impossible to have complex terms for each occasion of this sort. What more natural then, or more simple, than to add the signs of those ideas, viz. the word BEGINNING (which will remain always the same), and the name of the *place* (which will perpetually vary)?

Thus,

'Figs came—BEGINNING Turkey.
Lamp falls—BEGINNING ceiling.
Lamp hangs—BEGINNING ceiling.'

That is,

Turkey the *place* of BEGINNING to come.
Ceiling the *place* of BEGINNING to fall.
Ceiling the *place* of BEGINNING to hang.'

Having thus assigned its meaning, when it relates to *place*, Mr. Tooke proceeds to comment on what Wilkins calls its secondary application to *time*.

'*From* morn till night the' eternal larum rung.'

He admits that there is no place referred to in this line; but he contends that *from* relates to every thing to which BEGINNING relates, and to nothing else; and therefore is referable to time as well as to motion, without which indeed there can be no time. 'The larum rung BEGINNING morning.' That is, morning being the time of its beginning to ring. The Diversions of Purley, chap. 9, page 321. Here follows Dr.

Johnson's list of meanings, with a few superadded illustrations.

Away; noting privation.

Jubal first made the wilder notes agree,
And Jubal tuned Musick's Jubilee;
He called the echoes *from* their sullen cell,
And built the organ's city where they dwell.
Marvell. Musick's Empire.

Your slighting Zulema, this very hour
Will take ten thousand subjects *from* your power.
Dryden.

In fetters one the barking porter ty'd,
And took him trembling *from* his sovereign's side.
Id.

Clarissa drew, with tempting grace,
A two-edged weapon *from* the shining case. *Pope.*

But ne'er *from* strife—captivity—remorse—
From all his feelings in their inmost force—
So thrilled—so shuddered every creeping vein
As now they froze before that purple stain.
Byron. Corsair.

Noting reception.

What time would spare *from* steel receives its date.
Pope.

Noting procession, descent, or birth.

The song began *from* Jove. *Dryden.*

Thus the hard and stubborn race of man
From animated rock and flint began. *Blackmore.*

Succeeding kings rise *from* the happy bed. *Irene.*

Noting transmission.

The messengers *from* our sister and the king.
Shakspeare.

This is the colony to plant his knaves
From hence he picks and culls his murdering braves.
Marvell.

And *from* the summit of that craggy mound
The perching eagle oft was heard to cry,
Or on resounding wings to shoot athwart the sky.
Beattie.

Noting abstraction or vacation.

I shall find time
From this enormous state, and seek to give
Losses their remedies. *Shakspeare. King Lear.*

With *to* following; noting succession.

These motions we must examine *from* first *to* last, to find out what was the form of the earth. *Burnet.*

He bid her *from* time *to* time be comforted.
Addison.

Out of; noting emission.

When the most high
Eternal Father, *from* his secret cloud
Amidst, in thunder uttered thus his voice.
Milton.

Then, pierced with pain, she shook her haughty head,
Sighed *from* her inward soul, and thus she said.
Dryden.

Noting progress from premises to inferences.

If the objection be not removed, the conclusion of experience *from* the time past to the time present will not be sound and perfect. *Bacon.*

This is evident *from* that high and refined morality, which shined forth in some of the ancient heathens.
South.

Noting the place or person from whom a message is brought.

The king is coming, and I must speak with him *from* the bridge.
—How now, Fluellan, cam'st thou *from* the bridge?
Shakspeare. Henry V.

Out of; noting extraction.

From high Meonia's rocky shores I came,
Of poor descent: Acætes is my name. *Addison.*

Because of; noting the reason or motive of an act or effect.

David celebrates the glory of God *from* the consideration of the greatness of his works. *Tillotson.*

You are good, but *from* a nobler cause;
From your own knowledge, not *from* nature's laws.
Dryden.

We sicken soon *from* her contagious care;
Grieve for her sorrows, groan for her despair.
Prior.

Relaxation *from* plenitude is cured by spare diet, and *from* any cause by that which is contrary to it.
Arbuthnot on Aliments.

Out of; noting the ground or cause of any thing.

By the sacred radiance of the sun,
The mysteries of Hecate, and the night;
By all the operations of the orbs,
From whom we do exist, and cease to be,
Here I disclaim all my paternal care.
Shakspeare.

They who believe that the praises which arise *from* valour are superior to those which proceed *from* any other virtues, have not considered. *Dryden.*

What entertainment can be raised *from* so pitiful a machine? We see the success of the battle *from* the very beginning. *Id.*

'Tis true *from* force the strongest title springs,
I therefore hold *from* that which first made kings.
Id.

Not near to; noting distance.

His regiment lies half a mile at least
South *from* the mighty power of the king.
Shakspeare.

Noting separation or recession.

To die by thee, were but to die in jest;
From thee to die, were torture more than death.
Shakspeare.

Hast thou beheld, when *from* the goal they start,
The youthful charioteers with heaving heart,
Rush to the race, and panting, scarcely bear,
The' extremes of feverish hope and chilling fear.
Id. Virgil.

Noting exemption or deliverance.

And whos child that it was he bade hire hide
From every wight, for aught that may betide.
Chaucer. The Clerkes Tale.

From Jealousy's tormenting strife,
For ever be thy bosom freed. *Prior.*

Noting absence.

Our father he hath writ, so hath our sister,
Of differences, which I best thought it fit,
To answer *from* our home.
Shakspeare. King Lear.

Noting derivation.

I lay the deep foundations of a wall,
And Enos, named *from* me, the city call.
Dryden.

Since. Noting distance from the past.

The flood was not the cause of mountains, but there were mountains *from* the creation. *Raleigh.*

I had *from* my childhood a wart upon one of my fingers. *Bacon.*

The other had been trained up *from* his youth in the war of Flanders. *Clarendon.*

Were there, *from* all eternity, no memorable actions done 'till about that time? *Tillotson.*

The milk of tigers was his infant food,
Taught *from* his tender years the taste of blood.
Dryden.

ntrary to. Not in use.
y thing so overdone is *from* the purpose of play-
whose end, both at the first and now, was and
hold, as 'twere, the mirrour up to nature.
Shakspeare. Hamlet.

Do not believe,
at *from* the sense of all civility,
hus would play and trifle with your reverence.
Id.

d you draw bonds to forfeit? Sign, to break?
ust we read you quite *from* what we speak,
find the truth out the wrong way? *Donne.*

oting removal.

Thrice *from* the ground she leaped. *Dryden.*

rom is very frequently joined by an ellipsis
adverbs: as, *from above*, *from* the parts
e; *from below*, *from* the places *below*; of
h some are here exemplified.

rom above.

e, which gave them *from above* such power, for
culous confirmation of that which they taught,
ed them also with wisdom *from above*, to teach
which they so did confirm. *Hooker.*

No sooner were his eyes in slumber bound,
Then, *from above*, a more than mortal sound
vades his ears. *Dryden's Æneid.*

rom afar.

Light demilances *from afar* they throw.
Dryden.

rom beneath.

/ith whirlwinds *from beneath* she tossed the ship
bare exposed the bottom of the deep. *Dryden.*
n arm arises out of Stygian flood,
ich, breaking *from beneath* with bellowing sound,
irls the black waves and rattling stones round.
Id.

From behind.

ee, to their base restored, earth, seas, and air,
d joyful ages *from behind*, in crowding ranks appear.
Dryden.

From far.

A ship of merchants, that fetches her wares *from*
, is the good housewife of the commonwealth.
Bp. Hall.

Their train proceeding on their way,
From far the town and lofty towers survey.
Dryden.

From high.

Then heaven's imperious queen shot down *from*
high. *Dryden.*

From hence. Here *from* is superfluous.

In the necessary differences which arise *from*
nce, they rather break into several divisions than
n in any one public interest; and *from hence* have
ways risen the most dangerous factions, which have
ned the peace of nations. *Clarendon.*

From whence. *From* is here superfluous.

While future realms his wandering thoughts de-
light,
is daily vision, and his dream by night,
rbidden Thebes appears before his eye,
rom *whence* he sees his absent brother fly. *Pope.*

From where.

From where high Ithaca o'erlooks the floods,
rown with o'erarching shades and pendent woods,
s to these shores our filial duty draws.
Pope's Odyssey.

From without.

When the plantation grows to strength, then it is
me to plant it with women as well as with men,
at it may spread into generations, and not be
erced *from without*. *Bacon.*

If native power prevail not, shall I doubt
To seek for needful succour *from without*
Dryden.

From is sometimes followed by another preposition, with its proper case.

From amidst.

Thou too shalt fall by time or barbarous foes,
Whose circling walls the seven famed hills enclose;
And thou, whose rival towers invade the skies,
And *from amidst* the waves with equal glory rise.
Addison.

From among.

Here had new begun
My wandering, had not he, who was my guide
Up hither, *from among* the trees appeared,
Presence divine. *Milton's Paradise Lost.*

From beneath.

My worthy wife our arms mislaid,
And *from beneath* my head my sword conveyed.
Dryden's Æneid.

From beyond.

There followed him great multitudes of people from Galileo, and *from beyond* Jordan.
Matthew iv. 25.

From forth.

Young Aretus, *from forth* his bridal bower,
Brought the full laver o'er their hands to pour,
And canisters of consecrated flour.
Pope's Odyssey.

From off.

Knights, unhorsed, may rise *from off* the plain,
And fight on foot, their honour to regain. *Dryden.*

The sea being constrained to withdraw *from off* certain tracts of lands, which lay till then at the bottom of it. *Woodward.*

From out.

And join thy voice unto the angel-quire,
From out his secret altar touched with hallowed fire.
Milton.

The king with angry threatnings *from out* a window, where he was not ashamed the world should behold him a beholder, commanded his guard and the rest of his soldiers to hasten their death.
Sidney.

Now shake, *from out* thy fruitful breast, the seeds
Of envy, discord, and of cruel deeds.
Dryden's Æneid.

Strong god of arms, whose iron sceptre sways
The freezing North and hyperborean seas,
Terror is thine, and wild amazement, flung
From out thy chariot, withers even the strong.
Dryden.

From out of.

Whatsoever such principle there is, it was at the first found out by discourse, and drawn *from out of* the very bowels of heaven and earth. *Hooker.*

From under.

He, though blind of sight,
Despised, and thought extinguished quite,
With inward eyes illuminated,
His fiery virtue roused
From under ashes into sudden flame.
Milton's Agonistes.

From within.

From within
The broken bowels, and the bloated skin
A buzzing noise of bees his ears alarms.
Dryden.

FROME, a river of England, that rises from several springs in the south-west of Dorsetshire, and, running almost due west, passes under Frampton-bridge to Dorchester, and falls into a

bay of the English Channel, called Poolhaven, near Wareham.

FROME, or FROME-SELWOOD, a town of Somersetshire, and one of the most considerable of this part of the country, which was anciently one great forest, called Selwoodshire. Here is a large handsome church, 150 feet long, and fifty-four broad, comprising a nave, chancel, north and south aisles, four chapels, and a vestry-room, with a square embattled tower and an octagonal spire, 120 feet high. There are likewise several meeting-houses in the town, belonging to different denominations of dissenters, two of which are large handsome edifices. Near the bridge stands a free-school for twenty boys, and an alms-house for widows; the latter is a handsome building, and was erected, by subscription, in 1720. Here is also an hospital for old men, a charity-school for boys, and an asylum for girls, together with various Sunday-schools, which afford instruction to 2000 children. The chief manufacture is broad and narrow cloth. Formerly more wire cards, for carding wool for the spinners, were made at this place than in all the rest of England, and there were no fewer than twenty master card-makers, one of whom employed 400 men, women, and children, in that manufactory at once. This town has been long noted for its fine ale, which is kept to a great age. It is thirteen miles south of Bath, and 105 west by south of London.

FRO'MWARD, *prep.* Sax. ꝼþam and þeaꞃd. Away from; the contrary to the word towards. Not now in use.

As cheerfully going towards as Pyrocles went froward *fromward* his death. *Sidney.*

The horizontal needle is continually varying towards East and West; and so the dipping or inclining needle is varying up and down, towards or *fromwards* the zenith. *Cheyne.*

FRONDESCENTIÆ TEMPUS, in botany, the precise time of the year and month, in which each species of plants unfolds its first leaves. All plants produce new leaves every year; but all do not renew them at the same time. Among woody plants, the elder, and most of the honeysuckles; among the perennial herbs, the crocus and tulip are the first that push or expand their leaves. The time of sowing the seeds decides with respect to annuals. The oak and ash are constantly the latest in pushing their leaves; the greatest number unfold them in spring; the mosses and firs in winter. These striking differences seem to indicate that each species of plants has a temperature proper or peculiar to itself, and requires a certain degree of heat to extricate the leaves from the buds. This temperature, however, is not so fixed or constant as it may at first view appear. Among plants of the same species, there are some more early than others; whether that circumstance depends, as it most commonly does, on the nature of the plants, or is owing to differences in heat, exposure, and soil. In general, it may be affirmed that small and young trees are always earlier than larger or old ones. The pushing of the leaves is likewise accelerated or retarded, according to the temperature of the season; that is, according as the sun is sooner or later in dispensing the degree of heat suitable to each species.

FRONDI'FEROUS, *adj.* Latin *frondifer* Bearing leaves.

FRONT, *n. s., v. a.* & *v. n.* } Fr. *front*; Lat.
FRONT'ED, *adj.* } *frons.* Face and
FRONT'LESS, *adj.* } front both signify

the human countenance, and figuratively designate the particular parts of bodies, which bear some sort of resemblance to it, or to the forehead. Crabb thus distinguishes their peculiar application: 'Face is applied to that part of bodies which serves as an index or rule, and contains certain marks to direct the observer; front is employed for that part which is most prominent or foremost: hence we speak of the face of a wheel or clock, the face of a painting, or the face of nature; but the front of a house or building, and the front of a stage: hence likewise the propriety of the expressions, to put a good face on a thing; to show a bold front.' The verb signifies to oppose directly, or face to face, in the sense of confront; to stand opposed or over against any place or thing; to stand foremost. Frontless is used in the sense of barefaced unblushing impudence.

I *front* but in that file,
Where others tell steps with me.
Shakspeare. Henry VIII.

You four shall *front* them in the narrow lane; we will walk lower: if they 'scape from your encounter, then they light on us. *Shakspeare.*

Can you, when you have pushed out of your gates the very defender of them, think to *front* his revenges with easy groans? *Id.*

Some are either to be won to the state in a fast and true manner, or *fronted* with some other of the same party that may oppose them, and so divide the reputation. *Bacon's Essays.*

Both these sides are not only returns, but parts of the *front*; and uniform without, though severally portioned within, and are on both sides of a great and stately tower, in the midst of the *front*. *Bacon.*

The access of the town was only by a neck of land: our men had shot, that thundered upon them from the rampier in *front*, and from the gallies that lay at sea in flank. *Id.*

His forward hand, inured to wounds, makes way
Upon the sharpest *fronts* of the most fierce. *Daniel.*

They stand not *front* to *front*, but each doth view
The other's tail, pursued as they pursue. *Creech.*

Part *fronted* brigades form. *Milton.*

'Twixt host and host but narrow space was left,
A dreadful interval! and *front* to *front*
Presented, stood in terrible array.
Id. Paradise Lost.

Next do the lawyers sordid band appear,
Finch in the *front* and Thurland in the rear.
Marvell.

Palladius adviseth the *front* of his edifice should so respect the South, that in its first angle it receive the rising rays of the Winter's sun, and decline a little from the winter setting thereof. *Browne.*

The prince approached the door,
Possessed the porch, and on the *front* above
He fixed the fatal bough. *Dryden's Æneid.*

Thee, *frontless* man, we followed from afar,
Thy instruments of death and tools of war.
Dryden.

For vice, though *frontless*, and of hardened face,
Is daunted at the sight of awful grace. *Id.*

The square will be one of the most beautiful in Italy when this statue is erected, and a town house

t one end to *front* the church that stands at the
Addison on Italy.

sees the *front* of a palace covered with painted
of different orders. *Id.*

front yet threatens, and his frowns command.
Prior.

trike a blush through *frontless* flattery. *Pope.*

ere the deep trench in length extended lay,
acted troops stand wedged in firm array,
adful *front*. *Id.*

: patriot virtues that distend thy thought,
d on thy *front* and in thy bosom glow.
Thomson.

: high moon sails upon her beauteous way,
ely smoothing o'er the lofty walls
se tall piles and sea-girt palaces,
e porphyry pillars, and whose costly *fronts*,
ht with the orient spoil of many marbles,
altars ranged along the broad canal,
each a trophy of some mighty deed
d up from out the waters.
Byron. The Doge of Venice.

They erred, as aged men will do; but by
d by we'll talk of that; and if we don't
will be because our notion is not high
politicians, and their double *front*
ho live by lies, yet dare not boldly lie. *Byron.*

ey reached the hotel: forth streamed from the
front door
le of well clad waiters; and around
mob stood, and as usual several score
ose pedestrian Paphians, who abound
cent London, when the day light's o'er. *Id.*

RONT, in architecture, denotes the principal or side of a building, or that presented to chief aspect or view.

RO'NTAL, *n. s.* Fr. *frontale*; Lat. *frontale*. external form of medicine to be applied to forehead, generally composed among the ants of coolers and hypnoticks.

e may apply intercipients upon the temples of ick: *frontales* may also be applied. *Wiseman.*

he torpedo, alive, stupefies at a distance; but death produceth no such effect; which had retained, they might have supplied opium, and ed as *frontals* in phrensies. *Browne.*

RONTAL, FRONTLET, or brow-band, in the ish ceremonies, consists of four several pieces ellum, on each of which is written some text cripture. They are all laid on a piece of k calf's leather with thongs to tie it by. The s apply the leather with the vellum on their heads in the synagogue, and tie it round the d with the thongs.

'RO'NTATED, *adj.* Lat. *frons*. In botany, frontated leaf of a flower grows broader and ader, and at last perhaps terminates in a right : used in opposition to cuspated, which is, n the leaves of a flower end in a point.

'RO'NTBOX, *n. s.* Front and box. The in the playhouse from which there is a direct w to the stage.

How vain are all these glories, all our pains,
Unless good sense preserve what beauty gains!
That men may say, when we the *frontbox* grace,
Behold the first in virtue, as in face. *Pope.*

'RO'NTIER, *n. s.* & *adj.* Fr. *frontiere*. The it or utmost verge of any territory; the bor-; properly that which terminates not at the sea, but fronts another country; bordering; con terminous.

Draw all the inhabitants of those borders away, or plant garrisons upon all those *frontiers* about him.
Spenser on Ireland.

I upon my *frontiers* here keep residence,
That little which is left so to defend. *Milton.*

Yet had his temple high
Reared in Azotus, dreaded through the coast
Of Palestine, in Gath and Askalon,
An Accaron and Gaza's *frontier* bounds.
Id. Paradise Lost.

A place there lies on Gallia's utmost bounds,
Where rising seas insult the *frontier* grounds.
Addison.

Beyond the *frontiers*, his anxious view could discover nothing, except the ocean, inhospitable deserts, hostile tribes of barbarians of fierce manners and unknown language, or dependant kings who would gladly purchase the emperor's protection by the sacrifice of an obnoxious fugitive. *Gibbon.*

FRONTIERS are the extremes of a kingdom or country, which the enemies find in front when they would enter it. They were anciently called marches.

FRONTINAC, FORT, a fortress of Canada, on the north-west side of Lake Ontario, three miles from its mouth, and 300 from Quebec. It was taken from the French, in August 1759, by the British under colonel Bradstreet, though defended by 110 men and sixty pieces of cannon, besides Indians.

FRONTINUS (Sextus Julius), an ancient Roman anthor, of consular dignity, who flourished under Vespasian, Titus, Domitian, Nerva, and Trajan. He commanded the Roman armies in Britain; was made city prætor when Vespasian and Titus were consuls; and curator of the aqueducts by Nerva, which occasioned his writing De Aquæductibus Urbis Romæ. He wrote four books upon the Greek and Roman art of war; a tract De re Agrariâ, and another De Limitibus. These have been often separately printed; but were all collected in a neat edition at Amsterdam, in 1661, with notes by Robert Keuchen. He died under Trajan.

FRO'NTISPIECE, *n. s.* Fr. *frontispice*; Lat. *frontispicium*, id quod in fronte conspicitur. That part of any building or other body that directly meets the eye.

With *frontispiece* of diamond and gold
Embellished, thick with sparkling orient gems
The portal shone. *Milton's Paradise Lost*

Who is it has informed us that a rational soul can inhabit no tenement, unless it has just such a sort of *frontispiece?* *Locke.*

The *frontispiece* of the townhouse has pillars of a beautiful black marble, streaked with white.
Addison

FRO'NTLET, *n. s.* Fr. *fronteau*; Lat. *frons*. A bandage worn upon the forehead.

They shall be as *frontlets* between thine eyes.
Deut. vi. 8.

How, now, daughter, what makes that *frontlet* on? You are too much of late i' the frown.
Shakspeare.

To the forehead *frontlets* were applied, to restrain and intercept the influx. *Wiseman's Surgery.*

FRONTO (Marcus Cornelius), a Roman orator, preceptor to the emperor Marcus Aurelius and

Lucius Verus. The former made him consul, and erected a statue to his honor.

FRONTRO'OM, *n. s.* Front and room. An apartment in the fore part of the house.

If your shop stands in an eminent street, the *frontrooms* are commonly more airy than the backrooms; and it will be inconvenient to make the *frontroom* shallow. *Moxon.*

FRONZELLA, one of the seventeen almost inaccessible passes through the mountains of Vicenza, in Italy, commencing in the Valley of Brenta. It is the narrowest of them, and is so 'covered by perpendicular rocks, 300 feet high, that a ray of the sun can scarcely penetrate into the pass, and the eye cannot perceive the sky.' Yet 'this road (says, Dr. Oppenheim), is the easiest and most passable' of the seventeen, 'except during rain or snow, when it is the most perilous.'

FRORE, *adj.* } Dutch *bevrozen*, frozen.
FRORNE. } Frozen. This word is not used since the time of Milton.

O, my heart-blood is well nigh *frorne* I feel,
And my galage grown fast to my heel.
Spenser's Past.

The parching air
Burns *frore*, and cold performs the' effect of fire.
Milton.

FROST, *n. s.* } Sax. ꝼꞃoꞃꞇ; Dan. Swed.
FROS'TED, *adj.* } and Teut. *frost;* Belg.
FROS'TILY, *adv* } *vrost.* The last effect of
FROST'INESS, *n. s.* } cold; the power or act of
FROS'TY, *adj.* } congelation; the appearance of plants and trees sparkling with congelation of dew: the adjective is applied to whatever in appearance resembles this: the adverb is applied not only to natural cold but to want of animal warmth, and to coldness of affection; likewise to the head that is gray with age.

His eyen twinkeled in his hed aright,
As don the sterres in a *frosty* night.
Chaucer. Prologue to Cant. Tales.

There they doe finde that godly aged sire,
With snowy lockes adowne his shoulders shed;
As hoary *frost* with spangles doth attire
The mossy branches of an oke halfe ded.
Spenser's Faerie Queene.

This is the state of man; to-day he puts forth
The tender leaves of hope, to-morrow blossoms
And bears his blushing honours thick upon him;
The third day comes a *frost*, a killing *frost*,
And when he thinks, good easy man, full surely
His greatness is a ripening, nips his root,
And then he falls. *Shakspeare. Henry VIII.*

Where is loyalty?
If it be banished from the *frosty* head,
Where shall it find a harbour in the earth?
Shakspeare.

What a *frosty* spirited rogue is this! *Id.*

For all my blood in Rome's great quarrel shed,
For all the *frosty* nights that I have watched,
Be pitiful to my condemned sons.
Id. Titus Andronicus.

The air, if very cold, irritateth the flame, and maketh it burn more fiercely; as fire scorcheth in *frosty* weather. *Bacon.*

Courtling, I rather thou should'st utterly
Dispraise my work, than praise it *frostily*.
Ben Jonson.

A gnat half-starved with cold and hunger, went out one *frosty* morning to a bee-hive. *L'Estrange.*

When the *frost* seizes upon wine, only the more waterish parts are congealed; there is a mighty spirit which can retreat into itself, and within its own compass lies secure from the freezing impression. *South.*

The rich brocaded silk unfold,
Where rising flowers grow stiff with *frosted* gold.
Gay.

Behold the groves that shine with silver *frost*,
Their beauty withered, and their verdure lost.
Pope.

The Hours had now unlocked the gate of day,
When fair Aurora leaves her *frosty* bed,
Hasting with youthful Cephalus to play
Unmasked her face, and rosy beauties spread:
Tithonus' silver age was much despised;
Ah! who in love that cruel law devised,
That old love's little worth, and new too highly prized? *Fletcher's Purple Island.*

'Tis the same landscape which the modern Mars saw
Who marched to Moscow, led by Fame the Syren!
To lose by one month's *frost* some twenty years
Of conquest and his guard of grenadiers. *Byron.*

FROST, in physiology. Having under the articles COLD, CONGELATION, and FREEZING, entered fully into the various phenomena of freezing, we shall only here add a few miscellaneous observations on particular effects of frost.

Being derived from the atmosphere, (see METEOROLOGY), frost naturally proceeds from the upper parts of bodies downwards, as the water and the earth: so, the longer a frost is continued, the thicker the ice becomes upon the water in ponds, and the deeper into the earth the ground is frozen. In about sixteen or seventeen days frost, Mr. Boyle found it had penetrated fourteen inches into the ground. At Moscow, in a hard season, the frost will penetrate two feet deep in the ground; and captain James found it penetrated ten feet deep in Charlton Island, and the water in the same island was frozen to the depth of six feet. Scheffer assures us, that in Sweden the frost pierces two cubits or Swedish ells into the earth, and turns what moisture it finds there into a whitish substance, like ice; and standing waters to three ells, or more. The same author also mentions sudden cracks in the ice of the lakes of Sweden, nine or ten feet deep, and many leagues long; the rupture being made with a noise not less loud than if many guns were discharged together. By such means, however, the fishes are furnished with air; so that they are rarely found dead. In the northern parts of the world the most compact bodies are affected by frost. Timber is often apparently frozen, and rendered exceedingly difficult to saw. Marl, chalk, and other less solid terrestrial concretions, will be shattered by strong and durable frosts. Metals are contracted by frost, thus, an iron tube twelve feet long, upon being exposed to the air in a frosty night, lost two lines of its length. On the contrary, frost swells or dilates water nearly one tenth of its bulk. Mr. Boyle made several experiments with metalline vessels, exceedingly thick and strong; which being filled with water, close stopped, and exposed to the cold, burst by the expansion of the frozen fluid within them. Trees are often destroyed by frost,

urnt up by the most excessive heat; and, y strong frosts, walnut trees, ashes, and aks, are sometimes split and cleft, so as to n through, and this with a terrible noise, e explosion of fire-arms. In cold coun- he frost often proves fatal to mankind; cing gangrenes, and even death itself. who die of it have their hands and feet first , till they grow past feeling it; after which st of their bodies are so invaded, that they ken with a drowsiness, which if indulged, wake no more, but die insensibly. It also imes seizes the abdomen and viscera, which issection are found to be mortified and .

e great power of frost on *vegetables* is iently known: but the differences between rosts of a severe winter, and those which en in the spring mornings, in their effects on s and trees, were never perfectly explained y Messrs. Du Hamel and Buffon, in the ioirs of the Paris Academy. The frosts of e winters are much more terrible than those ie spring, as they bring on a privation of all roducts of the tenderer parts of the vegetable d; but then they are not frequent, such ers happening perhaps but once in an age; the frosts of the spring are in reality greater ries to us than these, as they are every year ated. In regard to trees, the great difference ais, that the frosts of severe winters affect i their wood, their trunks and large branches; reas those of the spring have only power to t the buds. The winter frosts happening at me when most of the trees in our woods and lens have neither leaves, flowers, nor fruits n them, and have their buds so hard as to be of against slight injuries of weather, espe- ly if the preceding summer has not been too ; in this state, if there are no unlucky cir- nstances attending, most trees bear moderate ters very well: but hard frosts, which happen e in winter, cause very great injuries even to se trees which they do not utterly destroy. ese are, 1. Long cracks following the direc- n of the fibres. 2. Parcels of dead wood en- sed round with wood yet in a living state. id 3. That distemperature which foresters call e double blea, which is a perfect circle of blea, soft white wood, which, when the tree is after- rds felled, is found covered by a circle of hard d solid wood.

The opinions of authors about the exposition trees to the different quarters, have been ry different, and most of them grounded on rational foundation. Many are of opinion that e effects of frosts are most violently felt on those ees which are exposed to the north, and others ink the south, or the west the most strongly af- cted by them. There is no doubt but the north posure is subject to the greatest cold. It does ot, however, follow from this, that the injury must e always greatest on the trees exposed to the north i frosts: on the contrary, there are abundant roofs, that it is on the south side that trees are enerally most injured by frost: and it is plain om repeated experiments, that there are par- icular accidents, under which a more moderate rost may do more injury to vegetables, than the most severe one which happens to them under more favorable circumstances. It is plain from the accounts of the injuries trees received by the frost in 1709, that the greatest of all were owing to repeated false thaws, succeeded by repeated new frosts. But the frosts of the spring furnish abundantly more numerous examples of this truth; and some experiments made by the count de Buffon, in his own woods, prove incontestably, that it is not the severest cold or most fixed frost that does the greatest injury to vegetables. This is an observation directly opposite to the common opinions, yet it is not the less true, nor any way discordant to reason.

We find, by a number of experiments, that it is humidity that makes frost fatal to vegetables; and therefore every thing that can occasion humidity in them, exposes them to these injuries, and every thing that can prevent or take off an over proportion of humidity in them, every thing that can dry them, though with ever so increased a cold, must prevent or preserve them from those injuries. Numerous experiments and observations tend to prove this. It is well known that vegetables always feel the frost very desperately in low places where there are fogs. The plants which stand by a river side are frequently found destroyed by the spring and autumnal frosts, while those of the same species, which stand in a drier place, suffer little or perhaps not at all by them; and the low and wet parts of forests are well known to produce worse wood than the high and drier. The coppice wood in wet and low parts of common woods, though it push out more vigorously at first than that of other places, yet never comes to so good a growth; for the frost of the spring killing these early top shoots, obliges the lower part of the trees to throw out lateral branches: and the same thing happens in a greater or less degree to the coppice wood that grows under cover of larger trees in great forests; for here the vapors, not being carried off either by the sun or wind, stagnate and freeze, and in the same manner destroy the young shoots, as the fogs of marshy places. It is a general observation, also, that the frost is never hurtful to the late shoots of the vine, or to the flower-buds of trees, except when it follows heavy dews, or a long rainy season, and then it never fails to do great mischief, though it be ever so slight. The frost is always observed to be more mischievous in its consequences on newly cultivated ground than in other places; and this is because the vapors, which continually arise from the earth, find an easier passage from those places than from others. Trees also which have been newly cut, suffer more than others by the spring frosts, which is owing to their shooting out more vigorously. Frosts also do more damage on light and sandy grounds, than on the tougher and firmer soils, supposing both equally dry; and this seems partly owing to their being more early in their productions, and partly to their lax texture suffering a greater quantity of vapors to transpire. It has also been frequently observed, that the side-shoots of trees are more subject to perish by the spring frosts than those from the top; and M. Buffon, who examined into this with great accuracy, always found the

effects of the spring frosts much greater near the ground than elsewhere. The shoots within a foot of the ground quickly perished by them; those which stood at two or three feet high bore them much better; and those at four feet and upwards frequently remained wholly unhurt, while the lower ones were entirely destroyed. A series of observations have proved, beyond all doubt, that it is not the hard frosts which so much hurt plants, as those frosts, though less severe, which happen when they are full of moisture; and this clearly explains the account of all the great damages done by the severe frosts being on the south side of the trees which are affected by them, though that side has been plainly all the while less cold than the north. Great damage is also done to the western sides of trees and plantations, when after a rain with a west wind the wind turns about to the north at sunset, as is frequently the case in spring, or when an east wind blows upon a thick fog before sunrising.

It should be added that frost is in the northern parts of the world a constant assistant in preserving meat. It has also other recommendations, and becomes an important assistant of their architecture, in the hands of the Esquimaux tribes.

Their winter huts are built entirely of snow frozen into a solid mass. The snow is formed into blocks, which laid over each other, and gradually bending inwards, terminate in a regular dome, sometimes nine or ten feet high. A plate of ice forms the window. When clusters of these huts have had their intervals filled up with snow and drift, they cannot be distinguished from the surrounding plain, and may be walked over; hence the idea of Greenland subterranean habitations; but, when the roof is thinned by thawing, a leg is apt to come down through it. The entrance is long, and under ground, as described by Scoresby. In the interior, raised benches of snow, covered with skins, serve for sitting or sleeping on. Heat, light, and cooking, are afforded by one lamp, having a wick eighteen inches long, fed with oil or blubber, and which, when lighted through its whole length, makes a most brilliant and beautiful flame. Close to it the temperature is raised to thirty-eight degrees, but in receding falls to twenty-three degrees, and cannot be raised higher without the danger of melting this frail mansion. In spring, indeed, the dripping causes much inconvenience, and brings on severe colds. These mansions, however, are said to be much more comfortable than those roofed with skins, the heat and closeness of which produce very bad effects.

Captain Franklin mentions a curious fact with regard to frozen fish in his late Journey to the Polar Seas. 'It may be worthy of notice here, he says, that the fish froze as they were taken out of the nets, and in a short time became a solid mass of ice; and by a blow or two of the hatchet were easily split open, when the intestines might be removed in one lump. If in this completely frozen state they were thawed before the fire, they recovered their animation. This was particularly the case with the carp, and we had occasion to observe it repeatedly, as Dr. Richardson occupied himself in examining the structure of the different species of fish, and was always, in the winter, under the necessity of thawing them before he could cut them. We have seen a carp recover so far as to leap about with much vigor, after it had been frozen for thirty-six hours.' p. 248.

A few pages onward he gives us the following statement of other effects of extreme cold in these regions. 'The weather during this month (December) was the coldest we experienced during our residence in America. The thermometer sunk on one occasion to 57° below zero, and never rose beyond 6° above it; the mean for the month was—29·7°. During these intense colds, however, the atmosphere was generally calm, and the wood-cutters and others went about their ordinary occupations without using any extraordinary precautions, yet without feeling any bad effects. They had their rein-deer shirts on, leathern mittens lined with blankets, and furred caps; but none of them used any defence for the face, nor did they need to do so. Indeed we have already mentioned that the heat is abstracted most rapidly from the body during strong breezes, and most of those who have perished from cold, in this country, have fallen a sacrifice to their being overtaken on a lake, or other unsheltered place, by a storm of wind. The intense colds were, however, detrimental to us in another way. The trees froze to their very centres, and became as hard as stones, and more difficult to cut. Some of the axes were broken daily, and by the end of the month we had only one left that was fit for felling trees. By entrusting it only to one of the party who had been bred a carpenter, and who could use it with dexterity, it was fortunately preserved until the arrival of our men with others from Fort Providence.

'A thermometer hung in our bed room at the distance of sixteen feet from the fire, but exposed to its direct radiation, stood, even in the daytime, occasionally at 15° below zero, and was observed more than once, previous to the kindling of the fire in the morning, to be as low as 40° below zero. On two of these occasions the chronometers (Nos. 2149 and 2151), which during the night lay under Mr. Hood's and Dr. Richardson's pillows, stopped while they were dressing themselves.'—pp. 254, 255.

We subjoin a chronological list of some of the most remarkable frosts recorded in history.

A. D.

220. The frost in Britain that lasted five months.
250. The Thames frozen nine weeks.
291. Most rivers in Britain frozen six weeks.
359. Severe frosts in Scotland for fourteen weeks.
508. The rivers in Britain frozen for two months.
558. The Danube quite frozen over.
695. The Thames frozen six weeks; booths built on it.
759. Frost from October 1st, till February 26th, 760.
827. Frost in England for nine weeks.
859. Carriages used on the Adriatic Sea.

lost rivers in England frozen two ths.
'he Thames frozen thirteen weeks.
'rost lasted 120 days; began December .
'he Thames frozen five weeks.
ievere frost on June 24th; the corn and destroyed.
The Thames frozen fourteen weeks.
Frost in England from November till 1.
Several wooden bridges carried away by

Frost from January 14th till March 22d.
Frost that lasted fifteen weeks.
From November 24th to February 10th, mes frozen down to Gravesend.
Frost for thirteen weeks.
1. Severe frost for many weeks.
The same for many weeks.
One for nine weeks; began December 1.
Severe frost for many weeks.
Severe frost in Russia.
Severe one in England.
The same in Germany.
The same in England.
Thames frozen below bridge; booths on

Severe frost in England.
The Thames was frozen over in January l booths erected on various parts of it. The er Tyne also was frozen at Newcastle to depth of twenty inches.

om a bulky work of the German writer Pil-, published at Vienna 1788, some interest-facts with regard to the severity of the s abroad, for above 1000 years may be ga-d: the later dates are supplied from the ob-ations of professor Platt of Kiel.

. D.
01 the Black Sea was entirely frozen over.
462 the Danube was frozen, and Theodo-ir marched over it to avenge his brother's eath in Suabia.
'63 the Black Sea and the Dardanelles were oth frozen over. The snow in some places se fifty feet high, and the ice was so heaped the cities as to push down the walls.
300 the winter was intensely cold.
322 the great rivers of Europe, such as the Danube, the Elbe, and the Seine, were so hard rozen as to bear heavy waggons for a month.
860 the Adriatic was frozen.
874 the winter was very long and severe. The snow continued to fall from the beginning of November to the end of March, and in-umbered the ground so much, that the forests were inaccessible for the supply of fuel.
891, and again in 893, the vines were killed by the frost, and the cattle perished in their stalls.
991 the winter lasted very long, with extreme severity. Every thing was frozen; the crops totally failed; and famine and pestilence closed the year.

A. D.
In 1044 great quantities of snow lay on the ground. The vines and fruit-trees were destroyed, and famine ensued.
In 1067 the cold was so intense, that most of the travellers in Germany were frozen to death on the roads.
In 1124 the winter was uncommonly severe, and the snow lay very long.
In 1133 it was extremely cold in Italy; the Po was frozen from Cremona to the sea; the heaps of snow rendered the roads impassable, the wine casks were burst, and even the trees split, by the action of the frost, with immense noise.
In 1179 the snow was eight feet deep in Austria, and lay till Easter. The crops and vintage failed; and a great murrain consumed the cattle.
The winters of 1209 and 1210 were both of them very severe; insomuch that the cattle died for want of fodder.
In 1216 the Po froze fifteen ells deep, and wine burst the casks.
In 1234 the Po was again frozen; and loaded waggons crossed the Adriatic to Venice. A pine forest was killed by the frost at Ravenna.
In 1236 the Danube was frozen to the bottom, and remained long in that state.
In 1269 the frost was most intense in Scotland, and the ground bound up. The Categat was frozen between Norway and Jutland.
In 1281 such quantities of snow fell in Austria as to bury the very houses.
In 1292 the Rhine was frozen over at Breysach, and bore loaded waggons. One sheet of ice extended between Norway and Jutland, so that travellers passed with ease; and, in Germany, 600 peasants were employed to clear away the snow, for the advance of the Austrian army.
In 1305 the rivers in Germany were frozen, and much distress was occasioned by the scarcity of provisions and forage.
In 1316 the crops wholly failed in Germany. Wheat, which some years before sold in England at 6*s.* a quarter, now rose to £2.
In 1323 the winter was so severe, that both horse and foot passengers travelled over the ice from Denmark to Lübeck and Dantzic.
In 1339 the crops failed in Scotland, and such a famine ensued, that the poorer sort of people were reduced to feed on grass, and many of them perished miserably in the fields. Yet in England wheat was at this time sold so low as 3*s.* 4*d.* a quarter.
In 1344 it was clear frost from November to March, and all the rivers in Italy were frozen over.
In 1392 the vineyards and orchards were destroyed by the frost, and the trees torn to pieces.
The year 1408 had one of the coldest winters ever remembered:—Not only the Danube was frozen over, but the sea between Gothland and Oeland, and between Norway and Denmark; so that wolves, driven from their forests, came over the ice into Jutland. In France the vineyards and orchards were destroyed.

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In 1423 both the North Sea and the Baltic were frozen. Travellers passed on foot from Lübeck to Dantzic. In France the frost penetrated into the very cellars. Corn and wine failed, and men and cattle perished for want of food.

The successive winters of 1432, 1433, and 1434, were uncommonly severe. It snowed forty days without interruption. All the rivers in Germany were frozen; and the very birds took shelter in the towns. The price of wheat rose, in England, to 27*s.* a quarter, but was reduced to 5*s.* in the following year.

In 1460 the Baltic was frozen, and both foot and horse passengers crossed over the ice from Denmark to Sweden. The Danube likewise continued frozen two months, and the vineyards in Germany were destroyed.

In 1468 the winter was so severe in Flanders, that the wine distributed to the soldiers was cut in pieces with hatchets.

In 1544 the same thing happened again, the wine being frozen into solid lumps.

In 1548 the winter was very cold and protracted. Between Denmark and Rostock, sledges drawn by horses or oxen travelled over the ice.

In 1564, and again in 1565, the winter was extremely severe over all Europe. The Scheldt froze so hard as to support loaded waggons for three months.

In 1571 the winter was severe and protracted. All the rivers in France were covered with hard and solid ice, and fruit trees, even in Languedoc, were killed by the frost.

In 1594 the weather was so severe, that the Rhine and the Scheldt were frozen, and even the sea at Venice.

The year 1608 was uncommonly cold, and snow lay of immense depth even at Padua. Wheat rose, in the Windsor market, from 36*s.* to 56*s.* a quarter.

In 1621 and 1622 all the rivers of Europe were frozen, and even the Zuyder Zee. A sheet of ice covered the Hellespont, and the Venetian fleet was choaked up in the lagoons of the Adriatic.

In 1655 the winter was very severe, especially in Sweden. The excessive quantities of snow and rain which fell did great injury in Scotland.

The winters of 1658, 1659, and 1660, were intensely cold. The rivers in Italy bore heavy carriages, and so much snow had not fallen at Rome for several centuries. It was in 1658 that Charles X. of Sweden crossed the Little Belt, over the ice, from Holstein to Denmark, with his whole army, foot and horse, followed by the train of baggage and artillery. During these years, the price of grain was nearly doubled in England; a circumstance which contributed, among other causes, to the restoration.

In 1670 the frost was most intense in England and in Denmark, both the Little and Great Belt being frozen.

In 1684 the winter was excessively cold. Many forest trees, and even the oaks in England, were split by the frost. Most of the hollies

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were killed. The Thames was covered with ice eleven inches thick. Almost all the birds perished.

In 1691 the cold was so excessive, that the famished wolves entered Vienna, and attacked the cattle, and even men.

The winter of 1695 was extremely severe and protracted. The frost in Germany began in October, and continued till April; and many people were frozen to death.

The years 1697 and 1699 were nearly as bad. In England the price of wheat which, in preceding years, had seldom reached to 30*s.* a quarter, now mounted to 71*s.*

In 1709 occurred that famous winter, called, by distinction, 'the cold winter.' All the rivers and lakes were frozen, and even the seas, to the distance of several miles from the shore. The frost is said to have penetrated three yards into the ground. Birds and wild beasts were strewed dead in the fields, and men perished by thousands in their houses. The more tender shrubs and vegetables in England were killed; and wheat rose in its price from £2 to £4 a quarter. In the south of France the olive plantations were almost entirely destroyed; nor have they yet recovered that fatal disaster. The Adriatic Sea was quite frozen over, and even the coast of the Mediterranean about Genoa; and the citron and orange groves suffered extremely in the finest parts of Italy.

In 1716 the winter was very cold. On the Thames, booths were erected and fairs held.

In 1726 the winter was so intense, that people travelled in sledges across the Strait, from Copenhagen to the province of Scania in Sweden.

In 1729 much injury was done by the frost, which lasted from October till May. In Scotland multitudes of cattle and sheep were buried in the snow; and many of the forest trees in other parts of Europe were killed.

The successive winters of 1731 and 1732 were likewise extremely cold.

The cold of 1740 was scarcely inferior to that of 1709. The snow lay eight or ten feet deep in Spain and Portugal. The Zuyder Zee was frozen over, and many thousand persons walked or skaited on it. At Leyden the thermometer fell 10° below the zero of Fahrenheit's scale. All the lakes in England froze, and a whole ox was roasted on the Thames. Many trees were killed by the frost, and postilions were benumbed on their saddles.—In both the years 1709 and 1740 the General Assembly of the Church of Scotland ordained a national fast to be held on account of the dearth which then prevailed.

In 1744 the winter was again very cold. The Mayne was covered seven weeks with ice; and at Evora, in Portugal, people could hardly creep out of their houses for heaps of snow.

The winters during the five successive years 1745, 1746, 1747, 1748, and 1749, were all of them very cold.

In 1754, and again in 1755, the winter was particularly cold. At Paris Fahrenheit's ther-

ıeter sank to the beginning of the scale; in England, the strongest ale exposed to ıir in a glass, was covered, in less than a ter of an hour, with ice an eighth of an thick.

inters of 1766, 1767, and 1768, were very all over Europe. In France the ther- ıeter fell six degrees below the zero of :enheit's scale. The large rivers and the t copious springs in many parts were :n. The thermometer, laid on the surface he snow at Glasgow, fell two degrees w zero.

'1 the snow lay very deep, and the Elbe frozen to the bottom.

'6 much snow fell, and the cold was in- e. The Danube bore ice five feet thick w Vienna. Wine froze in the cellars both France and in Holland. Many people e frost-bitten; and vast multitudes, both of feathered and of the finny tribes, perished. the quantity of snow which lay on the ınd had checked the penetration of the t. Van Swinden found, in Holland, that earth was congealed to the depth of twen- ıne inches, on a spot of a garden which had n kept cleared, but only nine inches at ano- r place near it, which was covered with four hes of snow.

successive winters of 1784 and 1785 were :ommonly severe, insomuch, that the Little lt was frozen over.

'89 the cold was excessive; and again in)5, when the republican armies of France :rran Holland.

successive winters of 1799 and 1800 were th very cold.

809, and again in 1812, the winters were narkably cold.

ıO'STBITTEN, *adj.* Frost and bitten. Nipped ithered by the frost.

e leaves are too much *frostbitten*. *Mortimer.*

ıO'STNAIL, *n. s,* Frost and nail. A nail a prominent head driven into the horse's s, that it may pierce the ice.

ıe claws are strait only to take hold, for better ression; as a horse that is shod with *frostnails*. *Grew's Cosmologia.*

RO'STWORK, *n. s.* Frost and work. Work 'hich the substance is laid on with inequali- like the dew congealed upon shrubs.

By nature shaped to various figures, those
he fruitful rain, and these the hail compose;
he snowy fleece and curious *frostwork* these,
roduce the dew, and those the gentle breeze.
Blackmore.

'ROTH, *n. s.* & *v. n.* } Dan. and Scottish
'ROTH'ILY, *adv.* } *froe*; Swed. *fra*, per-
'ROTH'Y, *adj.* } haps of Greek *αφρος*,
m. Spume; foam; the bubbles caused in ıors by agitation. Any empty or senseless ıw of wit or eloquence; any thing not hard, id, or substantial: to foam; to throw out ıme; to generate spume. Soft; not solid; sting; vain; empty; trifling.

A wilde bores 'gan they togeder smite,
That *frothen* white as fome for ire wood,
Up to their ancle foughte they in hir blood.
Chaucer. The Knightes Tale.

Who eateth his veal, pig and lamb being *froth*,
Shall twice in a week go to bed without broth.
Tusser.

His hideous tail then hurled he about
And therewith all enwrapt the nimble thighs
Of his *froth* foamy steed. *Faerie Queene.*

Their bodies are so solid and hard as you need not fear that bathing should make them *frothy*. *Bacon.*

When wind expireth from under the sea, as it causeth some resounding of the water, so it causeth some light motions of bubbles, and white circles of *froth*. *Id. Nat. History.*

The sap of trees is of differing natures; some watery and clear, as vines, beeches, pears; some thick, as apples; some gummy, as cherries; and some *frothy*, as elms. *Bacon.*

Surging waves against a solid rock,
Though all to shivers dashed the assault renew;
Vain battery, and in *froth* or bubbles end.
Milton.

The useless *froth* swims on the surface, but the pearl lies covered with a mass of waters. *Glanville.*

Though the principles of religion were never so clear and evident, yet they may be made ridiculous by vain and *frothy* men; as the gravest and wisest person in the world may be abused by being put in a fool's coat. *Tillotson.*

The scattered ocean flies;
Black sands, discoloured *froth*, and mingled mud arise.
Dryden.

They were the *froth* my raging folly moved
When it boiled up, I knew not then I loved,
Yet then loved most. *Id. Aurengzebe.*

He frets within, *froths* treason at his mouth,
And churns it through his teeth. *Dryden.*

What's a voluptuous dinner, and the *frothy* vanity of discourse that commonly attends these pompous entertainments? What is it but a mortification to a man of sense and virtue? *L'Estrange.*

Excess muddies the best wit, and only makes it flutter and *froth* high. *Grew.*

If now the colours of natural bodies are to be mingled, let water, a little thickened with soap, be agitated to raise a *froth*; and after that *froth* has stood a little, there will appear, to one that shall view it intently, various colours every where in the surfaces of the bubbles; but to one that shall go so far off that he cannot distinguish the colours from one another, the whole *froth* will grow white, with a perfect whiteness. *Newton.*

A painter having finished the picture of a horse, excepting the loose *froth* about his mouth and his bridle; and, after many unsuccessful essays, despairing to do that to his satisfaction, in a great rage threw a sponge at it, all besmeared with the colours, which fortunately hitting upon the right place, by one bold stroke of chance most exactly supplied the want of skill in the artist. *Bentley's Sermons.*

Behold a *frothy* substance rise;
Be cautious, or your bottle flies. *Swift.*

FROTH-SPIT, or Cuckow-Spit, a name given to a white froth, or spume, very common in spring and the first months of summer, on the leaves of certain plants, particularly on those of the common white field lychnis, or catchfly, thence called by some spatling poppy. All writers on vegetables have taken notice of this froth, though few have understood the cause or origin of it till of late. It is formed by a little

leaping animal, called by some the flea grasshopper, by applying its anus close to the leaf, and discharging thereon a small drop of a white viscous fluid, which, containing some air in it, is soon elevated into a small bubble: before this is well formed, it deposits such another drop; and so on, till it is every way overwhelmed with a quantity of these bubbles, which form the white froth which we see. Within this spume it is seen to acquire four tubercles on its back, wherein the wings are enclosed: these bursting, from a reptile it becomes a winged animal; and thus, rendered perfect, it flies to meet its mate, and propagate its kind. It has an oblong, obtuse body; a large head with small eyes; four external wings, of a dusky brown color, marked with two white spots; the head is black. It is a species of CICADA, which see.

FROUNCE, *n. s.* & *v. a.*. As a disease, from Arm. *froeni*, snivel; Welsh *ffroen*, the nose. A word used by falconers for a distemper, in which white spittle gathers about the hawk's bill. Fr. *froncer*; Teut. *fronsen*, to frizzle or curl the hair about the face. This word was at first probably used in contempt.

Her forhedde *frounceles* all plain.
Chaucer. Romaunt of the Rose.

Some warlike sign must be used; either a slovenly buskin, or an overstaring *frounced* head. *Ascham.*

Some *frounce* their curled hair in courtly guise,
Some prank their ruffs, and others timely dight
Their gay attire. *Faerie Queene.*

Thus, Night, oft see me in thy pale career,
'Till civil suited Morn appear;
Not tricked and *frounced* as she was wont,
With the attick boy to hunt. *Milton.*

FROUZY, *adj.* A cant word, signifies fetid; musty; dim; cloudy.

Petticoats in *frouzy* heaps. *Swift.*

When first Diana leaves her bed,
Vapours and steams her looks disgrace;
A *frouzy* dirty-coloured red
Sits on her cloudy wrinkled face. *Id.*

FRO'WARD, *adj.* } Saxon ꝼꞃamꝼeaꞃꝺ.
FRO'WARDLY, *adv.* } Peevish; ungovern-
FRO'WARDNESS, *n. s.* } able; angry; perverse: the contrary to *toward*. Thus Chaucer speaks of youth being 'froward from sadnesse.' See the instance.

Whose ways are crooked, and they *froward* in their paths. *Prov.* ii. 15.

He went on *frowardly* in the way of his heart. *Is.* lvii. 17.

Youth—of naught ellis takith heede.
But only folkis for to lede
Into disport and wildenesse
So *froward* is it from sadnesse.
Chaucer. Romaunt of the Rose, 4940.

She's not *froward*, but modest as the dove:
She is not hot, but temperate as the morn.
Shakspeare.

Time moveth so round, that a *froward* retention of custom is as turbulent a thing as innovation. *Bacon.*

The *froward* pain of mine own heart made me delight to punish him, whom I esteemed the chiefest let in the way. *Sidney.*

Tis with *froward* men, and *froward* factions too, as it is with *froward* children: they'll be sooner quieted by fear than by any sense of duty. *L Estrange.*

How many *frowardnesses* of ours does he smother? how many indignities does he pass by? how many affronts does he put up at our hands? *South.*

We'll mutually forget
The warmth of youth, and *frowardness* of age.
Addison's Cato.

FRO'WER, *n. s.* Dr. Johnson says, 'I know not the etymology.' Teut. *hauer*, *verhauer*.—Thomson. A cleaving-tool.

A *frower* of iron for cleaving of lath,
With roll for a sawpit, good husbandry hath.
Tusser.

FROWN, *v. a.* & *n. s.* } Belg. *fronsen*; old
FROWN'ING, *adj.* } Fr. *frogner*, to wrin-
FROWN'INGLY, *adv.* } kle.—Skinner. To express displeasure by contracting the face to wrinkles; to look stern.

With that the chorle his clubbe gan shake;
Frowning his eyen 'gan to make
An hideous chere, as man in rage;
For yre he brent in his visage.
Chaucer. Romaunt of the Rose.

For age and winter accord full nie,
This chill, that cold; this crooked, that wrie;
And as the louring weather looks doune,
So seemst thou like Good Friday to *frowne*.
Spenser. Shepheards Calender.

Patiently endure that *frown* of fortune, and by some notable exploit win again her favour. *Knolles.*

Say, that she *frowns*; I'll say, she looks as clear
As morning roses newly washed with dew.
Shakspeare.

They chuse their magistrate;
And such a one as he, who puts his shall,
His popular shall, against a graver bench
Than ever *frowned*. *Id. Coriolanus.*

How now, daughter, what makes that frontlet on? you are too much of late i' the *frown*.

—Thou wast a pretty fellow, when thou hadst no need to care for her *frowning*. *Id. King Lear.*

What, looked he *frowningly*?
—A countenance more in sorrow than in anger.
Shakspeare.

In his half-closed eyes
Stern vengeance yet and hostile terror stand;
His front yet threatens, and his *frowns* command.
Prior.

Heroes in animated marble *frown*. *Pope.*

The wood,
Whose shady horrors on a rising brow
Waved high, and *frowned* upon the stream below.
Id.

The courtiers stared, the ladies whispered, and
The empress smiled; the reigning favourite *frowned*—
I quite forget which of them was in hand
Just then, as they are rather numerous found,
Who took by turns that difficult command
Since her first majesty was singly crowned. *Byron.*

They sleep not
In their accelerated graves, nor will
Till Foscari fills his. Each night I see them
Stalk *frowning* round my couch, and, pointing towards
The ducal palace, marshal me to vengeance.
Id. The Two Foscari.

FROWY, *adj.* Musty; mossy. This word is now not used; but instead of it frowzy.

But if they with thy gotes should yede,
They soon might be corrupted;
Or like not of the *frowy* fede,
Or with the weeds be glutted.
Spenser's Pastorals.

O'ZEN, *part. pass.* of freeze. See FREEZE.
:aled with cold; chill in affection; void of
r appetite.

Be not ever *frozen*, coy;
One beam of love will soon destroy
And melt that ice to floods of joy. *Carew.*

'hat was the waste of war, what fierce alarms
ok Asia's crown with European arms?
n such have heard, if any such there be,
ose earth is bounded by the *frozen* sea.
Dryden.

Even here, where *frozen* Chastity retires,
ove finds an altar for forbidden fires. *Pope.*

OZEN OCEAN, or the Icy Sea, is a name
times given to that sea of Asia which ex-
towards the north into the polar regions,
whose boundaries east and west are Nova
)la and Fonutski Noss. Several ineffectual
pts have been made to navigate this sea;
mariners have always been obstructed. In-
ountable barriers of ice obstruct all navi-
n far from the shores; and from this cir-
tance it has its name. The ice never
ts up until the end of July; and fogs, which
able at a distance islands or vast columns
moke, are constantly hovering over it.
n the cold is at its greatest extreme, the
on is clear. It has islands inhabited by
e bears and arctic foxes. But no tides are
n this ocean; a series of very irregular currents
their place; seldom setting one way longer
the wind blows, and running at very une-
rates. Whales are rare: the beluga is
; and herrings, together with a small species
almon, may be caught, but there are no traces
hell-fish.

he Frozen Ocean receives some of the largest
tic rivers, as the Ob, the Lena, and the Kovima.
coast is generally high, formed by project-
promontories and exposed bays: it is covered
drift wood, from the mouth of the Kovima
Sacranof, in 168° 29′ E. long., but no farther
. On the coasts are numerous rein-deer,
:s, bears, wild sheep, and the whistling mar-
: the bones of the mammoth, as they are
ed, are also found here.

'. R. S. Fellow of the Royal Society.

Who virtû profess
Shin in the dignity of *F. R. S.* *Pope.*

'RUCTESCENTIA, from fructus, fruit, in
any, literally signifies the growth of the fruit,
is used elliptically for the precise time in
ich, after the fall of the flowers, the fruits
ive at maturity, and disperse their seeds. In
ieral, plants which flower in spring ripen their
its in summer, as rye; those which flower in
mmer have their fruits ripe in autumn, as the
ie; the fruit of autumnal flowers ripens in
nter, or the following spring, if kept in a
ve, or otherwise defended from excessive
sts. These frosts, says M. Adanson, are fre-
ently so pernicious and violent, as to destroy
greatest part of the perennial plants of Vir-
nia and Mississippi, that are cultivated in
ance, even before they have exhibited their
uit. The plants which flower during our
nter, such as those of the Cape of Good Hope,
pen their fruit in spring, in our stoves.

FRUCTIDOR (i. e. the fruit month, from Lat. *fructus*), the name of the twelth month, in the French revolutionary calendar. It begins August 19th, and ends September 16th.

FRUC'TIFY, *v. a.* & *v. n.* } Fr. *fructifier*;
FRUCTIFICA'TION, *n. s.* } Lat. *fructifer*. To
FRUCTIF'EROUS, *adj.* } make fruitful; to fertilise; to bear fruit.

It watereth the heart, to the end it may *fructify*; maketh the virtuous, in trouble, full of magnanimity and courage; and serveth as a most approved remedy against all doleful and heavy accidents which befal men in this present life. *Hooker.*

The legal levies the sovereign raises are as vapours which the sun exhales, which fall down in sweet showers to *fructify* the earth. *Howel's Vocal Forest.*

Thus would there nothing *fructify*, either near or under them, the sun being horizontal to the poles. *Browne.*

That the sap doth powerfully rise in the Spring, to put the plant in a capacity of *fructification*, he that hath beheld how many gallons of water may be drawn from a birch tree, hath slender reason to doubt. *Id. Vulgar Errours.*

FRU'CTUOUS, *adj.* Fr. *fructueux*; from fructify. Fruitful; fertile; impregnating with fertility.

Say what you list, and we shul gladly here:
And with that word, he said, 'In this manere:
Telleth,' quod he, 'your meditatioun;
But hasteth you; the sonne wol adoun:
Beth *fructuous*, and that in little space;
And, to do wel, God sende you his grace.
Chaucer. Prologue to the Persones Tale.

Apples of price, and plenteous sheaves of corn
Oft interlaced occur; and both imbibe
Fitting congenial juice; so rich the soil,
So much does *fructuous* moisture o'erabound.
Philips.

FRU'GAL, *adj.* } Fr. *frugalité*; Lat. *fru-*
FRU'GALLY, *adv.* } *galis*, *fruges*, fruits: its
FRUGAL'ITY, *n. s.* } primary meaning is temperance. Thrifty; sparing; not profuse; not lavish; nor yet strictly parsimonious. Crabb acutely observes, 'The frugal man spares expense on himself or on his indulgences; he may however be liberal to others, whilst he is frugal towards himself; the parsimonious man saves from himself as well as others; he has no other object than saving.'

As for the general sort of men, *frugality* may be the cause of drinking water; for that is no small saving, to pay nothing for one's drink. *Bacon.*

Reasoning, I oft admire,
How nature wise and *frugal* could commit
Such disproportions, with superfluous hand
So many nobler bodies to create,
Greater so manifold to this one use. *Milton.*

Frugality and bounty too,
Those differing virtues meet in you. *Waller.*

In this *frugality* of your praises, some things I cannot omit. *Dryden's Fables, Dedication.*

Mean time young Pasimond his marriage pressed,
And *frugally* resolved, the charge to shun,
To join his brother's bridal with his own. *Dryden.*

If through mists he shoots his sullen beams,
Frugal of light, in loose and straggling streams,
Suspect a drizling day. *Id. Virgil.*

The boundaries of virtue are indivisible lines: it is impossible to march up close to the frontiers of *frugality*, without entering the territories of modesty. *Arbuthnot's John Bull.*

Frugality is founded on the principle, that all riches have limits. *Burke.*

On the Grampian hills,
My father feeds his flocks; a *frugal* swain,
Whose constant cares were to increase his store,
And keep his only son, myself, at home.
Home.

Be silent,—Conrad!—dearest—come and share
The feast these hands delighted to prepare—
Light toil! to cull and dress thy *frugal* fare.
Byron. The Corsair.

Why call the miser miserable? as
I said before, the *frugal* life is his
Which in a saint or cynic ever was
The theme of praise. *Byron.*

FRUGI'FEROUS, *adj.* Lat. *frugifer*. Bearing fruit.—*Ainsworth.*

FRUIT, *n. s.*
FRUIT'AGE, *n. s.*
FRUIT'BEARER, *n. s.*
FRUIT'BEARING, *adj.*
FRUIT'ERER, *n. s.*
FRUIT'ERY, *n. s.*
FRUIT'FUL, *adj.*
FRUIT'FULLY, *adv.*
FRUIT'FULNESS, *n. s.*
FRUIT'LESS, *adj.*
FRUIT'LESSLY, *adv.*
FRUIT'GROVES, *n. s.*
FRUIT'STER, *n. s.*
FRUIT'TIME, *n. s.*
FRUIT'TREE, *n. s.*

Fr. *fruit;* Welsh *frwyth;* Lat. *fructus*. The primary and comprehensive meaning of this etymon is production—it is applied first to inanimate nature; to the production of plants, trees, &c.; next to the animal kingdom in the infinite variety of its offspring; figuratively to the thoughts and imaginations of the mind; and lastly, to the actions of men, to the advantages derived from them, and to their effects and consequences. Some of the derivatives have a precise and technical meaning, such as fruiterer, fruitster, and the words in composition. The illustrations of these are sufficient to convey the sense.

—And other fel into good erthe, and it sprong up and made an hundrid fold *fruyt*. *Wiclif. Luk.* viii.

For while that Adam fasted, as I rede,
He was in Paridis: and when that he
Ete of the *fruit* defended on a tree,
Anon he was outcast to wo and peine.
O, glotonie! on thee wel ought us plaine.
Chaucer. The Pardoneres Tale.

'Alas!' quod he, 'Arcita, cosin min!
Of all our strife God wot, the *frute* is thin.
Id. The Knightes Tale.

And, right anon, in comen tombesteres
Fetis and smale, and yonge *fruitesteres*,
Singers with harpes, bandes, wafereres,
Which ben the very devils officeres.
Id. The Pardoneres Tale.

Then doth the dædale Earth throw forth to thee
Out of her *fruitful* lap abundant flowres;
And then all living wights, soone as they see
The Spring breake forth out of his lusty bowres
They all do learne to play the paramours.
Spenser's Faerie Queene.

The *fruit* of the spirit is in all goodness and righteousness, and truth. *Ephes.* v. 9.

Cans't thou their reckonings keep? the time compute,
When their swol'n bellies shall enlarge the *fruit*.
Sandys.

O! let me not, quoth he, return again
Back to the world, whose joys so *fruitless* are;
But let me here for ay in peace remain,
Or straightway on that last long voyage fare.
Spenser.

Hear, Nature, hear! dear goddess, hear a father
Suspend thy purpose, if thou did'st intend
To make this creature *fruitful:*
Into her womb convey sterility.
Shakspeare. King Lear.

Upon my head they placed a *fruitless* crown,
And put a barren sceptre in my gripe;
No son of mine succeeding. *Id. Macbeth.*

Adonis' gardens,
That one day bloomed, and *fruitful* were the next.
Shakspeare.

I did fight with one Sampson Stockfish, a *fruiterer*, behind Gray's-inn. *Id. Henry IV.*

Lady, by yonder blessed moon I vow,
That tips with silver all these *fruittree* tops.
Shakspeare.

The strawberry grows underneath the nettle,
And wholesome berries thrive and ripen best,
Neighboured by *fruit* of baser quality. *Id.*

You have many opportunities to cut him off: if your will want not, time and place will be *fruitfully* offered. *Id.*

Neither can we ascribe the same *fruitfulness* to any part of the earth, nor the same virtue to any plant thereon growing, that they had before the flood.
Raleigh's History.

The Spaniards of Mexico, for the first forty years, could not make our kind of wheat bear seed; but it grew up as high as the trees, and was *fruitless*.
Id.

By tasting of that *fruit* forbid,
Where they sought knowledge, they did error find.
Davies.

Enter the town which thou hast won,
The *fruits* of conquest now begin;
To triumph, enter in. *Ben Jonson.*

The remedy of *fruitfulness* is easy, but no labour will help the contrary: I will like and praise some things in a young writer, which yet, if he continues in, I cannot but justly hate him for. *Id. Discoveries.*

Rich people who are covetous, are like the cypress tree; they may appear well but are *fruitless*.
Bp. Hall.

Male he created thee, but thy consort
Female for race; then blessed mankind, and said,
Be *fruitful*, multiply, and fill the earth;
Subdue it, and throughout dominion hold.
Milton.

The Earth,
Though in comparison of heaven so small,
Nor glistering, may of solid good contain
More plenty than the sun that barren shines,
Whose virtue on itself works no effect,
But in the *fruitful* earth. *Id.*

In heaven the trees
Of life, ambrosial *fruitage* bear, and vines
Yield nectar. *Milton's Paradise Lost.*

Greedily they plucked
The *fruitage*, fair to sight, like that which grew
Near that bituminous lake where Sodom flamed.
Milton.

Serpent! we might have spared our coming hither;
Fruitless to me, though *fruit* be here to' excess. *Id.*

My brothers when they saw me wearied out
With this long way resolving here to lodge,
Under the spreading favour of these pines
Stept, as they said, to the next thicket's side
To bring me berries or some cooling *fruit*
As the kind hospitable woods provide. *Id.*

She blushed when she considered the effect of granting; she was pale when she remembered the *fruits* of denying. *Sidney.*

If she continued cruel, he could no more sustain his life than the earth remain *fruitful* in the sun's continual absence. *Id.*

How sacred seeds of sea, and air, and earth,
And purer fire through universal night,
And empty space did *fruitfully* unite.
Roscommon.

All with a border of rich *fruittrees* crowned,
Whose loaded branches hide the lofty mound.
Waller.

Walking they talked, and *fruitlessly* divined
What friend the priestess by those words designed.
Dryden.

The goddess present at the match she made,
So blessed the bed, such *fruitfulness* conveyed,
That ere ten moons had sharped either horn,
To crown their bliss a lovely boy was born. *Id.*

Another *fruit*, from considering things in themselves, will be, that each man will pursue his thoughts in that method which will be most agreeable to the nature of the thing, and to his apprehension of what it suggests to him. *Locke.*

Trees, especially *fruitbearers*, are often infected with the measles. *Mortimer's Husbandry.*

By this way graft trees of different kinds one on another, as *fruitbearing* trees on those that bear not. *Id.*

Oft, notwithstanding all thy care
To help thy plants, on the small *fruitery*
Exempt from ills, an oriental blast
Disastrous flies. *Philips.*

While you, my lord, the rural shades admire,
And from Britannia's publick posts retire,
Me into foreign realms my fate conveys,
Through nations *fruitful* of immortal lays.
Addison.

See how the rising *fruits* the gardens crown,
Imbibe the sun, and make his light their own.
Blackmore.

It is a large one, much more great
Than e'er was bred in Afric yet,
From which we boldly may infer,
The moon is much the *fruitfuller*. *Gay.*

I have copied Nature, making the youths amorous and the damsels *fruitful*. *Id.*

The faithful slave,
Whom to my nuptial train Icarus gave
To tend the *fruitgroves*. *Pope's Odyssey.*

What is become of all the king of Sweden's victories? Where are the *fruits* of them at this day? Or of what benefit will they be to posterity? *Swift.*

What is more ordinary with them than the taking in flowers and *fruitage* for the garnishing of their work? *More.*

But thou who Heaven's just vengeance darest defy,
This deed with *fruitless* tears shall soon deplore
When death lays waste thy house, and flames consume thy store. *Beattie.*

His infant muse though artless was not mute,
Of elegance as yet he took no care
For this of time and culture is the *fruit*:
And Edwin gained at last this *fruit* so rare,
As in some future verse I purpose to declare. *Id.*

And that this wood was full of pleasant *fruits*
And trees of goodly growth, and spreading shoots.
Byron.

FRUITS, COLORS EXTRACTED FROM, See COLOR-MAKING.

FRUITS, in commerce, are distinguished into recent or fresh, and dry.

FRUITS DRY are those dried in the sun, or by the fire, with other ingredients sometimes added to them to make them keep; imported chiefly from beyond sea, and sold by the grocers. Such are RAISINS, CURRANTS, FIGS, CAPERS, OLIVES, CLOVES, NUTMEGS, PEPPER, and other spices: which see in their order. Under the denomination of dry fruits are also frequently included apples pears, almonds, filberds, &c.

FRUITS FRESH or recent, are those sold just as they are gathered from the tree, without any farther preparation; as are most of the produc ions of our gardens and orchards, sold by the fruiterers.

FRUIT-FLIES, a name given by gardeners and others to a sort of small black flies, found in vast numbers among fruit-trees in the spring season, and supposed to do great injury to them. Mr. Leeuwenhoek preserved some of these flies for his microscopical observations. He found that they did not live longer than a day or two, but that the females during this time laid a great number of longish eggs. The gardeners who suppose that these flies wound the leaves of the trees, are mistaken: it is true that they feed on their juices; but they have no instruments wherewith they can extract these for themselves; they feed on such as are naturally extravasated; and when there is not a sufficient quantity of these for their purpose, they haunt the places to which the pucerons resort, and feed on the juices which these little creatures extravasate, by means of the holes they bore in the leaves with their trunks.

FRUIT-GATHERERS, in horticulture, are instruments much used in taking the fruit from the trees in preference to gathering it by the hand by which it is often much bruised &c., and also on high wall trees or espaliers where the hand cannot reach. The best of these instruments is one invented by Mr. Saul, of which the diagram annexed is a representation, *a* and *b* are a pair of cutters fixed to a pole which may be lengthened by means of screwed joints if necesssary. At the lower end of the pole is a lever *c*, which may be fixed by a screw and socket to any part of the pole. The lever *d*, of the moving blade *b*, has a spring under it, to keep it open, and from the end of *d*, a string passes over the pulley *e*, to the handle *c*. By means of the arch and joint at *f*, the cutters may be set at any required angle.

When the fruit-gatherer is raised, so that the stalks of the fruit are included between the cutters, the string *c e* is pulled; the stalks are cut, and the fruit drops into the basket *h*.

FRUIT-TREES. See HORTICULTURE.

FRUITION, *n. s.* } Lat. *fruor*, to enjoy.
FRUITIVE, *adj.* } Enjoyment; possession; pleasure given by possession or use. Crabb says, that this word is employed only for the act of enjoying pleasures which are derived from

fruition, as distinguished from those which are had in expectation.

God riches and renown to men imparts,
Even all they wish; and yet their narrow hearts
Cannot so great a fluency receive,
But their *fruition* to a stranger leave. *Sandys.*

I am driven, by breath of her renown,
Either to seek shipwreck, or to arrive
Where I may have *fruition* of her love.
Shakspeare.

Man doth not seem to rest satisfied either with *fruition* of that wherewith his life is preserved, or with performance of such actions as advance him most deservedly in estimation. *Hooker.*

Wit once, like beauty, without art or dress,
Naked and unadorned, could find success;
'Till by *fruition*, novelty destroyed,
The nymph must find new charms to be enjoyed.
Granville.

That which we desire, ofttimes discontents us more in the *fruition*. *Bp. Hall.*

Fruition more deceitful is
Than thou canst be when thou dost miss.
Cowley.

Abstinence from ill-speaking he (the Psalmist) seemeth to propose as the first step towards the *fruition* of a durably happy life. *Barrow.*

To whet our longings for *fruitive* or experimental knowledge, it is reserved, among the prerogatives of being in heaven, to know how happy we shall be when there. *Boyle.*

FRUMENTARII, a kind of soldiers or archers under the western empire. The first mention we find made of these officers is in the reign of the emperor Adrian, who made use of them to inform himself of whatever passed. They did not make any particular corps distinct from the rest of the forces, but there was a certain number of them in each legion. It is supposed that they were at first a numoer of young persons, disposed by Augustus throughout the provinces, particularly on all the grand roads, to acquaint the emperor, with all expedition, of every thing that happened. Afterwards they were incorporated into the troops themselves, where they still retain their ancient name. As their principal office was the giving intelligence, they were often joined with the Curiosi, with whom they agreed in this part of their office. Their name is derived from their being also a sort of purveyors to the armies, cities, &c., collecting the corn from the several provinces.

FRUMENTATION, in Roman antiquity, a largess of corn bestowed on the people. This practice of giving corn to the people was very ancient among the Romans, and frequently used to sooth their turbulent humor. At first the number of those to whom this largess was given was indeterminate, till Augustus fixed it at 200,000.

FRUME'NTY, *n. s.* } From Lat. *frumen-*
FRUMENTACEOUS, *adj.* } *tum*, corn. Made of grain; food made of wheat boiled in milk.

FRUMP, *v. a.* To mock; to browbeat.

FRUSH, *v. a.* & *n. s.* Fr. *froisser*. To break, bruise, or crush. A sort of tender horn that grows in the middle of the sole, and at some distance from the toe: it divides into two branches, running towards the heel, in the form of a fork.

I like thy armour well;
I'll *frush* it, and unlock the rivets all,
But I'll be master of it. *Shakspeare.*

FRUSTRANEA POLYGAMIA. See BOTANY.

FRUSTRA'NEOUS, *adj.* Lat. *frustra*. Vain; useless; unprofitable; without advantage.

He timely withdraws his *frustraneous* baffled kindnesses, and sees the folly of endeavouring to stroke a tyger into a lamb, or to court an Ethiopian out of his colour. *South.*

Their attempts being so *frustraneous*, and the demonstrations to the contrary so perspicuous, it is a marvel that any man should be zealously affected in a cause that has neither truth nor any honest usefulness in it. *More.*

FRUS'TRATE, *v. a.* & *part. adj.* }
FRUSTRA'TION, *n. s.* } Fr. *frustrer*; Lat.
FRUS'TRATIVE, *adj.* } *frustror*.
FRUS'TRATORY, *adj.* } To make vain; to nullify; defeat; disappoint.

The act of parliament which gave all his lands to the queen, did cut off and *frustrate* all such conveyances. *Spenser.*

Few things are so restrained to any one end or purpose, that the same being extinct, they should forthwith utterly become *frustrate*. *Hooker.*

It is an axiom of nature, that natural desire cannot utterly be *frustrate*. *Id.*

I survive,
To mock the expectations of the world;
To *frustrate* prophecies, and to raze out
Rotten opinion. *Shakspeare. Henry IV*

He is drowned
Whom thus we stray to find, and the sea mocks
Our *frustrate* search on land. *Id. Tempest.*

The ruler of the province of Judea being by Julian busied in the re-edifying of this temple, flaming balls of fire issuing near the foundation, and oft consuming the workmen, made the enterprize *frustrate*.
Raleigh's History.

Now thou hast avenged
Supplanted Adam; and, by vanquishing
Temptation, hast regained lost Paradise,
And *frustrated* the conquest fraudulent.
Milton.

Not more almighty to resist our might,
Than wise to *frustrate* all our plots and wiles.
Id.

Thus do kingdoms *frustrating*
Other titles to their crown
In the cradle crown their king,
So all foreign claims to drown. *Marvell.*

Stern looked the fiend, as *frustrate* of his will;
Not half sufficed, and greedy yet to kill. *Dryden.*

Bartolus restrains this to a *frustratory* appeal.
Ayliffe.

In states notoriously irreligious, a secret and irresistible power countermands their deepest projects, splits their counsels, and smites their most refined policies with *frustration* and a curse. *South.*

FRUSTUM, *n. s.* Lat. A piece cut off from a regular figure; a term of science.

FRUSTUM, in mathematics, a part of some solid body separated from the rest. Thus,

The FRUSTUM OF A CONE is the part that remains when the top is cut off by a plane, parallel to the base; and is otherwise called a truncated cone.

The FRUSTUM OF A GLOBE, or SPHERE, is any part thereof cut off by a plane, the solid contents of which may be found by this rule: To three times the square of the semidiameter of the base

square of its height; then multiply that
the height, and this product multiplied
5 gives the solidity of the frustum.
'RUSTUM OF A PYRAMID is what remains
: top is cut off by a plane parallel to its

TEX, a shrub. Shrubs, according to
s, make a branch of the seventh family
egetable kingdom; and are distinguished
ees, in that they come up without buds.
s distinction is not universal, though it
rally just with regard to those of Europe.
has made no absolute distinction between
id shrubs. Frutex, in its general accep-
is a plant whose trunk is perennial, gem-
us, woody, dividing and subdividing into
number of branches. In short, it is the
e of a tree, exemplified in the rose bush.
TANY.

', *n. s.* Dan. and Swed. *froe;* Goth.
aiw, seed. The swarm of little fishes just
ed from the spawn; any swarm of the
of animals; it also signifies a kind of

of the *fry* of these rakehell horseboys, growing
navery and villainy, are their kern continually
d and maintained. *Spenser on Ireland.*

Them before the *fry* of children young,
wanton sports and childish mirth did play,
the maidens sounding timbrels sung.
Faerie Queene.

hey come to us, but as love draws;
swallows us, and never chaws;
im, as by chained shot, whole ranks do die;
is the tyrant pike, and we the *fry*. *Donne.*

hwith the sounds and seas, each creek and bay,
fry innumerable swarm, and shoals
, that with their fins and shining scales
under the green wave in sculls, that oft
the mid-sea. *Milton's Paradise Lost.*

close behind some promontory lie
uge leviathans, to attend their prey;
d give no chace, but swallow in the *fry*,
h through their gaping jaws mistake the way.
Dryden.

e angler had the hap to draw up a very little
rom among the *fry*. *L'Estrange.*

dresseth the dust from malt, by running it
gh a fan or *fry*. *Mortimer's Husbandry.*

e young *fry* must be held at a distance, and kept
r the discipline of contempt. *Collier.*

RY, *v. a.*, *v. n.*, & *n. s.* } Fr. *frire;* Lat.
RYINGPAN, *n. s.* } *frigo;* Welsh, *ffrio;*
frijck. To dress food by roasting it in a
on the fire; to melt and agitate with heat; to
r the action of fire: applied metaphorically,
ny thing that agitates the mind with indigna-
, or shame, and from which the sufferer can-
escape.

e coude roste, and sethe, and broil, and *frie*
en mortrewes, and wel bake a pie.
Chaucer. Prologue to the Canterbury Tales.

il of sweet almonds, newly drawn with sugar, and
tle spice, spread upon bread toasted is an excel-
nourisher; but then, to keep the oil from *frying*
he stomach, drink mild beer after it.
Bacon's Natural History.

f I pass by sea, I may chance to fall from the
ngpan into the fire. *Howel's Vocal Forest.*

Spices and gums about them melting *fry*,
And, phœnix-like, in that rich nest they die.
Waller.

So when with crackling flames a cauldron *fries*,
The bubbling waters from the bottom rise;
Above the brims they force their fiery way,
Black vapours climb aloft, and cloud the day.
Dryden.

Where no ford he finds, no water *fries*,
Nor billows with unequal murmurs roar,
But smoothly slide along, and swell the shore,
That course he steered. *Id. Æneid.*

We understand by out of the *fryingpan* into the fire, that things go from bad to worse. *L'Estrange.*

The soul there restless, helpless, hopeless lies;
The body *frying* roars, and roaring *fries:*
There's life that never lives, there's death that never dies. *Fletcher's Purple Island.*

But let it go:—it will one day be found
With other relics of a 'former world;'
When this world shall be former, under ground,
Thrown topsy-turvy, twisted, crisped, and curled;
Baked, *fried*, or burnt, turned inside-out, or drowned,
Like all the worlds before, which have been hurled
First out of and then back again to chaos,
The superstratum which will overlay us. *Byron.*

But Zoe, the mean time, some eggs was *frying*,
Since, after all, no doubt, the youthful pair
Must breakfast, and betimes—lest they should ask it,
She drew out her provision from the basket.
Id. Don Juan.

FRYTH (John), a martyr to the Protestant religion, under Henry VIII. He was the son of an inn-kepeer at Seven-Oaks in Kent, and educated in King's College, Cambridge, where he took the degree of B. A. Thence he removed to Oxford, and was made a junior canon of Wolsey's College. He there became acquainted with William Tyndale, a zealous Lutheran, who converted him to Lutheranism. Avowing his opinions publicly, he was apprehended, examined, and confined to his college. At length having obtained his liberty, in 1528, he went over to Germany, where he continued about two years, and then returned to England. At last he was taken up at Reading as a vagrant, and set in the stocks, where he remained till he was nearly expiring for want of sustenance. He was at length relieved by the humanity of Leonard Cox, a schoolmaster, who procured his enlargement, and supplied his wants. He then set out for London, where he began to make proselytes, but was apprehended by order of Sir Thomas More, and sent prisoner to the Tower. Refusing to recant, he was burnt in Smithfield, on the 4th July 1533. He left several works, which were printed in folio, in 1573.

FUB, *v. a.* See FOB.

FUB, *n. s.* A plump chubby boy or girl.

FUCA, STRAITS OF ST. JUAN DE, an inlet on the north-west coast of North America, about fifteen miles wide, between Cape Flattery on the south side, in lat. 48° 20′ N., long. 124° 23′ W., and Quadra's Isles on the north side, in lat. 48° 40′ N. These straits are said to have been originally discovered by a Greek pilot of the island of Cephalonia (Juan de Fuca), who was despatched in 1592, by the viceroy of Mexico, to explore the west coast of North America for an inlet which might lead to a communication with the Atlantic. But the account of this discovery

was mingled with such romantic tales that it remained disbelieved in modern times until the trading vessels, which frequent this coast, in the fur trade, having approached the shore from which captain Cook had been driven by contrary winds, discovered the inlet mentioned by De Fuca between the forty-eighth and forty-ninth parallels. Captain Meares, in particular, who visited this coast in 1788, was anxious to explore this inlet, and he accordingly equipped his boat on an expedition for that purpose. After his crew had entered the inlet, they were attacked by the inhabitants, who collected around them in canoes. A desperate attack was commenced. The savages had greatly the advantage in point of numbers, and were armed with clubs, spears, bows and arrows, and slings; but the courage of captain Meares's crew prevailed, and the assailants though with great difficulty were repulsed. Captain Meares, however, in consequence of these hostile dispositions of the inhabitants, abandoned all further thoughts of exploring this shore.

Vancouver arrived on this part of the American coast in 1792, and discovered this inlet, in lat, 48° 23′ 30″: continuing his course almost directly into the continent for nearly 100 miles he found that the strait bore round to the north-west and south-east. The southerly branch was found to terminate at the distance of about seventy miles, in lat. 47° 21′ N. long. 237° 6′ E., in low and apparently swampy lands. This branch was accurately surveyed in its numerous inlets by captain Vancouver, and after running in a north-west direction, generally parallel with the coast, was found to issue in the Pacific Ocean, by Queen Charlotte's Sound, in N. lat. 51° 45′, long. 232° 1′ E. The investigation was conducted with great perseverance, and through a course of perilous navigation, occasioned by the numerous islands and sunken rocks. The inhabitants were generally friendly; but on one occasion they showed an intention of attacking a boat's crew, and it was only by the conviction of the powerful means of resistance possessed by the British, that they desisted from this attempt. At some of the villages along the shore they were found well armed with muskets, and dexterous marksmen.

FUCINUS Lacus, in ancient geography, a lake of Italy, in the country of the Marsi, now called Celano, from a cognominal citadel, in the south of Abruzzo Ultra. According to the testimony of ancient authors, it was subject to extraordinary risings and decreasings. The actual circumference is about thirty-five miles: the breadth in the widest part is ten, in the narrowest four; its depth twelve feet upon an average. All round this noble piece of water rises a circle of grand mountains, some of them the highest in Italy, except the Alps, and many of them covered with snow. At the foot of them are numerous villages, with rich and well cultivated farms. As the swelling of the lake was attended with incredible damage, the Marsi had often petitioned the senate to drain it, and Julius Cæsar would have attempted it, had he lived. His successors were averse to the project, until Claudius, who delighted in expensive difficult enterprises, undertook it. During the space of eleven years he employed 30,000 men in digging a passage through the mountain; and, when every thing was ready for letting off the water, exhibited a superb naval spectacle on the lake. A great number of condemned criminals were obliged to act the parts of Rhodians and Sicilians in separate fleets; to engage in earnest, and to destroy one another, for the entertainment of the court and the multitude of spectators that covered the hills. A line of well armed vessels and rafts loaded with soldiers surrounded the scene of action, to prevent any of the wretches from escaping; but it was with great difficulty and many threats that they could be brought to engage. When this savage diversion was ended, the operations for opening the outlet commenced, and the emperor was very near being swept away and drowned, by the sudden rushing of the waters. However, either through the ignorance or negligence of the engineers the work did not answer as was expected, and Claudius did not live long enough to have the faults amended; and none of the water now escapes except through hidden channels formed by nature, which are probably subject to be obstructed, and thus occasion a superabundance of water in the lake, till some unknown cause remove the obstructions and again give free passage. Sir William Hamilton says, 'It is the most beautiful lake I ever saw, and it would be complete if the neighbouring mountains were better wooded.' It furnishes abundance of fish, though not of the best quality. There are a few large trouts, with many tenches, barbels, and dace. In the shallow water on the borders of the lake, he saw thousands of water snakes pursuing and preying upon a little kind of fish like our thornbacks, but much better armed; though their defensive weapons seemed to avail them but little against such ravenous foes. Claudius's Outlet he describes as still entire, though filled with earth and rubbish in many parts. He went into it with torches as far as he could. It is a covered canal, three miles long, and part of it cut through hard rock; and other parts supported by mason work, with wells to give light. Adrian is said to have let off the waters of the lake: and our author is of opinion, that, if the canal were cleared and repaired, it would still answer that purpose, and thereby restore a great deal of rich land fit for cultivation.

FU'CUS, *n. s.* } Lat. *fucatus*. Paint for the
FU'CATED, *adj.* } face: painted; disguised with paint: disguised by false show.

> Women chat
> Of *fucus* this, and *fucus* that. *Ben Jonson.*
>
> Those who paint for debauchery should have the *fucus* pulled off, and the coarseness underneath discovered. *Collier.*

Fucus, in antiquity, a name given to certain dyes and paints; particularly to a purple sea plant used to dye woollen and linens of that color. The dye, says Theophrastus, was very beautiful, but not lasting; for it soon began to change, and in time went wholly off. The women also used a substance called fucus to stain their cheeks red; and many have supposed that the same substance was used on both occasions; but this, on a strict enquiry, proves not to be the case. The Greeks called every thing φυκος that

stain or paint the flesh. But this pe- substance, used by the women to paint heeks, was distinguished from the others name of rizion among the more accurate , from ριζα, a root; and was indeed brought from Syria into Greece. The La- n imitation of the Greek name, called this dicula: and Pliny erroneously confounds ant with the radix lunaria, or τρυθιον of the s. The name fucus was in those times universal name for paint, that the Greeks omans had a fucus metallicus, which was ruse used for painting the neck and arms : after which they used the purpurissum, or ucus of the rizium, to give the color to the s. In after times they also used a fucus or for the purpose, prepared of the creta argenta- r silver chalk, and some of the rich purple that were in use at that time . and this seems ve been very little different from our rose-pink, or used on like occasions.

FUCUS, in botany, a genus of the monogynia r of algæ, and cryptogamia class of plants. All pecies afford a quantity of impure alkaline

The most remarkable are the following:— ciliatus, the ciliated or ligulated fucus, is d on the shores of Iona and other places, but t common. The color is red, the substance branous and pellucid, without rib or nerve; ordinary height of the whole plant about four ive inches. It is variable in its appearance rding to the different stages of its growth. eaten by the Scotch and Irish promiscuously dilse.

. esculentus, the eatable fucus, or bladder- ts, commonly called tangle in Scotland, is wise a native of the British shores. It is monly about four feet long, and seven or ht inches wide; but is sometimes found three ds or more in length, and a foot in width. all specimens are not above a cubit long, and inches broad. The substance is thin, mem- naceous, and pellucid; the color green or ve. The root consists of tough cartilaginous res. The stalk is about six inches long, and lf an inch wide, nearly square, and pinnated in middle between the root and origin of the f, with ten or twelve pairs of thick, cartilagin- s, oval, obtuse, foliaceous ligaments, each about o inches long, and crowded together. The af is of an oval lanceolate, or long elliptic form, mple and undivided, waved on the edges, and idely ribbed in the middle from bottom to top; e stalk running through its whole length, and anding out on both sides of the leaf. It is ten in the north both by men and cattle. Its roper season is September, when it is in perfec- on. The membraneous part is rejected, and the talk only is eaten.

F. giganteus, the gigantic fucus, is a native of he Straits of Le Maire; and grows on rocky round, which in those countries is distinguished rom sand or ooze by the enormous length of the ea-weeds that grow upon it. The leaves are our feet long and some of the stalks, though ot thicker than a man's thumb, are 120. Sir Joseph Banks and Dr. Solander sounded over some of them which were eighty-four feet deep; and, as they made a very acute angle with the bottom, they were thought to be at least one half longer.

F. palmatus, the palmated or sweet fucus, commonly called dulse, or dilse, grows plentifully on our sea-coasts and islands. Its substance is membraneous, thin, and pellucid; the color red, sometimes green, with a little mixture of red; its length generally about five or six inches, but varies from three to twelve: it is fan-shaped, or gradually dilated from the base upwards. Its divisions are extremely various. The inhabitants, both of Scotland and England, take pleasure in eating this plant; and women of weak habits often recover an appetite by eating it raw. The inhabitants of the Archipelago also are fond of it, as we learn from Steller. They sometimes eat it raw, but esteem it most when added to ragout, oglios, &c., to which it gives a red color; and, dissolving, renders them thick and gelatinous. In the Isle of Skye, it is sometimes used in fevers to promote perspiration, being boiled in water with butter. In this manner it also frequently purges. The dried leaves when infused in water, exhale the scent of violets.

F. pinnatifidus, the jagged fucus, or pepper dilse, is frequent on sea-rocks which are covered by the tides, both on the east and west coasts. It is of a yellow-olive color, often tinged with red The substance is cartilaginous, but tender and transparent; the height about two or three inches. This species has a hot taste in the mouth, and is therefore called pepper dilse, in this country. It is often eaten as a salad, like the preceeding.

F. plicatus, the matted or Indian grass fucus, grows on the sea-shores in many places of Scotland and England. It is generally about three or four, sometimes six inches long. Its color, after being exposed to the sun and air, is yellowish, or auburn; its substance pellucid, tough, and horny, so as to bear a strong resemblance to what the anglers call Indian grass.

F. plocamium, or pectinated fucus, is frequent on the sea-rocks, and in basins of water left by the recess of the tides. Its natural color is a most beautiful bright red or purple, but is often variegated with white or yellow. Its substance is cartilaginous, but extremely thin, delicate, and transparent; its height commonly about three or four inches. The stalk is compressed about half a line in diameter, erect, but waved in its growth, and divided almost from the base into many widely expanded branches. These primary branches are very long, alternate, exactly like the stalk, and subdivided into alternate secondary branches; which are again frequently compounded in like manner, and these divisions decorated with subulated teeth, growing in alternate rows, curiously pectinated or toothed on the upper side like a comb, the smallest of these teeth scarcely visible to the naked eye. The fructifications are minute spherical capsules, or smooth dark-red globules, scattered without order on the sides of the branches; generally sessile, but some few of them supported on short peduncles. This species, on account of its elegant colors and fine divisions, is the species most admired by those

who are fond of pictures and mimic landscapes, composed of marine vegetables.

F. prolifer, the proliferous fucus, is found on the shores of the western coast, adhering to shells and stones. The color is red; the substance membranaceous, but tough, and somewhat cartilaginous, without rib or nerve, though thicker in the middle than at the edges. Its whole length is about four or five inches, the breadth of each leaf about a quarter of an inch. The growth of this fucus, when examined with attention, appears to be extremely singular and wonderful. It takes its origin either from a simple, entire, narrow, elliptic leaf, about an inch and a half long; or from a dilated forked one, of the same length. Near the extremity of the elliptic leaf, or the points of the forked one (but out of the surface, and not out of the edge), arise one or more elliptic forked leaves, which produce other similar ones, in the same manner, near the summits; and so on continually one or more leaves from the ends of each other, in a proliferous and dichotomous order, to the top of the plant: which in the manner of its growth much resembles the cactus opuntia, or flat-leaved Indian fig. Sometimes two or three leaves, or more, grow out of the middle of the disc of another leaf; but this is not the common order of their growth. The fructifications are red, spherical, rough warts, less than the smallest pin's head, scattered without order on the surface of the leaves. These warts, when highly magnified, appear to be the curled rudiments of young leaves; which in due time either drop off and form new plants, or continue on and germinate upon the parent. The plant is very much infested with the flustra pilosa, the mandrepora verrucaria, and other corallines, which make it appear as if covered with white scabs.

F. saccharinus, the sweet fucus or sea belt, is very common on the sea coast. Its substance is cartilaginous and leathern; and the leaf is quite ribless. By these characters it is distinguished from the esculentus, to which it is nearly allied. It consists only of one simple, linear, elliptic leaf, of a tawny-green color, about five feet long, and three inches wide in its full grown state; but varies so exceedingly as to be found from a foot to four yards in length. The ordinary length of the stalk is two inches, but it varies even to a foot. The root is composed of branched fibres, which adhere to the stones like claws. This plant is often infested with the sertularia ciliata. The inhabitants of Iceland make a kind of pottage of it; boiling it in milk and eating it with a spoon. They also soak it in fresh water, dry it in the sun, and then lay it up in wooden vessels, where it is soon covered with a white efflorescence of sea salt, which has a sweet taste like sugar. This they eat with butter; but if taken in too great a quantity, the salt is apt to irritate the bowels. Their cattle feed and get fat upon this plant, both in its recent and dry state; but their flesh acquires a bad flavor. It is sometimes eaten by the people on the coast of England, boiled as a pot-herb.

F. serratus, the serrated fucus, or sea wrack, is frequent at all seasons upon the sea rocks at low water mark, but produces its seeds in July and August. It consists of a flat, radical, and dichotomous leaf, about two feet long; the branches half an inch wide, serrated on the edges with dents of unequal size, and at unequal distances, having a flat stalk or rib divided like the leaf, and running in the middle of it through all its various ramifications. A small species of coralline, called by Linnæus sertularia pumila, frequently creeps along the leaf. This species affords a much smaller quantity of alkaline salt than most others, eight oz. of the ashes yielding only three of fixed salt. The Dutch cover their crabs and lobsters with this fucus to keep them alive and moist; and prefer it to any other, as being destitute of those mucous vesicles with which some of the rest abound, and which would sooner ferment and become putrid.

F. vesiculosus, the bladder fucus, common sea wrack, or sea ware, grows in great abundance on the sea rocks about low water mark; producing its fructifications in July and August. It has the same habit, color, and substance, as the foregoing; but the edges of the leaf have no serratures, being quite entire; in the disc or surface are immersed hollow, spherical, or oval air-bladders, hairy within, growing generally in pairs, but often single in the angles of the branches, which are probably destined to buoy up the plant in the water: and, on the extreme segments of the leaves, appear tumid vesicles about three quarters of an inch long, sometimes oval and in pairs, sometimes single and bifid, with a clear viscid mucus interspersed with downy hairs.—This species is an excellent manure for land; for which purpose it is often applied in the maritime parts of Scotland and other countries. In the islands of Jura and Skye it serves as a winter food for cattle, which regularly come down to the shores at the recess of the tides to seek it. And sometimes even the stags, after a storm, descend from the mountains to the sea-sides to feed upon it. Linnæus informs us, that the inhabitants of Gothland boil it in water, and, mixing a little coarse meal or flour, feed their hogs with it; for which reason they call the plant swintang. And in Scania, he says, the poor people cover their cottages with it, and sometimes use it for fuel. In Jura, and some other of the Hebrides, the inhabitants dry their cheeses without salt, by covering them with the ashes of this plant; which abounds with such a quantity of salts, that from five oz. of the ashes may be procured two and a half of fixed alkaline salts. But the most beneficial use, to which the fucus vesiculosus is applied, is in making potash, or kelp, a work much practised in the Western Isles. There is a great difference in the goodness and price of this commodity, and much care and skill required in properly making it. That is esteemed the best which is hardest, finest grained, and free from sand or earth. The process of making it is this: when it is cut, it is carried to the beach and dried; and a hollow is dug in the ground, three or four feet wide; round its margin is laid a row of stones, on which the sea-weed is placed, and set on fire within; and, quantities of this fuel being continually heaped upon the circle, there is in the centre a perpetual flame, from which a liquid,

elted metal, drops into the hollow beneath: t is full, as it commonly is ere the close y, all heterogeneous matter being re-, the kelp is wrought with iron rakes, and it to a uniform consistence in a state of

When cool, it consolidates into a heavy olored alkaline substance, which undergoes glass-houses a second vitrification, and es a perfect transparency.

p is generally divided into two kinds; the ed kelp, and the drift-weed kelp; the made from the weed which has been re-cut from the rocks, the latter from that has been drifted ashore. The latter is sed to yield a kelp of inferior quality. which has been exposed to rain, during ocess of drying, affords a kelp of inferior y. It is, therefore, of the utmost import-to keep the weed as much as possible free rain. For this purpose, many employ ; when these are not at hand, the weed, has been laid out to dry, should be col-l into one heap during the rain; when this s, it should again be immediately spread out. s often been matter of dispute, how old the s should be before they be cut. In general years is the time allotted. This, however, some trials which have been made to as-in this point, seems to be too long. From riments, it appears, that the produce of from one ton of three years old weed, is eight pounds more than that from the same tity of two years old; from this we would lude, that the weed ought to be cut every years.

o great a value is set upon this plant by the bitants, that they roll fragments of rocks huge stones into the sea to increase the wth of it. Its medical virtues have been h celebrated by Dr. Russel, in his dissertation concerning the use of sea water in the eases of the glands. He found the saponaceous liquor, or mucus, in the vesicles of this nt, to be an excellent resolvent, extremely viceable in dispersing all scorbutic and scrofulous swellings of the glands. He recommends patient to rub the tumor with these vesicles ised in his hand, till the mucus has thoroughly netrated the part, and afterwards to wash with water. Or to gather 2 lbs. of the tumid sicles, in July, when they are full of mucus, d infuse them in a quart of sea-water, in a ss vessel, for fifteen days, when the liquor will ve acquired nearly the consistency of honey. en strain it off through a linen cloth, and rub s liquor, three or four times a day, upon any rd scrofulous swellings, washing the parts after-rds with sea water, and nothing can be more icacious to disperse them. Even scirrhosities, he ys, in women's breasts, have been dispelled by is treatment. By calcining the plant in the en air, he made a very black salt powder, hich he called vegetable Æthiops; a medicine uch used as a resolvent and deobstruent, and commended also as an excellent dentifrice to rrect the scorbutic laxity of the gums, and take f the foulness of the teeth.

FUD'DLE, *v. a.* & *v. n.* A frequentative of Swed. *full*: whence Scotch, *full, fou.* To make drunk; to drink to excess.

Men will be whoring and *fuddling* on still.
L'Estrange.

The table floating round,
And pavement faithless to the *fuddled* feet. *Thomson.*

FUEGO, Fogo, or St. Philip's, one of the Cape de Verd Islands, in the Atlantic, so named from its volcano, and from its having been discovered on St. Philip's day. It is fifteen miles long, and is much higher than any of the rest; seeming at sea to be one single mountain, though on the sides there are deep valleys. There is a volcano at the top which burns continually, and may be seen a great way off. It throws out huge pieces of rocks to a vast height, and torrents of melted lava run down its sides. The Portuguese, who first inhabited it, brought negro slaves with them, and a stock of cows, horses, and hogs; but their descendants are not now distinguishable from the negroes, the chief inhabitants being blacks, and of the Romish religion. The interior of the island is little known, but it is reported to suffer much from the want of water, which renders it unfit for the production of any vegetable except water melons, pompions, and fruits of a dry soil. Cotton was formerly raised, but never flourished here. The coast is abrupt and rocky, so that there are only a very few points at which it can be approached. The best road is that of Fonte de Villa, opposite the chief town. Long. 24° 20′ W., lat. 15° 0′ N.

Fuego, Terra del. See Terra del Fuego.

FUEGOS, one of the Philippine Islands, about thirty-six miles in circuit; the land rises gradually from the shore to the centre. Long. 123° 26′ E., lat. 9° 20′ N

FUE'ILLEMORTE, *n. s.* Fr. Also corruptly pronounced and written philomot. Fueillemorte color signifies the color of withered leaves in autumn.

FU'EL, *n. s.* & *v. a.* Fr. *feu*, fire, of Lat. *focus*. The matter, or aliment, of fire: to feed fire with combustible matter: to store with firing.

This shall be burning and *fuel* of fire. *Isa.* ix. 5.

This spark will prove a raging fire
If wind and *fuel* be brought to feed it with.
Shakspeare.

And yet she cannot waste by this,
Nor long endure this torturing wrong;
For more corruption needless is,
To *fuel* such a fever long. *Donne.*

Some are plainly œconomical, as that the sea be well watered, and well *fuelled*. *Wotton's Architect.*

As a lamp is choked by a superabundance of oil, a fire extinguished by excess of *fuel*, so is the natural heat of the body destroyed by intemperate diet.
Burton.

Never, alas! the dreadful name
That *fuels* the infernal flame. *Cowley.*

Moved by my charms, with them your love may cease;
And as the *fuel* sinks, the flame decrease. *Prior.*

The *fuelled* chimney blazes wide. *Thomson.*

Gain may be temporary and uncertain; but ever while you live expense is constant and certain; and it is easier to build two chimneys, than to keep one in *fuel*. *Franklin.*

Here wrecks were in such plenty
That there was *fuel* to have furnished twenty.
Byron. Don Juan.

FUENHOA, a city of China, in the province of Pe-Tcheli, celebrated for its extent, and the number of its inhabitants, as well as for the beauty of its streets and triumphal arches. It is situated near the great wall amidst mountains; and has under its jurisdiction two cities of the second, and eight of the third class, and a great number of fortresses, which bar the entrance of China against the Tartars.

FUERTEVENTURA, or FORTAVENTURA, one of the Canary Islands, consisting of two peninsulas, joined by an isthmus twelve miles broad. The soil is fertile, producing wheat, barley, mastic, orchel, dates, olives, and various other fruits; particularly a species of fig-tree, that yields a medicinal balm. It abounds in cattle and goats; 50,000 kids have been bred here annually. Long. 14° 32′ W., lat. 28° 4′ N.

FUGA'CITY, *n. s.* } Lat. *fugax.* Volatile: the quality of flying away: uncertainty; instability.
FUGA'CIOUS, *adj.* }
FUGA'CIOUSNESS, *n. s.* }

Spirits and salts, which, by their *fugacity*, colour, smell, taste, and divers experiments that I purposely made to examine them, were like the salt and spirit of urine and soot. *Boyle.*

FUGALIA, in Roman antiquity, a feast supposed by some to be the same with the regifugium, held on the 24th of February, in memory of the expulsion of the kings, and the abolition of monarchy. Others think that the fugalia was the same with poplifugia, or the feast of Fugia, the goddess of joy, occasioned by the rout of an enemy; which was the reason the people abandoned themselves to riot and debauchery.

FUGH, *interj.* Perhaps from Gr. φεῦ. An expression of abhorrence. Commonly foh.

A very filthy fellow: how odiously he smells of his country garlick! *fugh*, how he stinks of Spain!
Dryden's Don Sebastian.

FU'GITIVE, *adj.* & *n. s.* } Fr. *fugitif*; Lat.
FUGITIVENESS, *n. s.* } *fugitivus.* Not tenable; not to be held or detained; unsteady; evanescent; volatile; apt to fly away: a wanderer; a runagate; a vagabond: one hard to be caught, or detained: volatility; fugacity.

Whilst yet with Parthian blood thy sword is warm,
The *fugitive* Parthians follow.
Shakspeare. Antony and Cleopatra.

Unmarried men are best friends, best masters, best servants, but not always best subjects; for they are light to run away, and almost all *fugitives* are of that condition. *Bacon.*

The most malicious surmise was countenanced by a libellous pamphlet of a *fugitive* physician. *Wotton.*

The Trojan chief
Thrice *fugitive* about Troy wall. *Milton.*

Back to thy punishment,
False *fugitive!* and to thy speed add wings,
Lest with a whip of scorpions I pursue
Thy lingering. *Id. Paradise Lost*

That divers salts, emerging upon the analysis of many concretes, are very volatile, is plain from the *fugitiveness* of salt and of hartshorn attending in distillation. *Boyle.*

Your royal highness is too great and too just either to want or to receive the homage of rebellious *fugitives.* *Dryden.*

Our idea of infinity is a growing and *fugitive* idea, still in a boundless progression, that can stop no where. *Locke.*

Happiness, object of that waking dream,
Which we call life, mistaking: *fugitive* theme
Of my pursuing verse, ideal shade,
National good, by fancy only made. *Prior*

The more tender and *fugitive* parts, the leaves, of many of the more sturdy vegetables, fall off for want of the supply from beneath: those only which are more tenacious, making a shift to subsist without such recruit. *Woodward's Natural History.*

Can a *fugitive* daughter enjoy herself, while her parents are in tears? *Clarissa.*

What muse but his can Nature's beauties hit,
Or catch that airy *fugitive*, called Wit? *Harte.*

I cannot find my hero: he is mixed
With the heroic crowd that now pursue
The *fugitives*, or battle with the desperate.
Byron. Deformed Transformed

FUGITIVE PIECES, in literature, essays, poems, or other short compositions, inserted in newspapers, magazines, or the like periodical publications; or printed on loose sheets, or half sheets; so called, because easily lost and soon forgotten.

FUGUE, *n. s.* From Fr. and Lat. *fuga.* In music, some point consisting of four, five, six, or any other number of notes begun by some one single part, and then seconded by a third, fourth, fifth, and sixth part, if the composition consists of so many; repeating the same, or such like notes, so that the several parts follow, or come in one after another in the same manner, the leading parts still flying before those that follow. *Harris.*

The reports and *fugues* have an agreement with the figures in rhetorick of repetition and traduction.
Bacon's Natural Hist.

His volant touch
Instinct through all proportions, low and high,
Fled, and pursued transverse the resonant *fugue.*
Milton.

The skilful organist plies his grave and fancied descant in lofty *fugues.* *Id. on Education.*

Long has a race of heroes filled the stage,
That rant by note, and through the gamut rage;
In songs and airs express their martial fire,
Combat in trills, and in a *fugue* expire. *Addison.*

A FUGUE is a piece of music sometimes longer and sometimes shorter, in which, agreeably to the rules of harmony and modulation, the composer treats a subject; or, in other words, what expresses the capital thought or sentiment of the piece, in causing it to pass successively and alternately from one part to another. Some are peculiar to itself; and others common to it with what the French call imitation. 1. The subject proceeds from the tonic to the dominant, or from the dominant to the tonic, in rising or descending. 2. Every fugue finds its response in the part immediately following that which commenced. 3. That response ought to resume the subject in the interval of a fourth or fifth above or below the key, and to pursue it as exactly as the laws of harmony will admit; proceeding from the dominant to the tonic when the subject is introduced from the tonic to the dominant, and mov-

ing in a contrary direction when the subject is introduced from the dominant to the tonic. One part may likewise resume the same subject in the octave or unison of the preceding; but in that case, it is a repetition rather than a real response. 4. As the octave is divided into two unequal parts, of which the one contains four gradations descending from the tonic to the dominant, and the other only three in continuing the ascent from the dominant to the tonic; this renders it necessary to have some regard to this change in the expression of the subject, and to make some alterations in the response, that we may not quit the chords that are essential to the mode. It is a different case when the composer intends to alter the modulation; for these the exactness of the response itself, when taken in a different tone, produces the alteration proper for this change. 5. The fugue should be planned in such a manner, that the response may commence before the close of the best air, so that both the one and the other may be in part heard at the same time: that, by this anticipation, the subject may be as it were connected with itself, and that the art of the composer may discover itself in this concourse. It is absolute mockery, instead of a fugue, to impose upon the hearers the same air, merely transposed from one key to another, without any other restraint than an accompaniment afterwards formed at pleasure. This deserves at best no better name than what the French call imitation. See IMITATION.

Rousseau defines a fugue 'a piece of music in which a trait of melody, called the subject, is treated, according to certain established rules of harmony and modulation in making it pass successively and alternately from one part to another.' The subject resembles the text of a sermon, out of which all that is said should naturally arise, and serve as a commentary and illustration. But though, for variety, or to indulge caprice, fugues and canons have been composed in all intervals, yet orthodox contrapuntists allow no fugues to be regular, but those of which the answer is made in the fifth, fourth, eighth, or unison, as then the intervals will be the same. And of the answers, the preference is given to the fifth, then to the fourth, eighth and unison; as the effect is pleasing in that order. It must be remembered that the subject itself, as of all other movements, should begin on the key note, its fifth or its eighth. Of the various rules by which a true answer to a fugue may be tried, Dr. Pepusch advises solmisation; Padre Martini the modes of the Romish church, called authentic and plagal: both good in the three hexachords and their minor relatives; but in transposed keys, in which several flats or sharps occur at the clef, there is no rule more certain and unexceptionable than giving the answer in exactly the same intervals as the subject, only remembering that if one part rises a fifth, the other will only rise a fourth, as C ※ — G ※ — G ※ — C ※ — et e contra: as G ※ — C ※ — C ※ — G ※. But this is only in leading off. The rest of the answer must be in the same intervals, and characters for time, as the subject, except in prolation, augmentation and diminution, which give the answer in longer or shorter notes than the theme. All fugues and canons are imitations; but the term imitation is only applied to irregular fugues, when the intervals are not the same. The answer to a regular fugue may commence in the middle of the subject, which will unite them together, and make them reciprocally accompaniments to each other. 'The fugued style, says Mr. Donnely, is that where all the parts are nearly of the same importance, and where the harmony, whether for two, three, or four parts, is rich, pure, and concise; a style in which, not only all commonplace passages are carefully avoided, but every thing unworthy of the attention of the learned. This style is, and ever will be, that which the connoisseur and man of taste will esteem the most, not only because it is the most difficult, but because it is not subjected to the caprice of a frivolous and transitory taste, as is the case with most other musical productions, which get out of fashion, and never resist time. For this reason, the works of Handel, Marcello, Sebastian Bach, &c., have, for us, the same interest they had for past generations. There are some admirable specimens of fugues, in Clementi's Practical Harmony, a work, which has, in a most extraordinary degree, improved the taste for good music in England.'

It is impossible to enumerate all the ingenious contrivances that have been used in the works of great fughists. The following are the most frequent.

FUGA PER ARSIN ET THESIN, or fugue in contrary motion.

FUGA PER CONTRARI MOVIMENTI.

FUGA IN CONSEQUENZA, is sometimes used for canon.

FUGA OMOFONA, a fugue in unison.

FUGA LIBERA, free fugue. A canon is so called.

FUGA LEGATA, and a strict fugue, a canon.

FUGA PERPETUA, perpetual fugue.

FUL'CIMENT, *n. s.*. Lat. *fulcimen, fulcimentum*. That on which a body rests, which acts or is acted upon at each end, as a balance or a lever.

> The power that equiponderates with any weight, must have the same proportion unto it, as there is betwixt their several distances from the centre or *fulciment*. *Wilkins.*

FULCRUM, in mechanics, the prop or support by which a lever is sustained.

FULCRUM, in botany. See BOTANY, Index.

FULDA, or FULDE, a province, once an episcopal principality of Germany, in the circle of the Upper Rhine, bounded on the north by Hesse Cassel, east by Henneberg, south by Wurzburg, and west by Isemburg and Hesse. It now belongs chiefly to Hesse Cassel, and is forty miles long, and from seven to twenty-five broad: containing 642 square miles; and is full of woods, mountains, medicinal springs, and rich arable lands. It was erected into a bishopric, in 1752, by Boniface XIV. This is a mountainous district, and little adapted to tillage in any part: but the pasturage is extensive, and the culture of culinary vegetables considerable. The inhabitants are generally poor, and manufacture nothing but a little yarn, and linen. The Fulda is the

chief river, and the town of that name, described hereafter, the capital.

In 1802 the territory was secularised, and given to the prince of Nassau Orange: but Buonaparte seized it in 1810. In 1814 a portion of this district, containing 27,000 inhabitants, was given to Saxe Weimar, and the rest to Prussia, who has subsequently ceded her portion to Hesse-Cassel, and the latter government has given it the title of the grand duchy of Fulda, with a constitution of its own. It is divided into eight bailiwics. Population 64,000.

FULDA, or FULDE, the capital of the above principality, has a celebrated abbey, erected by Benedictine monks, in 744. The abbot was formerly primate of the imperial abbeys, and chancellor to the emperor. It is seated on the river of this name, fifty-five miles south of Cassel, fifty-eight north of Frankfort, and sixty-three E. N. E. of Mentz. Here is a university or lyceum with six teachers, and an ecclesiastical academy, the inhabitants manufacture woollen, linen, and earthenware. Population 7500.

FULDA (Charles Frederic), a Protestant ecclesiastic, born at Wimpfen, in 1722, possessed considerable learning, as well as some skill in mechanics, and was the author of Treatises, On the Goths; On the Cimbri; On the ancient German Mythology; A Chart of History; and a Dictionary of the German Roots. He died in 1788, at Einzingen.

FULFILL, *v. a.* (Full and fill.) To fulfill is literally to fill quite full, that is, to bring about full to the wishes of a person: it also signifies to accomplish, or to keep to the end, or to the full extent.

Woo to you that ben *fulfillid*, for ye schulen hungur.
Wiclif. Luk. vi.

And it was don whanne the dayes of his office weren *fulfillid*: he wente into his hous. *Id.*

O Salomon! richest of all richesse,
Fulfilled of sapience, and worldlie glorie
Ful worthy ben thy wordes to memorie
To every wight, that wit and reson can.
Chaucer. The Marchantes Tale.

——— I woll tell a tale to your consolacioune
In ensampill to yowe, that when that I have do
Another be right redy then for to tell; ryght so
To *fulfyl* our Hoostes wyll and his ordinaunce
There shall no fawte be found in me.
Id. The Pardonere and Tapstere.

Six gates i' th' city, with massy staples,
And corresponsive and *fulfilling* bolts,
Sparre up the sons of Troy.
Shakspeare. Troilus and Cressida.

This I my glory account
My exaltation, and my whole delight,
That thou in me well-pleased declarest thy will
Fulfilled, which to *fulfil* is all my bliss. *Milton.*

Here nature seems *fulfilled* in all her ends.
Id. Paradise Lost.

The fury bathed them in each other's blood;
Then, having fixed the fight, exulting flies,
And bears *fulfilled* her promise to the skies.
Dryden.

If on my wounded breast thou drop'st a tear,
Think for whose sake my breast that wound did bear;
And faithfully my last desires *fulfil*,
As I perform my cruel father's will. *Id. Ovid.*

FULFRA'UGHT *adj.* Full and fraught. Fully stored.

Thy fall hath left a kind of blot
To mark the *fulfraught* man, the best endued,
With some suspicion. *Shakspeare. Henry V.*

FUL'GENCY, *n. s.* } All from Lat. *fulgens*,
FUL'GENT, *adj.* } *fulgidus*. Splendor; glit-
FUL'GID, *adj.* } ter; shining; dazzling;
FULGID'ITY, *n. s.* } exquisitely bright.

As from a cloud his *fulgent* head,
And shape star-bright, appeared.
Milton's Paradise Lost.

The illumination is not so bright and *fulgent* as to obscure or extinguish all perceptibility of reason.
More's Divine Dialogues.

FULGENTIUS (St.), an orthodox father, of the fifth century, born at Talepta, in 468, of a noble family. Though he had a liberal education, and a lucrative post, he left it and turned monk. In 507 he was elected bishop of Ruspa; but was banished, with the other trinitarian African bishops, by Thrasimond, the Arian king of the Vandals; on whose death they were recalled. Fulgentius died in 533. His works were printed at Paris in 1 vol. 4to. 1684.

FULGORA, in zoology, a genus of insects belonging to the order of hemiptera. The characters are these: The front or fore part of the head is drawn extended and empty; the antennæ are seated below the eyes, having two articulations, whereof the exterior is larger, and of a globular form; the rostrum is reflected, or bent inwards under the body; and the feet are made for walking. There are twenty-five species, the most remarkable of which are:—

F. candelaria, or lantern fly. The head and thorax are generally of a ruddy brown; and the ground color of the elytra is fresh green, but quaintly figured with spots of a yellowish clay color, sometimes pale, at other seasons of a deeper hue. The wings are of a deep and beautiful yellow, with a broad band of glossy black bordering the extremities. The tarsi of the feet are composed of three articulations, and are paler than the legs and thighs, which are brown. When the insect is on the wing, the waving of the elytra (whose thinness renders the spots thereon transparent), assisted by the luminous quality peculiar to the tribe, and the golden yellow of the under wings, bordered with black, occasion the flashes they dart around in the night. It is an inhabitant of China.

F. Europæa. Front conic; body green, wings hyaline, reticulate: inhabiting Europe; and the only species of the genus found in England. It was the earliest discovered in Europe, hence its specific name.

FULGOR', *n. s.* } Lat. *fulgor*; *fulguratio*.
FULGURA'TION, *n. s.* } Dazzling brightness, like that of lightning; the act of lightning.

Glow-worms alive project a lustre in the dark; which *fulgour*, notwithstanding, ceaseth after death.
Browne.

When I set my eyes on this side of things, there shines from them such an intellectual *fulgour*, that methinks the very glory of the Deity becomes visible through them. *More.*

FUL'HAM, *n. s.* A cant word for false dice.

Let vultures gripe thy guts, for gourd and *Fulham's* hold,
And high and low beguile the rich and poor.
Shakspeare.

ULHAM, a village of Middlesex, four miles London. The Danes in 869 wintered at place till they retired to the continent. In iam the Conqueror's time it was held of the by the canons of St. Paul's; and there is ncient house in it, which is moated about, belongs to the see of London, whose bishop palace here, and the demesne has belonged iat diocese from 1067. From this place to ey there is a wooden bridge over the nes, where not only horses, coaches, and all ages, but even foot passengers, pay toll. church here is both a rectory and a vi-ge.

ULICA, in ornithology, the gallinule and , a genus of birds of the order of grallæ. bill convex: the upper mandible fornicated the lower at the edge; the lower mandible bbous behind the tip. The forehead is bald; the feet have four toes, subpinnated. There twenty-five species; eighteen of which be- to the gallinule division, distinguished by ing the toes furnished with broad scalloped nbranes; and seven comprehend the coots ch have the toes divided to their origin. The owing are among the most remarkable:—

. aterrima, the greater coot, is of a larger size the common coot, and its plumage is ker. This species is found in Lancashire Scotland; but is more plentiful on the con-nt, being found in Russia, and the west of eria very common; also at Sologne and the ghbouring parts, where they call it judelle. flesh is much esteemed.

F. atra, the common coot, has a bald forehead, black body and lobated toes; and is about een inches long. They frequent lakes and l rivers; making their nests among the rushes, h grass, reeds, &c., floating on the water, so as rise and fall with it. They lay five or six large gs, of a dirty whitish hue, sprinkled over with nute deep rust-colored spots; and it is said, at they will lay fourteen or more. The young en just hatched are very deformed, and the ad mixed with a red coarse down. In winter ey often repair to the sea, and the channel near outhampton is sometimes observed almost vered with them. They are often brought to at market, where they are exposed to sale with-t their feathers, and scalded like pigs. This ecies is not numerous, for vast numbers fall a ey while young to the buzzards, which frequent e marshes. Their food is small fish and water sects; but they sometimes eat the roots of the ilrush, and with it feed their young; they are id likewise to eat grain. This species is sup-osed to extend throughout the old continent, nd perhaps the new also. It inhabits Green-nd, Sweden, Norway, Russia, Siberia, Persia, China, and many of the intermediate parts. It also met with in Jamaica, Carolina, and other arts of North America. The Indians about Niagara dress the skins, and use them for ouches. They are called in Carolina, flus-erers.

F. chloropus, the common gallinule, is in ength about fourteen inches, and has a bald orehead and broad flat toes. It gets its food on grassy banks, and borders near fresh waters, and *in* the very waters, if they be weedy. It builds upon low trees and shrubs by the water side; breeding twice or thrice in a summer; and, when the young are grown up, drives them away to shift for themselves. The hen lays seven eggs of a dirty white, thinly spotted with rust color. The gallinule strikes with its bill, and in spring has a shrill call. In flying, it hangs down its legs; and in running, it often flirts up its tail, and shows the white feathers. The bottoms of its toes are so very flat and broad (to enable it to swim) that it seems to be the species which connects the cloven-footed aquatics with the fin-toed. It is pretty common on the continent, and inhabits America, from New York to Carolina; as well as Jamaica and other islands in the West Indies. It feeds on plants and small fish, and the flesh is pretty good.

F. porphyrio, the purple gallinule, is about the size of a fowl, or seventeen inches in length. The bill is an inch and a half long, and of a deep red color. The forehead is bare and red; the head and hind part of the neck are glossy violet; the legs are very stout, and of the color of the bill. This species is more or less common in all the warmer parts of the globe. On the coasts of Barbary they abound, as well as in some of the islands of the Mediterranean. In Sicily they are bred in plenty, and kept for their beauty. They are often met with in the south of Russia and west of Siberia, among reedy places; and near the Caspian Sea; but in the cultivated rice grounds of Ghilar, in Persia, they are in great plenty and high plumage. The female makes the nest among the reeds in the middle of March; lays three or four eggs, and sits from three to four weeks. That they are common in China, the Chinese paper hangings testify. They are also met with in the East Indies, the island of Java, Madagascar, &c. They are also common in South America. They are very docile, easily tamed, and feed with the poultry; scratching the ground with their feet, like our cocks and hens. They feed on fruits, roots, and grain, but eat fish with avidity, dipping them in the water before swallowing. They often stand on one leg, and lift the food to their mouths with the other. A pair of them, kept in an aviary in France, made a nest of small sticks mixed with a quantity of straw, and laid six white eggs, perfectly round; but the hen was careless of them, and they produced nothing. The flesh is said to be exquisite.

FULIGINOUS, *adj.* Fr. *fuligineux-se*; Lat. *fuliginosus*. Sooty; smoky.

Burrage hath an excellent spirit to repress the *fuliginous* vapours of dusky melancholy, and so cure madness. *Bacon.*

Whereas History should be the torch of truth, he makes her in divers places a *fuliginous* link of lies. *Howel.*

FUL'IMART, *n. s.* This word, of which Skinner observes that he found it only in this passage, seems to mean the same with stoat. A kind of stinking ferret.

The fichat, the *fulimart*, and the ferret, live upon the face, and within the bowels of the earth. *Walton's Angler.*

FULIMART, in zoology. See MUSTELA.

FULK (William), D. D., an eminent English divine, born at London, in the sixteenth century. He was patronised by the earl of Leicester, who, in 1571, presented him to the livings of Warley and Diddington. He attended Leicester, when he went ambassador to France; and on his return was made master of Pembroke-hall, and Margaret professor of divinity in Cambridge. His works are very numerous, and chiefly against the Papists; the most noted is his Comment on the Rhemish New Testament. He died in 1589.

FULL, *adj.*, *n. s.* & *adv.* } Sax. pulle; Goth.
FUL'LY, *adv.* } *full*; Teut. *ful*; Belg.
FUL'NESS, *n. s.* } *vol*; perhaps of Gr. φλεος, πλεος. Replete; without vacuity; leaving no space void: stored; well supplied: plump; fat; saturated; complete; without abatement; strong; not faint; not attenuated; mature; perfect: applied to the moon when complete in its orb: spread to view in all dimensions. The idea of fulness is plenitude, and is used either in the proper sense to express the state of objects that are full, or in the improper sense to express great quantity, which is the accompaniment of fulness. See *Crabb*. Full is much used in composition, instances of which immediately follow the illustrations of this adjective and its derivatives.

And the fast was *ful* nygh, a feeste day of the Jewis. *Wiclif. Jon.* vi.

Better is an handful with quietness, than both the hands *full* with travel and vexation of spirit. *Eccl.* iv. 6.

Valley *full* of chariots. *Isaiah.*
The trees of the Lord are *full* of sap. *Psalms.*

Alone I stande *full* sorie and *full* sad,
Which hoped for to see my Lorde and Kyng:
Small cause have I to be merie or glad
Remembryng this bitterful departyng.
Chaucer. Lament of Mary Magdeleine.

Full wos the fest of deinties and richesse,
Of instrumentes, of song, and of gladnesse.
Id. The Legende of Good Women.

This markis yet his wif to tempten more,—
To the uttereste prefe of hire corage
Fully to have experience and lore,—
If that she were as stedfast as before;
He on a day in open audience,
Ful boisteresly, hath said hire this sentence.
Id. The Clerkes Tale.

Tell me why on your shield, so goodly scored,
Bear ye the picture of that lady's head?
Full lively is the semblant, though the substance dead.
Spenser.

There are many graces for which we may not cease hourly to sue, graces which are in bestowing always, but never come to be *fully* had in this present life; and therefore, when all things here have an end, endless thanks must have their beginning in a state which bringeth the *full* and final satisfaction of all such perpetual desires. *Hooker.*

I was set at work
Among my maids; *full* little, God knows, looking
Either for such men or such business. *Shakspeare.*

You should tread a course
Pretty and *full* of view. *Id. Cymbeline.*

To lapse in *fulness*
Is sorer than to lie for need; and falshood
Is worse in kings than beggars. *Id.*

The swan's down feather,
That stands upon the swell at *full* of tide,
Neither way inclines.
Shakspeare. Antony and Cleopatra.

He is the half part of a blessed man,
Left to be finished by such as she;
And she a fair divided excellence,
Whose *fulness* of perfection lies in him.
Shakspeare.

The king hath won, and hath sent out
A speedy power to encounter you, my lord:
This is the news at *full*. *Id. Henry IV.*

But what at *full* I know, thou knowest no part;
I knowing all my peril, thou no art. *Shakspeare.*

When we return,
We'll see those things affected to the *full*. *Id.*

The king set forwards to London, receiving the acclamations and applauses of the people as he went; which indeed were true and unfeigned, as might well appear in the very demonstration and *fulness* of the cry. *Bacon's Henry VII.*

Barrels placed under the floor of a chamber, make all noises in the same more *full* and resounding. *Id. Natural History.*

Brains in rabbits, woodcocks, and calves, are fullest in the *full* of the moon. *Id.*

The alteration of scenes feeds and relieves the eye, before it be *full* of the same object. *Bacon.*

Followers, who make themselves as trumpets of the commendation of those they follow, are *full* of inconvenience; they taint business through want of secrecy, and export honour from a man, and make him a return in envy. *Id.*

To the houses I wished nothing more than safety, *fulness*, and freedom. *King Charles.*

I need not instance in the habitual intemperance of rich tables, nor the evil accidents and effects of *fulness*, pride and lust, wantonness and softness. *Taylor's Rule of Holy Living.*

Where my expressions are not so *full* as his, either our language or my art were defective; but where mine are *fuller* than his, they are but the impressions which the often reading of him have left upon my thoughts. *Denham.*

That must be our cure,
To be no more; sad cure; for who would lose,
Though *full* of pain, this intellectual being,
Those thoughts that wander through eternity?
Milton.

He *full*
Resplendent all his Father manifest
Expressed. *Id.*

What remains, ye gods,
But up and enter now into *full* bliss? *Id.*

So law appears imperfect, and but given
With purpose to resign them in *full* time
Up to a better covenant. *Id.*

These thoughts
Full counsel must mature. *Id.*

Then all thy saints assembled, thou shalt judge
Bad men and angels; they arraigned shall sink
Beneath thy sentence; Hell her numbers *full*
Thenceforth shall be for ever shut.
Id. Paradise Lost.

Therewith he ended, making a *full* point of a hearty sigh. *Sidney.*

With pretence from Strephon her to guard,
He met her *full*, but *full* of warefulness. *Id.*

Your enjoyments are so complete, I turn wishes into congratulations, and congratulating their *fulness* only wish their continuance. *South.*

The most judicious writer is sometimes mistaken after all his care; but the hasty critick, who judges on a view, is *full* as liable to be deceived. *Dryden.*

)m harmony, from heavenly harmony,
universal frame began:
)m harmony to harmony,
ıgh all the compass of the notes it ran
diapason closing *full* in man. *Id.*

ngth resolved, he throws with all his force
the temples of the warrior horse. *Id.*

Since you may
spect my courage, if I should not lay,
ıe pawn I proffer shall be *full* as good.
Id. Virgil.

y one is *full* of the miracles done by cold baths
ıyed and weak constitutions. *Locke.*

Full in the centre of the sacred wood,
n arm ariseth of the Stygian flood. *Addison.*

about the end of the third century, I do not re-
r to have seen the head of a Roman emperor
with a *full* face: they always appear in profile.
Id. on Medals.

ards the *full* moon, as he was coming home one
ıg he felt his legs faulter. *Wiseman.*

entleman of a *full* body having broken his skin
ıll, the wound inflamed. *Id. Surgery.*

ıer digesteth a full meal sooner than any liquor.
Arbuthnot.

Full of days was he;
'wo ages past, he lived the third to see.
Tickel.

s sort of pastoral derives almost its whole beauty
a natural ease of thought and smoothness of
; whereas that of most other kinds consists in
rength and *fulness* of both. *Pope.*

ere all must *full* or not coherent be. *Id.*

f where the rules not far enough extend,
ne lucky licence answer to the *full*
ı' intent proposed, that licence is a rule. *Id.*

ere is a perquisite *full* as honest, by which you
the best part of a bottle of wine for yourself.
Swift.

ter hard riding plunge the horses into water, and
them to drink as they please: but gallop them
peed, to warm the water in their bellies. *Id.*

r when his bright eye *full* our eye opposes
ı gains his glorious sight, but his own sight he
loses. *Fletcher's Purple Island.*

owing, and circumfused in speechless love,
r *full* divinity inadequate
feeling to express, or to improve,
gods become as mortals, and man's fate
moments like their brightest: but the weight
arth recoils upon us. *Byron. Childe Harold.*

Your crimes
re *fully* proved by your accomplices,
nd all which circumstance can add to aid them,
et we would hear from your own lips complete
vowal of your treason. *Id. Doge of Venice.*

'ULL, *v. a.* 'UL'LAGE, *n. s.* 'UL'LER, *n. s.* 'UL'LERY, *n. s.* 'UL'LINGMILL, *n. s.* } Sax. fullian; Swed. *fulla*; Latin *fullo*. To cleanse cloth from its oil or grease: the money paid for fulling or clean-
; cloth: one whose trade is to cleanse cloth;
place where the trade of a fuller is exercised:
the fullingmill is a mill where the water
es hammers, which beat the cloth till it be
ınsed.

lis raiment became shining, exceeding white as
w; so as no *fuller* on earth can whiten them.
Mark ix. 3.

The clothiers have put off
The spinsters, carders, *fullers*, weavers.
Shakspeare.

By large hammers, like those used for paper and *fullingmills*, they beat their hemp. *Mortimer.*

FULL-BLOWN, *adj.* Full and blown. Spread to the utmost extent, as a perfect blossom: stretched by the wind to the utmost extent.

My glories are past danger; they're *full-blown*:
Things, that are blasted, are but in the bud.
Denham.

My *full-blown* youth already fades apace;
Of our short being 'tis the shortest space!
Dryden.

He who with bold Cratinus is inspired,
With zeal and equal indignation fired;
Who at enormous villany turns pale,
And steers against it with a *full-blown* sail. *Id.*

FULL-BOTTOMED, *adj.* Full and bottom. Having a large bottom.

I was obliged to sit at home in my morning-gown, having pawned a new suit of cloaths and a *full-bottomed* wig for a sum of money. *Guardian.*

FULL-EA'RED. *adj.* Full and ear. Having the heads full of grain.

As flames rolled by the winds conspiring force,
O'er *full-eared* corn, or torrents raging course.
Denham.

FULLER (Andrew), a distinguished dissenting divine, secretary to the Baptist Missionary Society, was born at Wicken, in Cambridgeshire, in 1754. His father was a small farmer, who gave his son the rudiments of education at the free-school of Soham, and in 1775, on an invitation to become the pastor of a congregation at that place, he entered into the ministry and married. After a few years' residence at Soham, he accepted a similar charge at Kettering, where he wrote and published his Treatise on Faith. In the establishment of the Baptist Missionary Society, by Dr. Carey and others, Mr. Fuller exerted himself with great energy, and the whole of his future life was identified with its labors. He was also an able controversialist, and his treatise On the Calvinistic and Socinian Systems compared as to their Moral Tendency, attracted much attention. His other works, besides various published sermons, are Socinianism Indefensible; The Gospel its own Witness; Memoirs of Samuel Pearce; An Enquiry into the nature of Religious Declension; Discourses on the Book of Genesis; Dialogues, Letters, and Essays, 12mo.; Apology for the Christian Missions to India, &c. &c. The eulogy upon Mr. Fuller, from the pen of the Rev. Rob. Hall, is so creditable to both parties, that we must gratify our readers by subjoining it. It occurs in a controversial pamphlet, On Terms of Communion, respecting which Mr. Fuller differed with the writer.

'It has been insinuated that the author has taken an unfair advantage of his opponents, by choosing to bring forward this disquisition just at the moment when we have to lament the loss of a person whose judgment would have disposed, and his abilities enabled him to do ample justice to the opposite side of the question. He can assure his readers, that none entertained a higher veneration for Mr. Fuller than himself, notwithstanding their difference of sentiment on this subject; and that, when he entered on this discussion, it was with the fullest expectation of

having his opposition to encounter. At that time his state of health, though not good, was such as suggested a hope that the event was very distant which we all deplore. Having been led to mention this affecting circumstance, I cannot refrain from expressing in a few words the sentiments of affectionate veneration with which I always regarded that excellent person while living, and cherish his memory now that he is no more; a man, whose sagacity enabled him to penetrate to the depths of every subject he explored, whose conceptions were so powerful and luminous, that what was recondite and original appeared familiar; what was intricate, easy and perspicuous in his hands; equally successful in enforcing the practical, in stating the theoretical, and discussing the polemical branches of theology: without the advantage of early education, he rose to high distinction amongst the religious writers of his day, and, in the midst of a most active and laborious life, left monuments of his piety and genius which will survive to distant posterity. Were I making his eulogium, I should necessarily dwell on the spotless integrity of his private life, his fidelity in friendship, his neglect of self-interest, his ardent attachment to truth, and especially the series of unceasing labors and exertions, in superintending the mission to India, to which he most probably fell a victim. He had nothing feeble or undecisive in his character, but, to every undertaking in which he engaged, he brought all the powers of his understanding, all the energies of his heart; and if he were less distinguished by the comprehension, than the acumen and solidity of his thoughts; less eminent for the gentler graces, than for stern integrity and native grandeur of mind, we have only to remember the necessary limitations of human excellence. While he endeared himself to his denomination by a long course of most useful labor, by his excellent works on the Socinian and Deistical controversies, as well as his devotion to the cause of missions, he laid the world under lasting obligations.' Mr. Fuller died at Kettering in 1815.

Fuller (Nicholas), prebendary of Salisbury, a learned English critic, who published, in 1617, Miscellanea Theologica in four books, and afterwards two more of Miscellanea Sacra. He died in 1623, and there are some MSS. of his remaining in the Bodleian library.

Fuller (Thomas), D.D., a learned English historian and divine, born at Aldwinkle, Northamptonshire, in 1608. He studied at Cambridge, and was chosen minister of St. Bennet's. In his twenty-third year his merit procured him a fellowship in Sidney College, and prebend in Salisbury cathedral. He was afterwards appointed rector of Broad Windsor, and lecturer of the Savoy in London; but, upon the pressing of the covenant, he retired to Oxford, and soon after accompanied Hopton as his chaplain in the army, which he attended in their marches. Upon the Restoration, he recovered his prebend, was appointed chaplain extraordinary to Charles II., and created D.D. His memory was so excellent that he could repeat a sermon if he heard it but once. He wrote, 1. History of the Holy War. 2. The Church History of Britain, in folio. 3. Andronicus, or the Unfortune Politician, in 8vo. 4. A Pisgah sight of Palestine. 5. A History of English Worthies; and other works. He died in August, 1661. He was fond of punning: but once, attempting to play off a joke upon a gentleman named Sparrowhawk, met with the following retort: 'What is the difference, said the Dr. (who was very corpulent) 'between an owl and a sparrowhawk?' 'It is,' replied the other, 'fuller in the head, fuller in the body, and fuller all over.' In the Memoirs of Mr. Pepys, recently published, that writer says—'Jan. 22nd, 1661. I met with Dr. Thomas Fuller. He tells me of his last and great book that is coming out: that is, the History of all the Families in England; and could tell me more of my owne than I knew myself. And also to what perfection he hath now brought the art of memory; that he did lately, to four eminently great scholars, dictate together in the Latin upon different subjects of their proposing, faster than they were able to write, till they were tired; and that the best way of beginning a sentence, if a man should be out and forget his last sentence (which he never was), that then his last refuge is to begin with an utcunque.' His Worthies appeared in a new edition, with his life prefixed, in 1810, 2 vols 4to.

Fullers' Earth, *n. s.*

The *fullers' earth* of England very much exceeds any yet discovered abroad in goodness; which is one great reason why the English surpass all other nations in the woollen manufacture. *Woodward.*

***Fullers' earth* is a marl of a close texture, extremely soft and unctuous to the touch: when dry it is of a greyish colour, in all degrees, from very pale to almost black, and generally has a greenish cast in it. The finest *fullers' earth* is dug in our own island.**
Hill's Materia Medica.

Fullers' Earth, in natural history, a species of clay, of a grayish ash-colored brown, in all degrees, from very pale to almost black, and it has generally something of a greenish cast. It is very hard and firm, of a compact texture, of a rough and somewhat dusty surface, that adheres slightly to the tongue. It is very soft to the touch, not staining the hands, nor breaking easily between the fingers. It has a little harshness between the teeth, and melts freely in the mouth. Thrown into water, it makes no ebullition or hissing; but swells gradually in bulk, and falls into a fine soft powder. It makes no effervescence with aquafortis. Bergman has given an accurate account of the fullers' earth of Hampshire; its color is brown, with a scarcely perceptible shade of green, and streaked with pale yellowish veins, with some slaty appearance. Water boiled on it for half an hour, though filtered, still retains so much of it as to diminish its transparency. In this water the solution of marine baro selenite discovers nothing vitriolic; but the solution of silver does indicate some traces of marine acid. If this earth be heated to redness, it blackens; but this blackness vanishes in a higher heat, which shows it to proceed from some vegetable or coaly matter. When heated it slightly decrepitates, and in a strong heat forms a brown spongy mass. Heated

nicrocosmic salt, it at first effervesces , but afterwards is scarcely acted on; orrodes it better, but consumes it slowly. ttacks it with considerable effervescence. analysis it contains 0·518 silex, 0·25 0·033 aërated calx, 0·037 calx of iron, ërated magnesia, 0·155 moisture, or vola- ter.

igh this earth contains 4 per cent. of sub- that should effervesce, yet it does not ce with acids; which induces Bergman k that the calx and magnesia may be ally combined with the argill, and not mechanically mixed as in marls. It nto a brown spongy scoria before the pe. Its constituents, according to Klap- e, 53 silica, 10 alumina, 1·25 magnesia, ne, 0·10 muriate of soda, trace of potassa, f iron 9·75, water 24.

Saxony this earth commonly lies under ; in England under sandstone or sand, er sandstone or limestone; in Germany it found immediately under the soil. The procured from the counties of Surry and igham.

greatest quantity, and the finest earth of ind in the world, is dug in the pits at lon, near Woburn in Bedfordshire. The n these pits lie thus: from the surface to pth of six feet, there are several layers of all reddish, but some lighter colored than

Under these there is a thin stratum of one, which they break through, and then nd the fullers' earth. The upper stratum is about a foot thick; the workmen call ge, and throw it aside as useless; being only fouled with the sand which covered which insinuates itself a good way into After this they come to the fine fuller's which lies eight feet deep. The matter of divided into several layers, there being only about a foot and a half between one ntal fissure and another. Of these several the upper half, where the earth breaks it- tinged red; which seems to be owing to nning of the water upon it from among nds above; some of which are probably ferruginous nature, or have ferruginous among them. This reddish fullers' earth rkmen call crop; and between the cledge is there is a thin stratum of matter, of less n inch, which in taste, color, and external rance, resembles the terra Japonica of the

The lower half of the strata of fuller's they call wall earth. This is untinged he red color of the other, and seems the proper for fulling. Under the fullers' earth is a stratum of white and coarse stone about et thick. They seldom dig through this; they do, they find more strata of sand. s' earth is of great use in scouring cloths, &c., imbibing all the grease and oil used eparing, dressing, &c., of the wool; for reason it is made a contraband com- y, and is not to be exported under the ty of 1*s.* for every pound weight. See NG.

LLERS' THISTLE, or weed, *n. s.* Dipsacus. nt.

FULLING, the art or act of cleansing, scouring, and pressing cloths, stuffs, and stockings, to render them stronger, closer, and firmer: called also milling. Pliny, lib. vii. cap. 56, assures us, that one Nicias, the son of Hermias, was the first inventor of the art of fulling: and it appears by an inscription, quoted by Sir G. Wheeler, in his Travels through Greece, that this Nicias was a governor in Greece in the time of the Romans. The fulling of cloths and other stuffs is performed by a kind of water-mill, thence called a fulling-mill, or scouring-mill. These mills, excepting in what relates to the mill-stones and hopper, are much the same with corn-mills: and there are even some which serve indifferently for either use: corn being ground, and cloths fulled, by the motion of the same wheel. Whence, in some places, particularly in France, the fullers are called millers; as grinding corn and milling stuffs at the same time. The principal parts of the fulling-mill are, the wheel, with its trundle; which gives motion to the tree or spindle, whose teeth communicate it to the pestles or stampers, which are hereby raised and made to fall alternately, according as its teeth catch on or quit a kind of latch in the middle of each pestle. The pestles and troughs are of wood; each trough having at least two, sometimes three pestles, at the discretion of the master, or according to the force of the stream of water. In these troughs are laid the cloths, stuffs, &c., intended to be fulled: then, letting the current of water fall on the wheel, the pestles are successively let fall thereon, and by their weight and velocity stamp and press the stuffs very strongly, which thus become thickened and condensed. In the course of the operation, they sometimes make use of urine, sometimes of fullers' earth, and sometimes of soap. To prepare the stuffs to receive the first impressions of the pestle, they are usually laid in urine; then in fuller's earth and water; and, lastly, in soap dissolved in hot water. Soap alone would do very well; but this is expensive: though fullers' earth, in the way of our dressing, is scarcely inferior thereto; but then it must be well cleared of all stones and grittinesses, which are apt to make holes in the stuff. As to urine, it is certainly prejudicial, and ought to be entirely discarded; not so much on account of its ill smell, as of its sharpness and saltness, which qualities are apt to render the stuffs dry and harsh. See CLOTH, WOOLLEN.

The best method of fulling with soap is delivered by M. Colinet, in a memoir on that subject, supported by experiments, made by order of the marquis de Louvois, then superintendant of the arts and manufactories of France. 1. The substance of it is as follows:—A colored cloth, of about forty-five ells, is to be laid in the usual manner, in the trough of a fulling mill; without first soaking it in water, as is commonly practised in many places. To full this trough of cloth, fifteen pounds of soap are required; one half of which is to be melted in two pails of river or spring water, made as hot as the hand can bear it. This solution is to be poured by little and little upon the cloth, in proportion as it is laid in the trough: and thus it is to be fulled for at least two hours; after which it is to

be taken out and stretched. This done, the cloth is immediately returned into the same trough, without any new soap, and there fulled two hours more. Then taking it out, they wring it well, to express all the grease and filth. After the second fulling, the remainder of the soap is dissolved as in the former, and cast four different times on the cloth; remembering to take out the cloth every two hours, to stretch it, and undo the plaits and wrinkles it has acquired in the trough. When they perceive it sufficiently fulled, and brought to the quality and thickness required, they scour it for good in hot weather, keeping it in the trough till it be quite clean. As to white cloths, as these full more easily and in less time than colored ones, a third part of the soap may be spared.

FULLING OF STOCKINGS, CAPS, &c., should be performed somewhat differently; viz. either with the feet or the hands; or a kind of rack or wooden machine, either armed with teeth of the same matter, or else horses' or bullocks' teeth. The ingredients made use of herein are, urine, green soap, white soap, and fullers' earth. But the urine is also reckoned prejudicial here. Woven stockings, &c., should be fulled with soap alone: for those that are knit, earth may be used with the soap. Indeed it is common to full these kinds of works with the mill, after the usual manner of cloth, &c. But that is too coarse and violent a method, and apt to damage the work, unless it be very strong.

FULL-EY'ED, *adj.* Full and eye. Having large prominent eyes.

FULL-FED, *adj.* Full and fed. Sated; fat; saginated.

> All as a partridge plump, *full-fed*, and fair,
> She formed this image of well bodied air. *Pope.*

FULL-LA'DEN, *adj.* Full and laden. Laden till there can be no more added.

> It were unfit that so excellent a reward as the Gospel promises should stoop down, like fruit upon a *full-laden* bough, to be plucked by every idle and wanton hand. *Tillotson.*

FULLO (Peter), an heretical bishop of Antioch, in the fifth century, who embraced the Eutychian heresy, to which he added, that all the persons in the Trinity suffered on the cross; whence his followers were styled Theopaschatites. He usurped the see of Antioch from Martyrius in 471, for which he was afterwards deposed, but the emperor Zeno restored him. He died in 486.

FULL-SPRE'AD, *adj.* Full and spread. Spread to the utmost extent.

> How easy 'tis, when destiny proves kind,
> With *full-spread* sails to run before the wind;
> But those that 'gainst stiff gales laveering go,
> Must be at once resolved and skilful too.
> *Dryden.*

FULL-SU'MMED, *adj.* Full and summed. Complete in all its parts.

> The cedar stretched forth its branches, and the king of birds nested within its leaves, thick feathered, and with *full-summed* wings fastening his talons East and West; but now the eagle is become half naked.
> *Howel's Vocal Forest.*

FULMEN, in mythology, the thunderbolt or weapon which Uranus presented to Jupiter for having delivered him from captivity, and which, according to Virgil, was forged by the Cyclops. The fulmen in the hand of Jupiter was represented in three different ways. The first is a sort of wreath of flames in a conical shape, resembling the stone commonly called a thunderbolt. This was adapted to Jupiter when mild and calm, and was held down in his hand. The second is a similar figure, with two transverse darts of lightning, or sometimes wings, and was given to him when in the attitude of punishing. The third is a handful of radiating flames, which Jupiter held up, when in the act of inflicting some exemplary punishment. The Jupiter Tonans is represented on antique medals, as holding up the triple-forked fulmen, and standing in a quadriga thundering with his rapid coursers, and throwing the fulmen out of his hand, which darts at the same time out of the clouds beneath him. On a gem in the Florentine Gallery Jupiter is represented driving his chariot against one of the giants, and grasping the fulmen as ready to dart it at his head

The fulmen is also given to the eagle of Jupiter, who grasps it in his claws, and uses it in a similar manner to the thunderer himself. Minerva is also so armed on a medal of Syracuse, and, according to Virgil, she used it against Ajax the son of Oïleus for having ravished Cassandra in her temple on his return homeward from Troy.

There is a figure of Jupiter in Buonarotti's collection at Florence, holding up the three-forked bolt as just ready to dart at some guilty wretch; but with the conical body of the fulmen lying under his feet, as of no use in cases of severity.

FUL'MINATE, *v. a.* & *v. n.*, FUL'MINANT, *adj.*, FULMINA'TION, *n. s.*, FUL'MINATORY, *adj.* } Fr. *fulminer*; Latin, *fulmino*. To thunder; to denounce and curse: the one is the prerogative of God, the other the frequent presumption of bigoted, intolerant, and blasphemous man. Fulmination is not only what is usually understood by thunder, but is applied to any loud crack, or rumbling noise, especially to that which accompanies explosion of any kind.

> I cannot *fulminate* nor tonitruate words
> To puzzle intellects; my ninth lap affords
> No Lycophronian buskins. *Thomas Randolph.*

> As excommunication is not greatly regarded here in England, as now *fulminated*; so this constitution is out of use among us in a great measure.
> *Ayliffe.*

> The *fulminations* from the vatican were turned into ridicule. *Id. Parergon.*

> Whilst it was in fusion we cast into it a live coal, which presently kindled it, and made it boil and flash for a pretty while; after which we cast in another glowing coal, which made it *fulminate* afresh.
> *Boyle.*

> In damps one is called the suffocating, and the other the *fulminating* damp.
> *Woodward's Natural History.*

FULMINATING POWDERS. See POWDERS, FULMINATING.

FULMINATION, in the Romish canon law, a

of a bishop, official, or other ecclesiastic, d by the pope, by which it is decreed ne bull sent from the pope shall be exe-

SOME, *adj.* } From Sax. fulle, foul.
OMELY, *adv.* } Nauseous: offensive;
OMENESS, *n. s.* } rank; lustful; gross to ll; tending to obscenity.

knotte why that every tale is tolde,
e tarried till the luste be colde
m, that han herkened after yore,
avour passeth, ever the lenger the more,
ulsumnesse of the prolixitie.
Chaucer. The Squieres Tale.

uck them up before the *fulsome* ewes.
Shakspeare.

e satyrion is of a dainty smell, if the plant th white flowers only, and those not thin or ey are commonly of rank and *fulsome* smell.
Bacon.

hat brings *fulsome* objects to my view,
auseous images my fancy fills,
l goes down like oxymel of squills.
Roscommon.

half the youth of Europe are in arms,
ulsome must it be to stay behind,
ie of rank diseases here at home! *Otway.*

decency is considered, no *fulsomeness* is omitted, om is wanting, as far as dulness can supply it.
Dryden.

ertain epigram, which is inscribed to the em- is more *fulsome* than any passage I have met n our poet. *Id.*

LTA, a town of Bengal, on the eastern of the Hoogly or Bhagguarutty River, t twenty-five miles below Calcutta. At this the English, who escaped the horrors of the k-hole, took refuge on ship-board in 1756, continued here for nearly six months, during h they lost a great number of people, from nhealthiness of the place, and their being h crowded. The anchorage is good here, g protected from the swell of the sea, and ottom a stiff clay. Good water may also be ured; and there is an excellent market and

U'MADO, *n. s.* Lat. *fumus.* A smoked

sh that serve for the hotter countries, they used st to fume, by hanging them upon long sticks one ne, drying them with the smoke of a soft and inual fire, from which they purchased the name of *idoes.* *Carew.*

UMARIA, fumitory, a genus of the pen- dria order, and diadelphia class of plants, ral order twenty-fourth, corydales: CAL. di- lous: COR. ringent: there are two membra- eous filaments, each of which has three eræ. There are many different species, all , shrubby, deciduous and evergreen plants, wing from two to six or seven feet high, rned with small simple leaves, and papilio- eous flowers of different colors. The most arkable is the

'. Officinalis, or common fumitory. It grows urally in shady cultivated grounds, and pro- es spikes of purplish flowers in May and e. It is very juicy, of a bitter taste, without remarkable smell. Its medical effects are to ngthen the tone of the bowels, and promote the natural secretions. It is chiefly recommended in scorbutic, and cutaneous disorders, for open- ing obstructions of the viscera, attenuating, and promoting the evacuation of viscid juices. Hoff- man had a great opinion of it as a purifier of the blood; and assures us that in this intention scarcely any plant exceeds it. Cows and sheep eat it; goats are not fond of it; horses and swine refuse it.

FU'MATORY, *n. s.* Lat. *fumaria*; Fr. *fume- terre.* An herb.

Her fallow leas
The darnel, hemlock, and rank *fumatory* doth root over. *Shakspeare. Henry V.*

FUM'BLE, *v. n.* & *v. a.* } Goth. and Swed.
FUM'BLER, *n. s.* } *falma, famla*; Dan.
FUM'BLINGLY, *adv.* } *famle*; Belg. *fom- melen.* To attempt that to which we are incom- petent: awkwardly and unfairly: to play like a child; without object, or intention; any thing attempted without precision, decision, or effect.

I saw him *fumble* with the sheets, and play with flowers, and smile upon his finger's end.
Shakspeare.

As many farewells as be stars in heaven,
With distinct breath and consigned kisses to them,
He *fumbles* up all in one loose adieu. *Id.*

Our mechanick theists will have their atoms never once to have *fumbled* in these their motions, nor to have produced any inept system. *Cudworth.*

Am not I a friend to help you out? You would have been *fumbling* half an hour for this excuse.
Dryden's Spanish Frgar.

His greasy bald-pate choir
Came *fumbling* o'er the beads, in such an agony
They told 'em false for fear. *Id.*

FUME, *n. s.*, *v. n.*, & *v. a.* } Fr. *fumée*; Ita.
FU'MID, *adj.* } *fumo*; Lat. *fu-*
FUMID'ITY, *n. s.* } *mus.* Literally
FUMIGATE, *v. n.* } smoke, or exha-
FUMIGA'TION, *n. s.* } lation of any
FU'MINGLY, *adv.* } kind. It is not
FUMOS'ITY, *n. s.* } only applied to
FU'MOUS, *adj.* } vapor, and to the
FU'MY. } volatile parts of bodies which fly off by heat, but to the rage and passion of the mind when expressed in empty sounding words: to any thing unsubstantial; to idle conceits; vain imaginations. Fumiga- tion is a process of applying aromatic vapor, o smoke, for the purpose of medication or healing: scents raised by fire are likewise called fumiga- tions. Fumosity is used by Chaucer, and signi- fies the flatulent and steamy effect of excessive drinking: that which arises from the stomach thus disordered is denominated fume.

Hir dremes shul not now be told for me:
Ful were hir hedes of *fumositee*,
That causeth dreme, of which ther is no charge.
Chaucer. The Squieres Tale.

This wine of Spaigne crepeth subtilly
In other wines growing faste by,
Of which ther riseth swiche *fumositee*
That whan a man hath dronken draughtes three,
And weneth that he at home in Chepe,
He is in Spaigne, right at the town of Lepe.
Id. The Pardoneres Tale.

That which we move for our better learning and instruction sake, turneth unto anger and choler in them: they grow altogether out of quietness with it;

they answer *fumingly*, that they are ashamed to defile their pens with making answer to such idle questions. *Hooker.*

Love is a smoke raised with the *fume* of sighs;
Being purged, a fire sparkling in lover's eyes.
Shakspeare.

Tie up the libertine in a field of feasts,
Keep his brain *fuming*. *Id. Antony and Cleopatra.*

When Duncan is asleep, his two chamberlains
Will I with wine and wassel so convince,
That memory, the warder of the brain,
Shall be a *fume*. *Id. Macbeth.*

It were good to try the taking of *fumes* by pipes, as they do in tobacco, or other things, to dry and comfort. *Bacon.*

Plato's great year would have some effect, not in renewing the state of like individuals; for that is the *fume* of those that conceive the celestial bodies have more accurate influence upon these things below than they have, but in gross. *Id.*

To lay aside all that may seem to have a shew of *fumes* and fancies, and to speak solids, a war with Spain is a mighty work. *Id.*

We have
No anger in our eyes, no storm, no lightning:
Our heat is spent and *fumed* away in vapor,
Before our hands be at work.
Ben Jonson's Catiline.

Those that serve for hot countries they used at first to *fume*, by hanging them upon long sticks one by one, and drying them with the smoke of a soft fire. *Carew.*

Their prayers passed
Dimensionless through heavenly doors; then clad
With incense, where the golden altar *fumed*
By the great intercessor, came in sight
Before their father's throne. *Milton's Paradise Lost.*

A crass and *fumid* exhalation is caused from the combat of the sulphur and iron with the acid and nitrous spirits of aquafortis. *Brown.*

Silenus lay,
Whose constant cups lay *fuming* to his brain,
And always boil in each extended vein. *Roscommon.*

Power, like new wine, does your weak brain surprize,
And its mad *fumes* in your discourses rise;
But time these yielding vapours will remove:
Mean while I'll taste the sober joys of love.
Dryden.

Plunged in sloth we lie, and snore supine,
As filled with *fumes* of undigested wine. *Id.*

When he knew his rival freed and gone,
He swells with wrath; he makes outrageous moan:
He frets, he *fumes*, he stares, he stamps the ground,
The hollow tower with clamours ring around. *Id.*

Thus fighting fires awhile themselves consume;
But straight, like Turks, forced on to win or die,
They first lay tender bridges of their *fume*,
And o'er the breach in unctuous vapours fly. *Id.*

From dice and wine the youth retired to rest,
And puffed the *fumy* god from out his breast:
Ev'n then he dreamt of drink and lucky play:
More lucky had it lasted 'till the day. *Id.*

My *fumigation* is to Venus just
The souls of roses, and red coral's dust:
And, last, to make my *fumigation* good,
'Tis mixt with sparrows' brains and pigeons' blood.
Id.

She *fumed* the temples with an odorous flame,
And oft before the sacred altars came,
To pray for him who was an empty name. *Id.*

Would thou preserve thy famished family
With fragrant time the city *fumigate*,
And break the waxen walls to save the state. *Id.*

The heat will *fume* away most of the scent.
Mortimer.

The *fumes* of drink discompose and stupify the brains of a man overcharged with it. *South.*

Fumigations, often repeated, are very beneficial.
Arbuthnot.

The first fresh dawn then waked the gladdened race
Of uncorrupted man, nor blushed to see
The sluggard sleep beneath its sacred beam;
For their light slumbers gentle *fumed* away.
Thomson.

Yet there will still be bards; though fame is smoke,
Its *fumes* are frankincense to human thought!
Byron. Don Juan.

FUMIGATION, in medicine. By the subtile fumes produced by burning certain substances, much benefit or prejudice may be produced, according to the nature of the case, and the constitution on which the effects are to be exerted; as is evident from the palsies produced among metal-gilders, workers in lead-mines, &c.; and also from the benefits received in many cases when the air is impregnated with salutary materials. Catarrhs and colds, for instance, are relieved by fumes received with the breath; by the same means expectoration is assisted in the asthma; and even ulcers in the lungs have been relieved by this method. This is still more strongly exemplified by a practice of curing ulcers, and exciting the general action of quicksilver in the system, by enclosing the naked body of the patient in a box fitted to receive the fumes of quicksilver, raised by sprinkling cinnabar upon a red hot iron, or, what is still better, the hydrargyrus præcipitatus cinereus of the Pharmacopœia, which, not emitting any sulphureous vapors, proves less inconvenient to the patient. Mr. Pearson made a considerable number of experiments with a view to examine into the comparative efficacy of this treatment and the common friction. He found that by fumigating the gums became turgid and tender very quickly, and the local appearances were sooner removed than by the other method; but it sooner brought on debility, rapid and premature salivation, and, of course, could not be steadily continued. This gentleman therefore concludes, that where checking the progress of the disease suddenly is an object of great moment, or where the body is so covered with venereal ulcers that there scarcely remains a surface large enough to absorb the ointment, the vapor of mercury will be advantageous. The vapor of mercury is also singularly efficacious when applied to venereal ulcers, fungi, and excrescences; but this plan requires an equal quantity of mercury to be given internally, as if the local application itself were not a mercurial one.

FUM'ET, *n. s.* The dung of the deer.

FUMETTE, *n. s.* Fr. A word introduced by cooks, and the pupils of cooks, for the smell of meat.

A haunch of venison made her sweat,
Unless it had the right *fumette*. *Swift.*

FUMIGATOR, in surgery, an instrument used for injecting tobacco-smoke into the anus of drowned persons, with a view to excite the irritability of the muscles. The best kind is one

made by W. Willurgby, the bowl of which is of cast brass, and is large enough to contain about an ounce and a half of tobacco. The pipe projecting from the lower part of it is bored out of a solid piece of brass, and also those to which each extremity of the leathern tube is affixed. The cover is likewise made of cast brass; from the upper extremity of which projects a neck about an inch and a half in length, the opening or bore of it being about half an inch in diameter. The cover is fixed to the box by means of two notches made on each side of a circular ridge or edge, admitting two ears, that project from the upper part of the box, which by a circular motion lock upon the brim. The nozzle of the bellows is accurately fitted to the neck of the cover, and is about an inch and a half or two inches long; the lower end of the nozzle is rounded and smooth, like the lower extremity of a glyster-pipe, and perforated like a cullender, in order to prevent the ashes of the tobacco from rising into the bellows. The bellows are fastened upon the cover or lid in a manner similar to the preceding; an ear projects from the upper part of the neck, and is admitted into a notch, in a circular rim, upon the nozzle. The pipe, projecting from the lower extremity of the bowl, locks into the cross-pipe to which the leathern tube is affixed, in the manner of a bayonet. By this kind of fastening the whole apparatus may be made ready in the space of a minute, and forms one compact body, free from the hazard of falling in pieces, and thus interrupting the operation; and yet either part may be taken off, when the occasion requires, with the utmost ease and expedition. The bowl is enclosed in a thick case of wood, removable at pleasure, which secures the hand from injury during the whole process.

FUMING Liquor, in chemistry. The fuming liquors of Boyle and Libavius have been long known. To prepare the first, which is a hydroguretted sulphuret of ammonia, three parts of lime fallen to powder in the air, one of muriate of ammonia, and one of flowers of sulphur, are to be mixed in a mortar, and distilled with a gentle heat. The yellow liquor, that first comes over, emits fetid fumes. It is followed by a deeper colored fluid that is not fuming.

The fuming liquor of Libavius is made by amalgamating tin with half its weight of mercury, triturating this amalgam with an equal weight of corrosive muriate of mercury, and distilling by a gentle heat. A colorless fluid at first passes over: after this, a thick vapor is thrown out at one single jet with a sort of explosion, which condenses into a transparent liquor, that emits copious, white, heavy, acrid fumes, on exposure to the air. In a closely stopped bottle, no fumes from it are perceptible; but needle-shaped crystals form against the top of the bottle, so as frequently to close the aperture.

Cadet's fuming liquor is prepared by distilling equal parts of acetate of potash and arsenious acid, and receiving the product into glass bodies, kept cool by a mixture of ice and salt. The liquor produced, emits a very dense, heavy, fetid, noxious vapor, and inflames spontaneously in the open air.

FUMITER, *n. s.* A plant.

A day or two ye shul han digestives
Of wormes (or ye take your laxatives),
Of laureole centaurie, and *fumetere*.
Chaucer. The Nonnes Preestes Tale.

Why, he was met even now,
As mad as the vext sea; singing aloud,
Crowned with rank *fumiter* and furrow weeds.
Shakspeare.

FUMONE, a town of Italy, in the Campagna (Ecclesiastical States), with a castle in which pope Celestine V., after having resigned his dignity, is said to have been starved to death. It is four miles north-west of Alatri.

FUN, *n. s.* A low cant word. Sport; high merriment; frolicsome delight.

Dont mind me, though, for all my *fun* and jokes,
You bards may find us bloods good-natured folks.
More.

FUNAMBULUS, among the Romans, was what we call a rope dancer, and the Greeks schœnobates. At Rome the funambuli first appeared under the consulate of Sulpicius Pæticus and Licinius Stolo, who were the first introducers of the scenic representations. They were first exhibited in the island of the Tyber, and the censors Messala and Cassius afterwards promoted them to the theatre. In the Floralia, or ludi Florales, held under Galba, there were funambulatory elephants, as we are informed by Suetonius. Nero also showed the like, in honor of his mother Agrippina. Vopiscus relates the same of Carinus and Numerianus.

FUNCHAL, or Funchial, the capital of Madeira, is a large and populous town, situated on the south coast of the island, having four forts, and several fine churches. The bay is large and open, affording at no season convenient anchorage; but extremely dangerous in the winter, when heavy gales from the south-west are common. The beach is composed of large burnt stones, rounded by the action of the sea, and has often a surf on it that renders landing impossible; yet it is the most accessible part of the island. The town extends three-quarters of a mile along the beach, and about half a mile inland; its streets are narrow and crooked, paved with the stones from the beach, or with large masses of rugged lava, disagreeable to the feet. Several small streams, descending from the mountains, run through the town into the bay; but, as the inhabitants throw all their ordure into them, they add little to the cleanliness of the streets. The only handsome houses are those of the English merchants. But there is a curious chapel of sculls, in which those monuments of mortality are symmetrically disposed, after the manner of a similar chapel at Rome. The population is from 12,000 to 15,000.

Funchal is defended, as we have said, by four forts, viz. 1. St. Jago, at the east extremity of the bay, immediately under a steep hill; 2. St. Lorenzo, in which is the government house; 3. Peak Castle, on a hill north-west of the town, half a mile from the shore, and of difficult access on the south, but commanded by another hill; this is, however, the chief fortification, the walls being very high, but without a ditch, and not mounting above twelve guns; 4. The Loo Rock, on which is a fort with numerous cannon, en

barbette, and surrounded by a weak parapet. This rock, the name of which is properly Ilheo, the island, is distant from a rocky point of the bay 120 fathoms, and this narrow channel is 768 fathoms deep; the small craft belonging to the island, in winter, lie under this rock, with a rope fast to it; but, on the first appearance of bad weather, the people quit them and leave them to their fate. 200 paces west of the town is a work 100 paces long, with three small bastions, and a redoubt towards the sea, washed by the waves. The beach is also defended by a long low wall with cannon at intervals, but which could be of very little effect in preventing the landing of troops, did not the surf assist it.

The plantations in the neighbourhood are adorned with a great number of country houses, churches, and monasteries, which, from their elevated site, and in contrast with the white houses of the town, produce a striking and pleasing effect.

The trade of this port consists almost entirely in exporting the wine of the island, which is principally consumed in the British dominions and dependencies; and they export the Madeira not only to Britain, but to the East and West Indies. Ships touching here may obtain water, wine, fruits, and vegetables; but fresh meat and poultry are high, and cannot be obtained without permission of the governor.

FUNCTION, *n. s.* Lat. *functio*, is properly the act of discharging, or completing, an office, or business, from Lat. *fungor*, viz. *finem* and *ago*, to put an end to, or bring to a conclusion. It is, in general acceptation, extended to the office itself, or to the thing undertaken. Thus it is not only the single act of an office, but the trade and occupation which the office implies: it signifies, likewise, power and faculty, as applied to any particular part of the body and the office it performs, as well as to the intellectual powers and their operations.

Follow your *function*; go, and batten on cold bits. *Shakspeare.*

You have paid the heavens your *function*, and the prisoner the very debt of your calling. *Id. Measure for Measure.*

Tears in his eyes, distraction in his aspect,
A broken voice, and his whole *function* suiting
With forms to his conceit. *Id. Hamlet.*

Nor was it any policy or obstinacy, or partiality of affection either to the men or their *function*, which fixed me. *King Charles.*

Nature seems
In all her *functions* weary of herself:
My race of glory run, and race of shame;
And I shall shortly be with them that rest.
Milton.

They have several offices and prayers against fire, tempests, and especially for the dead, in which *functions* they use sacerdotal garments. *Stillingfleet.*

This double *function* of the goddess gives a considerable light and beauty to the ode which Horace has addressed to her. *Addison.*

Let not these indignities discourage us from asserting the just privileges and pre-eminence of our holy *function* and character. *Atterbury.*

The bodies of men, and other animals, are excellently well fitted for life and motion; and the several parts of them well adapted to their particular *functions*. *Bentley's Sermons.*

Whatever warms the heart, or fills the head,
As the mind opens, and its *functions* spread,
Imagination plies her dangerous art,
And pours it all upon the peccant part. *Pope.*

There is hardly a greater difference between two things than there is between a representing commoner in the *function* of his publick calling, and the same person in common life. *Swift.*

I have sworn to die
In full exertion of the *functions*, which
My country called me here to exercise,
According to my honour and my conscience—
I cannot break my oath.
Byron. The Two Foscari.

FUNCTION, in the animal economy, is by physicians divided into vital, animal, and natural.

FUNCTIONS, ANIMAL. The animal functions perform the motion of the body by the action of the muscles; and this action consists chiefly in the shortening the fleshy fibres, which is called contraction, the principal agents of which are the arteries and nerves distributed in the fleshy fibres. All parts of the body have their own functions, or actions, peculiar to themselves. Life consists in the exercise of these functions, and health in the free and ready exercise of them.

FUNCTIONS, NATURAL, are such as the creature cannot subsist any considerable time without; as the digestion of the aliment, and its conversion into blood.

FUNCTIONS, VITAL, are those necessary to life, and without which the individual cannot subsist; as the motion of the heart, lungs, &c.

FUND, *n. s.* & *v. a.* Fr. *fond*; Lat. *funda*, a bag. Stock; capital; that by which any expense is supported. Bank of money. To fund is to place money in the funds, either of a company, a corporation, or the public.

He touches the passions more delicately than Ovid, and performs all this out of his own *fund*, without diving into the arts and sciences for a supply. *Dryden.*

Part must be left, a *fund* when foes invade,
And part employed to roll the wat'ry tide. *Id.*

As my estate has been hitherto either tost upon seas, or fluctuating in *funds*, it is now fixed in substantial acres. *Addison.*

In preaching, no men succeed better than those who trust entirely to the stock or *fund* of their own reason, advanced indeed, but not overlaid by commerce with books. *Swift.*

They have been at a vast expense of time, and pains, and patience, to heap together, and to confirm themselves in a set of wrong notions, which they lay up in their minds as a *fund* of valuable knowledge. *Mason.*

FUNDS. Upon this extensive topic, after the various statistical tables, and other elementary matter relating to it, which will be found by our readers in the articles BANK, ENGLAND, and GREAT BRITAIN, we do not propose to enter at much length. It is a topic for entire volumes, even of more ample extent than ours. The principles on which our funding system is constructed and upheld, particularly by what is called the sinking fund; the principal periods of the accumulation of our immense national debt; and the relative advantages and disadvantages of that part of our public policy which has originated and increased it, at the best mode of providing for the national expenditure, are the chief subjects of our enquiry. These will be

introduced with some propriety by a definition of the principal terms of the discussion.

As the term *funds* will describe any sum or sums of money appropriated to a particular purpose, it includes, in popular language, both the national debt and revenue; the stocks and every thing relating to their management; the measures of Downing Street and Threadneedle Street, as well as those of Capel Court. Technically, the public debt and revenue are thus divided: the capitals of the several sums which the government has borrowed of contractors and other individuals, from time to time, is called *stock;* and the portions of the revenue appropriated to pay the interest and management of the debt only, are called the funds; and, by this appropriation of revenue, the debt is said to be funded. The different funds were established on different occasions, and are not all committed to the same managers; nor is the interest, or, in the technical language, the *dividends*, payable in all of them at the same time. But the only material circumstance in which they differ from each other, is the rate of interest on their capitals or stock; and, in this view, we have different funds, denominated the 3 per cents., the 4 per cents., &c.; from the respective rates of their yearly interests. The creditor is also, in some cases, recompensed by a temporary *annuity*, in addition to the interest of his stock; and his title to the annuity, like his title to the stock, is authenticated by a record, transferable at pleasure; and each annuity, whether it is for life, or for a certain number of years, may be considered as equivalent to a certain quantity of stock.

The interest or dividend on the stock is paid half-yearly; and the purchaser has the benefit of the interest due on the stock he buys, from the last term to the time of purchase. Therefore, the prices of the stocks rise gradually, cæteris paribus, from term to term, and fall at the term when the interest is paid. In comparing the prices of the different stocks, it is necessary to advert to the term when the last interest was paid; and, allowance being made for this circumstance, the prices of all the government stocks, which bear interest at the same rate, must be nearly the same, as they all depend on the same security.

When a loan is proposed, such terms must be offered to the lenders as may render the transaction beneficial; and this is now regulated by the prices of the old stocks. If the stocks which bear interest at 4 per cent. sell at par, or rather above, the government may expect to borrow money at that rate; but, if these stocks are under par, the government must either grant a higher interest, or some other advantage to the lenders, in compensation for the difference. Lotteries have formerly been employed to facilitate the loan, by entitling the subscribers to a certain number of tickets, for which no higher price was charged than the exact value distributed in prizes. Sometimes an abatement of a certain proportion of the capital has been granted, and a lender entitled to hold £100 stock, though, in reality, he advanced no more, perhaps, than £95.

It belongs to the chancellor of the exchequer to propose the terms of the loan in parliament; and he generally makes a previous agreement with some wealthy bankers or merchants, who are willing to advance the money on the terms proposed. The subscribers to the loan deposit a certain part of the sum subscribed, and are bound to pay the rest by instalments or stated proportions, on appointed days, under pain of forfeiting what they have deposited. For this they are entitled, perhaps, not only to hold their share in the capital, but to an annuity as we have stated; but happily the right of receiving a certain number of lottery-tickets is abolished. They may sell their capital to one person, their annuity to a second, at their own option. The value of all these interests together is called omnium; and, in order to obtain a ready subscription, it ought to amount to £102, or upwards, on b100 of capital. This difference is called the £onus to the subscribers.

The capital advanced to the public, in the form of transferable stocks, and bearing interest from taxes apportioned for that purpose, is called, as we have said, the funded debt. Besides, there is generally a considerable sum due by government which is not disposed of in that manner; and, therefore, is distinguished by the appellation of the unfunded debt. This may arise from any sort of national expense, for which no provision has been made, or for which the provision has proved insufficient. The chief branches are, 1st, exchequer-bills: these are issued from the exchequer, generally by appointment of parliament, and sometimes without such appointment, when exigencies require. They bear interest from the time when issued, and are taken in by the bank of England, which promotes their circulation. 2d, navy-bills: the sums annually granted for the navy have always fallen short of what that service required. To supply that deficiency, the admiralty issues bills in payment of victuals, stores, and the like, which bear interest six months after the time issued. The debt of the navy, thus contracted, is discharged, from time to time, by parliament.

The interest on all the public debts was formerly paid at the exchequer; but, the bank being found a much more convenient place for this purpose, nearly the whole is now payable there, the company receiving a certain allowance from government for managing all business relative to the public funds. See our article BANK.

The nature of the *sinking* fund may be thus explained:—By 3 Geo. I. c. 7, the surpluses of the three great national funds, the aggregate, general, and South Sea funds, over and above the interest and annuities charged upon them, are directed to be carried together, and to attend the disposition of parliament; and were denominated a *sinking fund*, because originally destined to sink and lower the national debt. To this have been since added many other entire duties granted in subsequent years; and the annual interest of the sums borrowed on their respective credits is charged on, and payable out of, the produce of the sinking fund. However, the nett surpluses and savings, after all deductions paid, amount annually to a very considerable sum. For, as the interest on

the national debt has been at several times reduced by the consent of the proprietors, who had their option either to lower their interest or be paid their principal, the savings from the appropriated revenues have been large. But, before any part of the aggregate fund (the surpluses whereof were one of the chief ingredients that formed the sinking fund) could be applied to diminish the principal of the public debt, it was mortgaged by parliament to raise an annual sum for the maintenance of the king's household and the civil list. For this purpose, in the late reigns, the produce of certain branches of the excise and customs, the post-office, the duty on wine-licenses, the revenues of the remaining crown-lands, the profits arising from the courts of justice (which articles include all the hereditary revenues of the crown), and also a clear annuity of £120,000 in money, were settled on the king for life, for the support of his majesty's household, and the honor and dignity of the crown. And, as the amount of these several branches was uncertain (though in the reign of Geo. II. they were computed to have sometimes raised almost a million), if they did not arise annually to £800,000, the parliament engaged to make up the deficiency. But Geo. III. having, soon after his accession, spontaneously signified his consent, that his own hereditary revenues might be so disposed of as might best conduce to the utility and satisfaction of the public, and having graciously accepted a limited sum, the said hereditary and other revenues are now carried into, and made a part of, the aggregate fund; and the aggregate fund is charged with the payment of the whole annuity to the crown. The limited annuity accepted by his late majesty was at first £800,000, but it has been since augmented to £900,000. The expenses themselves, being put under the same care and management as the other branches of the public patrimony, produce more, and are better collected than heretofore; and the public is a gainer of upwards of £100,000 per annum by this transaction.

The sinking fund, though often called the last resource of the nation, long, however, proved very inadequate to the purpose for which it was established. Ministers found pretences for diverting it into other channels; and the diminution of the national debt proceeded slowly during the intervals of peace, whilst each succeeding war increased it with great rapidity. To remedy this evil, and restore the public credit, to which the American war had given a considerable shock, Mr. Pitt conceived a plan for diminishing the debt by a fund which should be rendered unalienable to any other purpose.

In the session of 1786 he moved that the annual surplus of the revenue above the expenditure should be raised, by additional taxes, from £900,000 to £1,000,000 sterling, and that certain commissioners should be vested with the full power of disposing of this sum in the purchase of stock for the public, in their own names. These commissioners should receive the annual million by quarterly payments of £250,000, to be issued out of the exchequer before any other money, except the interest of the national debt itself; by these provisions, the fund would be secured, and no deficiencies in the national revenues could affect it, but such must be separately provided for by parliament. The accumulated compound interest on a million yearly, together with the annuities that would fall into that fund, would, he said, in twenty-eight years, amount to such a sum as would leave a surplus of £4,000,000 annually, to be applied, if necessary, to the exigencies of the state. In appointing the commissioners, he should, he said, endeavour to choose persons of such weight and character as corresponded with the importance of the commission they were to execute. The speaker of the house of commons, the chancellor of the exchequer, the master of the rolls, the governor and deputy governor of the bank of England, and the accountant-general of the high court of chancery, were persons, who, from their several situations, he should think highly proper to be of the number.

To the principle of this bill no objection was made, though several specious, but ill-founded ones were urged against the sufficiency of the mode which the chancellor of the exchequer had adopted for the accomplishment of so great and so desirable an end. He had made it a clause in his bill, that the accumulating million should never be applied but to the purchase of stock. To this clause Mr. Fox objected, and moved that the commissioners therein named should be impowered to accept so much of any future loan as they should have cash belonging to the public to pay for. This, he said, would relieve that distress the country would otherwise be under, when, on account of a war, it might be necessary to raise a new loan: whenever that should be the case, his opinion was, that the minister should not only raise taxes sufficiently productive to pay the interest of the loan, but also sufficient to make good to the sinking fund whatsoever had been taken from it. If, therefore, for instance, at any future period a loan of £6,000,000 was proposed, and there was at that time £1,000,000 in the hands of the commissioners, in such case they should take £1,000,000 of the loan, and the bonus or douceur thereupon should be received by them for the public. Thus government would only have £5,000,000 to borrow instead of £6,000,000, and from such a mode of proceeding, he said, it was evident great benefit would arise to the public. This clause was received by Mr. Pitt with the strongest marks of approbation, as was likewise another moved by Mr. Pulteney, enabling the commissioners named in the bill to continue purchasing stock for the public when it was above par, unless otherwise directed by parliament. With these additional clauses the bill was read a third time on the 15th of May, and carried up to the lords, where it also passed without meeting with any material opposition, and afterwards received the royal assent.

The operation of this bill surpassed perhaps the minister's most sanguine expectation. The fund was ably managed, and judiciously applied; and in 1793 the commissioners had extinguished some millions of the public debt. The war, however, in which the nation was that year involved, made it necessary to borrow immense additional sums.

e income of the whole sinking fund, on the f February, 1802, was £5,809,330. The sum which had been paid for the purchase ck, up to that period, was £38,110,795.

1792, we should perhaps have observed, s further provided, that whenever any new might be contracted, a sinking fund of one ent, upon the capital stock created, should ppropriated to it, unless other provision d have been made by parliament for re- ing it within forty-five years; and such a ng fund of one per cent. was, in conformity is act, provided for almost every future of the war; but in two or three instances ament availed itself of the alternative allowed nding other means of repayment within -five years. In 1802, particularly, no imme- sinking fund was assigned for £87,000,000 ock provided for in that year, and which sted partly of the loan of the year, and y of a sum of £56,000,000, previously d at different times on the credit of the in- tax, which was then repealed; but the ul- te redemption of that debt was secured by a nuation of the several sinking funds pro- d for antecedent loans, and which for that ose were continued and formed into what called the consolidated sinking fund. This gement was, by calculation, amply sufficient fect the redemption of the debt within forty- years, and even within a shorter period than uld otherwise have been brought about; but ould, if literally carried into execution, be e to produce inconveniences, which it is one he principal objects of the present plan to ate.

me of the principal provisions of the act 802 were repealed by an act of Mr. Vansit- in 1813, and an additional sum of £870,000 annum appropriated by it to the sinking fund, ake good the usual proportion of one per . on the capital stock provided for in that , and for the redemption of which another e had then been substituted, as has been re-mentioned.

nough at present has thus been said, to give reader a general view of the technical terms ur subject. But, as Mr. Vansittart's altera- of the sinking fund in 1813 was the last and t important interference with its machinery has been attempted, we may be allowed to trate it somewhat further.

When, in 1792, Mr. Pitt proposed to add 0,000 per annum to the sinking fund, he ob- ed, 'When the sum of £4,000,000 was ori- lly fixed as the limit for the sinking fund, it not in contemplation to issue more annually the surplus revenue than £1,000,000; con- ently, the fund would not rise to £4,000,000 a proportion of debt was paid off, the interest which, together with the annuities which ht fall in, in the interval, should amount to 000,000. But as, on the present supposition, itional sums beyond the original £1,000,000 to be annually issued from the revenue, and lied to the aid of the sinking fund, the con- uence would be, that, if that fund, with these itions carried to it, were still to be limited to 000,000, it would reach that amount, and cease to accumulate, before as great a portion of the debt is reduced as was originally in contemplation.' 'In order to avoid this consequence, which would, as far as it went,' he continued, 'be a relaxation in our system, I should propose, that whatever may be the additional annual sums applied to the reduction of the debt, the fund should not cease to accumulate till the interest of the capital discharged, and the amount of the expired annuities should, together with the annual £1,000,000 only, and exclusive of any additional sums, amount to £4,000,000.'

We have stated that, in 1792, a provision was made for attaching a sinking fund of 1 per cent. to each loan separately, which was to be exclusively employed in the discharge of the debt contracted by that loan, but that no part of these 1 per cents. was to be employed in the reduction of the original debt of £238,000,000, and that the act of 1802 consolidated all these sinking funds; so that the public were not to be exempted from the payment of the sinking fund itself, nor of the dividends on the stock to be purchased by the commissioners, till the whole debt existing in 1802 was paid off.

Mr. Vansittart proposed to repeal the act of 1802, and to restore the spirit of Mr. Pitt's act of 1792. He acknowledged, that it would be a breach of faith to the national creditor if the fair construction of that act, the act of 1792, were not adhered to; but it was, in Mr. Vansittart's opinion, no breach of faith to do away the conditions of the act of 1802. It was declared by the new act, that, as the sinking fund, consolidated in 1802, had redeemed £238,350,143 18*s.* 1*d.* exceeding the amount of the debt in 1786 by £118,895 12*s.* 10½*d.*, a sum of capital stock equal to the total capital of the public debt, existing on the 5th January 1786, viz. £238,231,248 5*s.* 2¾*d.* had been satisfied and discharged; 'and that, in like manner, an amount of public debt equal to the capital and charge of every loan contracted since the said 5th January 1786, shall successively, and in its proper order, be deemed and declared to be wholly satisfied and discharged, when, and as soon as a further amount of capital stock, not less than the capital of such loan, and producing an interest equal to the dividends thereupon, shall be so redeemed or transferred.' It was also resolved, 'that, after such declaration as aforesaid, the capital stock purchased by the commissioners for the reduction of the national debt, shall from time to time be cancelled; at such times, and in such proportions, as shall be directed by any act of parliament to be passed for such purpose, in order to make provision for the charge of any loan or loans thereafter to be contracted.'

It was further resolved, that, in order to carry into effect the provisions of the acts of the 32d and 42d of the king, for redeeming every part of the national debt within the period of forty-five years from the time of its creation, it is also expedient that, in future, whenever the amount of the sum to be raised by loan, or by any other addition to the public funded debt, shall in any year exceed the sum estimated, to be applicable in the same year to the reduction of the public

debt, an annual sum equal to one-half of the interest of the excess of the said loan or other addition, beyond the sum so estimated to be applicable, shall be set apart out of the monies composing the consolidated fund of Great Britain, and shall be issued at the receipt of the exchequer to the governor and company of the bank of England, to be by them placed to the account of the commissioners for the reduction of the national debt; and, upon the remainder of such loan or other addition, the annual sum of one per cent. on the capital thereof, according to the provisions of the said act of the 32d year of his present majesty.

A provision was also made, for the first time (as we have seen), for one per cent. sinking fund on the unfunded debt then existing, or which might thereafter be contracted.

In 1802, it has also been already observed, it was deemed expedient that no provision should be made for a sinking fund of one per cent. on a capital of £86,796,300; and as it was considered by the proposer of the new regulation, in 1813, that he was reverting to the principle of Mr. Pitt's act of 1792, he provided that £867,963 should be added to the sinking fund for the one per cent. on the capital stock created, and which was omitted to be provided for in 1802.

We cannot here follow into detail the far-reaching calculations, either of the advocates or opponents of our funding system. By the former it has been perhaps extravagantly eulogised; while it has been rashly, because totally, condemned by the latter. Its advantages have been to render possible the struggle of some parts and periods of the late contests for our political existence; and to prevent those sudden drafts on private incomes, for the public use, which must in numerous cases have been overwhelming, if the expenditure of the year had been provided within the year. By this system, instead of calling on the people to pay at once the whole additional expense of the war, the government obtained the money wanted by selling annuities, either temporary or perpetual, to those who would give most for them; and contracted for the whole community a moral and political obligation to provide the means of regularly and punctually paying the annuities which it sold. The transaction, say its advocates, more nearly resembles that of raising money by sale of annuities and rent charges in private life, than the contracting of demandable debts; differing in nothing from the former as to temporary annuities, and, with respect to the perpetual annuities, only differing from an absolute sale of rent charges, by retaining a right to re-purchase them at a stipulated price, which price differs from that obtained by their sale, according to the conditions made at the time of the contract.

It is often objected to this system, that by raising money in this manner, instead of providing it by adequate contemporary taxes, so far as we exonerate ourselves, we burden posterity.

In a national view, and as concerns the future resources of the government, many inconveniences may obviously arise from too great an extension of this system, but we apprehend that the popular objection to it which we have just now stated, is at least overcharged, if not altogether erroneous.

If any one, instead of being called upon to pay £100 as his share of the extraordinary expenditure, is only called upon to pay about the usual interest of that sum, the difference as respecting his posterity amounts to this—that if his property is of such a sort that £100 cannot give £5 a year of revenue, he and his posterity lose the annual difference; but this may almost always be avoided by a change of such property for other of a more profitable kind. If his property is so employed as to give him more than 5 per cent. profit, he, and through him, his posterity, gain the whole of the difference. In any case, if he retains £100 capital, he has so much more to leave behind him. But if, according to the present system, he is also annually charged by increase of taxes with a sum to redeem his assumed proportion of the annuity created, the only difference is, that the term during which he pays interest, instead of its principal money, becomes limited in proportion to the efficacy of the addition.

The principle of the mechanism of the British funding system, continues the above class of writers, gives to it that certainty and equability of effect, which may safely be made the basis of political calculations, by which the plans of warfare may be regulated in due proportion to the known pecuniary resources.

On the undiminishing permanence of those resources, the means almost entirely depend of protracting hostilities till they may be advantageously terminated. Doubtless where the ruling power is sufficiently dreaded, various ways may be adopted for extorting an adequate supply of money, and a country previously rich and prosperous may be long and greatly declining before its government, if despotic, may be much enfeebled by poverty. But the grand question is, by what pecuniary system this may be done *without* impoverishing the people—without taking more for the public use than a portion of an increasing addition to the national capital? The answer is found in the principle of the funding system of Britain.

Some amount of national funded debt is certainly *convenient* in many respects; the punctuality with which, in this country, the interest is paid; the facility with which money may be made productive, for any short period, by investing it in public securities, and with which it may be received back again at the moment when wanted, by the transfer of those securities: these and various other circumstances concur to make a national debt, such as ours is, a material advantage to many persons of moderate incomes, who cannot afford to wait for an uncertain receipt, and to many, whose commercial or other active employments of their capital are materially irregular. But all these advantages in their fullest extent might probably be obtained by a national debt of very far less magnitude than that to which ours has been swelled; and which cannot be contemplated without awful apprehensions of the consequences which may ultimately follow, unless some effectual means can be provided to retard its increase during war, and accelerate its

diminution during peace; the means undoubtedly exists of doing both, and the necessity of employing them is generally felt; but the manner and extent in which they may be most conveniently adopted so as to avoid sudden changes in the state of political and private economy, is a problem of much more difficult solution than may generally be imagined, and is, indeed, a practical question, materially depending on circumstances as they arise. An important effect of our funding system has been to create apparently a new capital of great magnitude.

'Nominally, without doubt, a new capital is created, but really it is a portion of the value of the intrinsic capital of the nation, transferred from those who hold that capital with entire power to manage it, to a new class of proprietors, who receive a portion of its profits through the agency of government, and to whom their respective portions of these profits are guaranteed by the national faith. The effect of this system must always be to transfer a portion of the intrinsic private revenue of the nation to a new, and as to this revenue, unemployed and unproductive class; and if any considerable proportion of those who receive it were, in all other respects, unemployed and unproductive, and were tempted to fold their hands in idleness by an income thus obtained without any exertion, the moral and political mischief would be of considerable magnitude. Practically the evil is not seen, and perhaps does not exist beyond an extent which is outweighed by the advantages which this system affords to very many, who from sex, or the infirmities of either extreme of life, are incapable of making a due profit of their property by personal exertions.

'But another effect of this system is to increase the nominal capital of the nation, as valued in money, though probably by no means to the extent which some have imagined. Direct taxes on the private revenue, derived from property, if applied to pay the interest of a funded national debt, can have no effect in increasing the nominal amount of the national capital. In estimating the value of any estate, such a rent-charge to the nation would be deducted like any rent-charge paid to an individual, and the remaining capital would be less in due proportion to the capital virtually transferred rather than created. But so far as the revenue paid to the national creditors is obtained by direct taxes, personally charged, there probably results from the funding system a double representation in money value of intrinsic capital; for the money value of that capital suffers no alteration, but only a portion is substracted from its profits, while the right of receiving that portion of the profits becomes the foundation of a new species of capital, estimated in due proportion to the contemporary value of any other secure and permanent source of clear income. If, therefore, the question is properly examined, it will be found that, as the greater part of the public revenue of this country is raised by personal or by indirect taxes, for that reason the greater part of the national debt, both funded and unfunded, is an additional representation in money value of the intrinsic capital, by the profits of which its interest is paid; and to this extent, therefore, the profit of money employed in purchasing productive capital is likely to be diminished. The money value of the whole national capital is made up of the united prices of the intrinsic capital, and of the national debts with which it is charged. If, therefore, the prices of the intrinsic capital, as of lands, merchandise, &c. &c., remain undiminished, more money must be employed to purchase its whole clear revenue; including in that revenue the part which is paid to the national creditors.

'Personal taxes also, as well as other direct taxes, by producing a diminution of the private income, which might otherwise be expended, have obviously a tendency to increase rather than to diminish the value of money, by diminishing the means of purchasing at former prices, and therefore either reducing the consumption or the money value: which have ultimately equivalent effects, though liable to be controuled and counteracted by the mode in which the taxes are expended. Indirect taxes on consumption are generally supposed to have an important effect in increasing the prices of things so taxed much beyond a due proportion to their actual amount; in this manner diminishing the value of money, and, by a general effect on all profits of capital actively employed, increasing the nominal amount of the private incomes out of which the public revenue is paid. Without doubt all taxes on merchandise of any kind will cause an effort on the part of those who sell it to indemnify themselves, and in many cases may give them an opportunity of making an additional profit; but we apprehend that this must altogether depend on the general state of the country where they are levied. The burden of all indirect taxes will fall either on the merchant and tradesman, or on the consumer, precisely according to the increasing or diminishing means of the latter to make his usual purchases. If his means diminish, he must buy less or give a lower price; and in either case the effect of taxes on his commodities will be to diminish the profits of the trader: and the value of money, as a medium of commerce, will be increased in equal proportion. We have no doubt that, in an ultimate analysis, it will be found that a national debt, and the taxes which must be levied to pay its interest, are rather instrumental than primary causes of changes in the value of money, and in the proportion of private incomes to the demands on them for national purposes.'

Such are some of the fairest observations we have seen on the part of the friends to this system. We refer the reader to p. 300 and 301 of our article ENGLAND for other considerations of a similar tendency.

On the other hand Dr. Hamilton and Mr. Ricardo contend that 'The excess of revenue above expenditure is the only real sinking fund by which public debt can be discharged. The increase of the revenue and the diminution of expense are the only means by which this sinking fund can be enlarged, and its operation rendered more effectual: and every scheme for discharging the public debt by sinking funds operating by compound interest, or in any other manner, unless so far as they are founded upon this principle, are illusory.' P. 10.

'Suppose,' says the latter able writer, 'a country at peace, and its expenditure, including the interest of its debt, to be £40,000,000, its revenue to be £41,000,000, it would possess £1,000,000 of sinking fund. This million would accumulate at compound interest; for stock would be purchased with it in the market, and placed in the names of the commissioners for paying off the debt. These commissioners would be entitled to the dividends before received by private stockholders, which would be added to the capital of the sinking fund. The fund thus increased would make additional purchases the following year; and would be entitled to a larger amount of dividends; and thus would go on accumulating, till in time the whole debt would be discharged. Suppose such a country to increase its expenditure £1,000,000, without adding to its taxes, and to keep up the machinery of the sinking fund; it is evident, that it would make no progress in the reduction of its debt, for, though it would accumulate a fund in the same manner as before in the hands of the commissioners, it would, by means of adding to its funded or unfunded debt, and by constantly borrowing, in the same way, the sum necessary to pay the interest on such loans, accumulate its million of debt annually, at compound interest, in the same manner as it accumulated its million annually of sinking fund.

'But suppose that it continued its operations of investing the sinking fund in the purchase of stock, and made a loan for the million which it was deficient in its expenditure, and that, in order to defray the interest and sinking fund of such loan, it imposed new taxes on the people to the amount of £60,000, the real and efficient sinking fund would, in that case, be £60,000 per annum, and no more, for there would be £1,060,000, and no more to invest in the purchase of stock, while £1,000,000 was raised by the sale of stock, or, in other words, the revenue would exceed the expenditure by £60,000.

'Suppose a war to take place, and the expenditure to be increased to £60,000,000, while its revenue continued as before £41,000,000, still keeping on the operation of the commissioners, with respect to the investment of £1,000,000. If it were to raise war-taxes for the payment of the £20,000,000 additional expense, the million of sinking fund would operate to the reduction of the national debt at compound interest as it did before. If it raised £20,000,000 by loan in the stocks or in exchequer bills, and did not provide for the interest by new taxes, but obtained it by an addition to the loan of the following year, it would be accumulating a debt of £20,000,000 at compound interest, and while the war lasted, and the same expenditure continued, it would not only be accumulating a debt of £20,000,000 at compound interest, but a debt of £20,000,000 per annum, and, consequently, the real increase of its debt, after allowing for the operation of the million of sinking fund, would be at the rate of £19,000,000 per annum at compound interest. But if it provided by new taxes 5 per cent. interest for this annual loan of £20,000,000, it would, on one hand, simply increase the debt £20,000,000 per annum; on the other, it would diminish it by £1,000,000 per annum, with its compound interest. If we suppose that, in addition to the 5 per cent. interest, it raised also by annual taxes £200,000 per annum, as a sinking fund, for each loan of £20,000,000, it would, the first year of the war, add £200,000 to the sinking fund; the second year £400,000; the third year £600,000, and so on, £200,000 for every loan of £20,000,000. Every year it would add, by means of the additional taxes, to its annual revenue, without increasing its expenditure. Every year too that part of this revenue which was devoted to the purpose of purchasing debt would increase by the amount of the dividends on the stock purchased, and thus would its revenue still farther increase, till at last the revenue would overtake the expenditure, and then once again it would have an efficient sinking fund for the reduction of debt.

'It is evident, that the result of these operations would be the same, the rate of interest being supposed to be always at 5 per cent. or any other rate, if during the excess of expenditure above revenue, the operation of the commissioners in the purchase of stock were to cease. The real increase of the national debt must depend upon the excess of expenditure above revenue, and that would be no ways altered by a different arrangement. Suppose that, instead of raising £20,000,000 the first year, and paying off £1,000,000, only £19,000,000 had been raised by loan, and the same taxes had been raised, namely, £1,200,000. As 5 per cent. would be paid on £19,000,000 only, instead of on £20,000,000, or £950,000 for interest instead of £1,000,000, there would remain, in addition to the original million, £250,000 towards the loan of the following year, consequently, the loan of the second year would be only for £18,750,000, —but as £1,200,000 would be again raised by additional taxes, or £2,400,000 in the whole the second year, besides the original million, there would be a surplus, after paying the interest of both loans, of £1,512,500, and therefore the loan of the third year would be for £18,487,500. The progress during five years is shown in the following table:—

	Loan each year.	Amount of Loans.	Amount of Interest.	Amount of Taxes.	Surplus.
Years.	£.	£.	£.	£.	£.
First . .	19,000,000	19,000,000	950,000	2,200,000	1,250,000
Second .	18,750,000	37,750,000	1,887,500	3,400,000	1,512,500
Third .	18,487,500	56,237,500	2,811,875	4,600,000	1,788,125
Fourth .	18,211,875	74,449,375	3,722,469	5,800,000	2,077,531
Fifth . .	17,922,469	92,371,844	4,618,592	7,000,000	2,381,408

instead of thus diminishing the loan each the same amount of taxes precisely had raised, and the sinking fund had been ap- in the usual manner, the amount of debt d have been exactly the same at any one of periods. These considerations led Dr. ilton to the conclusion, that this first mode ising the supplies during war, viz. by di- shing the amount of the annual loans, and oing the purchases of the commissioners in arket, would be more economical, and that ght therefore to be adopted. In the first , all the expenses of agency would be l. In the second, the premium usually ob- d by the contractor for the loan, would be l, on that part of it which is repurchased by commissioners in the open market. It is that the stocks may fall as well as rise be- n the time of contracting for the loan, and ime of the purchases made by the commis- ers; and, therefore, in some cases, the public gain by the present arrangement; but as e chances are equal, and a certain advantage ven to the loan contractor to induce him to nce his money, independently of all con- ency of future price, the public now give advantage on the larger sum instead of on smaller. On an average of years this can- fail to amount to a very considerable sum. But both these objections would be obviated,' Mr. Ricardo, 'if the clause in the original ing fund bill, authorising the commissioners ubscribe to any loan for the public service, he amount of the annual fund which they e to invest, were uniformly complied with. s is the mode which has, for several years, n strongly urged on ministers by Mr. Grenfell, is far preferable to that which Dr. Hamilton ommends.'

This great, and on the whole, perhaps, most artial of modern political economists, finally erves, 'Suppose a country to be free from t, and a war to take place, which should in- ve it in an annual additional expenditure of),000,000, there are three modes by which expenditure may be provided; first, taxes y be raised to the amount of £20,000,000 annum, from which the country would be lly freed on the return of peace; or, secondly, money might be annually borrowed and ded; in which case, if the interest agreed on was 5 per cent., a perpetual charge of ,000,000 per annum taxes would be incurred the first year's expense, from which there uld be no relief during peace, or in any future r; of an additional million for the second ar's expense, and so on for every year that the r might last. At the end of twenty years, if war lasted so long, the country would be per- tually encumbered with taxes of £20,000,000 r annum, and would have to repeat the same urse on the recurrence of any new war. The ird mode of providing for the expenses of the ar would be to borrow annually the £20,000,000 quired as before, but to provide, by taxes, a nd, in addition to the interest, which, accumu- ting at compound interest, should finally be ual to the debt. In the case supposed, if oney was raised at 5 per cent., and a sum of £200,000 per annum, in addition to the million for interest, were provided, it would accumulate to £20,000,000 in forty-five years; and, by consenting to raise £1,200,000 per annum by taxes, for every loan of £20,000,000, each loan would be paid off in forty-five years from the time of its creation; and in forty-five years from the termination of the war, if no new debt were created, the whole would be redeemed, and the whole of the taxes would be repealed. Of these three modes, we are decidedly of opinion that the preference should be given to the first. The burthens of the war are undoubtedly great during its continuance, but at its termination they cease altogether. *When the pressure of the war is felt at once, without mitigation, we shall be less disposed wantonly to engage in an expensive contest*, and if engaged in it, we shall be sooner disposed to get out of it, unless it be a contest for some great national interest. In point of economy, there is no real difference in either of the modes.'

The objections to this mode of Mr. Ricardo's are, however, as we have indeed already intimated, serious: suppose the extraordinary supplies to be raised by extraordinary taxes within the year, pressed upon merchants, manufacturers, and landholders, in short on all classes whose capital is invested in property not immediately accessible or convertible into money, so that they could not meet these large demands. It has been answered that all these descriptions of people may obtain the same accommodation which they enjoy under the present system, by going into the money market and borrowing for themselves. But here a difficulty occurs, in the necessity of finding security for private loans which does not occur in the funding system. This the trader has not to offer, unless either the whole of his capital is not invested in his business, in which case he is, as to the part not invested, a capitalist, not concerned in trade; or, unless his trading capital is fixed, that is to say, invested in buildings and machinery which may be mortgaged, in which case he is pro tanto in the same situation as a landowner. But if his capital be wholly circulating, that is, constantly passing from him in the shape of wages, price of raw material, or purchase of goods, and returning to him by the produce of his sales, he can give no security, and must withdraw from his trade the portion of capital required of him, contract his dealings, and probably ruin his prospects. The fact is, that, when the government goes into the market, it is able to borrow on the credit of all the capitals of the country as one great capital, managed indeed by different individuals, some of whom will fail, but others will succeed, and by their success will keep the national capital entire; and therefore, as it makes no difference to the creditor of the public whether A is ruined and B enriched, or B ruined and A enriched, both A and B are left to possess and manage their respective capitals in their own way. But to the private creditor of A it is every thing that A, and A alone and individually should retain his property entire, and therefore the private creditor will require to have such a hold upon that property as to make it impos-

sible for A to dissipate it, and if it is so secured, A cannot embark it in trading speculations so as to hazard its loss.

It is not only the trader who would often find it difficult to offer such security for the sum demanded of him by the state as would be accepted in the money market. How many landholders are there of large and clear incomes, the titles of whose estates will hardly bear the minute inspection to which they must submit them if they attempt to borrow money upon mortgage! At what a disadvantage must the owners of life-estates borrow the sums assessed upon them! and yet even these would be better off than some other classes of borrowers. For instance, the interest, which a fellow of a college has in his fellowship, may by possibility endure through his life, and is therefore recognised by the law as a freehold; yet it is determinable by marriage, which the law will permit no man to bind himself not to contract, and by the commission or omission of various other acts, against which no covenant could secure the lender, and upon which the judgment of a domestic forum, namely that of a visitor, is conclusive, however summary or informal. Naval and military officers are similarly situated; and it would probably not be easy for either fellow or captain, having no other property but his fellowship or commission, to anticipate his revenue by raising a loan upon it, even if the law had not prevented officers from borrowing on the security of their commissions. And the same remarks apply to all those numerous classes of persons, some high and some low, whose incomes arise from the enjoyment of offices of which they are liable to be deprived at the will of their employers, for their own misconduct, or in consequence of supervening inability to perform the duties, arising from sickness, accident, &c. But the government can borrow upon the credit of all these incomes, as if they were permanent; for, though A B and C lose their situations, others must succeed to them, in whose hands the emoluments will be equally accessible to the government. And, in like manner, wherever a fund is divided between a tenant for life and a remainder-man, either of these parties must borrow to a disadvantage; the first on account of the insecurity, the second on account of the remoteness of his interest; but the government can borrow on the credit of the whole fund, which it can reach in either of their hands. But further, where the borrower is an individual, he must submit to the inconvenience of being liable to have the loan called in at the pleasure of the lender; or, if he stipulates that it shall not be called in for a certain time, or without a certain notice, or the like, all such stipulations are valuable considerations in addition to the loan, and must of course be paid for by an equivalent in some shape or other. But the facility with which government securities are negociated renders all arrangements of this sort unnecessary; the holder can at all times get their value at the market price, and as that price, if the character of the government for stability and punctuality in its payments be good, is liable only to the same fluctuations inversely to which the value of money in the market is liable, and as those fluctuations are uncertain in their nature, and as likely to be to the benefit of the holder as to his detriment, it amounts to nearly the same thing, so far as he is concerned, as if the value of these securities were fixed to the most perfect uniformity. This, indeed, is impossible, not from any peculiarity in the nature of government securities, but because no commodity is free from fluctuation in value; and money lent to be repaid in numero as little as any other; for the borrower may force the lender to receive it again at a very disadvantageous time; and, if he be restricted from so doing, that agreement must be paid for by an equivalent, as was before observed in the corresponding case.

'Supposing, however,' says a writer on this subject in the Quarterly Review, 'all the difficulties attending the negociation of private loans to be surmounted, still the use of this expedient neutralises the first of the two advantages proposed by the advocates of the new plan of finance. For if, at the end of the war, individuals are to remain oppressed by the weight of debts contracted for the purpose of paying off in each year their shares of its charge, they will be no less distressed than they now are by remaining liable to their shares of the public debt.

'We will now consider whether, by the use of the same expedient, the other anticipated advantage, namely, the saving the expense of collecting the interest-taxes, negociating public loans, and managing the accounts of the debt, would be more effectually realised. It is material and obvious to remark, though it seems to have escaped the notice of our projectors, that the expense of collection must be added to the weight of taxes levied for the purpose of raising the supply within the year, as well as to that of interest-taxes. If both were to be collected at the same rate per cent., nothing would be saved upon this head by the remission of the extraordinary taxes at the end of the war. The two principal branches of the revenue of the united kingdom, the customs and the excise, are collected, the former at an expense of about 12, the latter of about 4⅝ per cent. The net receipt of the customs, after deducting repayments, allowances, discounts, drawbacks, &c., amounted, in the year ending on the 5th of January, 1823, to £12,923,420 and a fraction; the cost of collection to £1,547,486 and a fraction; the net receipt of the excise amounted to £28,976,344 and a fraction; the cost of collection to £1,360,869 and a fraction. The total net receipt then of these two taxes, about £42,000,000, costs nearly 7 per cent., in collecting. We will assume that any additional taxes to be imposed for the service of a war would be collected at the same rate, and that the sum required to be raised is £1,000,000. If this is raised by loan at 5 per cent., the expense of collecting the interest-taxes, £50,000, at 7 per cent., will be £3,500 a year, and an annuity to that amount must be raised by the people, in addition to the interest-taxes; but if the whole million is to be raised within the year by war taxes, the expense of collecting these taxes will, at 7 per cent., amount to £70,000; and this £70,000 must also be raised by the contributors by private loan, and the

interest of it at 5 per cent., will also be
) a year. The same reasoning applies,
ver rate of interest money may be supposed
r at the date of the transaction, or at what-
ate per cent. the taxes may be supposed
collected; because any increase or dimi-
ı of either of these rates would affect both
of the account alike. It is true, indeed,
if the selection of the objects and modes
ation were guided by perfect political wis-
there ought to be no other difference be-
the cost of collecting a large and a small
ıe, than that trifling one, which would arise
the necessity of employing in the former
ıgents of greater responsibility, and conse-
ly requiring larger pay, than such as would
ıfficient in the latter. For, as all taxes
to be so contrived as to bear equally upon
man's property in proportion to its value,
ng more ought to be necessary, when the
c service requires a larger amount of money
raised, than to increase the weight of the
ng taxes, without creating any new ones,
ı would require the introduction of new
inery for the purpose of collecting them.
this contrivance is one of the most difficult
ems in political economy. The property-
was perhaps the nearest approach that has
been made to the solution of it; and ac-
ngly the expense of collecting that tax
incomparably less than that of any other
ever was imposed in this country, being, in
year ending on the 5th of January, 1814,
£306,158, upon a receipt of £14,318,816.
the repugnance, with which it was endured,
ed that it had defects, unatoned for in the
ion of the contributors, even by the high
ts which it possessed as a measure of public
omy. If, however, it should be maintained,
we acknowledge ourselves inclined to lean
ıis opinion, that the public dislike to this
was occasioned more by the great weight,
:h it added to the already enormous pressure
ıe public burdens, than by any thing pecu-
y obnoxious in its own nature; that a pro-
y-tax judiciously imposed might be advan-
ously substituted for all others, or nearly all,
ı in time of peace, and that by increasing it
ı occasions of extraordinary emergency, any
itional sum of money, which the public ne-
ities required, and the national resources
d furnish, might be collected with a very
ll, if any, additional expense; then we would
:rve that, as by reason of the exclusive em-
ment of this tax, the collection of the supply-
s would cost no more, or but little more,
ng the war, than that of the interest-taxes
ld have cost under the funding system; so
her would the collection of the interest-taxes
r the return of peace, under this latter system,
materially, if at all, to the cost which must
e been incurred in raising the ordinary taxes
he peace establishment. If it should be said
in point of fact the people of this country
submit during the war to raise large supplies
he property-tax, which was brought into the
:hequer at a cheap rate, and are now paying
interest of the public debt by other taxes ga-
ed at a great expense, we answer that this
circumstance does not at all affect the merits of
the two systems under consideration, inasmuch
as this heavier charge is voluntarily incurred by
the contributors in preference to the lighter
charge, on account of their dislike to a peculiar
mode of taxation, and is therefore not fairly at-
tributable to the funding system, to which a pro-
perty-tax would be quite as applicable as to
that of raising the supplies within the year. It
is therefore immaterial to the present question,
whether an increased expense of collection does
or does not attend an increase of taxation; be-
cause, in the latter case, the gathering either of
the supply or the interest taxes will cost nothing
in addition to the expense of collecting the ordi-
nary revenue; in the former case, the collecting
of the supply-taxes for one year will be as bur-
thensome as the collecting for ever of those
which would be necessary to defray the interest
of a loan of equal amount. The funding system
then is not more expensive, as far as relates to
the collection of taxes, than that which is op-
posed to it.' This writer then endeavours to show
that in the negociation of its loans, and the ma-
nagement of the accounts, which become neces-
sary in consequence of them, it is far more
economical. But we cannot further pursue the
discussion.

FUN'DAMENT, *n. s.* } Old Fr. *fundement*; Lat. *fundamentum*. The foundation of any thing. That on which the body, building, proposition, argument, or procedure rests. Essential; not merely accidental, but of the very nature and essence of the thing.
FUNDAMEN'TAL, *adj.* & *n. s.* }
FUNDAMENT'ALLY, *adv.* }

Yeve me then of thy gold to make our cloistre;
Quod he; 'for mouy a muscle and mony an oistre,'
Whan other men han ben ful wel at ese,
Hath ben our food our cloistre for to rese;
And yet God wot, unneth the *fundament*
Parfourmed is; ne of our pavement,
N'is not a tile, yet within wones:
By God we owen fourty pound for stones.
Chaucer. The Sompnoures Tale.

You that will be less fearful than discreet,
That love the *fundamental* part of state,
More than you doubt the charge of it.
Shakspeare.

Until this can be agreed upon, one main and *fundamental* cause of the most grievous war is not like to be taken from the earth. *Raleigh.*

We propose the question, whether those who hold the *fundamentals* of faith may deny Christ damnably in respect of superstructures and consequences that arise from them. *South.*

Such we find they are, as can controul
The servile actions of our wavering soul,
Can fright, can alter, or can chain the will;
Their ills all built on life, that *fundamental* ill.
Prior.

Religion is not only useful to civil society, but *fundamentally* necessary to its very birth and constitution. *Bentley.*

Yet some there were among the sounder few,
Of those who less presumed, and better knew,
Who durst assert the juster ancient cause,
And here restored wit's *fundamental* laws. *Pope.*

The unlimited power placed *fundamentally* in the body of a people, the legislators endeavour to deposit in such hands as would preserve the people. *Swift.*

It is a very just reproach, that there should be so much violence and hatred in religious matters among men who agree in all *fundamentals*, and only differ in some ceremonies, or mere speculative points. *Id.*

Gain some general and *fundamental* truths, both in philosophy, in religion, and in human life. *Watts.*

FUNDAMENTAL BASS, in music, that which serves for a foundation to the harmony. This part is according to Rousseau, and all authors who have proceeded upon M. Rameau's experiment, in its primary idea, that bass which is formed by the fundamental notes of every perfect chord that constitutes the harmony of the piece; so that under each chord it causes to be heard, or understood, the fundamental sound of that particular chord; that is, the sound from whence it is derived by the rules of harmony. From whence we may see that the fundamental bass can have no other contexture than that of a regular and fundamental succession, without which the procedure of the upper parts would be illegitimate. To understand this well, it is necessary to be known, that, according to the system of Rameau, which Rousseau has followed in his dictionary, every chord, though composed of several sounds, can only have one which is its fundamental, viz. that which produces this chord, and which is its bass according to the direct and natural order. See MUSIC.

A FUNDAMENTAL CHORD is that whose bass is fundamental, and in which the sounds are ranged in the same order as when they are generated, according to the experiment so often repeated by M. d'Alembert, in his Preliminary Discourse and Elements of Music. See MUSIC. But, as this order removes the parts to an extreme distance one from the other, they must be approximated by combinations or inversions; but if the bass remains the same, the chord does not for this reason cease to bear the name of fundamental. Such an example is this chord, ut mi sol, included in the interval of a fifth: whereas, in the order of its generation, ut sol mi, it includes a tenth, and even a seventeenth; since the fundamental ut is not the fifth of sol, but the octave of that fifth.

A FUNDAMENTAL SOUND is that which forms the lowest note of the chord, and from whence are deduced the harmonial relations of the rest; or which serves for a key to the tone. See TONIC.

FUNDY, a bay of North America, between New England and Nova Scotia, remarkable for its tides, which rise to the height of fifty or sixty feet, and flow so rapidly as to overtake animals which feed upon the shore. Its extent northward, or rather to the north-east, is about 200 miles. From its mouth up to Passamaquoddy Bay, on its north-west side, situated between the province of New Brunswick and the district of Maine, are a number of bays and islands on both sides, and thus far it contracts its breadth gradually. It is twelve leagues across from St. John's, in New Brunswick, to the gut of Annapolis, in Nova Scotia. The fishery is here very abundant and profitable.

FUNEN, FIONIA, or FYEN, a considerable island of Denmark, in the Baltic, separated from Jutland by a strait called the Less Belt, and from the island of Zealand by the Great Belt. It is 340 miles in circuit, and contains 1376 square miles, and 120,000 inhabitants. On the north-east is the gulf of Odenzee, the only considerable indentation of the island, which has several hills, lakes, and rivers. Here also are forests of oak and birch. Funen is fertile in rye, barley, oats, peas, and maize for exportation; and has, besides, extensive orchards and hop grounds. Fattening cattle for export, and raising bees, form also considerable branches of its rural economy. The chief places are, 1. Odenzee, at the head of the gulf of the same name, with 6000 inhabitants, and some manufactures of woollens, and skins for gloves; the water of the rivulet which runs through it being particularly proper for this last purpose. From twenty to thirty trading vessels belong to it, and 200 enter and clear out annually. 2. Nyborg, a fortified town; of 1,600 inhabitants, on the Great Belt, where a duty is paid by all merchant ships passing through. It is also the usual crossing place to Corsoer, in Zealand, and has a good port, and forty to fifty single-masted vessels belong to it. 3. Svendborg, on the south end of the island, and 4. Faaborg on the south-west, having each 2000 or 3000 inhabitants. 5. Middelfart, on the narrowest part of the Little Belt, the usual crossing place to Snoghoe, in Jutland; it is a small town, chiefly inhabited by fishermen and boatmen. 6. Bogenzee on the north, and 7. Lessens on the west, both of little consequence.

FU'NERAL, *n.s.* & *adj.* } Fr. *funerailles*; Lat.
FUNE'REAL, *adj.* } *funus, funerea. Funus* is derived from *funis*, a cord, because lighted cords, or torches, were carried before bodies which were interred by night. The term funeral therefore denotes the ordinary solemnity which attends the consignment of a body to the grave; the payment of the last honors to the dead. Funereal is used poetically to describe what is dark, black, or dismal.

And after that, came woful Emelie,
With fire in hand, as was that time the gise,
To don the office of *funeral* service.
Chaucer. The Knightes Tale.

The lady, when she saw her champion fall,
Like the old ruines of a broken towre,
Staid not to waile his woefull *funeral*;
But from him fled away with all her powre.
Spenser. Faerie Queene.

Here, under leave of Brutus, and the rest,
Come I to speak in Cæsar's *funeral*. *Shakspeare.*

All things that we ordained festival,
Turned from their office to black *funeral*. *Id.*

Our instruments to melancholy bells,
Our wedding chear to a sad *funeral* feast. *Id.*

May he find his *funeral*
I' the' sands, when he before his day shall fall.
Denham.

No day he saw but that which breaks,
Thro' frighted clouds, in forked streaks;
While round the rattling thunder hurled,
As at the *funeral* of the world.
Marvel. The Unfortunate Lover.

Thy hand o'er towns the *funeral* torch displays,
And forms a thousand ills ten thousand ways.
Dryden.

But if his soul hath winged the destined flight,
Inhabitant of deep disastrous night,

Homeward with pious speed repass the main,
To the pale shade *funereal* rites ordain. *Pope.*
The long *funerals* blacken all the way. *Id.*
You are sometimes desirous to see a *funeral* pass by in the street. *Swift.*

Italia! oh Italia, thou who hast
The fatal gift of beauty, which became
A *funeral* dower of present woes and past,
On thy sweet brow is sorrow ploughed by shame,
And annals graved in characters of flame.
Byron. Childe Harold.

He has not had
The misery to die a subject where
He reigned: then let his *funeral* rites be princely.
Id. The Two Foscari.

What shall he be ere night? perchance a thing
O'er which the raven flaps her *funeral* wing.
Id. Corsair.

FUNERAL GAMES, a part of the ceremony of the ancient funerals. It was customary for persons of rank, among the ancient Greeks and Romans, to institute games, with all sorts of exercises, to render the death of their friends more remarkable. This practice was general, and is often mentioned by ancient writers. The celebration of these games, among the Greeks, mostly consisted of horse races; the prizes were of different sorts and value, according to the quality and magnificence of the person that celebrated them. The garlands given to victors on such occasions were usually of parsley, which was thought to have some particular relation to the dead. Among the Romans these games consisted chiefly of processions; and sometimes of mortal combats of gladiators around the funeral pile. They, as well as the Greeks, had also a custom of slaying a number of captives before the pile, as victims to appease the manes of the deceased. Cæsar relates, that the Gauls had also this custom. The funeral games were abolished by the emperor Claudius.

FUNERAL ORATION, a discourse pronounced in praise of a person deceased, at the ceremony of his funeral. This custom is also very ancient. In the annexed account of the Egyptian rites of interment, may be perceived the first rudiments of funeral orations, which were afterwards moulded into a more regular form by other nations, who adopted this practise. Nor can we omit remarking, that those funeral solemnities were attended not only with orations in praise of the deceased, but with prayers for him, made by one who personated the deceased. An entire form of one of these is preserved by Porphyry. 'When,' says he, 'they (the Egyptians) embalm their deceased nobles, they privately take out the entrails, and lay them up in an ark or chest; moreover, among other things which they do in favor of the deceased, lifting up the arc or chest to the sun, they invoke him; one of the Libitinarii making a prayer for the deceased, which Euphantus has translated out of the Egyptian language, and is as follows:—O lord, the sun, and all the gods who give life to man, receive me, and admit me into the society of the immortal ones; for, as long as I lived in this world, I have religiously worshipped the gods whom my parents showed me, and have always honored those who begot my body; nor have I killed any man, nor have I defrauded any of what has been committed to my trust, nor have I done any thing which is inexpiable. Indeed, whilst I was alive, if I have sinned either by eating or drinking any thing which was not lawful; not through myself have I sinned, but through these, showing the ark and chest where the entrails were. And, having thus spoke, he casts it into the river, but the rest of the body he embalms as pure.' The Grecians received the seeds of superstition and idolatrous worship from the Egyptians, by Cecrops, Cadmus, Danaus, and Erechtheus, coming into Greece; and, among other customs transplanted from Egypt, were the solemnities used at the burial of the dead. Of these an encomium on the deceased always formed a part. From the Egyptians and Grecians, especially the latter, the Romans received many of their laws and customs, as well as much of their polytheism and idolatrous worship. The corpse being brought to their great oratory, called the rostra, the next of the kin laudabat defunctum pro rostris, i. e. made a funeral oration, in the commendation principally of the party deceased, but touching the worthy acts also of those his predecessors whose images were there present. Dr. Kennet says, that 'In all the funerals of note, especially in the public or indictive, the corpse was first brought with a vast train of followers into the forum; here one of the nearest relations ascended the rostra, and delivered an oration in praise of the deceased. If none of the kindred undertook the office, it was discharged by some of the most eminent persons in the city for learning and eloquence, as Appian reports of the funeral of Sylla. And Pliny, the younger, reckons it as the last addition to the happiness of a very great man, that he had the honor to be praised at his funeral by the most eloquent Tacitus, then consul. The invention of this custom is generally attributed to Valerius Poplicola, soon after the expulsion of the regal family. Plutarch tells us, that honoring his colleague's obsequies with a funeral oration, it so pleased the Romans, that it became customary for the best men to celebrate the funerals of great persons with speeches in their commendation.' Thus Julius Cæsar, according to custom, made an oration in the rostra, in praise of his wife Cornelia, and his aunt Julia, when dead; wherein he showed, that his aunt's descent, by her mother's side, was from kings, and, by her father's, from the gods. Plutarch says, that 'he approved of the law of the Romans, which ordered suitable praises to be given to women as well as to men after death.' Though, by what he says in another place, it seems that the old Roman law was, that funeral orations should be made only for the elder women; and therefore he says, that Cæsar was the first that made one upon his own wife, it not being then usual to take notice of younger women in that way; but by that action he gained much favor from the populace, who afterwards looked upon him, and loved him as a very mild and good man. The reason why such a law was made in favor of the women, Livy tells us, was this, That when there was such a scarcity of money in the public treasury, that the sum agreed upon to give the Gauls to break up the siege of the city and capitol could not be raised, the women collected among themselves and made

it up; who hereupon had not only thanks given them, but this additional honor, that after death they should be solemnly praised as well as the men: whence it appears, that, before this time, the men only had those funeral orations made for them.

Funeral Rites, ceremonies accompanying the burial of any person. These rites differed among the ancients according to the different genius and religion of each country.

The first people who seem to have paid any particular respect to their dead, were the Egyptians, the posterity of Ham; as they were the first cultivators of idolatrous worship and superstition, after the flood, they were also the first who asserted the immortality of the soul, in its migration into all kinds of animals in earth, air, and sea, and its return to the human body; which they supposed to be within the term of 3000 years. Hence proceeded their great care in embalming their dead bodies, and their vast expense in building proper repositories for them; for they were more solicitous about their graves than their houses. Whenever a person died among the Egyptians, his parents and friends put on mournful habits, and abstained from all banquets and entertainments. This mourning lasted from forty to seventy days, during which time they embalmed the body. The embalmed body was restored to the friends, who placed it in a kind of open chest, which was preserved either in their houses, or in the sepulchres of their ancestors. But before the dead were deposited in the tomb, they underwent a solemn judgment, which extended even to their kings. Of this remarkable custom we have a particular account in the first book of Diodorus Siculus. 'Those who prepare to bury a relation, give notice of the day intended for the ceremony to the judges, and to all the friends of the deceased; informing them that the body will pass over the lake of that district to which the dead belonged; when on the judges assembling, to the number of more than forty, and ranging themselves in a semicircle on the further side of the lake, the vessel is set afloat, which those who superintend the funeral have prepared for this purpose. This vessel is managed by a pilot, called, in the Egyptian language, Charon; and hence they say that Orpheus, travelling in old times into Egypt, and seeing this ceremony, formed his fable of the infernal regions, partly from what he saw, and partly from invention. The vessel being launched on the lake, before the coffin, which contains the body, is put on board, the law permits all, who are so inclined, to produce an accusation against it. If any one steps forth, and proves that the deceased has led an evil life, the judges pronounce sentence, and the body is precluded from burial; but if the accuser is convicted of injustice in his charge, he falls himself under a considerable penalty. When no accuser appears, or when the accuser is proved to be an unfair one, the relations who are assembled change their expressions of sorrow into encomiums on the dead; yet do not, like the Greeks, speak in honor of his family, because they consider all Egyptians as equally well born; but they set forth the education and manners of his youth, his piety and justice in maturer life, his moderation, and every virtue by which he was distinguished; and they supplicate the infernal deities to receive him as an associate among the blest. The multitude join their acclamations of applause in this celebration of the dead, whom they consider as going to pass an eternity among the just below.' Such is the description which Diodorus gives of this funeral judicature, to which even the kings of Egypt were subject. The same author asserts, that many sovereigns had been thus judicially deprived of the honors of burial by the indignation of their people; and that the terrors of such a fate had the most salutary influence on the virtue of their kings.

Among the Greeks it was usual sometimes before the interment, to put a piece of money into the mouth of the deceased, which was thought to be Charon's fare for wafting the departed soul over the infernal river. This ceremony was not used in those countries which were supposed to be situated in the neighbourhood of the infernal regions, and to lead thither by a ready and direct road. The corpse was likewise furnished with a cake composed of flour, honey, &c., which was designed to appease the fury of Cerberus, the door-keeper of hell, and to procure the ghost a safe and quiet entrance. During the time the corpse continued in the house, there stood before the door a vessel of water: the design of which was, that those concerned about the body might purify themselves by washing; it being the opinion of the Greeks, as well as of the Jews, that pollution was contracted by touching a dead body. The ceremonies by which they expressed their sorrow for the death of their friends were various; but it seems to have been a constant rule to recede as much as possible in habit and behaviour from their ordinary customs. For this reason they abstained from banquets and entertainments; they divested themselves of all ornaments; they tore, cut off, or shaved their hair, which they cast into the funeral pile, to be consumed with the body of their deceased friend. Sometimes they threw themselves on the ground, and rolled in the dust, or covered their head with ashes; they beat their breasts, and even tore their flesh with their nails, upon the loss of a person they much lamented. When persons of rank, such as public magistrates or great generals, died, the whole city put on a face of mourning; all public meetings were intermitted; the schools, baths, shops, temples, and all places of concourse, were shut up. After interment followed the epulæ or feasts, at which the company used to appear crowned; when they spoke in praise of the dead; and not only at those feasts, but even before the company departed from the sepulchre, they were sometimes entertained with a panegyric upon the dead person. The Grecian soldiers, who died in war, had not only their tombs adorned with inscriptions, showing their names, parentage, and exploits, but were also honored with an oration in their praise. The custom among the Athenians in the interment of their soldiers was as follows, namely, 'They used to place the bodies of their dead in tents three days before the funeral, that all persons might have opportunity to find out their rela-

and pay their last respects to them. Upon
urth day a coffin of cypress was sent from
tribe, to convey the bones of their own
ons; after which went a covered hearse in
ry of those whose bodies could not be
. All these, accompanied with the whole
of the people, were carried to the public
ig-place, called Ceramicus, and there in-
l. One oration was spoken in commenda-
f them all, and their monuments adorned
pillars, inscriptions, and all other ornaments
about the tombs of the most honorable
ns. The oration was pronounced by the
s of those deceased persons who behaved
selves most valiantly. Thus, after the fa-
battle at Marathon, the fathers of Callima-
and Cynægyrus were appointed to make
neral oration. And, upon the return of the
upon which the solemnity was first held,
ame oration was constantly repeated every
' Interring, or laying the dead in the ground,
s to have been the most ancient practice
ig the Greeks; though burning came after-
s to be generally used among them. It was
mary to throw into the funeral pile those
ients the deceased usually wore. The pile
lighted by one of the deceased's nearest
ions or friends, who made prayers and vows
ie winds to assist the flames, that the body
it quickly be reduced to ashes; and, during
ime the pile was burning, the dead person's
ids stood by it, pouring libations of wine,
calling upon the deceased.

The funeral rites among the ancient Jews were
mn and magnificent. When any person was
l, his relations and friends rent their clothes;
ch custom is but faintly imitated by the mo-
n Jews, who only cut off a bit of their gar-
it in token of affliction. It was usual to
d the dead person's thumb into the hand,
fasten it in that posture with a string: be-
se the thumb then having the figure of the
ne of God, they thought the devil would not
e to approach it. When they came to the
ying-place, they made a speech to the dead
the following terms: 'Blessed be God, who
formed thee, fed thee, maintained thee, and
en away thy life. O dead! he knows your
mbers, and shall one day restore your life,
.' Then they spoke the eulogium, or funeral
ition, of the deceased; after which they said
prayer, called the righteousness of judgment;
n, turning the face of the deceased towards
aven, they called out, 'Go in peace.'

The funeral rites among the ancient *Romans*,
re very numerous. The deceased was kept
ven days; and every day washed with hot wa-
, and sometimes with oil, that, in case he were
ly in a slumber, he might be thus waked; and
ery now and then his friends meeting, made a
rrible outcry or shout, with the same view;
hich last action they called conclamatio. The
st conclamation was on the seventh day; when,
no signs of life appeared, the defunct was
essed and embalmed by the pollinctores;
laced in a bed near the door, with his face and
eels towards the street; and the outside of the
ate, if the deceased were of condition, was gar-
ished with cypress boughs. In the course of
these seven days, an altar was raised near his bed-
side, calledacerra; on which his friends every day
offered incense; and the libitinarii provided
things for the funeral. On the seventh day, a
crier was sent about the city, to invite the people
to the solemnisation of the funeral in these words:
'Exequias L. Tit. L. filii, quibus est commodum ire,
jam tempus est. Ollus (i. e. ille) ex ædibus effertur.'
The people being assembled, and the last conclа-
mation ended, the bed was covered with purple:
a trumpeter marched forth, followed by old wo-
men called præficæ, singing songs in praise of
the deceased: lastly, the bed followed, borne by
the next relations; and, if the person were of
quality and office, the waxen images of all his
predecessors were carried before him on poles.
The bed was followed by his children, kindred,
&c., atrati, i. e. in mourning: from which act
of following the corpse, these funeral rites
were called exequiæ. The body thus brought
to the rostra, the next of kin laudabat defunc-
tum pro rostris, made a funeral oration in his
praise and that of his ancestors. This done,
the body was carried to the pyra, or funeral pile,
and there burnt; his friends first cutting off a
finger, to be buried with a second solemnity.
The body consumed, the ashes were gathered;
and the priest sprinkling the company thrice with
clean water, the eldest of the præficæ crying aloud
ilicet, dismissed the people, who took their leave
of the deceased in this form:—'Vale, vale, vale:
nos te ordine quo natura permiserit sequemur.'
The ashes, enclosed in an urn, were laid in the
sepulchre or tomb.

The *ancient Christians* testified their abhor-
rence of the Pagan custom of burning the dead,
and always deposited the body entire in the
ground; and it was usual to bestow the honor
of embalming upon the martyrs at least, if not
upon others. They prepared the body for burial by
washing it with water, and dressing it in a funeral
attire. The carrying forth of the body was per-
formed by near relations, or persons of such dig-
nity as the circumstances of the deceased required.
Singing of psalms was the great ceremony used in
all funeral processions among the ancient Chris-
tians.

The funeral rites of the *Greek* church are
much the same with those of the Latin. It
needs only to be added, that after the funeral ser-
vice, they kiss the crucifix, and salute the mouth
and forehead of the deceased: after which each
of the company eats a bit of bread and drinks a
glass of wine in the church, wishing the soul a
good repose, and the afflicted family all conso-
lation.

Funeral Sermons. The custom of the Pa-
gan Romans, in pronouncing funeral orations in
praise of their deceased heroes, appears to have
been very early adopted by the ancient Christians.
Some of their funeral sermons or orations are still
extant, as that of Eusebius on Constantine; those
of Nazianzen on Basil and Cæsarius; and of
Ambrose on Valentinian, Theodosius, and others.
Gregory, the brother of Basil, made επικηδειον
λογον, a funeral oration, for Melitius bishop of
Antioch; in which orations, they not only praised
the dead, but addressed themselves to them,
which seems to have introduced the custom of

praying to departed saints. Now these orations were usually made before the bodies of the deceased were committed to the ground; which custom has been more or less continued ever since, to this day. The heathens honored those alone, with this part of the funeral solemnity, who were men of probity and justice, renowned for their wisdom and knowledge, or famous for warlike exploits; this, as Cicero informs us, being part of the law for burials, which directs, that the praises only of honorable persons shall be mentioned in the oration. It would be much more proper, if our funeral discourses were not so common, and if the characters given of the deceased were more just; devoid of that fulsome flattery with which they too often abound.

FUNFKIRCHEN, or PETS, a town and bishop's see of Hungary, in Baranga, situated on a hill between the Drave and the Danube. The neighbourhood is particularly fertile in wine; the episcopal library has several rare books and MSS. and Roman antiquities abound in the neighbourhood. This place was in possession of the Turks from 1543 to 1686; and in 1664 it was attacked by an Austrian army, and given up for three days to plunder. A university was founded in 1364, but soon fell into decay. Inhabitants 11,500. 140 miles W. N. W. of Belgrade, and 175 S. S. E. of Vienna.

FUNGI, from σφογγος, fungus. in botany, the fourth order of the twenty-fourth class of vegetables, in the Linnæan system; comprehending all those which are of the mushroom kind. The ancients called fungi children of the earth, to indicate the obscurity of their origin. The moderns have likewise been at a loss in what rank to place them; some referring them to the animal, some to the vegetable, and others to the mineral kingdom. Messrs. Wilck and Münchausen have not scrupled to rank these bodies among animal productions; because, when fragments of them or their seeds were macerated in water, these gentlemen perceived a quantity of animalcules discharged, which they supposed capable of being changed into the same substance. Hedwig has lately shown how ill founded this opinion is with respect to the lichen; and M. Durande has demonstrated its falsity with regard to the corallines. 'Indeed,' says M. Bonnet, speaking of the animality of fungi, 'nothing but the rage for paradox could induce any one to publish such a fable; and I regret that posterity will be able to reproach our times with it. Observation and experiment should enable us to overcome the prejudices of modern philosophy; now, that those of the ancient have disappeared and are forgotten.' It cannot be denied that the mushroom is one of the most perishable of all plants, and it is therefore the most favorable for the generation of insects. Considering the quickness of its growth, it must be furnished with the power of copious absorption: the extremity of its vessels must be more dilated than in other plants. Its root seems, in many cases, to be merely intended for its support; for some species grow upon stones or moveable sand, from which it is impossible they can draw much nourishment. We must therefore suppose, that it is chiefly by the stalk that they absorb. These stalks grow in a moist, and tainted air, in which float multitudes of eggs, so small that the very insects they produce are with difficulty seen by the microscope. Can it be surprising, then, that the corruption of the mushroom should make the water capable of disclosing certain beings that are really foreign to both? It is not more easy to acquiesce in the opinions of those naturalists who place the fungi in the mineral kingdom, because they are found growing on porous stones, thence called lapides fungarii: which, however, must be covered with a little earth, and be watered with tepid water, in order to favor the growth. Such mushrooms are no more the produce of the stone, than the lichen is of the rock to which it adheres, or the moss of the tree on which it is found. We have only to observe the growth of mushrooms, to be convinced, that this happens by development, and not by addition or combination of parts as in minerals. The opinion of Boccone, who attributed them to an unctuous matter performing the function of seed, and acquiring extension by apposition of similar parts; and that of Morison, who conceived that they grew spontaneously out of the earth by a certain mixture of salt and sulphur, joined with oils from the dung of quadrupeds, have now no longer any adherents. Fungi are produced, they live, they grow, by development; they are exposed to those vicissitudes natural to the different peiods of life which characterise living substances; they perish and die. They extract, by the extremity of their vessels, the juices with which they are nourished; they elaborate and assimilate them to their own substance. They are, therefore, organised and living beings, and consequently belong to the vegetable kingdom. But whether they are real plants, or only the production of plants, is still a matter in dispute with the ablest naturalists. These productions were generally attributed to the superfluous humidity of rotten wood, or other putrid substances. The opinion took its rise from observing that they grew most copiously in rainy weather. Such was the opinion of Tragus, of Bauhin, and even of Columna, who, talking of the peziza, says, that its substance was more solid and harder, because it did not originate from rotten wood, but from the pituita of the earth. It is not surprising that, in times when the want of experiment and observation made people believe that insects could be generated by putrefaction, we should find the opinion general, that fungi owed their origin to the putrescence of bodies, or to a viscous humor analogous to putridity. Malpighi could not satisfy himself as to the existence of seeds which other botanists had pretended to discover. He only says, that these plants must have them, or that they perpetuate themselves and shoot by fragments. Micheli, among the moderns, appears to have employed himself most successfully on this subject. He imagined that he not only saw the seeds, but even the stamina, as well as the little transparent bodies destined to favor the dissemination and the fecundation of these seeds. Before this author, Lister thought he perceived seeds in the fungus perosus crassus magnus of John Bauhin: the little round bodies that are

found in the pezizæ and helvellæ, at that time, passed for seeds; which did not appear at all probable to Marsigli, considering that the eye, when assisted with the very best microscopes, could perceive nothing similar in much larger fungi. Indeed these bodies may be the capsules or covers of the seeds, if they are not the seeds themselves. However this may be, Marsigli, observing that fungi were often without roots or branches, and that they wanted flowers and seeds, the means which nature employs for the production of perfect plants, thought himself warranted in doubting whether these beings could be ranked in the number of vegetables. The doubts of Marsigli prompted him to observe the formation of fungi. Their matrix he called situs: he imagined they grew in places where they met with an unctuous matter, composed of an oil mixed with nitrous salt, which, by fermentation, produced heat and moisture, and insinuated itself between the fibres of wood; that is, he imagined them the production of a viscous and putrescent humor. Lancisi, in like manner, considered fungi as owing their existence to the putrefaction of vegetables, and supposed them a disease in the plant; but he imagined, 'that the fibres of the trees were necessary to their production,' as is the case in the formation of galls; he compared them to the warts and other excrescences of the human body. He added, that such fungous vegetable tumors must necessarily assume various forms and figures, from the fluids which distend the tubes and vessels relaxed by putrescence, from the ductility of the fibres and their direction, and from the action of the air. This opinion has been refuted by the celebrated naturalist M. de Jussieu, in the Memoirs of the Academy of Sciences for 1728. He maintains, that the fungi have a great analogy with the lichen, which is allowed to be a vegetable; that, like the lichen, they are divested of stalk, branches, and leaves; that, like it, they grow and are nourished upon the trunks of trees; on pieces of rotten wood, and on all sorts of putrid vegetables; that they resemble the lichen too in the rapidity of their growth, and the facility with which many of them may be dried and restored to their former figure, upon being immersed in water; and, lastly, that there is a great similarity in the manner in which their seeds are produced. He affirms, that only the warts and excrescences which grow on animal bodies, and the knots and other tumors that are to be found on trees, can be compared with one another; for they are composed equally of the solid and liquid substance of the plant or animal on which they grow; whereas, the matter of the fungi is not only quite distinct from that of the plants on which they are found, but often entirely similar to the substance of those that spring immediately from the earth. The organisation, says M. de Jussieu, which distinguishes plants and other productions of nature, is visible in the fungi; and the particular organisation of each species is constant at all times and in all places; a circumstance which could not happen, if there were not an animal re-production of species, and consequently a multiplication and propagation by seed. This is not, he says, an imaginary supposition; for the seeds may be felt like meal upon mushrooms with gills, especially when they begin to decay; they may be seen with a magnifying glass, in those that have gills with black margins; and, lastly, says he, botanists can have no doubt that fungi are a distinct class of plants; because, by comparing the observations made in different countries with the figures and descriptions of such as have been engraven, the same genera and the same species are every where found. Notwithstanding this refutation, by M. de Jussieu, another naturalist, M. de Necker, has lately maintained, in his Mycitologia, that the fungi ought to be excluded from the three kingdoms of nature, and be considered as intermediate beings. He has observed, like Marsigli, the matrix of the fungi: and has substituted the word carchte (initium faciens) instead of situs; imagining that the rudiment of the fungus cannot exist beyond that point in which the development of the filaments or fibrous roots is perceived. He allows, that fungi are nourished and grow like vegetables; but he thinks that they differ very much from them in respect of their origin, structure, nutrition, and rapidity of growth. He says, that the various vessels which compose the organisation of vegetables are not to be found in the fungi, and that they seem entirely composed of cellular substance and bark; so that this simple organisation is nothing more than an aggregation of vessels endowed with a common nature, that suck up the moisture in the manner of a sponge; with this difference, that the moisture is assimilated into a part of the fungus. Lastly, that the fructification, the only essential part of a vegetable, and which distinguishes it from all other organised bodies, being wanting, fungi cannot be considered as plants. This he thinks confirmed, by the constant observation of those people who gather the morelle and the mushroom, and who never find them in the same spots where they had formerly grown. As the generation of fungi, says M. Necker, is always performed when the parenchymatous or cellular substance has changed its nature, form, and function, we must conclude that it is the degeneration of that part which produces these bodies. But, if fungi were owing merely to the degeneration of plants, they would be still better entitled to constitute a new kingdom. They would then be a decomposition, not a new formation or new bodies. Besides, we cannot deny that, in those bodies which form the limit between the animal and vegetable kingdoms, the organisation becomes simple, as the organs destined for nutrition are multiplied: but, as the last in the class of insects belongs to the animal kingdom, fungi ought, notwithstanding the simplicity of their organisation, still to belong to the vegetable kingdom. The parenchymatous or cellular substance, which, as M. Bonnet says, is universally extended, embraces the whole fibrous system, and becomes the principal instrument of growth, must naturally be more abundant in these productions; and this accounts for the rapidity of their enlargement. Besides growth, whether slow or rapid, never was employed to determine the presence or ab-

sence of the vegetable or animal character. The draba verna, which in a few weeks shoots, puts forth its leaves, its flowers, and fruit, is not less a plant than the palm. The insect that exists but for a day, is as much an animal as the elephant that lives for centuries. As to the seeds of the fungi, it is probable that nature meant to withdraw from our eyes the dissemination of these plants, by making the seeds almost imperceptible; and it is likewise probable, that naturalists have seen nothing but their capsules. Since, however, from the imperfection of our senses, we are unable to perceive these seeds, ought we to infer that they do not exist? Are we authorised to conclude this, because we do not find mushrooms where we have found them a year before? Undoubtedly not; for the greater part of plants require a particular soil, and the same mould that this year will foster a rare plant, will next year allow it to perish. Neither are we at liberty to deny the existence of these seeds, because those bodies which have been called their seeds, and the fragments or cuttings of the plants themselves, have not produced others of the same species. Nature seems to have reserved for herself the care of disseminating certain plants. It is in vain, for instance, that the botanist sows the dust found in the capsules of the orchis, which every one allows to be the seed. But, after all, what are those parts in the fungi casually observed by naturalists, and which they have taken for the parts of fructification? These are quite distinct from the other parts; and, whatever may be their use, they cannot have been formed by prolongation of the cellular substance, or of the fibres of the tree on which the fungus grows: they are, therefore, owing, like flower and fruit, to the proper organisation of the plant. These plants, therefore, have a particular existence, independent of their putrefying nidus. The gills of certain fungi, which differ essentially from the rest of the plant in their conformation, would be sufficient to authorise this latter opinion. But can putrefaction create an organic substance? Nature undoubtedly disseminates through the air, and over the surface of the earth, innumerable seeds of fungi, as well as eggs of insects. The plant and the animal are excluded, when the nidus or the temperature is favorable for their development. No fortuitous concourse, either of atoms or fluids, could produce bodies so exquisitely and so regularly organised. It is sufficient to throw one's eyes on the beautiful plates which Schæffer has published of them, and compare them by the glass, with the warts and other excrescences of animals, to be convinced that they have not the same origin. The function of the cellular substance in vegetables must be greatly superior to that in animals, if it could produce any thing but deformities. The greater part of fungi exhibit a configuration much too regular, constant, and uniform, to be the effect of chance or putrefaction. As this form is preserved the same in all places, where fungi have been found, it follows that they contain in themselves the principles of their reproduction. They resemble the misletoe, and other parasitic plants, which are perfectly distinct from the trees on which they grow. The fungi, therefore, are organised and living substances, or true plants.

FUNGIC Acid. The expressed juice of the boletus juglandis, boletus pseudoigniarius, the phallus impudicus, merulius cantharellus, or the peziza nigra, being boiled to coagulate the albumen, then filtered, evaporated to the consistence of an extract, and acted on by pure alcohol, leaves a substance which has been called by Braconnot fungic acid. He dissolved that residue in water, added solution of acetate of lead, whence resulted fungate of lead, which he decomposed at a gentle heat by dilute sulphuric acid. The evolved fungic acid, being saturated with ammonia, yielded a crystallised fungate of ammonia, which he purified by repeated solution and crystallisation. From this salt by acetate of lead, and thereafter sulphuric acid, as above detailed, he procured the pure fungic acid. It is a colorless, uncrystallisable, and deliquescent mass, of a very sour taste. The fungates of potash and soda are uncrystallisable; that of ammonia forms regular six-sided prisms; that of lime is moderately soluble, and is not affected by the air; that of barytes is soluble in fifteen times its weight of water, and crystallises with difficulty; that of magnesia appears in soluble granular crystals. This acid precipitates from the acetate of lead a white flocculent fungate, which is soluble in distilled vinegar. When insulated, it does not affect solution of nitre of silver; but the fungates decompose this salt.

FUN'GUS, *n. s.* } Lat. *fungus*. Strictly a
Fungos'ity, *n. s.* } mushroom. A word used to
Fun'gous, *adj.* } express such excrescences of flesh as grow out upon the lips of wounds, or any other excrescence from trees or plants not naturally belonging to them; as the agaric from the larch-tree, and auriculæ Judæ from elder. Excrescent; spongy; wanting firmness.

Many men, knowing that merry company is the only medicine against melancholy, spend all their days among good fellows in a tavern or ale-house, drinking venenum pro vino, like so many malt-worms, menfishes, water-snakes, or frogs in a puddle, and become mere *funguses* and casks. *Burton.*

The surgeon ought to vary the diet as the fibres lengthen too much, are too fluid, and produce *funguses*, or as they harden and produce callosities. *Arbuthnot on Diet.*

This eminence is composed of little points, or granula, called *fungus*, or proud flesh. *Sharp.*

It is often employed to keep down the *fungous* lips that spread upon the bone; but it is much more painful than the escharotick medicines. *Id. Surgery.*

Fungus. See Surgery.

FU'NICLE, *n. s.* } Fr. *funiculaire*; Lat. *fu-*
Funic'ular, *adj.* } *niculus*. A ligature; a fibre; a small cord.

FUNK, *n. s.* & *v. n.* Sax. ſynıȝ; Goth. *fuin*, *finik*, a stink: Lye says from Flem. *fonck*, perplexity. Dr. Johnson calls it a low word; but it seems to be of academical origin; being commonly used at Oxford for 'a scrape,' or perplexity. Every school boy knows its meaning.

The best part of the veal and the Greek for hunc,
Is the name of a man that makes us *funk*.
Oxford Epigram.

FUN'NEL, *n. s.* Lat. *infundibulum*, whence fundible, fundle, funnel. An inverted hollow

cone with a pipe descending from it, through which liquors are poured into vessels with narrow mouths; a tun dish; a pipe or passage of communication.

If you pour a glut of water upon a bottle, it receives little of it; but with a *funnel*, and by degrees, you shall fill many of them. *Ben Jonson.*

The outward ear or auricula is made hollow, and contracted by degrees, to draw the sound inward, to take in as much as may be of it, as we use a *funnel* to pour liquor into any vessel. *Ray*

Towards the middle are two large *funnels*, bored through the roof of the grotto, to let in light or fresh air. *Addison.*

Some the long *funnel's* curious mouth extend,
Through which ingested meats with ease descend.
Blackmore.

He put some live coals into an insulated *funnel* of metal, and, throwing on them a little water, observed that the ascending stream was electrised plus, and the water which descended through the *funnel* was electrised minus. *Darwin.*

FUNNEL OF A CHIMNEY, the shaft, or smallest part of the waste, where it is gathered into its least dimensions. Palladio directs that the funnels of chimneys be carried throughout the roof four or five feet at least, that they may carry the smoke clear from the house into the air. See CHIMNEY, FIRE-PLACE, &c. He also advises that chamber chimneys be not made narrower than ten or eleven inches, nor broader than fifteen; for if too narrow, the smoke will not be able to make its way; and if too wide the wind will drive it back into the room.

FUNSTERMUNSTER, or FINSTERMINSTER, a town of Switzerland, in Engandina, which the French, under Massena and Lecourbe, took possession of on the 26th of March, 1799, but were soon afterwards dislodged by the Austrians.

FUR, *adv.* Now written far. At a distance.

The white lovely dove
Doth on her wings her utmost swiftness prove,
Finding the gripe of faulcon fierce not *fur*.
Sidney.

FUR, *n. s.* & *v. a.* } Fr. *fourrure*; Barb. Lat.
FUR'RIER, *n. s.* } *furra*, a hairy skin. Skin
FUR'RY, *adj.* } with soft hair, with which
FUR'WROUGHT. } garments are lined for warmth, or covered for ornament: soft hair of beasts found in cold countries; hair in general; any moisture exhaled to such a degree as that the remainder sticks on the part: fur-wrought is made of fur: to line or cover with skins that have soft hair; to cover with soft matter.

The third had a mantell of lusty fresh colour
The utter part of purpill, y*furred* with pelur.
Chaucer. The Merchantes Second Tale.

Through tattered cloaths small vices do appear;
Robes and *furred* gowns hide all. *Shakspeare.*

You are for dreams and slumbers, brother priest;
You *fur* your gloves with reasons. *Id.*

This night, wherein the cubdrawn bear would couch,
The lion and the belly-pinched wolf
Keep their *fur* dry, unbonnetted he runs,
And bids what will take all. *Id. King Lear.*

O foolishness of men! that lend their ears
To those budge Doctors of the stoic *fur*,
And fetch their precepts from the Cynic tub,
Praising the lean and sallow abstinence.
Milton's Comus.

How mad a sight it was to see Dametas, like rich tissue *furred* with lambskins! *Sidney.*

Methinks I am not right in every part;
I feel a kind of trembling at my heart:
My pulse unequal, and my breath is strong;
Besides a filthy *fur* upon my tongue. *Dryden.*

Stretch out thy lazy limbs, awake, awake,
And Winter from thy *furry* mantle shake. *Id.*

Not armed with horns of arbitrary might,
Or claws to seize their *furry* spoils in fight. *Id.*

Three sisters, mourning for their brother's loss,
Their bodies hid in bark, and *furred* with moss. *Id.*

'Tis but dressing up a bird of prey in his cap and *furs* to make a judge of him. *L'Estrange.*

Such animals as feed upon flesh qualify it, the one by swallowing the hair or *fur* of the beasts they prey upon, the other by devouring some part of the feathers of the birds they gorge themselves with.
Ray on the Creation.

Their frying blood compels to irrigate
Their dry *furred* tongues. *Philips.*

A dungeon wide and horrible; the walls
On all sides *furred* with mouldy damps, and hung
With clots of ropy gore. *Addison.*

Silent along the mazy margin stray,
And with the *fur-wrought* fly delude the prey.
Gay's Pastorals.

From Volga's banks the' imperious Czar
Leads forth his *furry* troops to war. *Felton.*

And lordly gout wrapt up in *fur*,
And wheezing asthma, loth to stir. *Swift.*

He had a bed of *furs*, and a pelisse,
For Haidee stripped her sables off to make
His couch. *Byron. Don Juan.*

FUR, or FURR, in commerce, signifies the skins of wild beasts, dressed in alum with the hair on, and used as a part of dress by princes, magistrates, and others. The kinds most in use are those of the ermine, sable, castor, hare, coney, &c. It was not till the later ages that the furs of beasts became an article of luxury. The refined nations of antiquity never made use of them; those alone who were stigmatised as barbarians were clothed in the skins of animals. Strabo describes the Indians covered with the skins of lions, panthers, and bears; and Seneca the Scythians clothed with the skins of foxes and the smaller quadrupeds. Virgil exhibits a picture of the savage Hyperboreans, similar to that which might be witnessed in the clothing of the wild Americans. Most part of Europe was then in similar circumstances. Cæsar was, perhaps, as much amazed with the skin-dressed heroes of Britain, as our celebrated Cook was at those of his new discovered regions. What time has done to us, it may also effect for them; and, it is to be hoped, with much less bloodshed. Civilisation may take place; and those spoils of animals, which are at present essential for their clothing, become merely objects of ornament and luxury. It does not appear that the Greeks or ancient Romans ever made use of furs. It originated in those regions where they most abounded, and where the severity of the climate required that species of clothing. At first, it consisted of the skins only, almost in the state in which they were torn from the body of the beast; but, as soon as civilisation took place, and manufactures were introduced, furs became the lining of the dress, and often the elegant facing of the robes. It is probable that

the northern conquerors introduced the fashion into Europe. We find that, about A. D. 522, when Totila, king of the Visigoths, reigned in Italy, the Suethons, or natives of Sweden, found means, by help of the commerce of numberless intervening people, to transmit, for the use of the Romans, saphilinas pelles, the skins of the sables. As luxury advanced, furs of the most valuable kinds were used by princes as linings for their tents. Marco Polo, in 1252, found those of the cham of Tartary lined with ermines and sables. He calls the last zibelines and zambolines. He says that those and other precious furs were brought from countries far north; from the land of darkness, and regions almost inaccessible by reason of morasses and ice. The Welsh set a high value on furs, as early as the time of Howel Ddha, who reigned about 940. In the next age, furs became the fashionable magnificence of Europe. When Godfrey of Boulogne, and his followers, appeared before the emperor Alexius Comnenus, on their way to the Holy Land, he was struck with the richness of their dresses, tam ex ostro quam aurifrigio et niveo opere harmelino et ex mardrino grisioque et vario. How different was the advance of luxury in France, from the time of their great monarch Charlemagne, who contented himself with the plain fur of the otter! King Henry I. wore furs; yet, in his dress, was obliged to change them for warm Welsh flannel. But, in 1337, luxury had obtained to such a degree, that Edward III. enacted, that all persons who could not spend £100 a-year, should be prohibited the use of this kind of finery. These, from their great expense, must have been foreign furs, obtained from the Italian commercial states, whose traffic was at this period boundless. How strange is the revolution in the fur-trade! The north of Asia at that time supplied us with every valuable kind; at present, we send, by means of the possession of Hudson's Bay, furs to an immense amount, to Turkey, and even to China.

FURA'CIOUS, *adj.* } Lat. *furax*. Thie-
FURA'CITY, *n. s.* } vishness; disposition to steal.

FUR'BELOW, *n. s.* & *v. a.* Fr. *falbala*; Span. *farfala*; Goth. *farfalla*, the fold of a garment. A piece of stuff plaited and puckered together, either below or above, on the petticoats or gowns of women. This, like a great many other words, is the child of mere caprice. To adorn with ornamental appendages of dress.

A ball is a great help to discourse, and a birthday furnishes conversation for a twelvemonth after. A *furbelow* of precious stones, a hat buttoned with a diamond, a brocade waistcoat or petticoat, are standing topics. *Addison.*

She was flounced and *furbelowed*; every ribbon was crinkled, and every part of her garments in curl. *Id.*

When arguments too fiercely glare,
You calm them with a mllder air;
To break their points, you turn their force,
And *furbelow* the plain discourse. *Prior.*

Nay, oft in dreams invention we bestow
To change a flounce, or add a *furbelow*. *Pope.*

FUR'BISH, *v. a.* } Fr. *fourbir*, to burnish;
FUR'BISHER, *n. s.* } to polish; to rub to brightness.

Furbish the spears, and put on the brigandines. *Jer.* xlvi. 4.

It may enter Mowbray's waxen coat,
And *furbish* new the name of John o'Gaunt. *Shakspeare. Richard II.*

As after Numa's peaceful reign,
The martial Ancus did the sceptre wield;
Furbished the rusty sword again,
Resumed the long-forgotten shie.d,
And led the Latins to the dusty field. *Dryden.*

Some others who *furbish* up and reprint his old errours, hold that the sufferings of the damned are not to be, in a strict sense, eternal; but that, after a certain period of time, there shall be a general gaol-delivery of the souls in prison, and that not a farther execution, but a final release. *South.*

FURCA, so called from its resembling a fork, a remarkable mountain in the central part of the Alps, Switzerland, in the north-east corner of the canton of Valais. It is 14,000 feet above the level of the sea, a road passing between its two divisions.

FURCA, in antiquity, a piece of timber resembling a fork, used by the Romans as an instrument of punishment. The punishment of the furca was of three kinds; the first only ignominious, when a master, for small offences, forced a servant to carry a furca on his shoulders about the city. The second was painful, when the party was led about the circus or other place, with the furca about his neck, and whipped all the way. The third was capital, when the malefactor, having his head fastened on the furca, was whipped to death.

FURCA'TION, *n. s.* Lat. *furca*. Forkiness; the state of shooting two ways like the blades of a fork.

When stags grow old they grow less branched, and first lose their brow-antlers, or lowest *furcations* next the head. *Browne.*

FURETIERE (Antony), a learned French lawyer, born at Paris in 1620. He was eminent in the civil and canon law, and an advocate in the parliament. Afterwards, taking orders, he became abbot of Chalivoy, and prior of Chuines. He wrote many works, but is chiefly valued for his Universal Dictionary of the French Tongue, in which he explains the terms of art in all sciences, and which was published after his death. He died in 1688

FU'RFUR, *n. s.* Lat. Husk or chaff, scurf or dandruff, that grows upon the skin, with some likeness to bran.

FURFURA'CEOUS, *adj.* Lat. *furfuraceus*. Husky; branny; scaly.

FURIA, in zoology, a genus of insects belonging to the order of vermes zoophyta. There is but one species, viz. the F. infernalis. It has a linear smooth body, ciliated on each side, with reflexed feelers pressed to its body. In Finland, Bothnia, and the northern provinces of Sweden, people were often seized with a pungent pain, confined to a point, in the hand, or other exposed part of the body, which presently increased to a most excruciating degree, and sometimes proved suddenly fatal. This disorder was particularly observed in Finland, especially about boggy and marshy places, and always in

autumn. At length it was discovered, that this pain instantly succeeded somewhat that dropped out of the air, and in a moment penetrated and buried itself in the flesh. The Finlanders had tried a variety of applications to no purpose, until, at length, a poultice of curds or cheese was found the most effectual in easing the pain; and the event confirmed that the insect was allured by this application to leave the flesh; as, on its removal, this worm, no longer than the sixth of an inch, was found in it, and thus the cause of this painful disease explained. Linnæus tells us that he himself once experienced the effects of this animal, near the city of Lund, in Sweden. Dr. Solander once gave a slight description of this worm; but, from the difficulty of obtaining recent specimens, its nature is still obscure; and even its very existence has been occasionally doubted, particularly by Blumenbach and Muller. There seems, however, to be no good reason for questioning the existence of some such animal, though the accounts of its extraordinary qualities may have been exaggerated. The best account of it is in a quarto pamphlet, published by a Dr. Hagen, as an academical thesis: in which all the observations relative to it are summed up in a concise manner, and its real existence seemingly well ascertained. It is said to be generally about three-quarters of an inch long.

FURIÆ, Furies, in Pagan mythology, goddesses, whose office it was to punish the guilty after death. They sprang from the blood of the wound which Cœlus received from his son Saturn. Some make them daughters of Acheron and Night, or Pluto and Proserpine. According to the more received opinions, they were three in number, Tisiphone, Megæra, and Alecto, to which some add Nemesis. Plutarch mentions only one called Adrasta, daughter of Jupiter and Necessity. They were supposed to be the ministers of the vengeance of the gods; stern and inexorable; always employed in punishing the guilty upon earth, as well as in the infernal regions. They were also called Eumenides and Erinnydes. The Athenians styled them σεμναι θεαι, venerable goddesses. Their worship was almost universal; and people dared not to mention their names, or fix their eyes upon their temples. They were honored with sacrifices and libations; and in Achaia they had a temple, which, when entered by any one guilty of a crime, suddenly rendered him furious, and deprived him of the use of his reason. In the sacrifices, the votaries used branches of cedar and of alder, hawthorn, saffron, and juniper; and the victims were generally turtle doves and sheep, with libations of wine and honey. They were usually represented with a grim and frightful aspect, with a black and bloody garment, and with serpents wreathing round their heads instead of hair. They held a burning torch in one hand, to discover the guilty, and iron chains and whips of scorpions in the other, to punish them, and were always attended by Terror, Rage, Paleness, and Death. In hell they were seated around Pluto's throne, as the ministers of his vengeance. They were worshipped at Casina in Arcadia, and at Carmia in Peloponnesus. They had a temple at Athens, near the Areopagus, and their priests were chosen from amongst the judges of that court. At Telphusia, a city in Arcadia, a black ewe was sacrificed to them. On medals they are mostly represented as in the annexed diagram: the middle one bearing a torch in both hands; that on the right, a serpent in one hand, and a key in the other; that on the left, a scourge in one hand, and a dagger in the other.

FURL, *v. a.* Fr. *fresler*. To draw up; to contract.

When fortune sends a stormy wind,
Then show a brave and present mind;
And when with too indulgent gales
She swells too much, then *furl* thy sails.
Creech.

FURLING, in the sea language, signifies the wrapping up and binding any sail close to the yard; which is done by hauling upon the clew-lines, bunt-lines, &c., which wraps the sail close together, and, being bound fast to the yard, the sail is furled.

FU'RLONG, *n. s.* Sax. furlang. A measure of length; the eighth part of a mile.

If a man stand in the middle of a field and speak aloud, he shall be heard a *furlong* in round, and that in articulate sounds. *Bacon.*

Coming within a few *furlongs* of the temple, they passed through a very thick grove. *Addison.*

FU'RLOUGH, *n. s.* Belg. *verloef*. A temporary dismission from military service; a license given to a soldier to be absent.

Brutus and Cato might discharge their souls,
And give them *furlo's* for another world;
But we, like sentries, are obliged to stand
In starless nights, and wait the appointed hour.
Dryden.

FUR'MENTY, *n. s.* More properly frumenty or frumety, of Latin *frumentum*. Food made by boiling wheat in milk.

Remember, wife, therefore, though I do it not,
The seed-cake, the pasties, and *furmenty* pot.
Tusser.

FURNACE, *n. s.* & *v. a.* Sax. fyrnhuf; Lat. *furnus*. (Probably a compound in the Saxon o fire and house). An enclosed place where fire is heated intensely for the purpose of fusing or hardening substances. The verb is low and obsolete, occurring only in Shakspeare, and but once.

The fining pot is for silver and the *furnace* for gold. *Proverbs.*

Whoso falleth not down and worshippeth, shall the same hour be cast into the midst of a burning fiery *furnace*. *Daniel.*

This proude king let make a statue of gold,
Sixty cubites long, and seven in brede,
To which image, both yonge and old
Commanded he to loute, and have in drede,
Or, in a *fourneis* full of flames rede
He shuld be brent that wolde not obeye.
Chaucer. The Monkes Tale.

He *furnaces*
The thick sighs from him.
Shakspeare. Cymbeline.

Heat not a *furnace* for your foe so hot
That it may singe yourself. *Id. Henry VIII.*

We have also *furnaces* of great diversities, that keep great diversity of heats. *Bacon.*

The kings of Spain have erected divers *furnaces* and forges, for the trying and fining of their gold. *Abbot.*

A dungeon horrible, on all sides round,
As one great *furnace*, flamed. *Milton.*

FURNACES, in chemistry, are instruments of most universal use; and, as the success of a great number of experiments depends upon their being well or ill constructed, it is of great importance that a laboratory be well provided in this respect. In all furnaces the principal things to be attended to, are, to confine the heat as much as possible to the matter to be operated upon; and to produce as much heat with as little fuel as possible. To answer the first intention, the fire is usually confined in a chamber or cavity built on purpose for it, and furnished with a door for putting in the fuel, and a grate for supporting it, and allowing air to pass through, as well as the ashes to drop down into a cavity provided on purpose, and called the ash-pit. Thus the heat, produced by the inflamed fuel, is confined by the sides of the furnace, and obliged to spend great part of its force upon the subject enclosed. The second intention, which is the most important, is at the same time the most difficult to answer, and depends entirely upon the proportion between the spaces betwixt the furnace bars and the wideness and height of the chimney. This will appear from a consideration of the principles on which the degrees of inflammation are produced. These depend entirely on the current of air which passes through the inflamed fuel. As soon as the fuel is set on fire, a certain degree of heat is produced; but, unless a constant influx of air is admitted through the burning fuel, the fire is instantly extinguished; nor is it possible by any means to renew the inflammation until we admit a stream of fresh air amongst the fuel. When this is done, a rarefaction commences in the air of the fire-place of the furnace; so that it is no longer a counterpoise to the external air, and is, therefore, driven up the chimney by that which enters at the ash-pit. This again, passing through the fuel, is rarefied in its turn; and, giving place to fresh quantities, there is a constant flow of air up the chimney. In proportion to the rarefaction of the air in the fire-place, the greater is the heat. But, by a certain construction of the furnace, the under part of the chimney will become almost as strongly heated as the fire-place; by which means, though a very strong current of air is forced through the fuel, yet as great part of the heat is spent on the chimney, where it can be of no use, the fuel is wasted in a very considerable degree. To avoid this, we have no other method than to contract the throat of the chimney occasionally by a sliding plate; which, when put quite in, shuts up the whole vent; and, by being drawn out more or less, leaves a larger or smaller vent at pleasure. This plate ought to be quite drawn out till the fuel is thoroughly kindled, and the furnace well heated, so that a current of air may flow strongly through the fuel. After this, the plate is to be put in a certain length, so as just to prevent the smoke from coming out at the door of the furnace. The rarefaction of the air in the fire-place will elicit a very considerable draught of air, which will keep the fuel inflamed to a great degree; at the same time that the heat, being reflected from every part of the furnace excepting that narrow passage where the smoke goes up, becomes very intense. A large quantity of fuel may be put in at once, which will consume slowly, and thus require but little attention, in comparison with those furnaces where no such precaution is used. This sliding plate may be made of cast iron in those furnaces where no great heat is excited; but in others fire-clay will be more convenient. The contrivance, however, is scarcely applicable to those furnaces where great quantities of metal are to be melted; and, accordingly, the waste of fuel there is immense. It is computed that the iron-works of Carron, in Stirlingshire, consume annually as many coals as would be sufficient for a city containing 700,000 inhabitants. In order to regulate the heat, says Dr. Black, it is necessary to have the command of the furnace below; the parts above being frequently filled with small quantities of soot. The best method of managing this is to shut up the door of the ash-hole perfectly close, and to have a set of round holes, bearing a certain proportion to one another; and their areas being as 1, 2, 4, 8, 16, &c. Seven or eight of these ought to be made in the door of the ash-pit, which will give a sufficient command over the fire. When the fire is to be increased to the utmost, all the passages both above and below are to be thrown open, and the height of the vent augmented; which, by increasing the height of the column of rarefied air, increases also the motion of that through the fuel, and of consequence also the heat of the furnace. Macquer recommends another tube applied to the ash-pit, widest at the end farthest from the furnace, and tapering gradually towards it. The intention of this is to augment the current and velocity of the air, by its being made to pass from a wider into a narrower vent; but, though this is no doubt true, the air will not ultimately move with greater velocity than if the tube were not there. It can only be useful, therefore, in cases where the furnace is placed in a small room, and the tube itself has a communication with the external air. See CHEMISTRY and LABORATORY.

FURNEAUX (Philip), D. D., an able nonconformist divine of the eighteenth century, was born in 1726, at Totnes in Devonshire. Being designed for the ministry, he was sent to London for his academical studies; and, on becoming a preacher, was chosen assistant to Mr. Henry Read, pastor of a presbyterian congregation in St. Thomas's, Southwark. He afterwards became one of the Sunday evening lecturers at Salters' Hall. In 1753 he succeeded the Rev. Moses Lowman, as pastor of the congregation of Clapham. Dr. Furneaux continued a popular preacher for upwards of twenty-three years, but was attacked, in 1777, by a malady which ended in mental derangement, from which he never recovered. He died in 1783. His principal works are—Letters to the honorable Mr. Justice Blackstone, concerning his Exposition of the Act of

ion, and some Positions relating to Reli- ..iberty, in his celebrated Commentaries Laws of England; and Essays on Tole- 8vo., 1788.

NEAUX, an island of the South Pacific first discovered by Bougainville, and af- ..ls by captain Cook. It is surrounded by bank, and produces cocoa-nut trees. A agoon of sea water occupies the interior. 143° 10′ W., lat. 17° 11′ S.

NEAUX ISLANDS is a cluster of islands, ..known number, in Bass Strait, be- Van Diemen's Land and New Holland. ..rincipal are—Great Island, upwards of miles in length, Cape Barren Island, ..'s, and Preservation Island. The lower of them are sandy and swampy; but the of most of them is a white granite. All are ..n with brushwood, and have a few stunted which never exceed the height of twelve Vegetables in general are scanty; and, as soil itself were unfit for vegetation, in a n spot of Preservation Island the trees have ..rgone a petrifaction towards the roots. species of seals are found here, and invite emporary abode of those engaged in the ..y, otherwise these islands are uninhabited. are also the kangaroo, wombat, duck-billed ..ater, and snakes of different species with mous fangs. The sheer water, or sooty pe- , appears in innumerable flocks, and burrows ..e ground. As well as the navigation being very difficult, the water is bad. Furneaux ..ds were first visited by Bass and Flinders, in 3.

URNES, a town of West Flanders, near the on a canal which extends from Bruges to ..kirk. It is a neat town, and has an ..ant town-house. It was taken by the French May 1793, and soon after evacuated; but ..i again taken by general Pichegru in May 4. The air, once unhealthy on account of neighbourhood of marshes, is much improved ..e they were drained. It has a brisk trade in n, hops, butter, and cheese. Population 3200. teen miles south-west of Ostend, and twenty N. W. of Ypres.

FUR'NISH, *v. a.* } Fr. *fournir*; It. *fournir*.
FUR'NISHER, *n. s.* } To supply with what is
FUR'NITURE, *n. s.* } necessary to a certain pur- se. Furniture is generally that which is sup- ed; but now the specific term for goods in a use whether for use or ornament; a furnisher the agent who grants or procures supplies.

Upon a day as on their way they went,
It chaunst some *furniture* about her steed
To be disordered by some accident.
Spenser. Faerie Qeeene.

Young Clarion, with vauntful lustyhed,
After his guise did cast abroad to fare,
And thereto 'gan his *furnitures* prepare.
Spenser.

The duke is coming: see the barge be ready,
nd fit it with such *furniture* as suits
he greatness of his person.
Shakspeare. Henry VIII.

She hath directed
How I shall take her from her father's house;
What gold and jewels she is *furnished* with.
Shakspeare.

His training such,
That he may *furnish* and instruct great teachers,
And never seek for aid out of himself. *Id.*

Will your lordship lend me a thousand pounds to *furnish* me? *Id. Henry IV.*

Something deeper,
Whereof perchance these are but *furnishings*.
Shakspeare.

Plato entertained some of his friends at dinner, and had in the chamber a bed or couch, neatly and costly *furnished*. Diogenes came in, and got up upon the bed, and trampled it, saying, I trample upon the pride of Plato. Plato mildly answered, but with greater pride, Diogenes. *Bacon's Apophthegms.*

First thou madest the great house of the world, and *furnishedst* it: then thou broughtest in thy tenant to possess it. *Bp. Hall.*

By a general conflagration mankind shall be destroyed, with the form and all the *furniture* of the earth. *Tillotson.*

The ground must be of a mixt brown, and large enough, or the horse's *furniture* must be of very sensible colours. *Dryden.*

I shall not need to heap up instances; every one's reading and conversation will sufficiently *furnish* him, if he wants to be better stored. *Locke.*

The wounded arm would *furnish* all their rooms,
And bleed for ever scarlet in the looms. *Halifax.*

No man can transport his large retinue, his sumptuous fare, and his rich *furniture* into another world. *South.*

It is not the state, but a compact among private persons that hath *furnished* out these several remittances. *Addison.*

Doubtless the man Jesus Christ is *furnished* with superior powers to all the angels in heaven, because he is employed in superior work. *Watts.*

Here wealth had done its utmost to encumber
With *furniture* an exquisite apartment,
Which puzzled nature much to know what art meant.
Byron. Don Juan.

'Tis said that persons living on annuities
Are longer lived than others,
So true it is,
That some I really think, do never die;
Of any creditors the worst a Jew is,
And that's their mode of *furnishing* supply;
In my young days they lent me cash that way,
Which I found very troublesome to pay. *Id.*

FURROW, *n. s.* & *v. a.* Sax. ꝼuꝛh, ꝼyꝛꝛan; Dan. *furc*; Belg. *voore*. Any long trench or hollow; particularly a small trench made by the plough for the reception of seed. The verb signifies to cut in furrows; to divide in long hollows; to make by cutting.

But eft when ye count you freed from feare,
Comes the breme Winter with chamfred browes,
Full of wrinkles and frosty *furrowes*,
Drerily shooting his stormie darte,
Which curdles the bloud and pricks the harte.
Spenser. The Shepheard's Calendar.

With greedy force each other doth assayle,
And strike so fiercely that they do impresse
Depe dinted *furrowes* in the battred mayle.
Id. Faerie Queene.

There go the ships that *furrow* out their way;
Yea, there of whales enormous sights we see.
Wotton.

While the ploughman near at hand,
Whistles o'er the *furrowed* land. *Milton.*

Two such I saw, what time the labored ox,
In his loose traces from the *furrow* came,
And the swinkt hedger at his supper sat.
Id. Comus.

The billows fail, while Neptune lays his mace
On the rough sea, and smooths its *furrowed* face.
Dryden.

Then ploughs for seed the fruitfu *furrows* broke,
And oxen laboured first beneath the yoke. *Id.*

My lord it is, though time has ploughed that face
With many *furrows* since I saw it first;
Yet I'm too well acquainted with the ground quite to forget it. *Dryden and Lee's Oedipus.*

Oft did the harvest to their sickle yield;
Their *furrow* oft the stubborn glebe has broke;
How jocund did they drive their teams afield!
How bowed the woods beneath their sturdy stroke.
Gray's Elegy.

FURROW-WEED, *n. s.* Furrow and weed. A weed that grows in furrowed land.

Crowned with rank fumiter, and *furrow-weeds*.
Shakspeare.

FURRUCKABAD, a district of the province of Agra, Hindostan, between the rivers Ganges and Jumna, or between the twenty-seventh and twenty-eighth degrees of northern latitude. It formerly belonged to Canouge; but, in the early part of the last century, was assigned to an Afghan chief named Mohammed Khan Bungush, whose descendants became independent, and were frequently engaged in war with the nabobs of Oude; but at length became tributary to that power. The British, in the year 1801, took the nabob of Furruckabad under their protection; when the state of the country was found very wretched. He shortly after agreed to make it over, with all the civil and military jurisdiction, for an annual pension of 180,000 rupees. Since that period it has improved; and is managed by a judge, collector, &c., subject to the circuit court of Bareilly.

FURRUCKABAD, a fortified town of Hindostan, capital of the above district, is situated about a mile from the western bank of the Ganges, and contains a small citadel and the former palace of the nabob. To preserve his dignity, the British authorities reside in the suburbs. It carries on an advantageous trade with Cashmeer. The inhabitants are Hindoos and Mahommedans in nearly equal proportions. They are said to be handsome and brave, but not of very exemplary character. Under the walls of this place lord Lake, in 1804, after several days' pursuit, came up with and totally defeated the Mahratta chief Holkar.

FURSTENBERG, or FURSTENBURG, a late principality of Suabia, which was partitioned among different powers by the treaty of the Confederation of the Rhine. It was erected in the thirteenth century, and divided into several branches: the brothers and other children were called landgraves. The estate gave six voices in the assemblies of the circle, and a seat on the bench of princes at the diet of the empire. It now chiefly belongs to Baden. The whole contains about 860 square miles, and 83,000 inhabitants. It is in general a mountainous and woody district; but has good pastures. Here are also mines of iron and copper: the chief manufactures are straw hats, and time-pieces in wood, brass, or iron. The inhabitants are chiefly Catholics. A branch, of the old family of Furstenberg, we believe the Stuklingen, has its residence at Donau Eschingen. The town of Furstenberg is an insignificant place, fourteen miles N. N. W. of Schaffhausen, and remarkable for nothing but a ruined castle, the original seat of this family.

FURSTENBERG is also the name of other towns of Germany, viz. 1. In Lusatia on the Oder, taken by the Prussians in 1745, thirteen miles south of Frankfort; 2. One in the duchy of Mecklenburg, on the Havel, ten miles south-east of Strelitz, containing about 1800 inhabitants; 3. Another in the county of Waldeck, ten miles west of Waldeck.

FURSTENWALD, a well built town of the Middle Mark of Brandenburgh, on the Spree. It has manufactures of woollen stuffs; and is a place of some antiquity, having been taken in 1631 by the Swedes. In 1633 it was burned by the imperialists. Population 2350. Twenty-six miles east of Berlin, and twenty west of Frankfort on the Oder.

FURTADO (Abraham), a modern French Jew of some celebrity, was born in 1759, and became one of the leading members of the Parisian Sanhedrim convoked by Buonaparte. He is said to have possessed considerable eloquence, and was the author of a Poetical Version of the Book of Job; Political Harmonics, 4 vols.; a Translation of Lucretius, &c.

FURTH, a considerable manufacturing town of Franconia, subject to Bavaria, four miles west of Nuremberg. It is situated near the junction of the Rednitz and Pegnitz. It is entirely indebted for its increase to the liberality of its civil management. Artisans who are unable to obtain admission at Nuremberg settle without difficulty here: glass of all kinds, but in particular large mirrors, are made. There is also a number of watch-makers, gold-beaters, joiners, saddlers, stocking-weavers, &c.; and the total population amounts to nearly 13,000; of which the Jews form 2700: they have a separate spiritual and temporal jurisdiction; their judge being a rabbi, from whom there is an appeal to the other magistrates.

FURTHER, *adj.* & *adv.* } From forth, not
FUR'THERMORE, *adv.* } from far, as is com-
FUR'THEST, *adj.* } monly imagined; forth, further, furthest, corrupted from forther, forthest; Sax. ꝑonðeꝛ. Forther is used by Sir Thomas More. See FORTH and FARTHER. It signifies at a greater distance; beyond this: and it has, in some sort, the force of a substantive in the phrase no further for nothing further.

And the angel of the Lord went *further*, and stood in a narrow place. *Numb.* xxii. 2.

Than *furthermore* I went as I wos lad:
And there I sawe withouten any faile
A chaice yset with ful riche aparaile.
Chaucer. The Assemblie of Ladies.

And, *furthermore*, understond wel, that thise Conquerours or tyrantes maker, ful oft thralles Of hem that ben borne of as royal blood as ben They that hem conqueren. *Id. The Persones Tale.*

Upon that famous river's *further* shore,
There stood a snowie swan of heavenly hiew
And gentle kinde, as ever fowle afore
A fairer one in all the goodly criew:
Of white Strimonian brood might no man view.

re he most sweetly sung the prophecie
his owne death in doleful elegie.
Spenser. The Ruines of Time.

y bring them wines of Greece and Araby,
laintie spices fetch from *furthest* Ynd.
Id. Faerie Queene.

s ring I do accept most thankfully,
o, I pray you tell him: *furthermore*,
you, shew my youth old Shylock's house.
Shakspeare.

an had journied on, pensive and slow:
urther way found none, so thick entwined,
e continued brake, the undergrowth
rubs and tangling bushes had perplexed
ath of man or beast that passed that way.
Milton.

eir earnest eyes they fixed, imagining
ne forbidden tree a multitude
risen to work them *further* woe or shame. *Id.*

I may meet
wandering spirit, from him to draw
further would be learned. *Id.*

Let this appease
doubt, since human reach no *further* knows. *Id.*

n is never at a stay; if we do not retreat from it,
all advance in it; and the *further* on we go, the
we have to come back. *Barrow.*

I am commanded to inform you that
our *further* trial is postponed.
Byron. The Two Foscari.

FU'RTHER, *v. a.* FU'RTHERANCE, *n. s.* FU'RTHERER, *n. s.* From the adverb; Sax. ꝑoꝛðꝑian. To put onward; to forward; to note; to countenance; to assist; to help.

It were, quod he, to thee no gret honour
or to be false, ne for to be traytour
o me that am thy cosin and thy brother
swome ful depe, and eche of us to other,
hat never (for to dien in the peine!)
il that the deth departen shal us tweine,
'eyther of us in love to hindre other,
ut that thou shouldest trewely *forther* me
n every cas, as I shuld *forther* thee.
Chaucer. The Knightes Tale.

his gracelesse man, for *furtherance* of his guile
court the handmayd of my lady deare,
o, glad t'embosome his affection vile,
all she might more pleasing to appeare.
Spenser. Faerie Queene.

hat earnest favourer and *furtherer* of God's true
gion, that faithful servitor to his prince and
ntry. *Ascham.*

Things thus set in order, in quiet and rest,
Shall *further* thy harvest, and pleasure thee best.
Tusser.

Could their fond superstition have *furthered* so great
empts, without the mixture of a true persuasion con-
ning the irresistible force of divine power.
Hooker.

Our diligence must search out all helps and *further-*
ces of direction, which scriptures, councils, fathers,
stories, the laws and practices of all churches afford.
Id.

Cannot my body, nor blood-sacrifice,
Intreat you to your wonted *furtherance?*
Shakspeare. Henry VI.

If men were minded to live righteously, to believe
God would be no hindrance or prejudice to any such
design, but very much for the advancement and *fur-*
therance of it. *Tillotson.*

FU'RTIVE, *adj.* Fr. *furtive*; Lat. *furtivus.* Stolen; gotten by theft.

Or do they, as your schemes, I think, have shown,
Dart *furtive* beams and glory not their own,
All servants to that source of light, the sun? *Prior.*

FU'RUNCLE, *n. s.* Fr. *furoncle*; Lat. *furunculus.* A bile; an angry pustule.

A *furuncle* is in its beginning round, hard, and inflamed; and, as it increaseth, it riseth up with an acute head, and sometimes a pustule; and then it is more inflamed and painful, when it arrives at its state, which is about the eighth or ninth day. *Wiseman.*

FU'RY, *n. s.* FU'RIOUS, *adj.* FU'RIOUSLY, *adv.* FU'RIOUSNESS, *n. s.* Fr. *fureur*; Lat. *furor.* Madness; rage; passion of anger; tumult of mind, approaching to madness: enthusiasm; exaltation of fancy: also, from Lat. *furia*, one of the deities of vengeance, and thence a stormy, turbulent, violent, raging woman.

But at the feste redy ben, rivis,
The *Furis* three, with all her mortale bronde.
Chaucer. Legende of Good Women.

Much was Cambello daunted with his blowes;
So thicke they fell, and forcibly were sent,
That he was first from daunger of the throwers
Backe to retire, and somewhat to relent,
Till th' heat of his fierce *fury* he had spent.
Spenser. Faerie Queene.

A mighty speare eftsoones at him he bent;
Who, seeing him come on so *furiously*,
Met him mid-way with equall hardiment,
That forcibly to ground they both together went.
Id.

Which when his brother saw, fraught with great grief
And wrath, he to him leapt *furiously*. *Id.*

Taking up the lute, her wit began to be with a divine *fury* inspired; and her voice would, in so beloved an occasion, second her wit. *Sidney.*

No man did ever think the hurtful actions of *furious* men and innocents to be punishable. *Hooker.*

A sybil, that had numbered in the world
The sun to course two hundred compasses,
In her prophetick *fury* sewed the work.
Shakspeare.

To be *furious*,
Is to be frighted out of fear; and in that mood
The dove will peck the estridge. *Id.*

The sight of any of the house of York
Is as a *fury* to torment my soul. *Id.*

I do oppose my patience to his *fury*; and am armed
To suffer with a quietness of spirit
The very tyranny and rage of his. *Id.*

Who can be wise, amazed, temperate, and *furious*,
Loyal and neutral in a moment? No man.
Id. Macbeth.

With clamour thence the rapid currents drive
Towards the retreating sea their *furious* tide.
Milton.

They observe countenance to attend the practice; and this carries them on *furiously* to that which of themselves they are inclined. *South.*

She heard not half, so *furiously* she flies;
Fear gave her wings. *Dryden.*

It was the most proper place for a *fury* to make her exit; and I believe every reader's imagination is pleased, when he sees the angry goddess thus sinking in a tempest, and plunging herself into hell, amidst such a scene of horror and confusion.
Addison on Italy.

Prone on their routed rear the cranes descend;
Their bills bite *furious*, and their talons rend.
Beattie.

FURZ, *n. s.* } Sax. ꝼꞃꞅ, Lat. *genista spino-*
FURZY, *adj.* } *sa.* Gorse; goss; overgrown with gorse. The whole plant is very thorny; the flowers, which are of the pea-bloom kind, are disposed in short thick spikes, which are succeeded by short compressed pods, in each of which are contained three or four kidney-shaped seeds.—Miller.

We may know,
And when to reap the grain, and when to sow,
Or when to sell the *furzes*. *Dryden's Virgil.*

Wide through the *furzy* field their rout they take,
Their bleeding bosoms force the thorny brake. *Gay.*

FUSAROLE, in architecture, a moulding or ornament placed immediately under the echinus, in the Doric, Ionic, and Composite capitals.

FUSE, *v. a.*, *v. n.*, & *n. s.* }
FU'SIBLE, *adj.* }
FUSIBIL'ITY, *n. s.* }
FU'SIL, *adj.* }
FU'SION, *n. s.* }
Lat. *fundo, fusum, fusio.* To melt; to put into fusion; to liquefy by heat: capable of being melted; of being made liquid by heat; capacity of being melted: liquefiable; running by the force of heat. The substantive is the name of that part of a bomb, or grenado-shell, which makes the whole powder, or composition, in the shell take fire. It is usually a wooden pipe, or tap, filled with wildfire, or some such matter; and is intended to burn no longer than is the time of the motion of the bomb from the mouth of the mortar to the place where it is to fall, which time Anderson makes twenty-seven seconds.—Harris. Fusion is the act of melting, or the state of being melted, or running with heat.

Yet forgate I to make rehersaile
Gf waters corrosif, and of limaile;
And of bodies molification,
And also of hir induration;
Oils, ablusions, metal *fusible*
To tellen all wold passen any bible
That o wher is.
Chaucer. The Chanones Yemannes Tale.

The liquid ore he drained
Into fit molds prepared; from which he formed
First his own tools: then, what might else be wrought
Fusile, or graven in metal. *Milton's Paradise Lost.*

Colours afforded by metalline bodies, either colliquate with, or otherwise penetrate into other bodies, especially *fusible* ones. *Boyle.*

The bodies of most use, that are sought for out of the depths of the earth, are the metals which are distinguished from other bodies by their weight, *fusibility*, and malleableness. *Locke.*

Metals in *fusion* do not flame for want of a copious fume, except spelter, which fumes copiously, and thereby flames. *Newton's Opticks.*

Perpetual flames,
O'er sand and ashes, and the stubborn flint,
Prevailing, turn into a *fusil* sea. *Philips.*

FUSEE,' *n. s.* Fr. *fuseau.* The cone round which is wound the cord, or chain, of a clock or watch: a firelock, or small neat musket. Track of a buck.

The reason of the motion of the balance is by the motion of the next wheel, and that by the motion of the next, and that by the motion of the *fusee*, and that by the motion of the spring: the whole frame of the watch carries a reasonableness in it, the passive impression of the intellectual idea that was in the artist. *Hale.*

FUSEE. See WATCH-MAKING.

FUSELI, or FUESELI (Henry), a distinguished modern painter and author, was born at Zurich in 1739. His father was anxious to educate him for the church, but some prints, copies from the works of Michael Angelo, with whose peculiar merits and style he became especially struck, decided young Fuseli for the life of an artist. He was placed, however, at the Humanity College, and there contracted a friendship with Lavater, which terminated only with the life of the latter. At this period the two friends exhibited united zeal and ability in bringing to justice a leading magistrate in one of the bailiwics of Zurich, who had committed an act of great oppression; and a pamphlet appearing from them on the subject compelled the authorities to take the matter up, and the culprit absconded. Fuseli, after taking his degree of M.A., in the college, now accompanied his friend to Vienna and Berlin, in which latter capital they both prosecuted their studies under the learned Sulzer. Fuseli here also obtained an intimate acquaintance with the English language, and was induced by our ambassador at that court, Sir Robert Smith, to visit this country. He arrived in London in 1762, and, obtaining the situation of tutor to a nobleman's son, accompanied him to Paris. On his return he published Reflections on the Painting and Sculpture of the Greeks; and soon after an Essay in defence of Rousseau, against Voltaire. His early drawings being about this time shown to Sir Joshua Reynolds, the encouragement bestowed on him by that artist decided young Fuseli's fate, when he was finally vacillating between the palette and the pulpit. His first picture was Joseph interpreting the Dreams of the chief Baker and Butler, which was purchased by the late Mr. Johnson, of St. Paul's Church Yard. In 1770 Mr. Fuseli visited Italy in company with a friend, and while in that country transmitted to England several pictures, especially two from the works of Shakspeare, The Death of Beaufort, and a Scene from Macbeth. In 1778 he left Italy, and after paying a short visit to Zurich returned to England, where he suggested to the late alderman Boydell the idea of forming his Shakspeare Gallery, and supplied him with eight pictures. In 1790 he became a Royal Academician, and, in the course of the next nine years, painted a series of forty-seven pictures from Milton, afterwards exhibited as the Milton Gallery. He succeeded Mr. Barry, in 1799, as professor of painting to the Royal Academy; and, in 1804, Mr. Wilson as keeper to that association. In 1805 he published an improved edition of Pilkington's Dictionary of Painters, and in 1817 received the diploma of the first class of the Academy of St. Luke at Rome. Fuseli continued to practise his art till within a week of his death, which took place at Putney Hill, while he was on a visit to the countess of Guildford.

FUSES OF BOMBS OR GRENADOES are chiefly made of very dry beech-wood, and sometimes of hornbeam, taken near the root. They are turned rough, and bored; and then kept for several years in a dry place: the diameter of the hole is about one-fourth of an inch; the hole does not come quite through, leaving about one

fourth of an inch at the bottom; and the head is made hollow, in the form of a bowl. The composition for fuses is saltpetre three parts, sulphur one, and mealed powder three, four, and sometimes five. This composition is driven in with an iron driver (whose ends are capped with copper, to prevent the composition from taking fire), and pressed as hard as possible; the last shovel-full being all mealed powder, and two stands of quickmatch laid across each other being driven in with it, the ends of which are folded up into the hollow top, and a cap of parchment tied over it till it be used. When these fuses are driven into the loaded shell, the lower end is cut off in a slope, so that the composition may inflame the powder in the shell. The fuse must have such a length as to continue burning all the time the shell is in its range, and to set fire to the powder as soon as it touches the ground, which instantly bursts into many pieces. When the distance of the battery from the object is known, the time of the shell's flight may be computed to a second or two; which being known, the fuse may be cut accordingly, by burning two or three, and making use of a watch, or a string by way of a pendulum, to vibrate seconds.

The FUSIBILITY of metals is very various, but the following table is given of their respective powers of resisting heat, as given by M. Thenard:—

		Centigr.	
1. Fusible below a red heat.	Mercury	—39°	
	Potassium	+58	Gay Lussac and Thenard.
	Sodium	90	Gay Lussac and Thenard.
	Tin	210	Newton.
	Bismuth	256	Newton.
	Lead	260	Biot.
	Tellurium	A little less fusible than lead.—Klaproth.	
	Arsenic	Undetermined.	
	Zinc	370°	Brogniart.
	Antimony	A little below a red heat.	
	Cadmium		Stromeyer.
		Pyrometer of Wedgewood	
2. Infusible below a red heat.	Silver	20°	Kennedy.
	Copper	27	Wedgewood.
	Gold	32	Wedgewood.
	Cobalt	A little less difficult to melt than iron.	
	Iron	130	Wedgewood.
		158	Sir G. M'Kenzie.
	Manganese	160	Guyton.
	Nickel	As manganese.—Richter.	
	Palladium		
	Molybdenum	Nearly infusible; and to be obtained at a forge heat, only in small buttons.	
	Uranium		
	Tungsten		
	Chromium		
	Titanium	Infusible at the forge furnace. Fusible at the oxyhydrogen blowpipe. See BLOWPIPE.	
	Cerium		
	Osmium		
	Iridium		
	Rhodium		
	Platinum		
	Columbium		

FU'SIL, *n. s.* } Fr. *fusil*. A firelock; the
FUSI'LIER, *n. s.* } same kind of musket which is sometimes called a Fusee. The fusilier is a soldier armed with such a musket. Fusil is also a term in heraldry, from Lat. *fusus*, and the figure it designates is something like a spindle.

Fusils **must be made long, and small in the middle, in the ancient coat of Montague, argent three *fusils* in fesse gules.** ***Peacham.***

FUSIL, in heraldry, a bearing of a rhomboidal figure, longer than the lozenge, and having its upper and lower angles more acute and sharp than the other two in the middle. It is called in Latin fusus, a spindle, from its shape. See diagram fig. 1. *Argent* a fusil, *azure*; name Hoby. When the shield is covered with fusils it is called fusilly: fig. 2. *Argent*, fusilly *gules*; name Toyers.

Fig. 1.

Fig. 2.

FUSILEERS, in the British service, are soldiers armed like the rest of the infantry, with this difference only, that their muskets are shorter and lighter than those of the battalion and the grenediers.

FUSS, *n. s.* A low cant word. A tumult; a bustle.

> **End as it befits your station,**
> **Come to use and application;**
> **Nor with senates keep a *fuss*:**
> **I submit, and answer thus.** ***Swift.***

FUST, *n. s.* & *v. n.* } Fr. *fuste*, the trunk or
FUS'TIAN, *n. s.* } body of a column: also
FUS'TY, *adj.* } a cask. Its second
FUSTINESS, *n. s.* } sense, therefore, is a strong smell, as that of a mouldy barrel. The verb signifies to grow mouldy or to smell ill; while the second noun and the adjective, though derived from the same root *fuste*, a tree, signify a kind of cloth made of cotton, because cotton grows on trees. They are further applied to a high swelling kind of writing made up of heterogeneous parts, or of words and ideas ill-associated: bombast. Swelling: unnaturally pompous; ridiculously tumid; used of styles.

But for to tellen you of his araie,—
His hors was good, but he ne wos not gaie.
Of *fustian* he wered a gipon
Alle besmotred with his habergeon,
For he was late ycome, fro his viage,
And wente for to don his pilgrimage.
Chaucer. Prologue to the Cant. Tales.

Hector shall have a great catch, if he knock out either of your brains: he were as good crack a *fusty* nut with no kernel. *Shakspeare.*

The *fusty* plebeians hate thine honours. *Id.*

The large Achilles, at this *fusty* stuff,
From his deep chest laughs out a loud applause.
Id.

Is supper ready, the house trimmed, the servingmen in their new *fustian* and their white stockings?
Id.

When men argue, the greatest part
O' the contest falls on terms of art,
Until the *fustian* stuff be spent,
And then they fall to the argument.
Hudibras.

Nor will you raise in me combustion,
By dint of high heroick *fustian*. *Id.*

Virgil, if he could have seen the first verses of the Sylvæ, would have thought Statius mad in his *fustian* description of the statue on the brazen horse
Dryden's Dufresnoy.

What *fustian* have I heard these gentlemen find out in Mr. Cowley's odes! In general, I will say, that nothing can appear more beautiful to me than the strength of those images which they condemn.
Dryden.

Fustian is thoughts and words ill sorted, and without the least relation to each other. *Id.*

Chance thoughts, when governed by the close,
Oft rise to *fustian*, or descend to prose. *Smith.*

FUST, FAUSTUS, or FAUST. See FAUST.

FUSTIAN, in commerce, is a kind of cotton stuff. Fustians should be altogether made of cotton yarn, both woof and warp; but many pieces are made, the warp of which is flax, or even hemp. Fustians are made of various kinds, wide, narrow, fine, coarse; with shag or nap, and without it.

FU'STIC, *n. s.* A sort of wood brought from the West Indies, used in dyeing of cloth.

To FU'STIGATE, *v. a.* Lat. *fustigo*. To beat with a stick; to cane.

FUSTIGATIO, in the Roman customs, a punishment inflicted by beating with a staff. This punishment was peculiar to freemen; the slaves were scourged with whips.

FUSTILA'RIAN, *n. s.* From fusty. A low fellow; a stinkard; a scoundrel. A word used by Shakspeare only.

Away, you scullion, you rampallion, you *fustilarian*: I'll tickle your catastrophe. *Shakspeare.*

FU'TILE, *adj.* } French *futile*; Lat. *futilis*.
FUTIL'ITY, *n. s.* } Talkative; loquacious: trifling; worthless; of no weight.

One *futile* person, that maketh it his glory to tell, will do more hurt than many that know it their duty to conceal. *Bacon.*

This fable does not strike so much at the *futility* of woman, as at the incontinent levity of a prying humour. *L'Estrange.*

Trifling *futility* appears in their signs of the zodiack, and their mutual relations and aspects.
Bentley.

To pursue trifles is the lot of humanity; and whether we bustle in a pantomime, or strut at a coronation; whether we shout at a bonfire, or harangue in a senate-house; whatever object we follow, it will at last surely conduct us to *futility* and disappointment.
Goldsmith.

FUTTEHABAD, a town of Hindostan, in the province of Dehly and district of Hissar.—Futteh signifying victory, wherever a battle was at one time gained by the imperial arms, the name of the nearest place was changed to the town of victory; hence towns of Hindostan beginning in this way are numerous.

FUTTIPOOR, a town in the province of Agra, enclosed by a stone wall of great extent, built by the emperor Acber. The site within does not appear ever to have been filled with buildings, and the part now inhabited is inconsiderable. The neighbouring hills composed of a grayish stone, have supplied the materials of which the town is built. On the most elevated part stands the tomb of Shah Selim Cheestee, by the efficacy of whose devotion the empress of Acber, after remaining several years barren, became pregnant it is said and bore a son, who in honor of the saint, was named Selim; and, on ascending the throne of Hindostan, took the name of Jchangeer. Futtipoor is twenty-five miles W. S. W. from the city of Agra, Hindostan.

FUTTOCKS, *n. s.* Corrupted from foot hooks. Skinner. The lower timbers that hold the ship together.

FU'TURE, *adj.* & *n. s.* } Fr. *futur*; Latin
FU'TURELY, *adv.* } *futurus*. To come;
FU'TURITION, *n. s.* } that which will be
FU'TURITY, *n. s.* } hereafter. Time to come; something to happen hereafter. Futurition is the state of being to be; the condition of being to come hereafter. Futurity applies to time chiefly; if not exclusively as distinct from circumstances and events that may occur, yet it belongs to eternity, and like that it never *is*, but ever is to *be*.

That, but aforne her, she maie se
In the *future*, some smale socoure,
To leggen her of her doloure.
Chaucer. Romaunt of the Rose.

Not my service past, nor present sorrows,
Nor purposed merit in *futurity*,
Can ransom me. *Shakspeare. Othello.*

Thy letters have transported me beyond
This ign'rant present time; and I feel now
The *future* in the instant. *Id. Macbeth.*

This prescience of God, as it is prescience, is not the cause of any thing *futurely* succeeding; neither doth God's aforeknowledge impose any necessity, or bind. *Raleigh.*

We will freely part with all our other fortunes, substance, endure any misery, drink bitter potions,

swallow those distasteful pills, suffer our joynts to be seared, to be cut off, any thing for *future* health; so sweet, so dear, so precious above all things in this world is life. *Burton. Anat. Mel.*

Glory they sung to the most High! good will
To *future* men, and in their dwellings peace. *Milton.*

It may be well reckoned among the bare possibilities, which never commence into a *futurity*; it requiring such a free, sedate, and intent mind, as, it may be, is no where found but among the Platonical ideas. *Glanville's Scepsis.*

The mind, once jaded by an attempt above its power, either is disabled for the *future*, or else checks at any vigorous undertaking ever after. *Locke.*

Is it imaginable that the great means of the world's redemption should rest only in the number of possibilities, and hang so loose in respect of its *futurition*, as to leave the event in an equal poise, whether ever there should be such a thing or no? *South.*

All *futurities* are naked before that All-seeing Eye, the sight of which is no more hindred by distance of time than the sight of an angel can be determined by distance of place. *Id.*

He sows the teeth at Pallas's command,
And flings the *future* people from his hand.
Addison's Ovid.

This, great Amphiarus, lay hid from thee,
Thou skilled in fate and dark *futurity*. *Pope.*

I will contrive some way to make it known to *futurity*, that I had your lordship for a patron. *Swift.*

——————in the dust
The fair-haired Daughter of the isles is laid,
The love of millions! How did we entrust
Futurity to her! and though it must
Darken above our bones, yet fondly deemed
Our children should obey her child, and blessed
Her and her hoped-for seed, whose promise seemed
Like stars to shepherd's eyes:—'twas but a meteor beamed. *Byron. Childe Harold's Pilgrimage.*

FUTURE, or FUTURE TENSE, in grammar, signifies an inflexion of verbs, whereby they denote, that a thing will be in some time yet to come. See GRAMMAR.

FUZZ, *v. n.* } Swed. *fisa*; Fr. *vesser*;
FUZZ'BALL, *n. s.* } probably of Gr. φυσαω. To fly out in small particles: a kind of fungus which, when pressed, bursts and scatters dust in the eyes.

FY, *interj.* Fr. and Flem. *fy*; Gr. φεῦ; Lat. *vah*. A word of blame and disapprobation.

What aileth you to grone in this manere?
Ye ben a very sleper, *fy* for shame.
Chaucer. The Nonnes Preestes Tale.

Of thilke wicked ensample of Canace,
That loved hire owen brother sinfully,
Of all swiche cursed stories I say *fy*.
Id. Prologue to the Man of Lawes Tale.

And *fy* on fortune, mine avowed foe,
Whose wrathful wreaks themselves do now allay.
Spenser.

Fy, my lord, *fy*! a soldier, and afraid? What need we fear who knows it, when none can call our power to account? *Shakspeare.*

A bawd, sir, *fy* upon him! *Id.*

But *fy*, my wandering muse, how thou do'st stray!
Expectance calls thee now another way. *Milton.*

Nay, *fy*, what mean you in this open place?
Unhand me, or, I swear, I'll scratch your face:
Let go, for shame; you make me mad for spite:
My mouth's my own; and if you kiss, I'll bite.
Dryden.

Fy, fy, Nephew you would not pull off your boots here—Go down into the hall. *Congreve. Way of the World.*

Fy, madam, he cried, we must be past all these gaieties. *Tatler.*

FYAL or FAYAL, one of the Azores. See FAYAL.

FYERS, or FOYERS, a river of Invernesshire, which descending from the south through the vale of Fyers, and forming a stupendous water-fall, flows into Loch Ness, ten miles north-east of Fort Augustus. Dr. Garnett gives the following description of the falls of Foyers. 'Having left our horses at General's Hut, we were conducted by our landlord to the falls. We first visited the upper one, which is about a mile and a half from the house, and nearly half a mile above the lower fall. Here the river Foyers, being confined on each side by steep rocks, precipitates itself with great velocity, forming a very fine cataract. A little below the fall a bridge has been thrown over by the proprietor, Frazer of Foyers, from which the fall is seen; but, in order to obtain a proper view of it, we, with some difficulty, scrambled down the steep banks of the rocks below, from whence we beheld this romantic scene in perfection. The bridge and rocks formed a fine frame or fore-ground, behind which, at the distance of perhaps twenty yards, appeared the first part of the fall; the second and most important break was a few yards nearer, and the lowest almost under the arch. Our guide was present when very accurate measurements were taken of these falls. The following particulars are therefore put down from his information:—

	Feet.
From the arch of the bridge to the surface of the water, after the lowest part of the fall	200
Height of the fall	70

'The bridge was built about twelve years ago;' says the Dr. in 1798; 'before which time the only passage over this torrent was a rude alpine bridge, consisting of some sticks thrown over the rocks, and covered with turf. It was crossed by the peasantry on foot, but must certainly have turned giddy the steadiest head unaccustomed to such scenes. About three years before the present bridge was built, a neighbouring farmer, on his way home from Inverness, had called at the General's Hut, to shelter himself from the inclemency of the storm, and drive out the invading cold by reinforcing the garrison in the stomach. Here he met with some old acquaintance, with whom he conversed of former times, without observing the frequency of the circulating glass. The snow continued to fall in thick flakes, and they were sitting by a comfortable fire. At last, when the fumes of the whisky had taken possession of his brain, and raised his spirits to no ordinary pitch, he determined to go home. When he came to this place, having been accustomed to cross the bridge on foot, he habitually took the road, and forced his horse over it. Next morning he had some faint recollection of the circumstance, though the seeming impossibility of the thing made him suspect that it was a dream; but, as the ground was covered with snow, it was easy to convince himself: he accordingly went, and when he perceived the tracks of his horse's feet along the bridge, he fell ill, and died shortly af-

terwards.—In our way to the lower fall, our guide showed a cave of considerable size, near the river, where the freebooters used to shelter themselves in turbulent times. There was a way of escape towards the water, should the main entry be discovered. Our next object was the lower fall. When we came to the rude pillars, before-mentioned, we left the road, and went down the side of the hill. The descent to the point of view is difficult, but we were amply repaid for our trouble.' The following beautiful description of this fall was written by Burns as he was standing by it:

Among the heathy hills and ragged woods,
The roaring Fyers pours his mossy floods;
Till full he dashes on the rocky mounds,
Where thro' a shapeless beach his stream resounds.
As high in air the bursting torrents flow,
As deep recoiling surges foam below,
Prone down the rock the whitening sheet descends,
And viewless echo's ear, astonished rends,
Dim-seen, thro' rising mists and careless showers,
The hoary cavern, wide surrounding, lowers.
Still thro' the gap the struggling river toils,
And still, below, the horrid caldron boils.

FYNE, Loch, a large inlet of the sea in Argyleshire, about thirty-two miles in length, and from twelve to three, or at an average, four or five in breadth. It receives and returns a tide on each side of the isle of Arran, which is directly opposite to its entrance. Its coasts, which are in general flat and sandy, are adorned with many elegant seats, and beautifully indented with bays. For time immemorial it has been noted for its herring fishery.

FYZABAD (the City of Abundance), also called Bungala, is situated in the Dewah province of Oude, Hindostan, and is said to owe its origin to the nabob Sufder Jung having, about the year 1740, erected some temporary houses in a garden near this place. His son Shuja Addowleh, after the battle of Buxar, removed his residence hither, and gave orders for erecting a palace and other buildings. The court following his example, the city rose in a few years; but as the greater number of the houses were slightly built, and had only tiled roofs, many of them fell to decay soon after the nabob Assup Addowleh had transferred the capital to Lucknow. This is, however, still a considerable city, and was the constant residence of the mother and grandmother of the last-mentioned nabob. It contains some handsome tombs belonging to the reigning family: and its gardens are celebrated. The palace of Shuja Addowleh is said to have contained 1000 women at the time of his death, and fifty of his children. Being asked at one time how many he had of the latter, he was obliged to refer to a confidential servant before he could give an answer.

G.

G is the seventh letter and the fifth consonant of our alphabet. In the alphabets of all the oriental languages, the Hebrew, Phenician, Chaldee, Syriac, Samaritan, Arabic, and even the Greek, it is the third letter. The Hebrews call it ghimel or gimel, i. e. camel, because it resembles the neck of that animal; and it bears the same appellation in the Samaritan, Phenician, Chaldee: in the Syriac it is called gamel, in Arabic güm, and in Greek gamma. The gamma (Γ) of the Greeks is evidently the gimel (ג) of the Hebrews or Samaritans. The chief difference between the gamma and gimel consists in this, that the one is turned to the right, and the other to the left, according to the different manners of writing and reading which obtained among those nations; though Salmasius, on Solinus, attempted to prove that the G was derived from the Greek kappa. It is clear that the Latins borrowed their form of this letter from the Greeks; the Latin G being only a variation of the Greek gamma, Γ; as might easily be proved by an examination of the forms of this letter, which may be met with in the Greek and Latin MSS. through which it has passed from Γ to G. Diomed, lib. ii. cap. De Litera, calls G a new letter. His reason is, that the Romans had not introduced it before the first Punic war: as appears from the rostral column erected by C. Duilius, on which we every where find a C instead of G. It was Sp. Carvilius who first distinguished between these two letters, and invented the figure of the G; as we are assured by Terentius Scaurus. The C served very well for G; it being the third letter of the Latin alphabet, as the Γ or γ was of the Greek. The G is found instead of C on several medals: and M. Beger produces a medal of the Familia Ogulnia, where Gar is read instead of Car, which is on those of M. Patin. But the C is more frequently seen on medals instead of G; as Aucustalis Callafcia Cartacinensis, &c. for Augustalis, &c. Not that the pronunciation of those words was altered, but only that the G was ignorantly or negligently cut by the workmen: as is the case in divers inscriptions of the eastern empire; where auc, aucc, auccc, are often found for aug, &c. The northern nations frequently changed the G into V or W; as in Gallus, Wallus; Gallia, Wallia, Vallia, &c. the French change the W of the northern nations, and the V consonant, into G; as, Willielmes, William, into Guillaume; Wulphilas into Gulphilas; Vasco into Gascon, &c. The modern G takes its form from that of the Latins. It is a mute, and cannot be sounded at all without the help of a vowel. Its hard sound is formed by the reflexion of the air against the palate, made by the tongue as the air passes out of the throat; which Martianus expresses thus, G spiritus cum palato. G often sounds hard before *i*, as give, &c., and sometimes before *e*, as get, &c. It is also hard in derivatives from words ending in *g*, as singing, stronger, &c., and generally before *er*, at the end of words, as

G is mute before *n*, as gnash, sign. is the sound of hard *G* in the beginning of l, as ghostly; sometimes at the end it is silent, as though. But at the end of many words *Gh* has the sound of *f*, as laugh, , tough, &c. In music, G is the character rk of the treble cleff; and from its being l at the head, or marking the first sound in o's scale, the whole scale took the name it. IV. As a numeral, G was anciently to denote 400; and with a dash over it G for 40,000.

GAB, *v. n.* }
GABBLE, *v. n.* & *n. s.* } Mr. Todd observes of this word that it is
GABBLER, *n. s.* } one of the most ancient ir own language, and found in many others much the same meaning: Old Fr. *gaber*, to a at, from *gab*, mockery: Goth. *begabba*; Ice. a: the same from *gabb*, a mocker; Sax. gab- to trifle; to joke; to talk a mere jargon: *gabbare*, to mock; Pers. *ghab*, a foolish or r expression. The European word is to be d, perhaps, to the Celt. *gob*, a beak; Irish, a beak, or mouth: whence gab, for the th: and hence gabble. To make an indis- t noise, or talk loudly without meaning; to e, or chatter.

I am no labbe,
hough I say it I n'am not lefe to *gabbe*
what thou wolt, I shal it never telle.
Chaucer. The Milleres Tale.

gabbe not so have I joy and bliss.
Id. The Nonnes Preestes Tale.

When thou couldest not, savage,
w thine own meaning, but wouldest *gabble* like
hing most brutish, I endowed thy purposes
th words that made them known? *Shakspeare.*

Have you no wit, manners, nor honesty, but to *ble* like tinkers at this time of night? Do ye make alehouse of my lady's house?
Id. Twelfth Night.

Not to know what we speak one to another, so we m to know, is to know straight our purpose: ough's language, *gabble* enough and good enough.
Id. All's Well that Ends Well.

Forthwith a hideous *gabble* rises loud
mong the builders; each to other calls,
t understood. *Milton's Paradise Lost.*

Which made some think, when he did *gabble*,
e' had heard three labourers of Babel. *Hudibras.*

Flocks of fowl, that when the tempest roar,
'ith their hoarse *gabbling* seek the silent shore.
Dryden.

Such a rout, and such a rabble,
Ran to hear Jack pudding *gabble*. *Swift.*

GABARDINE. Span. *gabardina*; Ital. *gavardina*. A coarse frock; any mean dress.

You call me misbeliever cut-throat dog,
And spit upon my Jewish *gabardine*. *Shakspeare.*

The knight did straight submit,
And laid his weapons at her feet:
Next he disrobed his *gabardine*,
And with it did himself resign. *Hudibras.*

GABEL, *n. s.* Sax. gafel; Fr. *gabelle*; Ital. *gabella*. A tribute; an excise; a tax.

The *gabels* of Naples are very high on oil, wine, and tobacco. *Addison on Italy.*

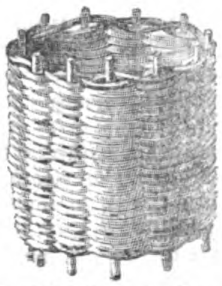
GABEL. Lat. cabella, gabium, gablagium, and vectigal, has the same signification among the ancient English writers, that gabelle had in France, before the revolution. It has been variously used, for a rent, custom, service, &c. Where it was a payment for rent, those who paid it were termed Gablatores. Formerly, when mentioned without any addition, gabel signified the tax on salt, though afterwards it was applied to all other taxes.

GABINIAN LAWS, in Roman antiquity, laws instituted upon several occasions by persons of the name of Gabinius: 1. Gabinius lex de Comitiis by Gabinius the tribune, A.U.C. 614; requiring that in the public assemblies for electing magistrates, the votes should be given by tables, and not vivâ voce: 2. De Comitiis, which made it a capital punishment to convene any clandestine assembly, agreeably to the old law of the twelve tables: 3. De Militiâ, by A. Gabinius the tribune, A.U.C. 685. It granted Pompey the power of carrying on the war against the pirates during three years, and of obliging all kings, governors, and states, to supply him with all the necessaries he wanted, over all the Mediterranean Sea, and in the maritime provinces as far as 400 stadia from the sea: 4. De Usurâ by Aul. Gabinius the tribune, A.U.C. 685; ordaining that no action should be granted for the recovery of any money borrowed upon small interest to be lent upon larger. This was a usual practice at Rome, which obtained the name of versuram facere: 5. Against fornication.

GABINUS CINCTUS, in Roman antiquity, a particular way of tucking the gown, by drawing it forwards on the breast, and tying it into a knot; as the people of Gabii did at a solemn sacrifice, on the sudden attack of an enemy, in order to be fitter for action. In this manner the consul used to declare war, to sacrifice, and burn the spoils of the enemy; and then he was said to be præcinctus.

GABION, *n. s.* Fr. A wicker basket filled with earth to make a fortification or entrenchment.

His battery was defended all along with *gabions*, and casks filled with sand. *Knolles.*



GABIONS, in fortifications, are baskets made of ozier twigs, of a cylindrical form, six feet high, and four wide; which, being filled with earth, serve as a shelter from the enemy's fire. See diagram:

GABLE, *n. s.* Fr. *gable*; Welsh and Belg. *gaval*; Swed. *gafwel*; Teut. *gabel*, *gibel*. The sloping roof at the end of a building.

Take care that all your brick-work be covered with the tilting, according to the new way of building, without *gable* ends, which are very heavy, and very apt to let the water into the brick-work.
Mortimer's Husbandry.

GABLE, or GABLE-END, of a house, is the upright triangular end from the cornice or eaves to the top of the house.

GABON, a river of Western Africa, flowing through a country of this name, and opening with a considerable estuary between Cape Lopez Gonsalvo and Benin. In its mouth are

a number of small islands called the Pongos. Vessels frequently stop here to take in water, which is better than at Cape Lopez. The articles of trade are ivory, wax, and honey; but the natives are licentious in their manners, and very difficult and tedious palavering. Here also are conveniences for repairing and refitting of ships.

GABRES, GEBRES, GUEBRES, or GHEBER. See GHEBER.

GABRIEL, גבריל, Heb. i. e. the strength of God, one of the angels. There are a few events, in which this exalted being was concerned recorded in Scripture. He was sent to the prophet Daniel, to explain to him the vision of the ram and goat, and the mystery of the seventy weeks; to Zecharias, to declare to him the future birth of John the Baptist; and, six months after, to the Virgin Mary, at Nazareth, to warn her of the birth of Jesus Christ. The Mahommedans call him the faithful spirit; and the Persians, the peacock of heaven. In the second chapter of the Koran, it is said, that whosoever is an enemy to Gabriel shall be confounded. It was Gabriel, Mahomet pretended, who brought the revelations which he published; and who conducted him to heaven mounted upon the animal Borak.

GABRIELITES, in ecclesiastical history, a sect of Anabaptists that appeared in Pomerania, in 1530; so named from Gabriel Scherling, who, after having been for some time tolerated in that country, was obliged to remove, and died in Poland.

GABRIELLI (Caterina), a celebrated and accomplished Italian singer of the last century, was born at Rome, 1730. She was a pupil of Porpora and Metastasio, and, from the circumstance of her father having been a cook, she acquired in her earlier years the epithet of La Cuochetina. Wherever she visited, she excited the greatest admiration of her talents. In Russia, she remained three years, and ranked high at court. Visiting England, in 1775, she appeared at the king's theatre during that and the following year, and is said to have exhibited fewer of her capricious freaks here than abroad, from a salutary fear lest an English audience should break her bones.

Brydone gives a curious instance of one of her whims during her stay at the court of Palermo. The viceroy had honored her, it appears, with an invitation to a party, which she accepted, but not arriving at the appointed hour, the dinner was put back, and a messenger despatched to her residence, who found her reading in bed. She rose and accompanied him, apologising to the company, which consisted of a great number of noble persons, on the ground that she had forgotten the engagement. This offended the viceroy; but when, on coming to the opera, no persuasion could induce her to sing a note above her breath, he threatened her with punishment. She was now, however, only the more obstinate, and returned for answer, that his excellency 'might indeed make her cry, but he never should make her to sing.' On this she was committed to prison; and remained in confinement twelve days, during which she gave magnificent entertainments, and paid the debts of the poorer prisoners, till the viceroy, who was a good-tempered man, gave up the contest, and set her at liberty. One expedient to ensure her best efforts was found to be, placing a favorite admirer in a conspicuous part of the theatre, when she would generally address her airs to him. Gabrielli amassed great wealth, although by no means mercenary, being enriched as well by her boundless success, as by the bounty of the emperor of Germany, who was much attached to her. He at length, however, banished her from Vienna, on account of the continual broils occasioned by her influence. The time of her decease is not recorded.

GAD, *n. s.* Sax. ȝaᵭ; Goth. and Swed. *gadd*; Isl. *gaddcur*, a club, or wedge. A wedge or ingot of steel: it is also used for a stile or graver.

I will go get a leaf of brass,
And with a *gad* of steel will write these words.
Shakspeare.

Flemish steel is brought down the Rhine to Dort, and other parts, some in bars, and some in *gads*; and therefore called Flemish steel, and sometimes *gad* steel. *Moxon's Mechanical Exercises.*

GAD, *v. n.* GADDER, *n. s.* GADDINGLY, *adv.* GADLING, *n. s.* GADFLY, *n. s.* Derived by Skinner from gadfly; by Junius from Welsh, *gadaw*, to forsake; by others thought to be the preterite of the old word *agaan*, to go. Minsheu says à Belg. *gaen*, to journey; or Belg. *gaden*, to please. To ramble about; to rove loosely, or wildly: one that runs abroad without object or business: gadfly, a fly that by stinging cattle causes them to run madly about; the breese.

A drunken woman, and a *gadder* abroad, causeth great anger, and she will not cover her own shame. *Ecclus.* xxvi. 8.

These bowes two held swete loking;
That ne seemed like no *gadling*;
And ten brode arrowes held he there
Of whiche five in his honde were.
Chaucer. Romaunt of the Rose.

How now, my headstrong, where have you been *gadding?*
—Where I have learnt me to repent. *Shakspeare.*

Envy is a *gadding* passion, and walketh the streets, and doth not keep home. *Bacon.*

The fly called the *gadfly* breedeth of somewhat that swimmeth upon the top of the water, and is most about ponds. *Bacon's Natural History.*

The lesser devils arose with ghastly rore,
And thronged forth about the world to *gad*;
Each land they filled, river, stream, and shore.
Fairfax.

Gad not abroad at every quest and call
Of an untrained hope or passion;
To court each place or fortune that doth fall,
Is wantonness in contemplation. *Herbert.*

Thee, shepherd, thee the woods and desart caves
With wild thyme and the *gadding* vine o'ergrown,
And all their echo's moan. *Milton.*

A fierce loud buzzing breeze; their stings draw blood,
And drive the cattle *gadding* through the wood.
Dryden.

She wreaks her anger on her rival's head;
With furies frights her from her native home,
And drives her *gadding*, round the world to roam.
Id.

There's an ox lost, and this coxcomb runs a *gadding* after wild fow' *L'Estrange.*

wonder their thoughts should be perpetually g from what disgusts them, and seek better inment in more pleasing objects, after which ill unavoidably be *gadding*. *Locke.*

it fly his slumbers, if perchance a flight ry *gadflies* fasten on the herd. *Thomson.*

.D, גד, i. e. a troop, one of the twelve rchs, the son of Jacob of Zilpah, and pro- r of the tribe of the Gadites.

D, in ancient geography, a district of jordan Palestine, situated between Gilead he kingdom of Bashan on the north, and f the Amorites to the south, having the n to the west, and bounded by various is on the east, so called from the tribe of ame.

.D, a prophet who attended David during ersecution by Saul, and gave him various nitions afterwards. He wrote a history of d's life, which is lost.

D, among miners, a small punch of iron, a long wooden handle, used to break up re. One of the miners holds this in his , directing the point to a proper place, while other drives it into the vein, by striking it a sledge hammer.

ADAMIS, a town and territory of Northern a, forming a species of oasis in the great rt of Sahara. It is situated north-west Fezzan, and south-west of Tripoli, and in road between these countries and Tom- oo: but the caravan that passes rarely consists ore than 150 camels. It passes through or Souat, another oasis to the south-west. territory is said to contain ninety-two vil- s, and many Roman ruins. 300 miles south- of Tripoli.

ADARENORUM AGER, in ancient geo- hy, the country of the Gadarenes, called by thew the country of the Gergesenes; a dis- that lay between Gadara and Gergesa, other- called Gerosa, both which lay within the apolis on the other side Jordan.

ADBURY (John), a noted professor of the derful revelations of astrology. He was a ve of Oxfordshire, and bred a sailor; then was the pupil and assistant of the famous y. Being a Catholic, and on account of e ominous remarks in his Almanacks, he arrested during the commotions excited by so-called Popish plots in Charles II. reign: liberated; and died, it is said, by ship- ck on a voyage to Jamaica: but the dates ther of his life or death appear. He pub- ed A Discourse of the Nature and Effects of mets, Philosophically, Historically, and Astro- ically considered, 1665: and Partridge, a fessor of this art, gave the world in 1693, e Black Life of John Gadbury.

GADEBUSCH, a town of Mecklenburgh- werin, on the Radegast, where the Swedes eated the Danes and Saxons, on the 20th of cember, 1712. Inhabitants 1500. It is een miles south-west of Wismar, and sixteen N.W. of Schwerin.

GADES, or GADIRA, in ancient geography, mall island in the Atlantic, on the panish st, twenty-five miles from the Pillars of Her- les. It was sometimes called Tartessus, and Erythia, according to Pliny. Geryon, whom Hercules killed, is said to have resided in it. Hercules Gaditanus had there a celebrated temple, in which all his labors were engraved. This island was considered as the western extremity of the habitable world, and as such was alluded to by the poets. Juvenal says,

Omnibus in terris quæ sunt à Gadibus usque
Auroram et Gangem pauci dignoscere possunt
Vera bona, atque illis multum diversa, remota
Erroris nebulâ. *Sat.* X.

Horace also,

Latiùs regnis avidum domando
Spiritum, quàm si Libyam remotis
Gadibus jungas, et uterque Pænus
Serviat uni. *Lib.* ii. od. 2.

GADIACZ, a town in the government of Pultava, Russia, containing 2300 inhabitants. 150 miles south-east of Czernigow.

GADOU, a country of Western Africa, having Brooko Fooladoo to the north, Konkodoo to the east, and Jallonhadoo to the south. It is crossed by streams, which descend from the mountains of Manding, and form the Senegal. The tract is mountainous, containing mines of gold, iron, and saltpetre.

GADUS, in ichthyology, a genus of fishes belonging to the order of jugulares. The head is smooth; there are seven cylindrical rays in the branchiostege membrane; the body is oblong, with deciduous scales; the whole fins are covered with the common skin of fish; the rays of the back fins are blunt, and those of the breast are sharp. There are twenty-three species, principally distinguished by their cirri, and the number of back fins. The most remarkable are these:—

G. barbatus, the pout, never growing to a large size, and seldom exceeding a foot in length. It is distinguished from all others by its great depth; one of the size above mentioned being nearly four inches deep in the broadest part. The back is very much arched, and cafinated; the color of the fins and tail is black; at the bottom of the pectoral fins is a black spot. The lateral line is white, broad, and crooked. The tail is even at the end, and of a dusky color. The color of the body is white; but more obscure on the back than the belly, and tinged with yellow. It is called at Scarborough a kleg, and is a very delicate fish.

G. carbonarius, the coal fish, is of a more elegant form than the cod, growing to the length of two feet and a half, and weighing about twenty-eight or thirty pounds at most. The head is small; the under jaw a little longer than the upper: the tail is broad and forked. They vary in color: some have their back, nose, dorsal fins, and tail, of a deep black; the gill-covers silver and black, the ventral and anal fins, and the belly, white: others are dusky, others brown; but, in all, the lateral line is straight and white, and the lower parts, or the ventral and anal fins, white. This species takes its name from the black color that it sometimes assumes. Belon calls it the colfisch, imagining that it was so named by the English, from its producing the ichthyocolla: but Gesner gives the true etymo-

logy These fishes are common on most of our rocky and deep coasts, but particularly those of the north of Scotland. They swarm about the Orkneys, where the fry are the greatest support of the poor. The young begin to appear on the Yorkshire coast in the beginning of July, in vast shoals, and are then about an inch and a half long. In August they are from three to five inches, and are taken in great numbers with the angling rod; they are esteemed very delicate; but grow so coarse, when a year old, that few people eat them. Fish of that age are from eight to fifteen inches long, and begin to have a little blackness near the gills and on the back; this blackness increases as they grow older. The fry is known by different names in different places: they are called at Scarborough parrs; and, when a year old, billets. About twenty years ago such a quantity of parrs visited that part, that for several weeks it was impossible to dip a pail into the sea without taking some. Though this fish is so little esteemed when fresh, it is salted and dried for sale.

G. eglesinus, the haddock, has a long body; the upper part of a dusky brown color, and the belly and lower part of the sides silvery: on the back are three fins, resembling those of the common cod fish; the lateral line is black; and the tail is forked: the head slopes down to the nose; on the chin is a short beard; and on each side beyond the gills is a large black spot. Superstition assigns this mark to the impression St. Peter left with his finger and thumb when he took the piece of silver out of the mouth of a fish of this species, which has been continued to the whole race of haddocks ever since that miracle. Large haddocks begin to be in roe in the middle of November, and continue so till the end of January; from that time till May they are very thin-tailed, and out of season. In May they begin to recover; and the middling-sized fish are then very good, and continue improving till the time of their perfection. The small ones are extremely good from May till February, and some even in February, March, and April, viz. those which are not old enough to breed. The fishermen assert, that in rough weather haddocks sink down into the sand and ooze in the bottom of the sea, where they shelter themselves till the storm is over; for in stormy weather they take none, and those that are taken immediately after a storm have mud on their backs. In summer they live on young herrings and other small fish; in winter on the stone-coated worms, a species of serpula, which the fishermen call haddock-meat. The grand shoal of haddocks comes periodically on the Yorkshire coast. It is remarkable that they appeared in 1766 on the 10th of December, and exactly on the same day in 1767: these shoals extended from the shore nearly three miles in breadth, and in length from Flamborough Head to Tinmouth Castle, and perhaps much farther northwards. An idea may be given of their numbers by the following fact: three fishermen, within the distance of a mile from Scarborough harbour, frequently loaded their boats with them twice a-day, taking each time about a ton of fish; when they put down their lines beyond the distance of three miles from the shore, they caught nothing but dog fish, which shows how exactly these fish keep their limits. The best haddocks were sold at from 8*d.* to 1*s.* per score, and the smaller sort at 1*d.* and even ½*d.* per score. The large haddocks quit the coast as soon as they go out of season, and leave behind great plenty of small ones. It is said that they visit the coasts of Hamburgh and Jutland in summer. It is no less remarkable than providential, that all kinds of fish (except mackerel) which frequent the Yorkshire coast, approach the shore, and, as it were, offer themselves to us, generally remaining there as long as they are in high season, and retire from us when they become unfit for use. They do not grow to a great bulk, one of fourteen pounds being an uncommon size, but these are extremely coarse; the best weighing only from two to three pounds.

G. lota, the burbot, in its body has some resemblance to an eel, only shorter and thicker; and its motions also resemble those of that fish: it is besides very smooth, slippery, and slimy. The head is very ugly, being flat, and shaped like that of a toad: the teeth are very small, but numerous. On the end of the nose are two small beads; on the chin another. The color varies: some are dusky, others are of a dirty green, spotted with black, and oftentimes with yellow; and the belly in some is white; but the real colors are frequently concealed by the slime. This species abounds in the lake of Geneva, and is also met with in the lakes Maggiore and Lugano. In Britain it is found in the Trent; but in greater plenty in the Witham, and the great east fen in Lincolnshire. It is a very delicate fish for the table, though of a disgusting appearance when alive. It is very voracious, and preys on the fry and smaller fish. It does not often take bait, but is generally caught in weels. The largest taken in our waters weigh between two and three pounds, but abroad they are sometimes found of double that weight.

G. merlangus, the whiting, is a fish of an elegant make: the upper jaw is the longest; the eyes are large, the nose is sharp: the teeth of the upper jaw are long, and appear above the lower when closed. The color of the head and back is a pale brown; the lateral line white, and crooked; the belly and sides are silvery, the last streaked lengthwise with yellow. These fish appear in vast shoals in spring, keeping at the distance of about half a mile to that of three miles from the shore. They are caught in vast numbers by the line, and afford excellent diversion. They are the most delicate, as well as the most wholesome, of any of the genus: but they do not grow to a large size, the biggest not exceeding twenty inches; and even that is very uncommon, the usual length being ten or twelve; though, it is said, that whitings from four to eight pounds in weight have been taken in the deep water at the edge of the Dogger Bank.

G. merlucius, the hake, is found in vast abundance on many of our coasts, and those of Ireland. There was formerly a stationary fishery of hake on the Nymph bank off Waterford, immense quantities appearing there twice a-year; the first shoal coming in June, during the mack-

erel season; the other in September, at the beginning of the herring season, probably in pursuit of those fish. The hake is in England esteemed a very coarse fish, and is seldom admitted to table either fresh or salted. When cured it is known by the name of Poor John. These fish are from one and a half to nearly three feet; they are of a slender make, of a pale ash color on their backs, and of a dirty white on their bellies.

G. minutus, the poor, is the smallest species yet discovered, being little more than six inches long. On the chin is a small beard; the eyes are covered with a loose membrane; on each side of the gill-covers and jaws there are nine punctures. The color on the back is a light brown; on the belly a dirty white. It is taken near Marseilles, and sometimes in such quantities as to become a nuisance; for no other kinds of fish are taken during their season. It is esteemed good, but incapable of being salted or dried. Belon says, that when it is dried in the sun, it grows as hard as horn.

G. molva, the ling, is usually from three to four feet long, but have been caught seven feet long. The body is very slender; the head flat: the upper jaw is longest; the teeth in that jaw are small and very numerous; in the lower, few, slender, and sharp: on the chin is a small beard. They vary in color, some being of an olive hue on the sides and back, others cinereous; the belly white. The ventral fins are white: the dorsal and anal edged with white. The tail is marked near the end with a transverse black bar, and tipped with white. Its English name ling is derived from its length, being a corruption of long. It abounds about the Scilly Isles, on the coasts of Scarborough, Scotland, and Ireland, and forms a great branch of trade. It was considerable, so long ago as the reign of Edward III. an act for regulating the price of lob, ling, and cod, being made in the thirty-first year. In the Yorkshire fens they are in perfection from the beginning of February to that of May, and some to the end of it. In June they spawn, depositing their eggs in the soft oozy ground of the mouth of the Tees. At that time the males separate from the females, and resort to some rocky ground near Flamborough Head, where the fishermen take great numbers without ever finding any of the female fish among them. While a ling is in season its liver is very white, and abounds with a fine flavored oil; but as soon as it goes out of season, the liver becomes as red as that of a bullock, and affords no oil. The same happens to the cod and other fish in a certain degree, but not so remarkably as in the ling. When in perfection, a very large quantity of oil may be melted out of the liver by a slow fire; but if a violent sudden heat be used for that purpose, they yield very little. Vast quantities of ling are salted for exportation as well as for home consumption. To be split, or cut for curing, it must measure twenty-six inches or upwards from the shoulder to the tail; if less than that, it is not reckoned a sizeable fish, and consequently not entitled to the bounty on exportation; such are called drizzles, and are in season all summer.

G. morhua, the common cod, is cinereous on the back and sides, and commonly spotted with yellow: the belly is white; but they vary much, both in color and shape, particularly that of the head. The side line is wide, broad, and straight till opposite the vent, when it bends towards the tail. Codlings are often taken of a yellow, orange, and even red color, while they remain among the rocks; but on changing their place assume the color of other codfish. The jaws are of an equal length, and at the end of the lower is a small beard; the teeth are disposed in the palate as well as in the jaws. The cod is found only in the northern seas; being, as Rondeletius calls it, an ocean fish, and never met with in the Mediterranean Sea. It affects cold climates and seems confined between the latitudes 66° and 50°; those caught north and south of these degrees being either bad, or in small numbers. The Greenland cod are small, and emaciated; being very voracious, and suffering in those seas a scarcity of provision. Most other species of this genus inhabit the cold seas, or such as lie within regions that can just claim the title of temperate. There is nevertheless a species found near the Canary Islands, called cherny, which are said to be better than the Newfoundland kind. The great rendezvous of the cod fish is on the banks of Newfoundland, and the other sand-banks off the coasts of Cape Breton, Nova Scotia, and New England. See our article FISHERIES.

G. mustela, the five-bearded cod, very much resembles the lota. The beards on the upper jaw are four, viz. two at the very end of the nose, and two a little above them: on the end of the lower jaw is a single one. The fish are of a deep olive brown, their belly whitish. They grow to the same size as the lota.

G. pollachius, the pollack, has the under jaw longer than the upper; the head and body rise pretty high, as far as the first dorsal fin. The side line is incurvated, rising towards the middle of the back, then sinking and running straight to the tail; it is broad and of a brown color. The color of the back is dusky, sometimes inclining to green: the sides beneath the lateral line are marked with lines of yellow; and the belly is white. This species is common on many of our rocky coasts: during summer they are seen in great shoals frolicking on the surface of the water, and flinging themselves into a thousand forms. They will then bite at any thing that appears on the top of the waves, and are often taken with a goose feather fixed to the hook. They are very strong, being observed to keep their station at the feet of the rocks in the most turbulent and rapid sea. They do not grow to a very large size; the biggest seldom exceed six or seven pounds, but some have been taken near Scarborough, during winter, that weighed nearly twenty-eight pounds. They are there called leets.

G. toricius, the torsk, tusk, or brismack, is a northern fish; and as yet not discovered lower than about the Orkneys, and even there it is rather scarce. In the seas about Shetland, it swarms, and forms (barrelled or dried) a considerable article of commerce. The length is about twenty inches, the greatest depth four and a half; the head is small; the upper jaw a little longer than the lower; both jaws furnished with

many small teeth; on the chin is a small single beard: from the head to the dorsal fin is a deep furrow. The color of the head is dusky: the back and sides yellow; belly white; edges of the dorsal, anal, and caudal fins, white, the other parts dusky; the pectoral fins brown.

GAELIC Language, the language of the ancient and modern Highlanders of Scotland. See Highlanders It is esteemed the most ancient as well as the purest dialect of the Celtic, now spoken. It has all the marks of an original language. Most of its words are expressive of some property or quality in the objects which they denote. This, with the variety of its sounds (many of which, especially those that express the soft and mournful passions, are peculiar to it), renders it highly adapted for poetry. It was the language of the Scottish court, till the reign of Malcolm Canmore, and was even spoken so late as that of Robert Bruce, particularly in a parliament held by him at Ardchattan. Its alphabet consists of eighteen letters, of which five are vowels. 'Those who understand it,' says Dr. James Robertson, of Callander, 'know its energy and power; the ease with which it is compounded; the boldness of its figures; and its tenderness in expressing the finest feelings of the human heart. But its genius and constitution, the structure of its nouns and verbs, and the affinity it has to some other languages are not so much attended to. These point at a very remote era, and seem to deduce its origin from a very high antiquity. The verbs have only three tenses, which is the simplest and most natural division of time. The persons of each tense are distinguished, by adding pronominal particles to each person. The third person singular of each verb has genders, or admits of a masculine and feminine particle affixed. The moods are the indicative, imperative, and infinitive. The subjunctive differs from the indicative only by the addition of one syllable to the verb, and a conjunction before it. The imperative has only the second person in both numbers. The infinitive is often used as a substantive noun, expressive of the abstract signification of the verb. There is only one conjugation and one declension. The cases of the nouns are marked by different particles, or by a change of the last vowel. The degrees of comparison are formed by placing certain syllables before the adjective; and the superlative frequently by a repetition of the positive.' These and other peculiarities of the Gaelic language are illustrated by Dr. Robertson in Sir J. Sinclair's Statistical Account of Scotland, vol. xi. p. 611—619, to which we refer the reader.

GAERTNER, an eminent naturalist, born at Calu, in Suabia, in 1732. His father was physician to the duke of Wirtemberg, and Joseph, being destined for the church, received his education and studied theology at the University of Tubingen; but, discovering a strong inclination to natural history and mathematics, he changed his profession, and applied to medicine. From Tubingen he removed to Gottingen, where he attended the lectures of Haller. He afterwards travelled through various parts of Europe, and, on his return to his own country, took the degree of M. D. In 1759 he went to Leyden, where he was particularly attentive to the botanical lectures, and about the same time applied himself to vegetable anatomy; in the prosecution of which he went to England, and gained the friendship of some of the most eminent men of the age. Here he communicated some interesting papers to the Philosophical Transactions, the principal of which is a Memoir on the Fructification and Propagation of Confervæ, &c., and was admitted F. R. S. In 1768 he went to Petersburg, where he was appointed professor of botany and natural history; a place which he filled with the greatest credit, and explored the whole Ukraine for botanical discoveries; but he returned to his native place in 1770. In 1778 he again visited London, for the purpose of making drawings and descriptions of fruits, to illustrate the great work in which he was then engaged, his Carpology, the first volume of which he dedicated to Sir Joseph Banks. He died in 1791, leaving many valuable MSS.

GAETA, a town, promontory, and gulf of Naples, in the Terra di Lavoro. The town lies along the shore, from the centre of the bay to the point of the promontory, and is a bishop's see; it contains a cathedral and nine churches. The cathedral is finely proportioned and well lighted, but not large. Opposite the great portal is an antique column, marked with the names of the winds in Greek and Latin, and the font is a fine antique of white marble, with bas reliefs. The streets are well built, and paved: and the environs extremely picturesque. The tomb of Minutius Plaucus, now a battlemented tower called Torre d'Orlando, stands on a bold eminence in the narrow neck that unites the promontory or peninsula of Gaeta to the continent. Buonaparte conferred the title of duke of Gaeta on Gaudir his finance minister in 1809. Population 15,000. It is forty miles north-west of Naples.

GÆTULI, the people of Gætulia, were among the earliest inhabitants of Africa. They were distinguished by different epithets; as Nigri, Autololæ, Daræ, and Baniuræ.—Pliny. They were a rough, unpolished, roving people, living on venison and the spontaneous productions of the earth, and resting in the first places in which night surprised them.

GAFF, *n. s.* } Fr. *gaffe*, a harpoon, or large
Gaff'er, *n. s.* } hook; Sax. ȝeferne, companion, says Dr. Johnson after Junius: others that it is a corruption of Sax. gœwfather, or gefa'der: a word of respect now obsolete, and used only in contempt or ridicule.

> For *gaffer* Treadwell told us by the bye,
> Excessive sorrow is exceeding dry.
> *Gay's Pastorals.*

Gaff, a sort of boom or bole, frequently used in small ships, to extend the upper edge of the mizen; and always employed for the same purpose on those sails, whose foremast edges are joined to the mast by hoops, or lacings, and which are usually extended by a boom below. Such are the main sails of all sloops, brigs, and schooners.

GAFFAREL (James), a learned French divine, born at Mannes in Provence, about 1606. He acquired great skill in the oriental languages, and

cabbalistic and occult sciences, which he
d and ridiculed. Cardinal Richelieu made
s librarian, and sent him into Italy to col-
e best books and MSS. He published a
called Curiositez Inouiés, i. e. Unheard
iosities. He died in 1681, aged eighty,
; an unfinished account of the caves, grot-
vaults, catacombs, and mines, he had met
ı thirty years' travels.

F'FLES, *n. s.* Sax. gaꝑelucaꝛ, spears.
ial spurs put on fighting cocks: a steel
vance to bend cross-bows.

The *gaffle* of a cross-bow. *Sherwood.*

FSA, a southern town of Tunis, anciently
, bordering on the Bled el Jereede. It
d one of the fortresses of Numidia, and is
ed on a rising ground, surrounded with
ıtions of olives, almonds, pistachios, &c.
plantations are supplied with water from
ɔuntains, one in the citadel, and the other
: city, in forming which, and the baths con-
d, great labor appears to have been employ-
The citadel, is now a poor modern build-
but the walls of many of the houses exhibit
, granite pillars, entablatures, &c. It is
niles S. S. W. of Tunis.

AG, *v. n.* & *n. s.* Belg. *gaghel*, the palate;
Belg.) *kau wegge*, a jaw-wedge.—Thomson.
op the mouth, and prevent utterance, whilst
ows breathing: the instrument with which
s done.

's out of his guard already; unless you laugh
ıinister occasion to him, he is *gagged*.
Shakspeare. Twelfth Night.

me, when the kids their dams too deeply drain,
gags and muzzles their soft mouths restrain.
Dryden.

ıur woman would have run up stairs before me;
have secured her below with a *gag* in her chaps.
Id.

ıere foamed rebellious logick, *gagged* and bound.
Pope.

AGE, *n. s.* & *v. a.* Fr. *gage*, a pledge; se-
ty. 'The past participle of Sax. ȝæȝeıan, to
e up,' says Mr. Tooke, 'gage-bound, that by
:h one is bound to fulfil certain engagements.'
e or measure, especially of liquids, hence it
sed as expressive of engagements and obli-
ɔns, to which pledges and securities are
exed: to take the contents of vessels of liquid,
ɔrm an estimate.

hey from their mother's breasts poor orphans rend,
without *gages* to the needy lend. *Sandys.*

He, when the shamed shield of slain Sansfoy
e spyed, with that same fairy champion's page,
e to him leapt; and that same envious *gage*
f victor's glory from him snatcht away.
Faerie Queene.

There I throw my *gage*,
Disclaiming here the kindred of a king,
And lay aside my high blood's royalty.
Shakspeare.

There is my *gage*, the manual seal of death,
hat marks thee out for hell. *Id.*

My chief care
Is to come fairly off from the great debts
Wherein my time, something too prodigal
Hath left me *gaged*. *Id.*

We shall see your bearing.
—Nay, but I bar to-night: you shall not *gage* me
ɜy what we do to-night. *'d.*

A moiety competent
Was *gaged* by our king. *Id.*

But since it was decreed, auspicious king,
In Britain's right that thou should'st wed the main,
Heaven, as a *gage*, would cast some previous thing,
And therefore doomed that Lawson should be slain.
Dryden.

In any truth, that gets not possession of our minds by self-evidence or demonstration, the arguments that gain it assent, are the vouchers and *gage* of its probability. *Locke.*

I am made the cautionary pledge,
The *gage* and hostage of your keeping it.
Southern.

One judges, as the weather dictates, right
The poem is at noon, and wrong at night;
Another judges by a surer *gage*,
An author's principles or parentage. *Young.*

GAGE is also used for a challenge to combat. See CARTEL. It was a pledge which the accuser or challenger cast on the ground, and the other took up as accepting the challenge; being usually a glove, gauntlet, chaperoon, or the like. See BATTLE.

GAGE, among letter founders, a piece of box, or other hard wood, variously notched: used to adjust the dimensions, slopes, &c., of the different sorts of letters.

GAGE, in joinery, an instrument made to strike a line truly parallel to the straight side of any board or piece of stuff. Its chief use is for gaging of tenons, to fit into mortises; and for gaging stuff of an equal thickness. It is made of an oval piece of wood, fitted upon a square stick, to slide up and down stiffly thereon, and with a tooth, at the end of the staff, to score, to strike a line upon the stuff at any distance, according to the distance of the oval from it.

GAGE, in the sea language. When one ship is to the windward of another, she is said to have the weather-gage of her. They likewise call the number of feet that a vessel sinks in the water, the ship's gage; this they find by driving a nail into a pike near the end, and putting it down beside the rudder till the nail catch hold under it: then as many feet as the pike is under water is called the ship's gage.

GAGE, BUCKET SEA, an instrument contrived by Dr. Hales to find the different degrees of coolness and saltness of the sea, at different depths. It consists of a common household pail or bucket, with two heads; which have each a round hole in the middle, about four inches in diameter, covered with square valves opening upwards; and, that they may both open and shut together, there is a small iron rod fixed to the upper part of the lower valve, and the other end to the lower side of the upper valve. So that as the bucket descends with its sinking weight into the sea, both the valves may open by the force of the water, which thus has a free passage through the bucket. But, when the bucket is drawn up, then both the valves are shut by the force of the water at the upper part of the bucket; so that the bucket is drawn up full of the lowest sea water to which it has descended. When the bucket is drawn up, the mercurial thermometer fixed in it is examined; but great care must be taken to observe the degree at which the mercury stands, before the lower part of the thermometer

is taken out of the water in the bucket, lest it be affected by the different temperature of the air. To keep the bucket in a right position, there are four cords fixed to it, reaching about three feet below it; to which the sinking weight is fixed. Dr. Hook also constructed an instrument for the same purpose for a representation of which see plate GAGES, fig. 1. This consists of a square wooden bucket C, whose bottoms are so contrived, that as the weight A sinks, the iron B, to which the bucket C is fastened by two handles D, D, on the end of which are the moveable bottoms or valves E, E, and thereby draws down the bucket, the resistance of the water keeps up the bucket in the posture C, whereby the water, whilst the bucket is descending, has a free passage through it; whereas, as soon as the bucket is pulled upwards by the line F, the resistance of the water to that motion beats the bucket downwards, and keeps it in the posture G, whereby the included water is kept from getting out, and the ambient water kept from getting in.

There is also an instrument of this name invented by Dr. Hales and Dr. Desaguliers for finding the depth of the sea; the description of which is this: A B, plate GAGES fig. 2, is the gage bottle, in which is cemented the gage-tube F*f* in the brass cape at G. The upper end of the tube F is hermetically sealed, and the open lower end *f* is immersed in mercury, marked C, on which swims a small thickness or surface of treacle. On the top of the bottle is screwed a tube of brass H G, pierced with several holes to admit the water into the bottle A B. The body K is a weight hanging by its shank L, in a socket N, with a notch on one side at *m*, in which locks the catch *l* of the spring S, and passing through the hole L, in the shank of the weight K, prevents its falling out when once hung on. On the top, in the upper part of the brass tube at H, is fixed a large empty ball, or full-blown bladder I, which must not be so large, but that the weight K may be able to sink the whole under water. The instrument thus constructed is used in the following manner:—The weight K being hung on, the gage is let fall into deep water, and sinks to the bottom: the socket N is somewhat longer than the shank L; and therefore, after the weight K comes to the bottom, the gage will continue to descend till the lower part of the socket strikes against the weight; this gives liberty to the catch to fly out of the hole L, and let go the weight K; when this is done, the ball or bladder I instantly buoys up the gage to the top of the water. While the gage is under water, the water having free access to the treacle and mercury in the bottle, will by its pressure force it up into the tube F*f*, and the height to which it has been forced by the greatest pressure, viz. that at the bottom, will be shown by the mark in the tube which the treacle leaves behind it, and which is the only use of the treacle. This shows into what space the whole air in the tube F*f* is compressed; and consequently the height or depth of water which by its weight produced that compression, which is the thing required. If the gage-tube F*f* be of glass, a scale might be drawn on it with the point of a diamond, showing, by inspection, what height the water stands above the bottom. But the length of ten inches is not sufficient for fathoming depths at sea, since that, when all the air in such a length of tube is compressed into half an inch, the depth of water is no more than 634 feet, which is not half a quarter of a mile. If, to remedy this, we make use of a tube fifty inches long, which for strength may be a musket barrel, and suppose the air compressed into 100dth part of half an inch; then by saying, as 1 : 99 :: 400 : 39,600 inches, or 3300 feet; even this is but little more than half a mile, or 2640 feet. But since it is reasonable to suppose the cavities of the sea bear some proportion to the mountainous parts of the land, some of which are more than three miles above the earth's surface; therefore to explore such great depths, the Dr. contrived a new form for his sea gage, or rather for the gage-tube in it, as follows: B C D F, fig. 3, is a hollow metalline globe communicating on the top with a long tube A B, whose capacity is a ninth part of that globe On the lower part, at D, it has also a short tube D E, to stand in the mercury and treacle. The air contained in the compound gage-tube is compressed by the water as before; but the degree of compression, or height to which the treacle has been forced, cannot there be seen through the tube; therefore, to answer that end, a slender rod of metal or wood, with a knob on the top of the tube A B, will receive the mark of the treacle and show it when taken out. If the tube A B be fifty inches long, and of such a bore that every inch in length should be a cubic inch of air, and the contents of the globe and tube together 500 cubic inches; then, when the air is compressed within 100dth part of the whole, it is evident the treacle will not approach nearer than five inches of the top of the tube, which will agree to the depth of 3300 feet of water as above. Twice this depth will compress the air into half that space nearly, viz. two inches and a half, which correspond to 6600, which is a mile and a quarter. Again, half that space, or one inch and a quarter, will show double the former depth, viz. 13,200 feet, or two miles and a half; which is probably very nearly the greatest depth of the sea.

GAGE, A SLIDING, tool used by mathematical instrument-makers for measuring and setting off distances.

GAGE, TIDE, is the name of an instrument used for determining the height of the tides by M. Bayly, in the course of a voyage towards the South Pole, &c., in the Resolution and Adventure, in 1772, 1773, 1774, and 1775. This instrument consists of a glass tube, whose internal diameter was seven-tenths of an inch, lashed fast to a ten-feet rod, divided into feet, inches, and quarters: this rod was fastened to a strong post fixed upright and firm in the water. At the lower end of the tube was an exceedingly small aperture, through which the water was admitted. In consequence of this construction, the surface of the water in the tube was so little affected by the agitation of the sea, that its height was not altered one-tenth of an inch, when the swell of the sea was two feet.

GAGE, WIND, an instrument for measuring the force of the wind upon any given surface. It was invented by Dr. Lind, who gives the follow

ɾiption of it. Plate Gages, fig. 4. This nt consists of two glass tubes A B, C D, or six inches in length. Their bores, e so much the better for being equal, ıt four-tenths of an inch in diameter. ɜ connected together like a siphon, by a ɜnt glass tube *a b*, the bore of which is ıe-tenth of an inch in diameter. On the ıd of the leg A B there is a tube of latten ɾhich is kneed, or bent perpendicularly s, and has its mouth open towards F. other leg, C D, is a cover with a round in the upper part of it, two-tenths of an diameter. This cover and the kneed ɜ connected together by a slip of brass *e d*, ıot only gives strength to the whole in- ıt, but also serves to hold the scale H I. The ube and cover are fixed on with hard ce- ɾr sealing wax. To the same tube is sol- piece of brass *e*, with a round hole in it ve the steel spindle K L; and at *f* there ınother piece of brass soldered to the brass *h*, which surrounds both legs of the in- ıt. There is a small shoulder on the spin- ɾ, upon which the instrument rests, and a ıut at *i*, to prevent it from being blown off ndle by the wind. The whole instrument y turned round upon the spindle by the so as always to present the mouth of the tube towards it. The end of the spindle ıcrew on it; by which it may be screwed e top of a post or a stand made on purpose. also a hole at L, to admit a small lever for ng it into wood with more readiness and ɾ. A thin plate of brass *k* is soldered to ıeed tube, about half an inch above the hole G, so as to prevent rain from falling t. There is likewise a crooked tube A B, to be put occasionally upon the mouth of ıeed tube F, to prevent rain from being ı into the mouth of the wind gage when it out all night, or exposed in the time of rain. ɔrce or momentum of the wind may be as- ned by this instrument, by filling the tubes ıll of water, and pushing the scale a little down, till the 0 of the scale, when the in- ent is held up perpendicularly, be on a vith the surface of the water in both legs of ind-gage. The instrument being thus ad- l, hold it up perpendicularly, and turning ıouth of the kneed tube towards the wind, ve how much the water is depressed by it ıe one leg, and raised in the other. The of the two is the height of a column of water h the wind is capable of sustaining at that ; and every body that is opposed to that l will be pressed upon by a force equal to weight of a column of water, having its base ıl to the altitude of the column of water sus- ɜd by the wind in the wind gage. Hence the ɜ of the wind upon any body, where the sur- opposed to it is known, may be easily ıd; and a ready comparison may be made ɾixt the strength of one gale of wind and that ıother. The force of the wind may be like- ɜ measured with this instrument, by filling it l the water runs out at the hole G. For, if then hold it up to the wind as before, a quan- of water will be blown out; and, if both legs of the instrument are of the same bore, the height of the column sustained will be equal to double the column of water in either leg, or the sum of what is wanting in both legs. But, if the legs are of unequal bores, neither of these will give the true height of the column of water which the wind sustained. But the true height may be obtained by the following formulæ. Suppose that after a gale of wind which had blown the water from A to B, fig. 7, forcing it at the same time through the other tube out at E, the surface of the water should be found standing at some level D G, and it were required to know what was the height of the column E F or A B, which the wind sustained. In order to obtain this, it is only necessary to find the height of the columns D B o G F, which are constantly equal to one another; for either of these added to one of the equal columns A D, E G, will give the true height of the column of water which the wind sustained. The use of the small tube of communication *a b*, fig. 5, is to check the undulation of the water, so that the height of it may be read off from the scale with ease and certainty. But it is particularly designed to prevent the water from being thrown up to a much greater or less altitude, than the true height of the column which the wind is able at that time to sustain, from its receiving a sudden impulse whilst it is vibrating either in its ascent or descent. As in some cases the water in this instrument might be liable to freeze, and thus break the tubes. Dr. Lind recommends a saturated solution of sea salt to be used instead of it, which does not freeze till Fahrenheit's thermometor falls to 0.

GAG'GLE, *v. n.* Dutch, *gagen*, *gagelen*, to make a noise like a goose.

> Birds prune their feathers, geese *gaggle*, and crows seem to call upon rain; which is but the comfort they receive in the relenting of the air.
>
> *Bacon's Natural History.*
>
> May fat geese *gaggle* with melodious voice,
> And ne'er want gooseberries or apple-sauce.
>
> *King.*

GAGNIER (John), M. A., a learned Orientalist, born at Paris in the seventeenth century. He was bred a Roman Catholic, but joined the church of England, and received the degree of M. A. from Cambridge and Oxford. In 1706 he published Joseph Ben Gorion's History of the Jews, in Hebrew, 4to.; and, in 1723, Abulfeda's Life of Mahomet, in Arabic, folio: with Latin translations and notes. He succeeded Dr. Wallis, as professor of Arabic: and was much esteemed, as a judicious critic, and a man of great erudition. He died in 1725.

GAGUIN (Robert), LL. D., a French historian, born at Colines, near Amiens, and educated at Paris. Charles VIII. and Louis XII. employed him in embassies to England, Germany, and Italy. His chief work is De Gestis Francorum, from Pharamond to A. D. 1491; folio, Lyons, 1524. He died in 1501.

GAHNIA, in botany, a genus of the monogynia order, and hexandria class of plants: CAL. an involucrum with two or five flowers: COR. two-valved; the stamina six capillary and very short filaments; the antheræ linear, sharp-pointed at the apex, and as long as the corolla; there is

no pericarp: SEED single and oblong. Species two, Polynesian herbs.

GAILLARD (Gabriel Henri), was born at Ostel, a small village in the former diocese of Soissons, on the 26th of March, 1726. His father's inclination to the bar decided the choice of this profession; but he soon gave himself up to the exclusive cultivation of literature, in spite of the remonstrances of his friends. The study of the great writers of antiquity, and of the best French authors, occupied his days, and very often also the hours of which he imprudently abridged his repose. He was not twenty when, in 1745, he produced La Rhetorique Françoise à l'usage des Demoiselles, the success of which surpassed his expectations. It was, however, as he himself afterwards admitted, only the work of a school-boy; but the singularity of the title excited curiosity, and the youth of the author pleaded for indulgence. The Poetique à l'usage des Dames, published four years afterwards, in 1749, was not however so well received. A volume of literary miscellanies, in which was a life of the young and gallant Gastoin De Foix, duke of Nemours, who died at Ravenna, appeared in 1756. Encouraged by the applause of several academicians, M. Gaillard, in 1757, published the History of Mary of Burgundy. This work was every where commended, and the Academy of Belles Lettres chose the new historian to fill the place of the industrious and learned abbé Lebœuf, who died in 1760. While pursuing the career of erudition and history, in which he thus distinguished himself, M. Gaillard did not renounce any of the branches of literature which he had loved and cultivated in his youth. His Discourse on the Advantages of Peace obtained the second prize decreed, in 1767, by the French Academy. His Eulogy on Henry IV., and that on Pierre Corneille, were crowned soon afterwards, in 1768, the former by the Academy of Rochelle, and the latter by the Academy of Rouen; and in 1770 he obtained the prize proposed by the Academy of Marseilles for the Eulogy on Massillon. These successes opened to him, in 1771, the doors of the French Academy. The History of Francis I., the first four volumes of which appeared in 1766, and the others in 1769, in the midst of M. Gaillard's academic triumphs, heightened their lustre by the idea which it produced of his indefatigable industry, of the fertility of his mind, and the variety of his talents. This history was divided under the heads civil history, political history, &c.; and, although almost the universal opinion had decided against it, M. Gaillard pursued the same method in the History of Charlemagne, which he gave to the world in 1782. The History of the Rivalship of France and England, which M. Gaillard published previously to that of Charlemagne, from 1771 to 1777, was received with that general approbation the justice of which time has since confirmed. The History of the Rivalship of France and Spain is written on the same principles, on the same plan, and with the same ability. The Historical Dictionary of the Methodical Encyclopedia, in six quarto volumes, is likewise a highly esteemed production of M. Gaillard's, and combines the judicious criticism, and rich and easy style, which characterise his other historical compositions. The same qualities are to be found in the dissertations and notes subjoined by him to the new edition of Debelloy's works published in 1782, with a Life prefixed to them. When the revolution commenced Gaillard retired to St. Firmin, near Chantilly, to a simple but commodious habitation. In this retreat, where he made protectors and friends of his rustic neighbours, he found in the most calamitous times the security and repose necessary for continuing his cheering pursuits, and diverting his mind by study from the afflicting situation of his country. Here he attempted to compose, in a great measure from recollection, an Eulogy on M. de Malesherbes, whose friendship he had enjoyed from his youth; and in this performance, published in 1805, may be perceived striking traits of his best talents. Notwithstanding the pressure of years and infirmities, he was incessantly engaged in revising and arranging the numerous observations which he had made in the course of his studies, on the History of France by Velly, Villaret, and Garnier; and was about to send them to press when the gout, to which he had been long subject, flying to his chest, carried him off on the 13th of February, 1806.

GAIN, *n. s.*, *v. a.*, *v. n.* & *adj.*
GAIN'ER, *n. s.*
GAIN'FUL, *adj.*
GAIN'FULLY, *adv.*
GAIN'FULNESS, *n. s.*
GAIN'LESS, *adj.*
GAIN'LESSNESS, *n. s.*
GAIN'LY, *adv.*

Sax. ȝeaȝn, from aȝan, to possess; Goth. *gayn*, *geign*; Swedish, *gagn*; Fr. *gain*. The primary meaning is profit or advantage, as contrary to loss: it is applied in a great variety of instances to persons and possessions, in a negative or affirmative sense.

That, sir, which serves for *gain*
And follows but for form,
Will pack, when it begins to rain,
And leave thee in the storm. *Shakspeare.*

Besides the purpose it were now, to teach how victory should be used, or the *gains* thereof communicated to the general consent. *Raleigh.*

The client, besides retaining a clear conscience, is always a *gainer*, and by no means can be at any loss, as seeing, if the composition be overheard, he may relieve himself by recourse to his oath. *Bacon.*

It is in praise of men as in gettings and *gains*; for light *gains* make heavy purses; for light *gains* come thick, whereas great come but now and then. *Id. Essays.*

Moreover, Glories, Thrones, are so sublime,
That whosoever thinkes their top to *gaine*,
Till many thousand weary steps he clime,
Doth foole himselfe, by musings which are vaine. *Geo. Withers.*

You then, that would, with Pleasure, Glory *gaine*,
Diana like, those modest things require,
Which truly may beseeme you to attaine;
And stoutly follow that which you desire. *Id.*

With hocus pocus and their heavenly sight
They *gain* on tender consciences at night. *Marvell.*

A leper once he lost, and *gained* a king. *Milton.*

I acceptance found, which *gained*
This answer from the gracious voice divine. *Id.*

He never shall find out fit mate, but such
As some misfortune brings him, or mistake,
Or whom he wishes most, shall seldom *gain*

igh her perverseness, but shall see her *gained* far worse. *Id.*

ath was the post, which I almost did *gain*:
I once more be tost into the main? *Waller.*

t became a *gained* ground by the muddy and matter brought down by the Nilus, which set- degrees into a firm land.
Browne's Vulgar Errours.

who were sent to the other pass, after a short ce, *gained* it. *Clarendon.*

me, with presents, laden from the port,
ratify the queen and *gain* the court.
Dryden.

aro's muse commodious precepts gives
uctive to the swains, nor wholly bent
vhat is *gainful*: sometimes she diverts
a solid counsels. *Philips.*

e is a lawful *gain*, which, by the blessing of nay be a comfort to a house; 'a good man an inheritance to children's children;' but i got by fraud and injustice is ill got, and will *ain*; it will not only do no good to a family, l bring poverty and ruin upon it.
Henry. Hab. ii. 9, 10.

ou have two vessels to fill, and you empty one he other, you *gain* nothing by that.
Burnet's Theory of the Earth.

will dazzle his eyes, and bait him in with the is proposal of some *gainful* purchase, some rich , or advantageous project. *South.*

English have not only *gained upon* the Vene- n the Levant, but have their cloth in Venice
Addison.

came to the roots of the mountain, and had a roublesome march to *gain* the top of it.
Id. on Italy.

o on the land, while here the ocean *gains*,
other parts it leaves wide sandy plains. *Pope.*

ly fights for kings or dives for *gain*. *Id.*

good behaviour had *gained* so far on the em- that I began to conceive nopes of liberty.
Swift.

e parallel holds too in the *gainlessness* as well as ousness of the work: miners, buried in earth arkness, were never the richer for all the ore ligged; no more is the insatiable miser.
Decay of Piety.

ey *gain* by twilight's hour their lonely isle,
em the very rocks appear to smile.
Byron. Corsair.

AIN, in architecture, is the workmen's term ie bevelling shoulder of a joist or other tim- It is used also for the lapping of the end of oist, &c., upon a trimmer or girder; and the thickness of the shoulder is cut into the ner, also bevelling upwards, that it may just ve the gain; and so the joist and trimmer en and level with the surface. This way of ing is used in floors and hearths.

AINAGE, GAINAGIUM, in ancient writers, fies the draught oxen, horses, wain, plough, furniture, for carrying on the work of tillage ie sokemen and villeins. Gainage is the with wainage. Bracton, lib. i. cap. 9, king of lords and servants, says, Ut si eos uant, quod salvum non possit eis esse wain- n suum. And again, lib. iii. tract. 2, cap. 1, nus non amerciabitur, nisi salvo wainagio For anciently, as it appears both by Magna ta and other books, the villein, when ced, had his gainage free, that his plough t not stand still: and the law, for the same reason, still allows a like privilege to the husbandman, that is, his draught horses are not in many cases distrainable.

GAINAGE is also used for the land itself, or the profit raised by cultivating it.

GAINGIVING, *n. s.* Gainst and give, to give against, and is synonymous with misgiving; a word nearly obsolete.

It is but foolery; but it is such kind of *gaingiving* as would, perhaps, trouble a woman.
Shakspeare. Hamlet.

GAIN'SAY, *v. a.* } Gainst and say, a word
GAINSAY'ER, *n. s.* } still in use, and implies contradiction, opposition, and controversy; also denial: gainsayers in a religious sense are those who dispute against, oppose, or deny its doctrines.

Speeches which *gainsay* one another, must of necessity be applied both unto one and the same subject.
Hooker.

Such as may satisfy *gainsayers*, when suddenly, and besides expectation, they require the same at our hands. *Id.*

We are, for this cause, challonged as manifest *gainsayers* of Scripture, even in that which we read for Scripture unto the people. *Id.*

I never heard yet
That any of those bolder vices wanted,
Less impudence to *gainsay* what they did,
Than to perform it first. *Shakspeare.*

Others sought themselves a name by being his *gainsaying*, but failed of their purpose. *Fell.*

Too facile then, thou didst not much *gainsay*;
Nay, didst permit, approve, and fair dismiss.
Milton.

It was full matter of conviction to all *gainsayers*.
Hammond.

GAINSBOROUGH (Thomas), a celebrated English painter, was born at Sudbury in Suffolk in 1737. His father was a clothier in contracted circumstances; and we first hear of our young artist as rambling in the woods, and sketching the scenery of this neighbourhood. At length he came to London for improvement, and is said at first to have practised modelling figures of animals with success. He also made drawings for the engravers, and painted and sold small landscapes. At last he had recourse to portrait painting, by which means he supported himself for some time, and then married and removed to Ipswich, and subsequently to Bath, where he enjoyed great reputation. In 1774 he returned, however, to London, and quickly rose to acknowledged and indeed unrivalled excellence in the landscape department of his profession. He was still also much employed as a painter of portraits. Gainsborough died of a cancer in the neck, August 2nd, 1788, and was interred in Kew churchyard. The landscapes of Gainsborough are described as 'uniting the brilliancy of Claude with the precision and simplicity of Ruysdael.' He was much esteemed by Sir Joshua Reynolds, who says, 'if ever this nation should produce genius sufficient to acquire to us the honorable distinction of the English school, the name of Gainsborough will be transmitted to posterity, in the history of the art, among the very first of that rising name.' He had also fine talents for music; and displayed, both in his letters and conversation, considerable general taste and ability.

His nephew, Gainsborough Dupont, distinguished himself as an artist, but died in 1797, at the age of thirty.

GAINSBOROUGH, a market town of Lincolnshire, 149 miles from London, seated on the Trent near the sea. It is a large well-built town, and has a pretty good trade. The north marsh in its neighbourhood is noted for horse races. The town consists chiefly of one long street, parallel with the river, and is well paved, and lighted. The church is a very neat edifice, and has been lately rebuilt at the expense of the inhabitants. Here are several meeting-houses for dissenters; and several good charity-schools. Over the river is a handsome stone bridge, erected in 1791. Gainsborough gives title of earl to the Noel family. The Danes, when they invaded the kingdom, brought their ships to this place; and here Sueno their king was murdered. It lies eighteen miles north-west of Lincoln. Market on Tuesday.

GAINST, *prep.* For against. See AGAINST.

Tremble, ye nations! who, secure before,
Laughed at those arms, that *'gainst* ourselves we bore.
Dryden.

GAINSTAND, *v.a.* Gainst and stand. To resist or withstand.

Love proved himself valiant, that durst with the sword of reverent duty *gainstand* the force of so many enraged desires. *Sidney.*

GAI'RISH, *adj.* } Sax. ȝeppian, to dress
GAI'RISHNESS, *n. s.* } fine; old French *gaierie* (finery). A term applicable to colors, as showy; splendid, and fine, and by accommodation to flighty or extravagant joy; opposed to sobriety and gravity.

Three or four will outrage in apparel, huge hose, monstrous hats, and *gairish* colours. *Ascham.*

I called thee then poor shadow, painted queen,
The presentation of but what I was;
A mother, only mocked with two fair babes;
A dream of what thou wast, a *gairish* flag,
To be the aim of every dangerous shot. *Shakspeare.*

Let your hope be without vanity, or *gairishness* of spirit, but sober, grave, and silent. *Taylor.*

There in close covert by some brook,
Where no profaner eye may look,
Hide me from day's *gairish* eye. *Milton.*

Fame and glory transport a man out of himself: it makes the mind loose and *gairish*, scatters the spirits, and leaves a kind of dissolution upon all the faculties. *South.*

GAIT, *n. s.* Dutch *gat;* Goth. *gata;* from Goth. *ga*, to go. Movement from place to place, as walking; marching: also the manner and air of walking.

With that worde Reson went her *gate*
When she sawe for no sermoning
She might me fro my folie bring.
Chaucer. Romaunt of the Rose.

Nought regarding, they kept on their *gait*,
And all her vain allurements did forsake.
Faerie Queene.

Thou art so lean and meagre waxen late,
That scarce thy legs uphold thy feeble *gait.*
Hubbard's Tale.

Great Juno comes; I know her by her *gait.*
Shakspeare.

Formal in apparel,
In *gait* and countenance surely like a father. *Id.*

Good youth, address thy *gait* unto her;
Be not denied access, stand at her door. *Id.*

A third, who, by his *gait*
And fierce demeanour, seems the prince of hell
Milton.

Leviathans
Wallowing, unwieldly, enormous in their *gait.*
Id.

I described his way,
Bent all on speed, and marked his airy *gait.* *Id.*

GALACTITES, in natural history, a substance much resembling French chalk, in many respects; but different from it in color. The ancients found it in the Nile, and in some rivers in Greece; and used it in medicine as an astringent, for defluxions and ulcers of the eyes. At present it is common in Germany, Italy, and some parts of France, but it is little regarded, being esteemed an inferior kind of morochthus.

GALACTOPHAGI, and GALACTOPOTÆ, from γαλα, γαλακτος, milk; φαγειν, to eat; and ποτης of πινω, I drink; in antiquity, persons who lived wholly on milk, without corn or any other food. Certain nations in Scythia Asiatica, as the Getæ, Nomades, &c., are famous in ancient history, as galactophagi. Homer makes their eloge. Iliad, lib iii. Ptolemy, in his Geography, places the Galactophagi between the Riphæan Mountains on one side, and the Hircanian Sea on the other.

GALAGE, *n. s.* Obsolete. A shepherd's clog.

My heart-blood is well nigh frorne, I feel;
And my *galage* grown fast to my heel. *Spenser.*

GALANGAL, *n. s.* Fr. *galange.* A medicinal root.

The lesser *galangal* is in pieces, about an inch or two long, of the thickness of a man's little finger; a brownish red colour, extremely hot and pungent. The larger *galangal* is in pieces, about two inches or more in length, and an inch in thickness: its colour is brown, with a faint cast of red in it: it has a disagreeable, but much less acrid and pungent taste. *Hill.*

GALANGAL. See KÆMPFERIA.

GALANTHUS, the snow-drop, in botany, a genus of the monogynia order, and hexandria class of plants, natural order nineteenth, spathaceæ. There are three concave petals; and the nectarium consists of three emarginated petals; the stigma is simple. There is but one species, viz. the

G. Nivalis, a bulbous-rooted flowery perennial, rising but a few inches in height, and adorned at top with small tripetalous flowers of a white color. There are three varieties, viz. the common single-flowered snow-drop, the semi-double snow-drop, and the double snow-drop. They are beautiful little plants; and are much valued on account of their early appearance, often adorning the gardens in January or February, when scarcely any other flower is to be seen. They frequently burst forth when the ground is covered with snow, and continue very often till the beginning of March, making a very ornamental appearance, especially when disposed in clusters towards the fronts of the borders, &c. The single kind comes first into bloom, then the semi-double, and after that the double They

in any soil, and multiply exceedingly by rom the roots.

GALAPAGOS are a group of thirteen een islands, 120 leagues distant from the Quito.

soil is not fertile, but is covered with rees, proper for the construction of sloops ; the only cultivation is a small quantity on, the inhabitants chiefly gaining a live- by the sea, and particularly by going to Islands, Bahamas, to collect salt. The land is thirty-six miles long, and one to oad, shaped like a fish-hook.

St. George's Island is the chief settlement, ning about 500 houses built of a soft which is sawed like timber, but when l with lime becomes hard. These stones it to the West Indies for filtering water. arbour of St. George can only receive -gun ships ; the rise of tide is six feet. vid's Island supplies St George with pro- . The fourth Island of any size is named set, besides which, there are reckoned nearly ots of sand and rocks.

rray's Anchorage, though exposed from east to north-west is the only port that a line of battle ship through a dangerous arrow channel in the reef. Ships of war atered from a cistern which receives the ater in Tobacco Bay.

onsiderable number of sloops and schoon- e built here of the cedar of the islands, mployed in the trade between the West s and North America. The population is 5000 whites, and nearly the same number ucks. The custom-house returns of im- from this island to England, and exports, :—

	Imports.	Exports.
809 .	£11,648 .	£34,279
810 .	1,137 .	36,613

e only export of the island produce is n in 1809, 21,656 pounds; and in 1810) pounds.

ne government is similar to the West India nds.

ALATÆA, or GALATHÆA, in mythology, a nymph, daughter of Nereus and Doris. She beloved by the Cyclops Polyphemus, whom reated with disdain ; while Acis, a shepherd icily, enjoyed her affection. The Cyclops d his rival with a piece of a rock while he sed on the bosom of Galatæa. The nymph, nsolable for the loss of Acis, as she could restore him to life, changed him into a foun-

GALATIA, the ancient name of a province Asia Minor, now called Amasia. It was nded on the east by Cappadocia, on the south Pamphylia, on the north by the Euxine Sea, on the west by Bithynia. It was the north t of Phrygia Magna; but, upon being occu- d by the Gauls, was called Galatia ; and be- se situated amidst Greek colonies, and its ives mixed with Greeks, Gallogræcia. Strabo ls it Gallatia, and Gallogræcia; hence a two- l name of the people, Galatæ and Gallogræci. e Greeks called it Gallia Parva, to distinguish it from Gallia Transalpina, both which they called Galatia. It was reduced by the Romans under Augustus, and now belongs to the Turks Here St. Paul founded a church.

GALATIANS, EPISTLE to THE, a canonical book of the New Testament, written by the apostle Paul to the primitive Christians in Gala- tia, to reclaim them from the observation of Jewish ordinances, into which they had been se- duced by the Judaising teachers.

GALATZ, or GALACZ, a town and harbour of European Turkey, in Moldavia, on a lake near the confluence of the Pruth and the Danube. It is fortified, and the harbour admits large ships up the town. Almost all the trade between Moldavia and Constantinople in cattle, corn, &c., passes through it. The environs produce very good wine ; the inhabitants, about 5000, are chiefly Greeks. Medals found here have shown that it was built near the ruins of an ancient town, founded by Trajan. In 1789 an obstinate battle was fought in the neighbourhood of this town, between the Russians and the Turks: in which the latter lost 8000 men, the town was taken and set on fire. Fifty-four miles west of Ismail, and 120 S. S. W. of Bender.

GALAX, in botany, a genus of the monogy- nia order, and pentandria class of plants: COR. is salver-shaped: CAL. decaphyllous: CAPS. uni- locular, bivalved, and elastic. Species one only a native of Virginia.

GALAXIA, in botany, a genus of the trian- dria order, and monadelphia class of plants: CAL. none: COR. one: petal six cleft, with a long tube: spathe one or two leaved : style one: CAPS. three-celled inferior. Species three, natives of Madagascar and the Cape.

GALAXY, *n. s.* Fr. *galaxie;* Gr. *γαλαξίας*. A stream of light in the sky, formed by innumerable stars, and called the milky way.

' Lo there !' quod he, ' cast up thine eye ;
See yonder, lo, the *galaxie*,
The whiche men clepe the milky way,
For it is white. *Chaucer. House of Fame.*

A brown, for which heaven would disband
The *galaxy*, and stars be tanned. *Cleaveland.*

Several lights will not be seen,
If there be nothing else between ;
Men doubt, because they stand so thick i' the' sky,
If those be stars that paint the *galaxy*. *Cowley.*

A broad and ample road, whose dust is gold,
And pavement stars, as stars to thee appear,
Seen in the *galaxy*. *Milton's Paradise Lost.*

We dare not undertake to shew what advantage is brought to us by those innumerable stars in the *galaxy*. *Bentley.*

The GALAXY is that long white luimnous track which seems to encompass the heavens like a girdle, and is easily perceivable in a clear night, especially when the moon does not shine. The Greeks called it *Γαλαξιας*, and the Romans via lactea, the milky way, on account of its color and appearance. It passes between Sagittarius and Gemini, and divides the sphere into two parts; it is unequally broad; in some parts single, in others double. The ancient poets, and even philosophers, speak of the Galaxy as the road by which the heroes went to heaven. The Egyptians called it the Way of Straw, from the story of its rising from burning straw, thrown

behind the goddess Isis in her flight from the giant Typhon. The Greeks give, however, two different accounts of it: the one, that Juno, without perceiving it, accidentally gave suck to Mercury when an infant; but that as soon as she turned her eyes upon him, she threw him from her, and as the nipple was drawn from his mouth, the milk ran about for a moment: the other, that the infant Hercules being laid by the side of Juno when asleep, on waking she gave him the breast; but soon perceiving who he was, she threw him from her, and the heavens were marked by the wasted milk. Aristotle supposed it a kind of meteor, formed of a crowd of vapors, drawn into that part by certain large stars disposed in the region of the heavens answering hereto. Others, finding that the Galaxy was seen all over the globe, that it always corresponded to the same fixed stars, and that it transcended the height of the highest planets, set aside Aristotle's opinion; placed the Galaxy in the firmament, or region of the fixed stars, and concluded it to be nothing but an assemblage of an infinite number of minute stars. Since the invention of the telescope, this opinion has been abundantly confirmed. By directing a good telescope to any part of the milky way, where before we only saw a confused whiteness, we now descry an innumerable multitude of little stars, so remote, that a naked eye confounds them. See ASTRONOMY.

GALBA (Servius Sulpicius), emperor of Rome, and the seventh of the Cæsars, born the 24th of December A. A. C. 5. He was gradually raised to the highest offices of the state, and exercised his power in the provinces with the greatest equity. He dedicated much of his time to solitary pursuits, to avoid the suspicions of Nero. Expressing his disapprobation of the emperor's oppression in the provinces, Nero ordered him to be put to death; but he escaped from the executioner, and was publicly saluted emperor. When seated on the throne, he suffered himself to be governed by favorites, who oppressed the citizens. Exemptions were sold at a high price; and impunity even for murder was to be purchased. Such irregularities greatly displeased the people; and Galba refusing to pay the soldiers the money he had promised them, they assassinated him in the seventy-third year of his age, and eighth month of his reign. The virtues which had shone so bright in Galba, when a private man, totally disappeared when he ascended the throne; and he who had showed himself the most impartial judge, forgot his duty when he became emperor.

GALBANUM, *n. s.* Sax. ȝalbanum; Gr. χαλβανη. A resinous gum.

We meet with *galbanum* sometimes in loose granules, called drops of tears, which is the purest, and sometimes in large masses. It is soft, like wax, and ductile between the fingers; of a yellowish or reddish colour: its smell is strong and disagreeable. It is of a middle nature between a gum and a resin, being inflammable as a resin, and soluble in water as a gum, and will not dissolve in oil as pure resins do. It is the produce of an umbelliferous plant. *Hill.*

GALBANUM issues from the stem of an umbelliferous plant, growing in Persia and many parts of Africa. See BUBON. The juice is semipellucid, soft, tenacious; of a strong smell, and a bitterish warm taste; the better sort is in pale colored masses, composed of clear white tears. Geoffroy relates, that a dark greenish oil is to be obtained from this by distillation, which, upon repeated rectifications, becomes of an elegant sky-blue color. The purer sorts of galbanum are said by some to dissolve entirely in wine, vinegar, or water; but these liquors are only partial menstrua with regard to this drug; nor do spirits of wine or oils prove more effectual in this respect: the best solvent is a mixture of two parts spirits of wine and one of water. Galbanum agrees in virtue with gum ammonia, but is generally accounted less efficacious in asthmas, and more so in hysterical complaints. It is an ingredient in the gum pills, the gum plaster, and some other officinal compositions.

GALE, *n. s.* Goth. *gol;* Belg. *koele;* Germ *gahling*, hasty; sudden. A wind which blows somewhat stronger than a breeze, but not tempestuously.

What happy *gale*
Blows you to Padua here, from old Verona?
Shakspeare.

Nor is there greater basenesse, then those mindes
That from an honest purpose can be wrought
By threatenings, bribes, smooth *gales*, or boystrous windes,
Whatever colour or excuse be brought.
George Withers.

Winds
Of gentlest *gale* Arabian odours fanned
From their soft wings, and Flora's earliest smells.
Milton.

Umbria's green retreats,
Where western *gales* eternally reside. *Addison.*

When a brisk *gale* against the current blows,
And all the watery plain in wrinkles flows,
Then let the fisherman his art repeat,
Where bubbling eddies favor the deceit.
Gay's Rural Sports.

When the long-sounding curfew from afar
Loaded with loud lament the lonely *gale*,
Young Edwin, lighted by the evening star,
Lingering and listening, wandered down the vale.
Beattie.

No prize, alas, but yet a welcome sail,
The blood-red signal glitters in the *gale*.
Byron. Childe Harolde.

GALE, in sea language, a term of various import. When the wind blows not so hard but that a ship may carry her top-sails a-trip (that is, hoisted up to the highest) they say it is a loom gale. When it blows very strong, it is a stiff, strong, or fresh gale. When two ships are near one another at sea, and, there being but little wind blowing, one of them finds more of it than the other, they say that the one ship gales away from the other.

GALE (Dr. John), an eminent Baptist minister of the last century, was born in London in 1680. He studied at Leyden, and afterwards at Amsterdam, under Limborch, and was chosen minister of the Baptist congregation in Barbican in 1715. He became a popular preacher, but is principally known by his Reflections on Dr. Wall's History of Infant Baptism, 8vo He died in 1721. Four volumes of his sermons

were published after his death. He is said to have projected an English translation of the Septuagint of Grabe.

GALE (Theophilus), an eminent nonconformist minister, was born in 1628. He was invited to Winchester in 1657, and continued a stated preacher there until the re-establishment of the church by Charles II., when he quitted his preferment. He was afterwards engaged by Philip lord Wharton as tutor to his sons, whom he attended to an academy at Caen, in Normandy; and afterwards became pastor to a congregation of Dissenters in Holborn, and master of a respectable academy at Newington. He died in 1678; and is principally known by his Court of the Gentiles, calculated to show, that the Pagan philosophers derived their most sublime sentiments from the Scriptures. Besides this work, he was the author of Philosophia Generalis, in duas partes disterminata, 8vo. Idea Theologiæ tam contemplativæ quam activæ, ad formam S. Scripturæ delineata, 8vo. The Anatomy of Infidelity, 8vo. &c.

GALE (Thomas), D. D. and F. R. S., a learned divine, born at Scruton, in Yorkshire, in 1636. He was educated at Cambridge, and became professor of Greek in that university. He was afterwards chosen head master of St. Paul's school, London; and wrote the inscriptions on the monument erected in memory of the conflagration in 1666. In 1676 he was made a prebendary in St. Paul's; and being elected F. R. S. presented a Roman urn to the society. About 1697 he gave to the new library of Trinity College, in Cambridge, a great number of Arabic MSS., and in 1697 was admitted dean of York. He died in that city in 1702; and was interred in the cathedral, where a monument was erected to his memory. He was one of the best Greek scholars of his age, and kept up a correspondence with the most learned men at home and abroad. He published, 1. Historiæ Poeticæ Antiqui Scriptores, 8vo. 2. Opuscula Mythologica, Ethica, et Physica, in Gr. and Lat. 8vo. 3. Herodoti Historia, fol. 4. Historiæ Anglicanæ Scriptores quinque, in fol. 5. Historiæ Britannicæ, Saxonicæ, Anglo-Danicæ, Scriptores quindecim, fol. 6. Rhetores Selecti, &c.

GALE (Roger), F. R. S. and A. S. S., eldest son of the preceding, was educated at Trinity College, Cambridge, of which he was chosen fellow in 1697. He was M. P. for North Allerton, in the first three parliaments of Great Britain. He was first vice-president of the Society of Antiquaries, and treasurer to the Royal Society. He died in 1744, and was esteemed one of the most learned men of his age. He published several valuable books, particularly an edition of Antoninus's Commentary.

GALEA, in antiquity, a light casque, headpiece, or morrion, which came down to the shoulders, commonly of brass. Camillus, according to Plutarch, ordered those of his army to be of iron, as being the stronger metal. The lower part of it was called buccula, and on the top was a crest. The Velites wore a light galea, made of the skin of some wild beast.

GALEANO (Joseph), a learned physician of Palermo, born in 1605. He was author of several medical works, and published a Collection of the Sicilian Poets, in 5 vols. He died in 1675.

GALEATED, *adj.* **Lat.** *galeatus.* Covered, as with a helmet; and in botany descriptive of plants which bear a flower resembling a helmet, as monkshood.

A *galeated* eschinus copped, and in shape somewhat more conick than any of the foregoing.

Woodward on Fossils.

GALEGA, in botany, a genus of the decandria order, and diadelphia class of plants; natural order thirty-second, papilionaceæ: CAL. composed of subulated nearly equal dents or segments; the legume has oblique striæ: SEEDS lying between them. Species thirty-six; chiefly natives of the Cape, South America, and India.

GALEN (Claudius), prince of the Greek physicians after Hippocrates, was born at Pergamus, in Asia Minor, A. D. 131. His father being possessed of an ample fortune, and well versed in philosophy, instructed his son in the first rudiments of learning, and afterwards procured him the greatest masters of the age. Galen, having finished his studies, chose physic for his profession, studied the works of Hippocrates, and at length resolved to travel, and to embrace every opportunity of inspecting on the spot the plants and drugs of various countries. With this view he went to Alexandria, where he staid some years; thence through Cilicia, Palestine, Crete, Cyprus, Lemnos, and the Lower Syria; in which last places he obtained a thorough insight into the nature of the Lemnian earth, and the opobalsamum: after this he returned home by Alexandria. Galen had been four years at Pergamus, where he had the care of the public gladiators, and his practice was attended with extraordinary applause, when some commotions induced him to settle at Rome, but the proofs he gave of his superior skill, added to the respect shown him by several persons of high rank, created him so many enemies among his brethren of the faculty, that he was obliged to quit that city, after having resided there four or five years. He had not long however returned to Pergamus, when he was recalled by the emperors Aurelius and Verus. After their death, he retired to his native country; where he died, about A. D. 200. He wrote in Greek; and is said to have composed 200 volumes, most of which were unhappily burnt in the temple of Peace. The best editions of those that remain, are, those of Basil in 1558, in 5 vols. and of Venice in 1625, in 7 vols. Galen was of a weak and delicate constitution, as he himself asserts; but nevertheless, by his temperance and skill in physic, arrived to a great age. One of his rules was, always to rise from table with some degree of appetite. He is justly considered as the greatest physician of antiquity, next to Hippocrates; and performed such surprising cures, that he was frequently accused of magic.

GALENIA, in botany, a genus of the digynia order, and octandria class of plants, natural order thirteenth, succulentæ: CAL. trifid: COR. none: CAP. roundish and dispermous.

GALENIC, or GALENICAL, *adj.* in medicine, is applied to that manner of considering and

treating diseases, founded on the principles of Galen, or introduced by Galen.

GALENISTS, or GALENITES, in church history, a branch of Mennonites, who take in several of the opinions of the Socinians, or rather Arians, touching the divinity of our Saviour. In 1664 the Waterlandians divided into two parties, of which the one were called Galenists, from their leader Abraham Galenus, a learned and eloquent physician of Amsterdam, and the other Apostolians.

GALEOPSIS, in botany, a genus of the angiospermia order, and didynamia class of plants; natural order forty-second, verticillatæ. The upper lip of the corolla is a little crenated or arched; the under lip more than bidentate. Species four, all indigenous to our own cornfields.

GALEOTI (Martio), secretary to Matthias, king of Hungary, tutor to his son John, and librarian at Buda, was born at Narni in Italy. He published a work entitled, De Homine Interiore et de Corpore ejus, in 4to, and a collection of bons mots of king Matthias. Being invited by Louis XI. of France, to his court, he went to Lyons, but meeting the king unexpectedly, he, in descending hastily to pay his respects to the monarch, fell, and, being very corpulent, was so much hurt, that he died soon after.

GALERICULATE, *adj.* Lat. *galerus*. Covered as with a hat.

GALERICULUM, in Roman antiquity, a cap worn both by men and women, consisting of skin so neatly dressed with hair, that the artificial covering could scarcely be distinguished from the natural. They were used by those whose hair was thin; and by wrestlers, to keep their own hair from receiving any injury from the oils with which they were rubbed before they exercised.

GALGACUS, the name given by Tacitus, and other Roman historians, to the king of Scots, who opposed Agricola, called by Buchanan, and our other Scots historians, Corbredus Galdus.

GALIANI (Ferdinand), an Italian ecclesiastic and writer, was born at Naples in 1720. His uncle, was archbishop and almoner to the king, and took care of his education. At the age of twenty, he wrote some popular verses on the death of the public executioner, in ridicule of the custom, then universal, of celebrating the memory of opulent persons, by eulogies. Not long after this, Benedict XIV. desiring Galiani's uncle to send him some of the stones thrown up by Mount Vesuvius, the archbishop entrusted the commission to his nephew, who wrote in the box, 'Si filius Dei es, fac ut *lapides* isti *panes* fiant.' For this piece of wit, the pope, it is said, gave him an abbey worth £700 a-year. In 1750 he published his Tractata della Moneta, which was followed by An Essay on the Commerce of Corn, printed at Paris, where he resided with the Neapolitan ambassador. On his return to Rome he was appointed a counsellor in the tribunal of commerce, and died in 1789. Besides the above works, he wrote a Treatise on the Neapolitan language, and another on the Armed Neutrality.

GALICIA, or GALLICIA, an important province of Spain, forming the north-west angle of that country. It is bounded on the north and west by the Atlantic, on the east by Asturia and Leon, and on the south by the Portuguese provinces of Tras-los-Montes and Entre-douro-é-Minho. Its mean extent is about forty-six leagues from north to south, and 140 leagues from east to west, having a territorial area of 16,746 square miles, and upwards of 1,000,000 inhabitants. It lies between 6° 37′ and 9° 13′ W. long., and 40° 56′ and 43° 46′ N. lat.

Galicia has the title of a kingdom, and is divided into seven districts or provinces. The principal towns are Compostella, Corunna, Lugo, Tuy, Orense, Finisterre, Vigo, &c. &c. Its capital is generally said to be Compostella in San-Jago; but Corunna has also been regarded as such. It has an archbishopric (San Jago), and a university; four bishoprics, Tuy, Orense, Mondonnedo, and Lugo; five cathedral and five collegiate chapters, several abbeys of Benedictines and Bernardines, two commanderies of religious orders, seven cities, 3683 parishes, and ninety-eight religious houses. This province has 100 leagues of coast, and its ports are numerous, both on the north and western ocean; but they in general are small. Those that deserve notice are, Maria, Corcuvion, Bayona, Pontevedra, Muroz, Guardia, Vigo, Corunna, Ferrol, Santa Marta, Vivero, Ribadeo, &c.

The climate of Galicia is mild upon the coast, and cold in the interior, which is exposed to winds and heavy rains. It is considered the most populous province in Spain, and is, in general, very mountainous, and well wooded, but intersected with beautiful valleys, and small plains. A chain of mountains proceeds from the Pyrenees near Roncevallos, between Biscay and Navarre, directing its course to the north-west, and leaving on its right the Asturias, penetrating by Leon into Galicia, which it traverses, and continues till it is stopped by the sea, after forming Cape Finisterre. The mountains of this branch have different names; the most considerable of which is the Sierra de Mondonnedo, of great extent, occupying the whole extremity of the north-east of Galicia towards Asturia, and proceeding to the north as far as Cape Ortegal, and to the west as far as the Atlantic.

Its chief rivers are the Eo, or Rio de Miranda, which separates it from Asturias, and, after pursuing a course of twenty-four leagues from south-east to the north, falls into the Northern Ocean above Ribadeo in Galicia, and Castropol in Asturia; the Ulla or Ilia, which has a course of twenty-three leagues from the north-east to the south-west; the Tambra, or Tamaris, which gives the name of Tamaricians to the people who occupy its banks, pursuing a course of twenty leagues from the north-east to the south-west; the Mandeo, whose course is sixteen leagues, from the east to the north-east; the Minho, which rises in the east of the Sierra Mondonnedo, and after receiving several tributary streams, and separating Galicia from Portugal, in a course of about fifty-two leagues, first from north to south and then to the south-west, falls into the ocean near the port of Guardia; the Sil, which rises in the mountains to the west of Leon, and after a course of thirty-three

falls into the Minho. In this province kon seventy rivers of some size.

ia was formerly celebrated for its mines: at are now chiefly known are copper, id tin. White marble and jasper are etween Corunna and Betanzos, as well as e, vitriol, sulphur, &c. These moun- so furnish excellent timber. Galicia abounds in mineral waters, and game. wheat, oats, millet, hemp, flax, lemons, ier fruit, with some wine, are its chief s. Fine oak, walnut, chestnut, and hazle ound, and the inhabitants rear many cattle, mules, asses, hogs, and poultry. armer keeps a flock of sheep and goats ortion to the extent of his land; and the ns are deemed laborious in the culture of il, and their general attention to agricul- But they are not much addicted to the ical arts or to commerce. There are, r, manufactories of woollen stuffs, coarse nd hosiery at Lugo; of ropes and sail- t Ferrol and Corunna; of linen at Tuy, silk in the territory of Montforte, in the of Lamos. Yet, on the whole, Galicia regard to manufactories, the least enter- part of Spain, and its natives are so fre- engaged in servile employment in the arts of the country, and are so accustomed reatment, that it has given rise to a pro- ommon in the neighbouring provinces, s treated me like a Gallego.' They are however, to be not deficient in manly e and spirit, and the temper evinced by it home is often indicative of energy and on of character.

coasts and rivers are plentifully supplied ll kinds of fish. The exports are cattle, nd the cloth it manufactures. They also to other provinces of Spain, table-linen, hides and leather, hats, tapes, knit ngs, wool and wine. The importations the English, French, and Dutch, are ed at Vigo, and the exportations sent lly from the port of Corunna. See NNA.

s country took its name from its ancient itants, the Callæci, and was constituted a om in the year 1060 by Ferdinand the , of Castile, who gave this province to his Don Garcias. Till the reign of Ferdinand d Isabella, however, the inhabitants paid respect to the royal authority, and the no- exercised a feudal sovereignty in their territories, conniving at the pillage of gers. The ancient inhabitants are cele- d in history for their exploits in war and ng, and fishing. Their wives ploughed the sowed, gathered the harvest, and took care eir families. The traveller, at present, finds ie mountains of Galicia simple and pure iers, and a quiet and very hospitable people, nally of good size, muscular, and robust: women are fair and handsome, with black and eyes, and fine and regular teeth, but very expressive features. Men, women, and lren go barefoot. The Galicians were the poets of Spain, and they composed and sung es before the descent of the Romans. The present language is a mixture of the ancient Castilian and Portuguese.

GALICIA, an extensive province of Austrian Poland, bounded on the north by Poland Proper, or the new kingdom of that name, on the east by Russia, on the south by Moldavia, Transylvania and Hungary, and on the west by Austrian Silesia. It lies between 18° 35′ and 26° 50′ of E. long., and 47° 50′ and 50° 45′ of N. lat., containing 32,521 square miles, and, including the adjacent province of the Bukowine, about 3,750,000 inhabitants.

With the exception of some branches of the Carpathians, towards the south, Galicia contains no mountains. It is watered by the Vistula, the Dniester, Dunajez, the San, and the Wisloka, besides other smaller streams; and ponds are numerous throughout the country. The climate is warm, and the soil in general very fertile, but the agriculture is in a very low state; still a considerable quantity of corn is exported. The other products are flax, rapeseed, and fruit, including grapes; but no good wine is made here. The horses are esteemed for their hardiness and swiftness, and black cattle are an article of export. By an authentic statement delivered to the imperial chambers of commerce at Vienna, in 1813, the stock of oxen, cows, and horses, was thus taken:—

Oxen . . .	340,168.
Cows . . .	622,151.
Horses . . .	238,790.

In the woods are wolves, bears, buffaloes, and game of all kinds; the beaver too is indigenous here, particularly in the neighbourhood of Grodek, and on the banks of the Bog. The cochineal insect is also found in Galicia, and gold is procured in small quantities from the sand of the Bistricza. Petroleum, flints of an excellent quality, and mineral waters, are found in different parts of the country; the mountains also contain iron ore, but the most important mineral production is salt, which exists in almost every hill, and is either used as dug from the mines, or as prepared by evaporation. The quantity annually produced is about 200,000 tons.

The character, manners, and language, of the Galicians differ little from those of the Poles in general except toward the east, where Russian is used. Although servitude has been of late abolished by the Austrian government, the habits consequent on that state of society will long remain; and the only difference as yet produced, has been to transfer the rod from the hand of the master to that of a magistrate or his deputy. Idleness is the bane of the country. The cottages of the peasantry are most wretched, and manufactures are almost unknown. The little inland commerce is in the hands of the Jews; but the property of land in the nobility. The distance from the sea-coast is a great impediment to the export of corn; but the level nature of the country is favorable to navigation; the boats used, draw little water, and the roads are generally good.

During the middle ages, Galicz and Wlodimir were two independent duchies of limited extent, occupying nearly the site of the present

Galicia. From the twelfth to the end of the fourteenth century they belonged to the kingdom of Hungary, but came at the last period, by marriage, to the crown of Poland. Still the kings of Hungary, however, retained the title and arms of the duchies; and at the partition of Poland, in 1772 and 1795, the emperor of Austria resumed, as king of Hungary, these possessions of his ancestors, together with part of the palatinate of Cracow, Masovia, Chelms, Volhynia, and Podolia, the whole of Sendomir, Lublin, Belcz, and Red Russia. These were formed into a kingdom, under the ancient title of Galicia and Lodomeria; but no division corresponding to the two names took place. The latter is rarely found in maps either of Poland or Austria.

In 1796 the whole was divided into Eastern and Western Galicia, containing a population of nearly 5,000,000. But in 1809 Austria was obliged to make a cession of the chief part of Western Galicia to Russia, and to the newly established duchy of Warsaw; which country has not since been restored to Austria, but now forms part of the kingdom of Poland. In Eastern Galicia, Russia obtained a population of 400,000, in four districts or circles; but these were restored to Austria in 1815. The language used in public proceedings is German, and the state religion of Galicia Catholic, but the number of Greek parishes is double that of the Catholic. There is an archbishop of each religion resident at Lemberg, as well as a Lutheran superintendant. The Jews in 1817 were 422,000 in number.

Galicia now bears the title of kingdom, and is governed by a viceroy, who resides at Lemberg, which is also the meeting place of the diet, and the seat of the higher courts of law. The whole kingdom is divided into eighteen circles, and produces £1,200,000 of revenue. In 1817 a constitution was published, and a representative government established. The states consist of deputies from the clergy, the nobles, the knights, and the royal towns. The deputies receive a fixed salary from the state. Of the towns, Lemberg is the only one of magnitude, and the only one which as yet sends deputies. The others are Halicz or Galitsch (which gave name to the province), Brody, Przemysl, Jaroslow, Stanislawow, Tarnopol, and Czernowitz. The last is the capital of the Bukowine.

GALICIA, or GUADALAXARA. See GUADALAXARA.

GALILEE, in ancient geography, a province of Judea, bounded by mount Lebanon on the north, by the Jordan and the sea of Galilee on the east, by the Chison on the south, and by the Mediterranean on the west. It was the scene of many of our Saviour's miracles; but the bounds of the country are not now well known, nor the places where many of the towns stood. It belongs to the Turks.

GALILEANS, a sect of the Jews. Their founder was one Judas, a native of Galilee, who, esteeming it an indignity to the Jews to pay tribute to strangers, raised up his countrymen against the edict of Augustus, which had ordered a taxation of all the subjects of the Roman empire. They insisted that God alone should be owned as Lord. In other respects they were of the opinion of the Pharisees; but, as they judged it unlawful to pray for infidel princes, they separated from the rest of the Jews, and performed their sacrifices apart. As our Saviour was supposed to be a native of Galilee, and his apostles were mostly Galileans, they were suspected to be of this sect; and it was on this principle, as St. Jerome observes, that the Pharisees laid a snare for him, by asking, whether it was lawful to give tribute to Cæsar; that, in case he denied it, they might nave an occasion of accusing him.

GALILEO (Galilei), the famous mathematician and astronomer, was the son of a Florentine nobleman, and born in 1564. He was designed by his father for the profession of medicine, but had from his infancy a strong inclination to philosophy and the mathematics; and made great progress in these sciences. In 1592 he was chosen professor of mathematics at Padua; and during his abode there invented the telescope; or, according to others, improved that instrument, so as to make it fit for astronomical observations. In 1611 Cosmo II., grand duke of Tuscany, sent for him to Pisa, where he made him professor of mathematics, with a handsome salary; and soon after inviting him to Florence, gave him the office and title of principal philosopher and mathematician to his highness. He had been but a few years in Florence, before he was convinced, that Aristotle's doctrine, however ill-grounded, was held too sacred to be called in question. Having observed, however, some solar spots in 1612, he printed a tract on the subject in 1613 at Rome, in which, and in some other pieces, he ventured to assert the truth of the Copernican system. For these he was cited before the inquisition; and, after some months' imprisonment, was released upon a simple promise, that he would renounce his heretical opinions, and not defend them by word or writing. But having, in 1632, published at Florence his Dialogues of the two greatest systems of the world, the Ptolemaic and Copernican, he was again cited before the inquisition, and committed to the prison of that court at Rome. On June 22d, N. S. 1632, the congregation was convened, and in his presence pronounced sentence against him and his books, obliging him to abjure his errors in the most solemn manner; committed him to the prison of their office during pleasure; and enjoining him, as a saving penance, for three years, to repeat once a-week the seven penitential psalms. This sentence Pope Urban VIII. mitigated, by confining him in the palace of the Medici at Rome, and finally to his own country-house in the vicinity of Florence, where he spent the remainder of his days. Devoting himself, in this retreat, during eight years, to the perfecting of his telescope, until by continued application, and the effects of the night air, he became blind three years before his death. This event took place in January 1642, in the seventy-eighth year of his age.

Among various useful inventions, of which Galileo was the author, is that of the simple pendulum, which he had made use of in his astronomical observations, and which his natural

son Vicenzia first applied to clocks. The advances made by Galileo himself in this important discovery, have been disputed, and are so admirably detailed by himself, that we subjoin a portion of his letter to the States of Holland on the subject, dated March, 1636:—'I possess,' he says, 'measurers of time (mesura tore del tempo) such, that if one constructs four or six similar instruments, one will find, as a proof of their accuracy, that the times which they measure and indicate (tempi da quelli mesurati è mostrati) do not differ one second, not only in an hour, but a day, a month; so uniform are these clocks (oruoli), fully (pur troppo) astonishing to observers of celestial phenomena and motions; the more because the construction of those instruments (instrumenti) is very easy and simple, and little subject to those external hindrances which other instruments devised for the same purpose are liable to.' The word oruoli (horologes), which here occurs, must be particularly attended to; for, though it suggests to us, and did even suggest at that time the idea of an instrument indicating the time by the regular motion of the hands, it appears from Galileo's own description of them, in a subsequent letter, written in June of the same year, that he meant something quite different from it. After explaining the chief principles of this theory of the pendulum from his Dialogi de Motu (which were then printing at Elzevir's), he adds: 'From these true and well established principles, I derived the construction of my reckoners of time (numeratore del tempo), and I use not a weight suspended by a thread, but a pendulum (pendole) of some ponderous and more solid stuff (de materia solida è grave,) as brass or copper: I make the pendulum in the form of a sector of twelve or fifteen degrees, its semidiameter of two or three palms (between sixteen and twenty-four inches), the larger it is the more easy will it be to be employed (con minor tedio se gli potra assistere). I make this sector thick in the semidiameter of the middle, and becoming thinner towards the edge, by which means I obtain a cutting side, which will enable it to overcome, as much as possible, the resistance of the air, which alone retards its motion. In the centre is a hole through which an iron axis passes, like that of a balance, with a sharp edge below, resting on two supports of bell-metal.' 'It will be necessary,' he farther adds, 'in order to continue its motion, that an assistant shall, from time to time, give it a pretty strong impulse (un impulso gagliardo), to restore the length of its vibrations.' But as the same assistant has to count the number of oscillations which it performs, he proposes, as a tolerably easy mode of avoiding this troublesome labor (un assai commodo provredimento), that from the middle of the vibrating sector there should project a pin, which, when the pendulum swings to one side, should meet the upright part of a tooth belonging to a small crown-wheel, as light as paper (leggierissima quanto una carta), and impel it round its axis, but on swinging backwards, ascend along the sloping side of the same tooth, and leave the wheel unmoved; so that one tooth might be impelled at each entire vibration, and the number of vibrations be shown by the revolution of the wheel, which might likewise be connected with a larger wheel by means of a pinion.' 'But,' he adds, 'it is unnecessary to explain all this to you, who possess choice and practised artists in the construction of clocks and other machines; because those people, on learning the new principle, that a pendulum performs its oscillations in very equal times, whether it describes larger or smaller arches, will be able to draw from it much more subtile consequences than I can imagine.' From this it appears doubtful whether Galileo ever himself tried the contrivance of the pin and wheel, and did not rather throw it out as a hint for others to improve upon, than as the result of actual experience. He then concludes in these remarkable words:—'In these very simple pendulums, then, which are subject to no alteration whatever (alterazione alcune), is contained the method to preserve in an easy manner a constant measure of time: and you will perceive their utility, and the advantages they possess in astronomical observations, which do not require that the oruolo should always go, but where it is sufficient to know from the hours of the noon, or of the setting of the sun, the smaller divisions of time, for an eclipse, conjunction, or other celestial phenomenon.'

To Galileo also the world is indebted for the discovery of the rotation of the sun upon its own axis, and of the general planetary character of the moon. He also invented a machine by means of which the Venetians rendered their Laguna fluid and navigable; and the principles which he laid down in regard to gravitation, produced the barometer. A great number of his treatises were published in a collection by signior Mendessi, under the title of L'opera di Galilei Galileo Lynceo. A volume also of his letters to several learned men, and solutions of several problems, were printed at Bologna in 4to. Besides these, he wrote many others, which were unfortunately lost through his wife's superstition; who, solicited by her confessor, gave him leave to peruse her husband's MSS., of which he tore and took away as many as he thought not fit to be published.

GALIOT, *n. s.* Fr. *galiotte*. A little galley; a sort of brigantine, built very slight, and fit for chace. It carries but one mast, and two or three pattereroes: it can both sail and row, and has sixteen or twenty seats for the rowers, with one man to each oar.

Barbarossa sent two notable pyrates with thirty *galiots*, who, landing their men, were valiantly encountered, and forced again to their *galiot*.
Knolles's History.

GALIUM, in botany, a genus of the monogynia order, and tetrandia class of plants; natural order forty-seventh, stellatæ: COR. monopetalous and plain; and there are two roundish SEEDS. There are many species; of which the most remarkable are the following:—

G. aparine, clivers, or goose-grass, has a square, very rough, jointed, very weak stem, two, three, or four feet long, and adhesive: the branches are opposite; the joints hairy at the base: the leaves, consisting of eight or ten at each joint, are narrow, pointed, above rough, beneath smooth, and carinated: the seeds are

rough; flowers white, small, few, on slender foot-stalks on the tops of the branches. It is common in fields by the sides of hedges, &c. The expressed juice of this plant taken internally, and the bruised leaves applied by way of poultice, are said to have been used with success as a cure for the cancer.

G. verum, the yellow lady's bed-straw, has a firm, erect, brown, square stem; the leaves generally eight in each whirl, linear, pointed, brittle, and often reflex; branches short, generally two from each joint, terminating in spikes of small yellow flowers. It grows commonly in dry ground, and on road sides. The flowers coagulate boiling milk; and the best Cheshire cheese is said to be prepared with them. The French prescribe them in hysteric and epileptic cases. Boiled in alum-water they tinge wool yellow. The roots dye a red not inferior to madder; for which purpose they are used in the island of Jura. In the Edinburgh Medical Commentaries we have accounts of some violent scorbutic complaints being cured by the juice of this plant. Sheep and goats eat the plant; horses and swine refuse it; cows are not fond of it.

GALL, *n. s.*, *v. a.* & *v. n.* Sax. ȝeala; Dut. *galle;* Fr. *galer*. The bile, an animal secretion remarkable for its bitter taste: also the bladder which contains it. Preternatural tumors which grow on trees, and are used in the composition of ink. This word is used figuratively to denote rancor, malignity, or anger; a slight scratch, or abrasion of the skin. The verb signifies to hurt by fretting the skin; to wear away by attrition; to fret; to vex; to harass; to keep in a state of uneasiness.

Then these wretches, full of all frowardnesse,
Gave hym to drinke eisell tempred with *gall*.
Chaucer. Lament of Mary Magdaleine.

They did great hurt unto his title, and have left a perpetual *gall* in the minds of the people.
Spenser on Ireland.

In honour of that action, and to *gall* their minds who did not so much commend it, he wrote his book.
Hooker.

Come to my woman's breast,
And take my milk for *gall*, you murthering ministers!
Shakspeare.

A honey tongue, a heart of *gall*,
Is fancy's spring, but sorrow's fall. *Id.*

I have seen you glecking and *galling* at this gentleman twice or thrice. *Id.*

Poison be their drink!
Gall, worse than *gall*, the daintiest meat they taste!
Id.

He doth object, I am too great of birth;
And that my state being *galled* with my expence,
I seek to heal it only by his wealth. *Id.*

Thither write, my queen,
And with mine eyes I'll drink the words you send,
Though ink be made of *gall*. *Id. Cymbeline.*

I'll touch my point
With this contagion, that, if I *gall* him slightly,
It may be death. *Id. Hamlet.*

Fading flowers in every field,
To winter floods their treasures yield;
A honey'd tongue, a heart of *gall*
Is fancy's spring, but sorrow's fall. *Raleigh.*

Besides the acorns, the oak beareth *galls*, oak-apples, and oak-nuts. *Bacon's Natural History.*

The married couple, as a testimony of future concord, did cast the *gall* of the sacrifice behind the altar.
Browne.

No man commits any sin but his conscience smites him, and his guilty mind is frequently *galled* with the remembrance of it. *Tillotson.*

She still insults, and you must still adore;
Grant that the honey's much, the *gall* is more.
Dryden's Juvenal.

Malpighi, in his treatise of *galls*, under which name he comprehends all preternatural and morbose excrescences, demonstrates that all such excrescences where any insects are found, are excited by some venenose liquor, which, together with their eggs, such insects shed. *Ray on the Creation.*

In our wars against the French of old, we used to *gall* them with our long bows, at a greater distance than they could shoot their arrows. *Addison.*

Suppose your hero were a lover,
Though he before had *gall* and rage;
He grows dispirited and low,
He hates the fight, and shuns the blow.
Prior.

Gall is the greatest resolvent of curdled milk: Boerhaave has given at a time one drop of the *gall* of an eel with success. *Arbuthnot on Diet.*

The Aleppo *galls*, wherewith we make ink, are no other than cases of insects, which are bred in them.
Derham.

How sore I *galled* him only Heaven could know,
And he that felt, and I that caused the woe. *Pope.*

The *gall*-bladder is a very remarkable contrivance. It is the reservoir of a canal. *Paley's Theology.*

GALL, in the animal economy. See BILE and ANATOMY. Gall was generally given amongst the Jews to persons suffering death under the execution of the law, to make them less sensible of their pain; but gall and myrrh are supposed to have been the same thing; because, at our Saviour's crucifixion, St. Matthew says, they gave him vinegar to drink mingled with gall; whereas St. Mark calls it wine mingled with myrrh. Perhaps they distinguished every thing bitter by the name of gall. The Greeks and Romans also gave such a mixture to persons suffering a death of torture. Many experiments have been made upon the gall of different animals, but few conclusions can be drawn from them with any certainty; as there must always be a considerable difference between the effects of acids, or other menstrua, upon dead matter, and in the living system. Dr. Percival, however, showed that putrid bile may be perfectly corrected and sweetened by an admixture of the vegetable acids, vinegar, and juice of lemons. These, he observes, have this effect much more completely than the mineral ones; and hence, he thinks, arises the great usefulness in the vegetable acids of autumnal diseases; which are always attended with a putrescent disposition of the bile, owing to the heat of the preceding summer. He takes notice of a common mistake among physicians, who frequently prescribe elixir of vitriol in those diseases where vinegar or lemon juice would be much more effectual. From this effect of acids on the gall, he also thinks, we may see why the immoderate use of acids is so pernicious to digestion. It is necessary to health that the gall should be in some degree acrid and alkalescent, but, as acids have the property of rendering it perfectly mild and sweet, they must be propor-

tionably pernicious to the due concoction and assimilation of the food; which, without an acrid bile cannot be accomplished. Hence the body is deprived of its proper nourishment and support, the blood becomes vapid and watery, and a fatal cachexy unavoidably ensues. This has been the case with many unfortunate persons, who, in order to reduce their excessive corpulency, have indulged themselves in the too free use of vinegar. From the mild state of the gall in young children, Dr. Percival also thinks it is, that they are so much troubled with acidities.

GALL, in natural history, denotes any protuberance, or tumor, produced by the puncture of insects on plants and trees of different kinds. These galls are of various forms and sizes, and no less different with regard to their internal structure. Some have only one cavity, and others a number of small cells communicating with each other. Some of them are as hard as the wood of the tree they grow on, whilst others are soft and spongy; the first being termed gall-nuts, and the latter berry-galls, or apple-galls. See CYNIPS. The external coat of the excrescence described above, is dried by the air, and grows into a figure which bears some resemblance to the bow of an arch, or the roundness of a kernel. This little ball receives its nutriment, growth, and vegetation, as the other parts of the tree, by slow degrees, and is called the gall-nut. The worm that is hatched under this spacious vault, finds in the substance of the ball, which is as yet very tender, a nourishment suitable to its nature; gnaws and digests it till the time of its transformation to a nymph, and from that state soon changes into a fly. After this the insect disengages itself from its confinement, and takes its flight into the open air. The case, however, is different with respect to the gall-nut that grows in autumn. The cold weather frequently comes on before the worm is transformed into a fly, or before the fly can pierce through its enclosure. The nut falls with the leaves; but although it might now be supposed that the fly within is lost, yet in fact its being covered up so close is the means of its preservation. Thus it spends the winter in a warm house, where every crack and cranny of the nut is well stopped up; and lies buried under a heap of leaves, which preserve it from the injuries of the weather. This apartment, however, though so commodious a retreat in winter, is a prison in spring. The fly, roused out of its lethargy by the vernal heat, breaks its way through and ranges where it pleases. A very small aperture is sufficient, as at this time the fly is but a diminutive creature. Besides, the ringlets whereof its body is composed, dilate and become pliant in the passage. A very small quantity of oak galls, put into a solution of vitriol in water, though but very weak, give it a purple or violet color; which, as it grows stronger, becomes black; and on this property depends the art of making our writing ink, as also the arts of dying and dressing leather, and other manufactures. See INK. The best galls come from Aleppo: these are not quite round and smooth like the other sorts, but have several tubercles on the surface. Galls have a very austere styptic taste, without any smell: they are very strong astringents, and as such have been sometimes made use of both internally and externally, but are not much taken notice of in the present practice. Some recommend an ointment of powdered galls and hog's lard as very effectual in certain painful states of hæmorrhois; and it is alleged that the internal use of galls has cured intermittents after the Peruvian bark has failed. A mixture of galls with a bitter and aromatic has been proposed as a substitute for the bark. Deyeux investigated the properties of galls with considerable care; and more lately Sir Humphry Davy examined the same subject. The strongest infusion Sir H. Davy could obtain at 56° Fahrenheit, by repeated infusion of distilled water, on the best Aleppo galls, broken into small pieces, was of the specific gravity of 1·068. 400 grains of this infusion, evaporated at a heat below 200°, left 53° of solid matter, which consisted of about 0·9 tannin, and 0·1 gallic acid, united to a portion of extractive matter. 100 grains of the solid matter left, by incineration, nearly 4½, which were chiefly calcareous matter, mixed with a small portion of fixed alkali.

From 500 grains of Aleppo galls Sir H. Davy obtained, by infusion as above, 185 grains of solid matter, which on analysis appeared to consist of tannin 130; mucilage, and matter rendered insoluble by evaporation, 12; gallic acid, with a little extractive matter, 31; remainder, calcareous earth and saline matter, 12.

GALL (St.), a town and canton of Switzerland, bounded by Upper Austria and by the cantons of the Grisons, Glarus, Schweitz, and Zurich. The extent of the canton is about 1100 square miles, and its population 134,000, three-fifths Catholics. This was formerly one of the estates belonging to the ancient abbey of St. Gall. The southern part is mountainous and rugged; but to the north are beautiful cultivated hills, plains, and valleys, covered with vineyards and fields, adapted more particularly to pasture. The frequency of rain is favorable to this, and the breed of cattle is much esteemed.

The chief mountains of the canton are the Kammor and the Sentis; between 7000 and 8000 feet above the level of the sea. The rivers are the Rhine, the Tamin, the Saar, the Sitter: part of the lakes of Zurich and Constance, and the greater part of that of Wallenstadt, are also in this canton. The products are corn, wine, flax, hemp, and maize. The chief mineral is iron, which the inhabitants are partly employed in manufacturing, as well as in the linen and cotton manufactures. The government is aristo-democratical; the great council consisting of eighty-six Catholics and sixty-six Protestants; the small or executive council of nine members. The canton is divided into eight districts, and is bound to furnish to the confederation of Switzerland 2630 men, and £2500 sterling. The capital of the canton, situated between two mountains on the rivulet of Steinach, is an excellent trading town; well built, and surrounded with walls and ditches. It contains, including its three suburbs, about 9000 inhabitants, for the most part Protestants. Objects of curiosity here are the old Benedictine Abbey, from which the town takes its name; the academy and the gymnasium (with nine

classes), the cabinets of natural history and coins, and the public library. The principal church, council-house, arsenal, and hospital, are also worthy of notice. Cotton and linen stuffs of extreme fineness are made here, as well as valuable pieces of embroidery, the inhabitants having carried spinning and other machines to great perfection. The environs are covered with bleaching grounds.

GALLA, a people of Ethiopia, or Southern Abyssinia, dwelling originally, as Mr. Bruce supposes, under the line, and exercising the profession of shepherds, which they still continue to do. For many years, he says, 'they have been constantly migrating northwards, though the cause of this migration is not known.' At first they had no horses; but, as they proceeded northward, and conquered the Abyssinian provinces, they soon furnished themselves with them, and now make little account of infantry in their armies. On the frontiers of Abyssinia, the multitude divided, and part directed their course towards the Indian Ocean; after which, having made a settlement in the eastern part of the continent, they turned southward into the countries of Bali and Dawaw, which they entirely conquered, and settled there about 1537. Another division, having taken a westerly course, spread themselves along the banks of the Nile, surrounding the country of Gojam, and, passing eastward behind the country of the Agows, extended their possessions as far as the territories of the Gongas and Gasats. Since that time the Nile has been the boundary of their possessions; though they have frequently plundered, and sometimes conquered the Abyssinian provinces on the other side of the river. A third division has settled to the south of the low country of Shoa, which the governor of that province has permitted, in order to form a barrier betwixt him and the territories of the emperor, on whom he scarcely acknowledges any dependence. In modern times, the most remarkable of these tribes are, the Boren Galla, who, under Guxo, their chief, have obtained possession of the provinces of Gogam, Demot, and Dembea, including Gondar, the capital of Abyssinia. Another division is called the Adjow Galla, who, under Gojee and Sibar, have occupied the southern provinces of Amhara, Begemder, and Angott. Gojee lately attacked Tigre with 40,000 horse, but was defeated with great slaughter. Mr. Salt mentions two tribes, the Assabo in the west, and the Woldutoki in the east, who retain all the original barbarism of this race.

The Galla are of a brown complexion, and have long black hair; but some of them, who live in the valleys, are entirely black. At first their common food was milk and butter; but, since their intercourse with the Abyssinians, they have learned to plough and sow their land, and to make bread: each of the three divisions are subdivided into seven tribes. In their behaviour they are extremely barbarous; and lived, until lately, in continual war with the Abyssinians, whom they murder without mercy. Yet, notwithstanding their cruelty abroad, they have always lived under the strictest discipline at home; and every broil or quarrel is instantly punished. Bruce says they have a kind of nobility, from among whom only the sovereign can be chosen; but Mr. Salt found no traces of this usage.

The Galla are reported to be very good soldiers, especially in cases of surprise; but, like most other barbarians, have no constancy nor perseverance after the first attack. They will, however, perform extraordinary marches, and are excellent light horse for a regular army in an hostile country; but are very indifferently armed. In their customs, they are described as filthy to the last degree. They anoint their heads and whole bodies; in which, as well as in other respects, they greatly resemble the Hottentots. It has been supposed that they have no religion whatever; but Mr. Bruce is of opinion that this is a mistake. The tree called wanzey, he says, is undoubtedly worshipped by all the three nations as a god; and they have likewise certain stones which are worshipped as gods. They also worship the moon, and some stars, when in certain positions, and at some particular seasons of the year. They also believe in a resurrection; and have some faint notions of a state of future happiness. To the south they profess the Mahommedan religion. They all intermarry with each other, but will not allow strangers to live among them, though the Moors trade with them. They deal in blue Surat cloth, myrrh, and salt. Polygamy is allowed among them, and the women solicit their husbands to take others to their embraces, that they may have numerous families of children; as the Galla, according to Mr. Bruce, always fight in families, whether against foreign enemies, or with one another. Mr. Salt contends, that the Mahommedan religion, to which a large portion of these people have in modern times become converted, has decidedly improved them.

GALLAND (Anthony), a learned antiquarian, member of the Academy of Inscriptions, and professor of Arabic in the Royal College of Paris, was born of poor parents at Rollo, in Picardy, in 1646. Having studied at the Sorbonne and other celebrated schools, he travelled into the east; where he acquired great skill in the Arabic language, and in the manners of the Mahommedans. He wrote, 1. An Account of the Death of the Sultan Osman, and the Coronation of the Sultan Mustapha. 2. A Collection of Maxims, drawn from the Works of the Orientals. 3. A Treatise on the Origin of Coffee. He also translated the Arabian Nights' Entertainment, and died in Paris in 1715.

GAL'LANT, *adj.* & *n. s.* } Fr. *galant*; Ital.
GAL'LANTLY, *adv.* } *galante*; Span. *gala*,
GAL'LANTRY, *n. s.* } *galano*, fine dress.

These words are descriptive of persons and actions; as they are gay, brave, fine, courtly to ladies: also used in a bad and licentious sense.

But, fare thee well, thou art a *gallant* youth.
Shakspeare.

One, worn to pieces with age, shews himself a young *gallant*. *Id.*

Hector, Deiphobus, and all the *gallantry* of Troy, I would have armed to day. *Id.*

There are no tricks in plain and simple faith;
But hollow men, like horses hot at hand,
Make *gallant* shew and promise of their mettle.
Id.

, that any should kill his uncle, made him
revenge in manner *gallant* enough. *Sidney.*
iscoursed, how *gallant* and how brave a thing
l be for his highness to make a journey into
and to fetch home his mistress. *Clarendon.*
Make the sea shine with *gallantry*, and all
e English youth flock to their admiral.
Waller.
e gay, the wise, the *gallant*, and the grave,
ued alike, all but one passion have. *Id.*
e *gallants*, to protect the lady's right,
r fauchions brandished at the grisly spright.
Dryden.
nts look to't, you say there are no sprights;
l come dance about your beds at nights. *Id.*
had left the good man at home, and brought
er *gallant*. *Addison's Spectator.*
uld, if possible, represent the errors of life,
lly those arising from what we call *gallantry*, in
manner as the people of pleasure may read me.
case I must not be rough to gentlemen and
but speak of sin as a gentleman. *Steele.*
he martial Moors, in *gallantry* refined,
ent new arts to make their charmers kind.
Granville.
have not dealt so *gallantly* with us as we did
you in a parallel case: last year a paper was
t here from England, which we ordered to be
by the common hangman. *Swift.*
ooks like a sort of compounding between virtue
ice, as if a woman were allowed to be vicious,
led she be not a profligate; as if there were a
n point where *gallantry* ends, and infamy begins.
Id.
When first the soul of love is sent abroad,
e gay troops begin
gallant thought to plume their painted wings.
Thomson.
en there were Frenchmen, *gallant*, young, and
gay,
I'm too great a patriot to record
r Gallic names upon a glorious day. *Byron.*

ALLE, or PORT GALLE, a sea-port town
fort on the south-west coast of Ceylon;
n by the Dutch from the Portuguese in 1640,
by the British in February, 1796. See
LON. It is ninety-eight miles south of
dy.

ALLEASS, *n. s.* Fr. *galeas*. A heavy, low-
t vessel, with both sails and oars; it carries
e masts, but they cannot be lowered, as in a
ey. It has thirty-two seats for rowers, and
or seven slaves to each. They carry three tier
guns at the head, and at the stern there are
tier of guns.

My father hath no less
han three great argosies, besides two *galleasses*,
nd twelve tight gallies. *Shakspeare.*
he Venetians pretend they could set out, in case
great necessity, thirty men of war, a hundred gal-
, and ten *galleasses*. *Addison on Italy.*

ALLEON, *n. s.* Fr. *galion*, a large ship
h four or sometimes five decks, now in use
y among Spaniards.
I assured them that I would stay for them at Tri-
ado, and that no force should drive me thence, ex-
t I were sunk, or set on fire by the Spanish *gal-*
s. *Raleigh's Apology.*
The number of vessels were one hundred and
rty, whereof galleasses and *galleons* seventy-two,
dly ships, like floating towers or castles.
Bacon's War with Spain.

GALLEONS were formerly employed in the Spanish West India trade. The Spaniards sent annually two fleets: the one for Mexico, which they call the flota; and the other for Peru, which they call the galleons. By a general regulation made in Spain, it was established, that there should be twelve men of war and five tenders annually fitted out for the armada, or galleons; eight ships of 600 tons burden each, and three tenders, one of 100 tons, for the island of Margarita, and two of eighty each, to follow the armada; for the New Spain fleet, two ships of 600 tons each, and two tenders of eighty each; and for the Honduras fleet, two ships of 500 tons each: and in case no fleet happened to sail any year, three galleons and a tender should be sent to New Spain for the plate. These regulations, of course, the independence of South America has superseded.

GALLERY, *n. s.* Fr. *galerie*; Ital. and Lat. *galeria*, a fine room. A covered walk along the floor of a house, into which the doors of the apartments open; in general any building of which the length much exceeds the breadth; the seats in the playhouse above the pit.

High lifted up were many lofty towers,
And goodly *galleries* fair overlaid. *Spenser.*
Your *gallery*
Have we passed through, not without much content.
Shakspeare.
The row of return on the banquet side, let it be all stately *galleries*, in which *galleries* let there be three cupolas. *Bacon.*
In most part there had been framed by art such pleasant arbours, that, one answering another, they became a *gallery* aloft from tree to tree, almost round about, which below gave a perfect shadow.
Sidney.
There are covered *galleries* that lead from the palace to five different churches. *Addison.*
While all its throats the *gallery* extends,
And all the thunder of the pit ascends. *Pope.*
Bombastry and buffoonery, by nature lofty and light, soar highest of all, and would be lost in the roof (of the theatre) if the prudent architect had not, with much more foresight, contrived for them a fourth place, called the twelve-penny *gallery*, and there planted a suitable colony, who greedily intercept them in their passage. *Swift.*
She clapped her hands and thro' the *gallery* pour,
Equipped for flight, her vassals, Greek and Moor.
Byron. Corsair.
I pass my evenings in long *galleries* solely,
And that's the reason I'm so melancholy.
Id. Don Juan.

GALLERY, in gardening, an ornament made with trees of different kinds. Galleries are very common in the French gardens, but are seldom introduced into the British ones, especially since the taste for clipped trees has been exploded. For those, however, who may still choose to have them, Miller gives the following directions:—In order to make a gallery in a garden, with porticoes and arches, a line must first be drawn of the length you design the gallery to be; which being done, it is to be planted with hornbeam, as the foundation of the gallery. The management of galleries is not difficult. They require only to be digged round about, and sheared a little when there is occasion. The chief difficulty is in the ordering the fore part of the gallery, and

in forming the arches. Each pillar of the porticoes or arches ought to be four feet distant from one another, and the gallery twelve feet high, and twenty feet wide, that there may be room for two or three persons to walk abreast. When the hornbeams are grown to the height of three feet, the distance of the pillars well regulated, and the ground-work of the gallery finished, the next thing to be done is to form the frontispiece; to perform which, you must stop the hornbeam between two pillars for that purpose, which forms the arch. As it grows, cut off those boughs which outshoot the others. In time they will grow strong, and may be kept in form by the shears. Portico galleries may be covered with lime-trees.

Gallery, in a ship, is a frame, made in the form of a balcony, at the stern of a ship, without board; into which there is a passage out of the admiral's or captain's cabin.

Gallery, in fortification, a covered walk across the ditch of a town, made of strong beams, covered with planks, and loaded with earth; sometimes it is covered with raw hides, to defend it from the artificial fires of the besieged.

Gallery of a Mine is a narrow passage, or branch of a mine, carried on under ground to a work designed to be blown up. See Mine.

GALLETYLE, *n. s.* This word has the same import as gallipot; a fine painted tile.

Make a compound body of glass and *galletyle*; that is, to have the colour milky like a chalcedon, being a stuff between a porcellane and a glass.
Bacon's Physical Rem.

GALLEY, *n. s.* Ital. *galea*; Fr. *galere*; old Fr. *galoie, galère*; barb. Gr. γαλαια. Derived according to some from *galea*, a helmet, pictured formerly on the prow of a vessel, according to others from γαλεωτης, the sword fish, or from galleon, expressing in Syriac men exposed to the sea. Heb. גל, a wave, Minsheu. This word is the root of galleass, gallion, galliot; it has two general acceptations; a vessel driven with oars, much in use in the Mediterranean; and thus considered as a place of punishment, because criminals are condemned to row in them.

In the ages following, navigation did every where greatly decay, by the use of *gallies*, and such vessels as could hardly brook the ocean. *Bacon.*

Jason ranged the coasts of Asia the Less in an open boat or kind of *galley*. *Raleigh's History.*

On oozy ground his *gallies* moor;
Their heads are turned to sea, their sterns to shore.
Dryden.

The most voluptuous person, were he tied to follow his hawks and his hounds, his dice and his courtships every day, would find it the greatest torment that could befal him: he would fly to the mines and the *gallies* for his recreation, and to the spade and the mattock for a diversion from the misery of a continual uninterrupted pleasure. *South.*

In Coron's Bay floats many a *galley* light.
Byron. Corsair.

GALLEY-SLAVE, *n. s.* Galley and slave. A person condemned for some crime to row in the galleys.

As if one chain were not sufficient to load poor men, he must be clogged with innumerable chains: this is just such another freedom as the Turkish *galley-slaves* do enjoy. *Bramhall.*

The surges gently dash against the shore,
Flocks quit the plains, and *galley-slaves* their oar.
Garth.

Hardened *galley-slaves* despise manumission.
Decay of Piety.

Galleys are low flat-built vessels, furnished with one deck, and navigated with sails and oars The largest sort were those employed by the Venetians. They were commonly 162 feet long above, and 133 feet by the keel: thirty-two feet wide, with twenty-three feet length of stern-post. They were furnished with three masts, and thirty-two banks of oars; every bank containing two oars, and every oar being managed by six or seven slaves, usually chained thereto. In the fore part they had three little batteries of cannon, of which the lowest consisted of two thirty-six-pounders, the second of two twenty-four-pounders, and the uppermost of two two-pounders; three eighteen-pounders being also planted on each quarter. The complement of men for one of these galleys was 1000 or 1200; and they were esteemed very convenient for bombarding or making a descent upon an enemy's coast, as drawing but little water; and, having by their oars frequently the advantage of a ship of war, in light winds or calms, by cannonading the latter near the surface of the water, or by scouring her whole length with their shot, and at the same time keeping on her quarter or bow, so as to be out of the direction of her cannon. The galleys next in size to these, which are also called half-galleys, are from 120 to 130 feet long, eighteen feet broad, and nine or ten feet deep. They have two masts, which may be struck at pleasure; and are furnished with two large latteen sails, and five pieces of cannon. They have commonly twenty-five banks of oars. A size still less than these are called quarter-galleys, carrying from twelve to sixteen banks of oars. They generally keep close under the shore, but sometimes venture out to sea to perform a summer cruise.

Galley-Head, a promontory of Ireland, on the coast of Cork, on the extremity of which stands Dundede Castle. This is sometimes fatally mistaken by sailors, for the Old Head of Kinsale, when the light of the latter is not seen. It lies eighteen miles S.S.W. of Bandon Bridge.

Galley Worm, in zoology. See Iulus.

GALL-FLY, in entomology. See Cynips.

GALLI, in antiquity, a name given to the priests of Cybele, from the river Gallus, in Phrygia; but of the etymology of the name we have no certain account. These priests had the names also of Curetes, Corybantes, and Dactyli. The chief priest was called Archi-Gallus. This order of priesthood is found both among the Greeks and Romans.

Galli. See Gallia and Gauls.

Galli, five small desolate islands on the coast of the Principato Citra of Naples. They are supposed to be the Syrenusæ, or islands once inhabited by the Syrens, which Ulysses passed with so much caution and hazard. Great revolutions, however, have been occasioned in their shape, size, and number, by the effects of subterranean fire; and some learned persons go so

ssert, that these rocks have risen from
n of the sea since Homer's time; con-
, that those monsters dwelt on some
ıt, probably Sicily or Capri. The tra-
Syrens residing hereabouts is very an-
l universally admitted; but what they
re, divested of their fabulous and poeti-
ise, is not easy to discover. See SYREN.
nusæ were only three in number; and,
, if these and the Galli be the same, two
ıst have since risen, or the three have
ıt into five by a subterraneous convul-
ın the largest is a watch-tower, and the
ı a deserted hermitage. The principal
only a narrow semicircular ridge, co-
ith a shallow coat of soil; two other
ınds, and some jagged rocks just peeping
ıe waves, correspond with this one so as
the outline of a volcanic crater. The
ıtion of them all is, at top, a calcareous
tremely shaken, tumbled, and confused,
vith masses of breccia, disposed in a most
.r manner; below these is lava, and the
the eye follows it, the stronger are the
of fire: below the surface of the water,
some places above it, the layers are com-
locks of basaltes. Hence, we may pre-
hat central fires have heaved up to light the
d substances that originally lay near their
with all the intermediate strata that covered
from the sea. The layers incline down-
from east to west; the air seems to have
its way into part of the mass while in fu-
nd, by checking its workings, caused many
:averns to be left in it. These islands are
ivated and uninhabited since the old her-
St. Antonio died. Myrtle covers most of
rface.

LLIA, in ancient geography, a large coun-
Europe, called Galatia by the Greeks.
nhabitants were called Galli, Celtæ, Celti-
ınd Celtoscythæ. Ancient Gaul was divided
our different parts by the Romans, called
ı Belgica, Narbonensis, Aquitanica, and
:a; though Julius Cæsar divides it only
hree. Besides these grand divisions, there
:en mention made of Gallia Cisalpina, or
ior, and Transalpina, or Ulterior, which
omprehended the whole of Gaul, properly
ılled, as possessed by the ancient Gauls.
original inhabitants were descended from
:eltes, or Gomerians, by whom the greatest
of Europe was peopled; the name of Galli,
auls, being probably given them long after
settlement in that country. They were
ıntly divided into a great number of diffe-
nations, who were continually at war with
another, and at variance among themselves.
ar tells us, that not only all their cities, can-
, and districts, but almost all their families,
: divided and torn by factions; and this, un-
btedly, facilitated the conquest of the whole.
general character of all these people was an
:ssive love of liberty, even to ferocity. This
y carried to such an extreme, that on the
ıearance of incapacity of action through old
, wounds, or chronic diseases, they put an
l to their lives, or prevailed upon their friends
:ill them. In cities, when they found them-
ves so straitly besieged that they could hold
out no longer, instead of thinking how to obtain honorable terms of capitulation, their chief care, very often, was to put their wives and children to death, and then to kill one another, to avoid being led into slavery. Their contempt of death, according to Strabo, very much facilitated their conquest by Cæsar; for, pouring their numerous forces upon such an experienced enemy as Cæsar, their want of conduct very soon proved the ruin of the whole. Their chief diversion was hunting; and indeed considering the vast forests with which their country abounded, and the multitude of wild beasts which lodged in them, they were under an absolute necessity to hunt and destroy them, to prevent the country from being rendered totally uninhabitable for man. The ancient history of the Gauls is entirely wrapped up in obscurity and darkness; all we know concerning them for a long time is, that they multiplied so fast, that their country being unable to contain them, they poured forth in vast multitudes into other countries, which they often subdued, and in which they then settled. It often happened, however, that these colonies were so molested by their neighbours, that they were obliged to send for assistance to the mother country. The Gauls were always ready to send forth great numbers of new adventurers; and, as these spread desolation wherever they came, the very name of Gauls proved terrible to most of the neighbouring nations. The earliest excursion of these people, of which we have any distinct account, was into Italy, under a famed leader, named Bellovesus, about A. A. C. 622. He crossed the Rhone and the Alps, till then unattempted, defeated the Hetrurians, and seized upon that part of the country, since known by the names of Lombardy and Piedmont. The second grand expedition was made by the Cenomani, a people dwelling between the Seine and the Loire, under a general, named Elitonis. They settled in those parts of Italy, since known by the names of Bresciano, Cremonese, Mantuan, Carniola, and Venetia. In a third excursion, two other Gaulish nations settled on both sides of the Po; and in a fourth the Boii and Lingones settled in the country between Ravenna and Bologna. The time of these last three expeditions is uncertain. The fifth expedition of the Gauls was more remarkable than any of the former, and happened about 200 years after that of Bellovesus. The Senones, settled between Paris and Meaux, were invited into Italy by an Etrurian lord, and settled themselves in Umbria. Brennus, their king, laid siege to Clusium, a city in alliance with Rome; and this produced a war with the Romans, in which the latter were at first defeated, and their city taken and burnt; but at length the whole army of the Gauls was cut off by Camillus, insomuch that not a single person escaped. See ROME. The Gauls after this undertook some other expeditions against the Romans; in which, though they always finally proved unsuccessful, by reason of their want of military discipline, yet their fierceness and courage made them so formidable to the republic, that, on the first news of their march, extraordinary levies of troops were made, and sacrifices and public supplications offered to the gods. Against the Greeks, the

expeditions of the Gauls were very little more successful than against the Romans. The first of these we hear of was about A. A. C. 279, the year after Pyrrhus had invaded Italy. At this time the Gauls, finding themselves greatly overstocked with inhabitants at home, sent out three great colonies to conquer new countries. One of these armies was commanded by Brennus, another by Cerethrius, and the third by Belgius. The first entered Pannonia, or Hungary; the second Thrace; and the third marched into Illyricum and Macedonia. Here Belgius at first met with great success; and enriched himself by plunder to such a degree, that Brennus, envying him, resolved to enter the same countries, in order to share the spoil. In a short time, however, Belgius met with such a total defeat, that his army was almost entirely destroyed; upon which Brennus hastened to the same place. His army at first consisted of 150,000 foot and 15,000 horse: but two of his principal officers revolted, and carried off 20,000 men, with whom they marched into Thrace; where, having joined Cerethrius, they seized on Byzantium, and the western coast of Propontis, making the adjacent parts tributary to them. To retrieve this loss, Brennus sent for fresh supplies from Gaul, and having increased his army to 150,000 foot, and upwards of 60,000 horse, he entered Macedonia, defeated the general who opposed him, and ravaged the whole country. He next marched towards the straits of Thermopylæ, to invade Greece, but was stopped by the forces sent to defend that pass against him. He passed the mountains, however, as Xerxes had formerly done; upon which the guards retired, to avoid being surrounded. Brennus then having ordered Acichorius, the next to him in command, to follow at a distance with part of his army, marched with the bulk of the forces to Delphi, in order to plunder the rich temple there. This enterprise proved very unfortunate: a great number of his men were destroyed by a dreadful storm of hail, thunder, and lightning; another part of his army was destroyed by an earthquake; and the remainder, imagining themselves attacked by the enemy, fought against each other the whole night, so that in the morning scarcely one-half of them remained. The Greek forces then poured in upon them from all parts, and that in such numbers, that though Acichorius came up in due time with his forces, Brennus found himself unable to make head against the Greeks, and was defeated with great slaughter. He himself was desperately wounded, and so disheartened by his misfortunes, that, having assembled all his chiefs, he advised them to kill all the wounded and disabled, and to make the best retreat they could; after which he put an end to his own life. On this occasion it is said, that 20,000 of these unhappy people were executed by their own countrymen. Acichorius then set out with the remainder for Gaul; but, being obliged to march through the country of their enemies, the calamities they met with in the way were so grievous, that not one of them reached their own country: a just judgment, say the Greek and Roman authors, for their sacrilegious intentions against Delphi. The Romans, having often felt the effects of the Gaulish ferocity and courage, thought proper at last, in order to humble them, to invade their country. Their first successful attempt was about A. A. C. 118, under Quintus Marcius Rex. He opened a way betwixt the Alps and the Pyrenees, which laid the foundation for conquering the whole country. This was a work of immense labor of itself, and rendered still more difficult by the opposition of the Gauls, especially those called the Stæni, who lived at the foot of the Alps. These people at last, finding themselves overpowered by the Romans, set fire to their houses, killed their wives and children, and then threw themselves into the flames. After this Marcius built Narbonne, which became the capital of a province.

Scaurus, the successor of Marcius, also conquered some Gaulish nations; and, to facilitate the sending troops from Italy into that country, he made several excellent roads between them, which before were almost impassable. These successes gave rise to the invasion of the Cimbri and Teutones. From this time the Gauls ceased to be formidable to the Romans; at last, however, the Helvetii kindled a war with the republic, which ended in the total subjection of the country. Orgetorix had engaged a vast number of his countrymen to burn their towns and villages, and to go in search of new conquests; but Julius Cæsar, to whose lot the whole country of Gaul had fallen, made such haste to suppress them, that he reached the Rhone in eight days, broke down the bridge of Geneva, and, in five days more, finished the famed wall between that city and mount Jura, now St. Claude, which extended seventeen miles in length, was sixteen feet high, fortified with towers and castles at proper distances, and a ditch that ran the whole length of it. Whilst this was doing, and his reinforcements were coming, he amused the Helvetii, who had sent to demand a passage through the country of the Allobroges, till his troops had arrived, and then refused it to them; whereupon a dreadful battle ensued, in which they lost 130,000 men, besides a number of prisoners, among whom were the wife and daughter of Orgetorix, the leader of this unfortunate expedition. The rest submitted, and begged they might be permitted to go and settle among the Ædui, from whom they originally sprung, and, at the request of these last, they were permitted to do so. The Gauls were constantly in a state of variance with one another; and Cæsar, who knew how to make the most of these intestine broils, soon became the protector of the oppressed, a terror to the oppressors, and the umpire of all their contentions. Among those who applied to him for help, were his allies the Ædui; against whom Ariovistus, king of the Germans, joined with the Averni, who inhabited the banks of the Loire, had taken the country of the Sequani from them, and obliged them to send hostages to him. Cæsar forthwith sent to demand the restitution of both, and, in an interview which he soon after obtained with that haughty and treacherous prince, had almost fallen a sacrifice to his perfidy; upon which he bent his whole power against him, forced him out of his intrenchments, and gave him a total overthrow. Ariovistus escaped, with difficulty, over the Rhine; but his two wives, and a daughter, with a great number of Germans

of distinction, fell into the conqueror's hand. Cæsar, after this signal victory, led his army into winter quarters, whilst he went over the Alps to make the necessary preparations for the next campaign. By this time the Belgæ were so terrified at his success, that they entered into a confederacy against the Romans as their common enemy. Of this, Labienus, who had been left in Gaul, sent Cæsar notice, upon which he immediately left Rome, and made such despatch, that he arrived upon their confines in about fifteen days. Of his arrival, the Rhemi submitted to him; but the rest, appointing Galba king of the Suessones, general of all their forces, which amounted to 150,000 men, marched directly against him. Cæsar, who had seized on the bridge of the Axona (now Aisne), led his light horse and infantry over it; and, whilst the others were encumbered in crossing that river, made such terrible slaughter of them, that the river was filled with their dead, insomuch that their bodies served for a bridge to those who escaped. This new victory struck such terror into the rest, that they dispersed themselves; immediately after which the Suessones, Bellovaci, Ambiones, and some others, submitted to him. The Nervii, indeed, joined with the Atrebates and Veromandui against them; and, having first secured their wives and children, made a vigorous resistance for some time; but were at length defeated, and the greatest part of them slain. The rest, with their wives and old men, surrendered, and were allowed to live in their own cities and towns as formerly. The Aduatici were next subdued; and, for their treachery, were sold for slaves, to the number of 50,000. Young Crassus, the son of the triumvir, subdued also seven other nations, and took possesion of their cities; which not only completed the conquest of the Belgæ, but brought several nations from beyond the Rhine to submit. The Veneti, or ancient inhabitants of Vannes in Britanny, who had been likewise obliged to send hostages to the conqueror, in the mean time made great preparations by sea and land to recover their liberty. Cæsar, then in Illyricum, equipped a fleet on the Loire, and, having given the command of it to Brutus, defeated them by land, as Brutus did by sea; and, having put their chief men to death, sold the rest for slaves. The Unelli, with Veridorix their chief, together with the Lexovii and Aulercii, were, about the same time, subdued by Sabinus, and the Aquitani by Crassus, with the loss of 30,000 men. There remained nothing but the countries of the Morini and Menapii to be conquered of all Gaul. Cæsar marched against them, but found them so well intrenched in their inaccessible fortresses, that he contented himself with burning and ravaging their country; and, having led his troops into winter quarters, he again passed over the Alps. He was, however, soon after obliged to defend his Gaulish conquests against a body of Germans, who were attempting to settle there, to the number of 400,000. These he totally defeated, and then resolved to carry his conquering arms into Germany. See GERMANY.

Upon his return into Gaul, he found it laboring under a great famine, which had caused a kind of universal revolt. Cotta and Sabinus, who were left in the country of the Eburones, now Liege, were betrayed into an ambush by Ambiorix, one of the Gaulish chiefs, and had most of their men cut off. The Aduatici had fallen upon Q. Cicero, who was left there with one legion, and had reduced him to great straits: while Labienus, with his legion, was attacked by Indutiomarus, at the head of the Rhemi and Senones: but, by one bold sally, he put them to flight, and killed their general. Cæsar acquired no small credit by quelling all these revolts; but each victory cost so many of his troops, that he was forced to have recourse to Pompey for a fresh supply, who readily granted him two of his own legions to secure his Gaulish conquests; but the Gauls, ever restless under a foreign yoke, raised up a new revolt and obliged him to return. His fear lest Pompey should gain the affections of the Roman people, had obliged him to strip the Gauls of their gold and silver, to bribe them over to his interest; and this was no small cause of those frequent revolts which happened during his absence. He quickly, however, reduced the Nervii, Aduatici, Menapii, and Treviri; the last of whom had raised the revolt under the command of Ambiorix; but he found the flame spread much farther, even to the greatest part of the Gauls, who had chosen Vercingetorix their generalissimo. Cæsar was forced to leave Insubria, whither he had retired to watch the motions of Pompey, and, in the midst of winter, to repass the Alps into the province of Narbonne. Here he gathered his scattered troops with all possible speed, besieged and took Noviodunum, now Noyons, and defeated Vercingetorix, who was come to its relief. He next took the city of Avaricum, now Bourges, one of the strongest in Gaul, and which had a garrison of 40,000 men; of whom he made such a dreadful slaughter, that hardly 800 escaped. Whilst he was besieging Gergovia, the capital of the Arverni, he was informed that the Nitiobriges, or Agenois, were in arms, and that the Ædui were sending to Vercingetorix 10,000 men, whom they were to have sent to reinforce Cæsar. Upon this news, he left Fabius to carry on the siege, and marched against the Ædui. These, upon his approach, submitted in appearance, and were pardoned; but soon after that whole nation rose, and murdered all the Italian troops in their capital. Cæsar, on this, resolved to raise the siege of Gergovia, and at once attack the enemy's camp, which he did with some success; but when he thought to have gone to Noviodunum, where his baggage, military chest, &c., were left, he heard that the Ædui had carried them off, and burnt the place. Labienus, justly thinking that Cæsar would need his assistance, went to join him, and, in his way, defeated a Gaulish general, named Camulogeno, who came to oppose his march: but this did not hinder the revolt from spreading all over Celtic Gaul, whither Vercingetorix had sent for fresh supplies, and, in the mean time, attacked Cæsar; but was defeated, and forced to retire to Alesia, a strong place, now called Alise. Hither Cæsar hastened, and besieged him; and, having drawn a double circumvallation, with a view to starve him, refused all offers of a surrender from him. At length, the long expected reinforcement came, consisting of

160,000 men, under four generals, who made several fruitless attacks on Cæsar's trenches, but were defeated in three several battles, which at length obliged Vercingetorix to surrender at discretion. Cæsar used all his prisoners with great severity, except the Ædui and Arverni, by whose means he hoped to gain their nations, which were the most potent of Celtic Gaul; nor was he disappointed: for both of them submitted to him, and the former received him into their capital, where he spent the winter, after putting his army into winter quarters. The Gauls, upon their former ill success, resolving to have as many separate armies as provinces, in order to embarrass him the more, Cæsar, and his generals Labienus and Fabius, were forced to fight them one after another; which they did, however, with such success, that, notwithstanding the season, they subdued the Biturges, Carnuti, Rhemi, and Bellovaci, with their general Correus; by which he at once quieted all the Belgic provinces bordering on Celtic Gaul. The next who followed were the Treviri, the Eburones, and the Andes, under their general Dunmarus. The last place which held out against him was Uxellodunum; which was defended by the two last acting generals of the Gauls, Drapes, the Senonian, and Luterius, the Cadurcean. The place being strong and well garrisoned, Cæsar was obliged to march thither from the farthest part of Belgic Gaul, and soon after reduced it. Here again he caused the right hands of all that were fit to bear arms to be cut off, to deter the rest from revolting a fresh. Thus was the conquest of Gaul finished from the Alps and Pyrenees to the Rhine, all which vast tract was now reduced to a Roman province under the government of a prætor. During his several expeditions into Gaul, Cæsar is said to have taken 800 cities; to have subdued 300 different nations; and to have defeated, in several battles, 3,000,000 of men, of whom 1,000,000 were killed, and another taken prisoners. The history of the country, from the time of its conquest by the Romans to the present, will be found under the articles FRANCE, and ROME.

The following table exhibits a comparative view of the ancient and modern political division of Gaul:—

Roman provinces under Augustus.	Provinces under the French Monarchy prior to the division into departments
1. Narbonensis, I^ma	Languedoc, Conserans, Comté de Foix, Roussillon
2. Narbonensis, II^da	Part of Lower Provence, —— Upper Dauphiné
3. Alpes Maritimæ	—— Eastern Province, Nice, Monaco
4. Lugdunensis, I^ma	Lyonois, Nivernois, Burgogne, Beaujolais, Forez, Part of Champagne
5. Lugdunensis, II^da	Normandie, Vexin François
6. Lugdunensis, III^a	Bretagne, Maine, Anjou, Touraine
7. Lugdunensis, IV^a	Mantois, Chartrain, Isle de France, Brie, Part of Champagne, ——Bourgogne, ——Nivernois, ——Orleanois
8. Aquitania, I^ma	Berri, Marche, Limousin, Part of Poitou, Bourbonnais, Auvergne, Velay, Gevaudan, Rouergue, Alby in Languedoc, Quercy
9. Aquitania, II^a	Part of Poitou, Angoumois, Saintonge, Perigord, Bordelais, Agenois
10. Novempopulana	Landes, Bazadois, Condomois, Comminge, Bigorre, Bearn, Navarre, Gascogne
11. Gallia Belgica, I^ma	Territory of Treves, ——Luxembourg, Duchy of Gueldre, Messin, Toulonais, Lorraine, Barrois
12. Belgica, II^a	Laonois, Beauvoisis, Noyonnais, Picardie, Artois, Flandre
13. Maxima Sequanorum	Part of Bourgogne, —— Franche Comté, —— Switzerland
14. Germania, I^ma	Electorate of Mentz, ——— Treves, ——— Palatinate, Worms, Spire, Alsace, Some districts in Suabia and in Switzerland
15. Germania, II^a	United Provinces, Part of Westphalia, &c
16. Gallia Viennensis	Savoy, Vivarais, Dauphiné, Comtat-Venaissin, Part of Provence

LIARD, *n. s.* & *adj.* } Span. *gagliar-*
AR'DISE, *n. s.* } *do*; Ital. *gallardo;*
ard, derived from *ard*, genius, and *gay*,
Johnson. Mr. Todd more probably
el. *gaida*, to allure.' A gay man; gay;
ly dance; merriment. Both words are
olete.

lard he was as goldfinch in the showe.
Chaucer.

think, by the excellent constitution of thy
is formed under the star of a *galliard*.
Shakspeare. Twelfth Night.

There's nought in France
t can be with a nimble *galliard* won:
a cannot revel into dukedoms there.
Shakspeare.

re be any that would take up all the time,
find means to take them off, and bring others
musicians used to do with those that dance too
liards. *Bacon.*

ripla's and changing of times have an agree-
ith the changes of motion; as when *galliard*
d measure time are in the medley of one dance.
Id.

n is a *galliard* by himself. *Cleaveland.*

ny nativity my ascendant was the watery
Scorpius; I was born in the planetary hour of
, and I think I have a piece of that leaden
in me; I am no way facetious, nor disposed
mirth and *galliardise* of company. *Browne.*

LLIARD, or GALLIARDA, was a sort of dance
ıtly in great request, consisting of very dif-
motions and actions, sometimes proceed-
rra à terra or smoothly along, sometimes
ing, sometimes along the room, and some-
across. It was also called Romanesque,
se brought from Rome. Thomot Arbeau, in
chesography, describes it as consisting of five
and five positions of the feet, which the
rs performed before each other, and whereof
ves us the score or tablature, which is of six
ns and two triple times.

LLIARDA, in the Italian music, a tune that
gs to the dance called galliard. The air of
ively in time.

LLIC ACID. This acid is procured in the
easy manner by Mr. Friedler's method,
h is the following:—

ssolve two ounces of common alum-water,
precipitate the solution by letting fall into it
lution of potash; wash the precipitate well,
transfer it into a decoction of gall-nuts (ob-
d by infusing one ounce of gall-nuts in
en of water, and evaporating the liquor to
half); agitate the mixture frequently during
course of twenty-four hours, and then filter it.
fluid which passes through the filter is gallic
, which may be obtained in the form of needle-
ed crystals, by evaporating it slowly till a
cle appears, and then letting it stand undis-
ed.

hese crystals, however, according to Sir H.
y, are contaminated with a small portion of
ıctive matter; and to purify them they may
laced in a glass capsule in a sand heat, and
imed into another capsule, inverted over this
kept cool. M. Deyeux, indeed, recommends
rocure the acid by sublimation in the first
ance; putting the powdered galls into a glass
rt, and applying heat slowly and cautiously;
when the acid will rise and be condensed in the neck of the retort. This process requires great care, as, if the heat be carried so far as to disengage the oil, the crystals will be dissolved immediately. The crystals thus obtained are pretty large, laminated, and brilliant.

M. Barmel, of the School of Medicine at Paris, finds that he can obtain pure gallic acid by pouring solution of white of egg into the infusion of nut-galls, till this ceases to be disturbed: then to evaporate the clarified liquid to dryness, to heat the residuum with alcohol, to filter the new liquid, and concentrate it to the proper degree for the formation of gallic acid.

The gallic acid, placed on a red-hot iron, burns with flame, and emits an aromatic smell, not unlike that of benzoic acid. It is soluble in twenty parts of cold water, and in three parts at a boiling heat. It is more soluble in alcohol, which takes up an equal weight if heated, and one-fourth of its weight cold.

It has an acido-astringent taste, and reddens tincture of litmus. It does not attract humidity from the air. It forms, with the several metals, precipitates of different colors. With gold it forms a brown precipitate; with silver a gray; mercury an orange; copper a brown; lead a white; and iron a black precipitate.

From the gallate of lead, Berzelius infers the equivalent of this acid to be 8·00. Its ultimate constituents are—hydrogen 5·00 + carbon 56·64 + oxygen 38·36 = 100.

GAL'LICISM, *n. s.* Fr. *gallicisme;* Lat. *gallicus*. A mode of speech peculiar to the French language; such as, he *figured* in controversy, he *held* this conduct, he *held* the same language that another *held* before. Vide Bolingbroke.

In English I would have *gallicisms* avoided, that we may keep to our own language, and not follow the French mode in our speech. *Felton on the Classics.*

GALLIGAS'KINS, *n. s.* *Caligæ Gallo-Vasconum.*—Skinner. Large open hose: generally used in a ludicrous manner.

There lived a taylor in Bristol, O;
* * * * * *
The more he did try
He did cut them all awry,
And he could'nt cut a pair of *galligaskins*, O.
Old Song.

My *galligaskins*, that have long withstood
The Winter's fury, and encroaching frosts,
By time subdued, what will not time subdue,
An horrid chasm disclose. *Philips.*

GALLIMA'TIA, *n. s.* Fr. *galimathias*. Nonsense; talk without meaning.

GALLIMAU'FRY, *n. s.* Fr. *galimafree*. A medley, or mixture; and applicable in description, to acts, persons, and objects.

They have made of our English tongue a *gallimaufry*, or hodgepodge of all other speeches.
Spenser.

They have a dance, which the wenches say is a *gallimaufry* of gambols, because they are not in't.
Shakspeare. Winter's Tale.

Sir John affects thy wife.
—Why, sir, my wife is not young.
—He wooes both high and low, both rich and poor;
He loves thy *gallimaufry* friend. *Shakspeare.*

The painter who, under pretence of diverting the eyes, would fill his picture with such varieties as

alter the truth of history, would make a ridiculous piece of painting, and a mere *gallimaufry* of his work. *Dryden's Dufresnoy.*

GALLING, or excoriation, in medicine. See EXCORIATION.

GALLING OF A HORSE'S BACK, a disorder, occasioned by heat, and the chafing or pinching of the saddle. To prevent it, some take a hind's skin, well garnished with hair, and fit it neatly under the pannel of the saddle, so that the hairy side may be next the horse. When a horse's back is galled upon a journey, take out a little of the stuffing of the pannel, over the swelling, and sew a piece of soft white leather on the inside of the pannel; anoint the part with salt butter, and every evening wipe it clean, rubbing it till it grow soft, anointing it again with butter, or, for want of that, with grease; wash the swelling or hurt, every evening, with cold water and soap; and strew it with salt, which should be left on till the horse be saddled in the morning.

GAL'LIOT, *n. s.* Fr. *galliotte*. A small swift galley. See GALLEY.

Barbarossa departing out of Hellespontus, with eighty gallies and certain *galliots*, shaped his course towards Italy. *Knolles's History.*

GALLIPAGO ISLES. See GALIPAGO.

GALLIPOLI, a fortified city of Naples, in the Terra d'Otranto, on a peninsula on the east side of the gulf of Tarento. It joins the main land by a bridge, and is a bishop's see, is well built, and has a convenient harbour, with manufactures of muslin, cotton stockings, and stuffs. Its chief article of trade, however, is in oil, which is stored in subterraneous vaults hollowed out in the rock on which the city is built, and where it is said to improve considerably by fermentation. Inhabitants 9000. It is twenty-three miles west of Otranto, and 224 east by south of Naples.

GALLIPOLI, a considerable commercial town in the province of Romagna, European Turkey, is situated on the north side of the strait of Gallipoli, the ancient Hellespont. Population 17,000, of whom 10,000 are Turks, and the rest Greeks and Jews. It is the see of a bishop, and tolerably well built; the bazaars are very extensive, and well furnished, forming a succession of streets, each appropriated to particular kinds of merchandise. Its fountains are also many of them elegant structures. Broken fragments of ancient sculpture and architecture are found in every part of the town.

Gallipoli has two harbours, and gives name to a government of the Turkish empire, called that of the Capudan Pacha, who resides in this town. It was once fortified, but is now open: the only defence being an old castle, seated on an eminence. It was the first town, in Europe, taken by the Turks, and fell into their hands in 1356. It is the see of a Greek bishop, and has a population of 17,000, of whom about 10,000 are Turks, and the rest Greeks and Jews. It is eighty miles south of Adrianople, and 108 south-west of Constantinople.

GAL'LIPOT, *n. s.* Dutch, *gleye*, shining earth; or Span. *gala*, finery. A pot, painted and glazed, commonly used for medicines

Plato said his master Socrates was like the apothecary's *gallipots*, that had on the outsides apes, owls, and satyrs; but within precious drugs. *Bacon's Apophth.*

Alexandrinus thought it unsafe to trust the real secret of his phial and *gallipot* to any man. *Spectator.*

Here phials in nice discipline are set;
Their *gallipots* are ranged in alphabet. *Garth.*

Thou that dost Æsculapius decide,
And o'er his *gallipots*, in triumph ride. *Fenton.*

GALLO, an island of the Pacific, on the coast of Peru, in long. 80° 33′ W., lat. 1° 26′ S., and containing a small Indian settlement. There is another island of this name on the coast of Brasil, to the north of the island of Santa Catalina, in long. 48° 45′ W., lat. 27° 10′ S.

GALLO, an island of the South Sea, near the coast of Peru, which was the first place possessed by the Spaniards when they attempted the conquest of Peru; it is also the place where the Buccaneers used to come for wood and water, and to refit their vessels. Long. 88° 0′ W., lat. 2° 30′ N.

GALLO-GRÆCIA, a country of Asia Minor, near Bithynia and Cappadocia. It was inhabited by a colony of Gauls, who assumed the name of Gallogræci, because a number of Greeks had accompanied them in their emigration. See GALATIA.

GALLOIS (John), born at Paris in 1632, noted for having been, in conjunction with M. de Sallo, who formed the plan, the first publisher of the Journal des Sçavans. The first Journal was published January 5th, 1665; but these gentlemen criticised new works so rigorously that the whole tribe of authors united against it. De Sallo declined entirely after the publication of the third number; but Gallois ventured to send out a fourth on January 4th, 1666; though not without a most humble advertisement at the beginning, in which he declared, that the author 'would not presume to criticise, but simply give an account of the books.' This, with the protection of M. Colbert, reconciled the public to it; and thus began literary journals which have been continued from that time to this, under various titles and by various writers. Gallois continued his journal to 1674, when more important occupations obliged him to give it over to other hands. M. Colbert had taken him into his house to teach him Latin; and when he lost his patron, in 1683, he was first made librarian to the king, and then Greek professor in the royal college. He died in 1707.

GALLON, *n. s.* Low Lat. *gelo*. A liquid measure of four quarts.

Beat them into powder, and boil them in a *gallon* of wine, in a vessel close stopped. *Wiseman's Surgery.*

GALLOO, a large town of Kaarta, in Africa, situated in a fertile and beautiful valley, surrounded by rocks, 140 miles north-west of Sego.

GAL'LOON, *n. s.* Fr. *galon*. A kind of lace of gold, silver, or silk.

GAL'LOP, *v. n.* & *n. s.* } Fr. *galoper*; de-
GAL'LOPER, *n. s.* } rived by all the etymologists, after Budæus, from Gr. καλπαζειν perhaps it may come from Dut. *gant*, all, and

to run. To move forward by leaps, so
the feet are off the ground at once; to
vith great rapidity: the motion itself: a
r man that gallops.

They 'gan espy
rmed knight towards them *gallop* fast,
seemed from some feared foe to fly.
Faerie Queene.

I did hear
loping of horse: who was't come by?
Shakspeare.

The golden sun
the zodiack in his glistering coach. *Id.*
'hom doth time *gallop* withall?
a thief to the gallows. *Id.*

His steeds will be restrained,
llop lively down the western hill. *Donne.*

ng such streams of blood as threatened a
ing life, we *galloped* toward them to part them.
Sidney.

uch a shape grim Saturn did restrain
avenly limbs, and flowed with such a mane,
half surprised, and fearing to be seen,
acher *galloped* from his jealous queen. *Dryden.*

that rides post through a country may, from
ansient view, tell how in general the parts lie;
superficial ideas he may collect in *galloping* over
Locke.

who fair and softly goes steadily forward, in a
e that points right, will sooner be at his journey's
than he that runs after every one he meets,
h he *gallop* all day full speed. *Id.*

ales bred in cold countries are much better to
than horses for their walk and trot; but they are
nonly rough *gallopers*, though some of them are
fleet. *Mortimer's Husbandry.*

r on the sixteenth at full *gallop* drew
ght two horsemen, who were deemed cossacques
some time, till they came in nearer view.
Byron.

ALLOP ISLANDS, a cluster of small islands
he St. Lawrence. Long. 75° 18′ W., lat. 44°
N.

ALLOPER, in artillery, is the name of a car-
e which serves for a pound and a half gun.
s carriage has shafts so as to be drawn with-
a limber, and is thought by some to be more
venient and preferable to other field carriages;
l it may also serve for our light three and six
unders.

GALLOW, *v. a.* Sax. aɣælpan. To terrify;
fright.

The wrathful skies
Gallow the very wanderers of the dark,
And make them keep their caves. *Shakspeare.*

GAL'LOW, *n. s.*
GAL'LOWS, *n. s.*
GAL'LOWSFREE, *adj.*
GAL'LOWSTREE, *n. s.*
} Used by some in the singular, generally in the plural, or it sometimes has another plural, gal-
wses. Goth. *galgo*; Sax. ɣealɣa; Belg. *galge*; eut. *galgen*; which some derive from Lat. *gaba-
s, furca*, others from גבה, high, Minsheu, from leb. גבול, an end; but it is probably derived om *gallow*, aɣælpan, to fright. A beam laid ver two posts, on which malefactors are hanged: wretch that deserves an ignominious death. allowstree, the tree of terror.

But, to beware, no grace yet he hadde
Til Fortune on the *galwes* made him gape.
Chaucer. The Monkes Tale.

Who so that bildeth his hous all of salwes,
And finketh his blind hors over the falwes,
And suffereth his wif to go seke halwes,
Is worthy to be honged on the *galwes*.
Id. The Wif of Bathes Tale

He hung their conquered arms, for more defame,
On *gallowtrees*, in honour of his dearest dame.
Spenser.

Cupid hath been five thousand years a boy.
—Ay, and a shrewd unhappy *gallows* too.
Shakspeare.

I would we were all of one mind, and one mind good; O there were desolation of gaolers and *gallowses*. *Id. Cymbeline.*

I prophesied if a *gallows* were on land,
This fellow could not drown. *Id. Tempest.*

A Scot, when from the *gallowtree* got loose,
Drops into Styx, and turns a Soland goose.
Cleaveland.

He (a rebel) is resolved to raise himself, though it be but upon the *gallows*. *Butler.*

This monster sat like a hangman upon a pair of *gallows*: in his right hand he was painted holding a crown of laurel, in his left hand a purse of money.
Sidney.

Let him be *gallowsfree* by my consent,
And nothing suffer, since he nothing meant.
Dryden.

If Haman had not set up a *gallows*, perhaps the king would not have ordered him to be hanged; but if he rear a *gallows*, for the man whom the king delights to honour, the humour is very natural that he should be ordered to try it himself.
Henry. Est. vii. 9.

GALLOWS, among our ancestors, was called furca, fork; a name by which it is still denominated abroad, particularly in France and Italy. In this latter country the reason of the name still subsists; the gallows being a real fork driven into the ground, across the legs whereof is laid a beam, to which the rope is tied. See FURCA.

GALLOWAY, *n. s.* A horse not more than fourteen hands high, much used in the north, and so named as coming originally from Galloway, a shire in Scotland.

GALLOWAY, in geography, a county of Scotland, which is divided into two districts; the western, called Upper, and the eastern, Lower.

GALLOWAY, LOWER, or the Stewartry of Kirkcudbright. See KIRKCUDBRIGHT.

GALLOWAY, UPPER, or the county of Wigton. See WIGTON.

GALLOWAY, MULL OF, the south cape or promontory of all Scotland, in the county of Galloway, on the Irish Sea. Long. 1° 43′ W., of Edinburgh, lat. 54° 44′ N.

GALLOWAY, NEW, a town of Scotland, in Kirkcudbrightshire, near the Ken, fifteen miles north of Kirkcudbright.

GAL'LOWGLASSES, *n. s. Gallogla*, an English servitor. A name given to footmen in Ireland; and to soldiers, amongst the wild Irish, who serve on horseback.

A puissant and mighty power
Of *gallowglasses* and stout kernes,
Is marching hitherward in proud array. *Shakspeare.*

GALLUS (Cornelius), an ancient Roman poet, born at Forum Julium, in Gaul. He was a particular favorite with Augustus Cæsar, who made him governor of Egypt: but his mal-administration there occasioned his banishment and

the loss of his estate; for grief of which he put an end to his own life. He wrote four books of elegies.

GALLUS, the cock, in ornithology. See PHASIANUS.

GALLY, in printing, a frame into which the compositor empties the lines out of his composing stick, and in which he ties up the page when it is completed. The gally is formed of an oblong square board, with a ledge on three sides, and a groove to admit a false bottom called a gally slice.

GALVANI (Lewis), a celebrated physiologist, born at Bologna, in 1737, where many of his relations had arrived at distinguished eminence in jurisprudence and divinity. In his youth he became enamoured of the greatest austerities of the Catholic religion, and attached himself to a convent of monks, who were noted for their particular attention to the sick and dying. He was much inclined to become a member of this order, but was dissuaded from it by one of the brotherhood; and he afterwards devoted his attention to the study of medicine in its various branches. These he prosecuted under Beccari, Tacconi, Galli, and particularly Galleazzi, with whom he became an inmate, and afterwards married his daughter. From the great reputation which he acquired by his inaugural thesis, De Ossibus, in 1762, he was, not long after, chosen public lecturer in the university, and reader in anatomy to the institute of his native city. His lectures were greatly admired, and he was constantly attended by vast numbers; while he employed his few leisure hours in making experiments, and in the useful study of comparative anatomy. With the results of his assiduity he enriched the Memoirs of the Institute of Bologna, by inserting a number of curious observations on the urinary organs, and on the organs of hearing in birds. Having fully established his anatomical and physiological knowledge throughout the Italian schools, he was accidentally led to that interesting discovery which has exalted his name among the leaders in Science, and by which it will be honorably commemorated. The health of his wife was on the decline, and by way of restorative she was using a soup of frogs. Some of these animals being skinned for this purpose, were lying on a table in Galvani's laboratory, in which also stood an electrical machine; and a person who assisted him in conducting his experiments unintentionally brought the point of a scalpel towards the crural nerves of a frog which lay near the conductor, when the muscles of the limb were very strongly convulsed. Galvani repeated the experiment, and discovered that the convulsions only happened when the scalpel was in contact with the nerve, and a spark was drawn from the conductor at the same time. This led him to vary the experiment in every possible way, and at last he observed that the same effect took place when the lumbar nerves having been laid bare and suspended by a hook of copper, to a balcony of iron, swung againgst the rails by their own weight. From a great number of experiments Galvani concluded that all animals have within them an electricity of a peculiar nature; that this fluid is contained in most parts, but is most apparent in the nerves and muscles; that it is secreted by the brain, and diffused by the nerves through various parts of the body. He compared each muscular fibre to a small Leyden phial, and attempted to explain the phenomena of muscular motion by analogies taken from that instrument. He first thought of its pathological influence in regard to rheumatic, convulsive, paralytic, and other nervous affections. His first publication on this subject was entitled Aloysii Galvani de viribus Electricitatis in Motu Musculari Commentarius, printed in 1791 for the Institute of Bologna. Its appearance instantly roused the attention of philosophers both in Italy and other countries, and it was soon followed by numerous publications, in some of which the sentiments of Galvani were defended, and in others they were opposed. A number of arguments were adduced by the celebrated Volta, to prove that the opinion of Galvani respecting animal electricity was erroneous, and deriving the phenomena from the electric matter of the atmosphere, without allowing the nerves and muscles any higher place than that of the most sensible tests hitherto discovered. Galvani also composed a variety of memoirs on subjects connected with his profession; and with men of science he took much pleasure to converse, and to investigate the merits of new publications. In private life the character of Galvani was truly amiable; and the death of his wife, in 1790, was to him a very severe shock: it brought upon him an alarming melancholy, and he indulged in it by frequent visits to her tomb in the nunnery of St. Catherine, where he gave vent to the poignancy of his grief. On the French taking possession of Bologna he refused to take the civic oath of allegiance to the Cisalpine Republic, on which account he was cruelly deprived of all his offices and dignities; and obliged to take up his residence in the house of his brother James, where he fell into a state of debility, and died on the 5th of November, 1798, in the sixty-first year of his age.

GALVANISM. See ELECTRO-GALVANISM.

GALWAY, a county in Ireland, in the province of Connaught, bounded on the north by Mayo, on the east by the river Shannon, which separates it from the King's county and Tipperary; on the south by Clare, and on the west by the Atlantic Ocean. It is in extent the second county in Ireland, being next to Cork, and contains 2593 English square miles, or 1,659,520 acres, divided into seventeen baronies, and, including the South Arran Isles, three in number, at the entrance of Galway Bay, into 116 parishes. It is within the archbishopric of Tuam.

The surface of this county consists, for about one-third, of mountains, bogs, or lakes, the greater part of which is contained in the three baronies on its western side. East and south the country is flat, interspersed with a few hills, and the soil is warm and fertile; much better adapted, however, for grazing than tillage; the fields are enclosed with dry stone walls, and the general basis of the soil is lime-stone. Although this part of Galway contains more gentlemen's seats, than any other portion of Ireland of the same extent, few of them are imposing in their appearance, and the general want of trees gives a dreariness to the landscape.

country between the sea and the Shannon watered, and contains several beautiful Lough Corrib here extends about twenty in length, its greatest breadth being ; but, in the middle, it is contracted to a v channel, which is crossed by a ferry at . It yields a fresh water muscle, that ces pearls, 'of which,' says Beaufort, 'I een some very fine specimens.' Next to annon, the principal rivers are, the Black , Suck, Clare, Galway, and Dunmore; the River, on the bounds of Mayo, is subter- us for about three miles, and the Clare and loyne unite their waters under ground, ately appearing and retiring from sight. h Reagh and Lough Coutra are fine pieces ter; the latter, in particular, which is si- d near the borders of Clare, is much ad- l for its combination of hills, woods, and ds.

e Arran Isles, on the western coast, in- d in this county, are rocky and pre- ous near the shore, which, in many places, ts up into stupendous perpendicular cliffs. are called the South Arran Isles, to distin- h them from Arran Island, on the coast of egal. They formerly gave the title of earl he Butler family, which is extinct, but the is continued in that of Gore.

here are several large estates in Galway, af- ing an income of from £5000 to £10,000 a- : one of these is said to be the most exten- in the British Isles, and stretches along sea coast for seventy miles. In 1809 the t of the green land averaged from a guinea l a half to two guineas per acre, or about . 9*d*. an English acre. A third, perhaps, of land is let on partnership leases, at three lives twenty-one years, to an indefinite number of sons, sometimes eighteen or twenty, who are nt tenants, and entitled to the benefit of sur- orship. 'These people,' according to Mr. akefield, 'divide the land, and give portions their children, which consist of a fourth or h of what they call 'a man's share;' that is, the land which originally belonged to one me in the lease. A certain portion of the hole farm, or take, as it is styled, is appropri- ed for tillage, and this portion is then divided to lots, perhaps twenty or thirty. These lots e again subdivided into fields, which are par- tioned into small lots, each partner obtaining e or two ridges; but these ridges do not con- nue in the hands of the same occupier longer an the time they are in tillage. The pasture held in common; and the elders of the village re the legislators, who establish such regulations s may be judged proper for their community, nd settle all disputes that arise among them. Their houses stand close to each other, and form vhat is here termed a village.' Galway, how- ver, has a fair proportion of resident proprie- ors. The chief towns are Galway, Tuam, and Ballinasloe, where the greatest fairs in Ireland for cattle, sheep, and wool, are held in July and October.

The cattle here are long-horned, and fully equal, in the opinion of Mr. Wakefield, to any n England. But the most valuable part of the live stock is sheep; 'some of the finest flocks in the world,' says this writer. Potatoes are not here cultivated to so great an extent as in some parts of Ireland; they plant them on oat stubble, or on lea that has been burned or manured, and follow with wheat, bear or barley, or oats; which grains often follow in this order. Paring and burning the soil is common, and a great part of the rent of some of the estates on the shore is paid from kelp. Mr. Wakefield states, that the wages of common labor in Galway, in 1811, were 9*d*. a day; and, in hay and corn harvest, 1*s*. 1*d*. The price of potatoes was 3½*d*. per stone; beef 5½*d*., and pork 3½*d*. per lb.; oat-meal 14*s*. per cwt.; milk 2*d*., and butter-milk three farthings per quart; and herrings 5*s*. 3*d*. per hundred.

The linen manufacture is not considerable in Galway, but is the only kind of manufacture pursued to any extent. There is a consider- able salmon fishery at the town of Galway; and, in the bay, herrings, lobsters, and crabs abound. Of the latter, such as in Dublin would bring 7*s*. or 8*s*., may be often bought here for 6*d*., we are told, or even for less. The oysters found at Pouldoody are much esteemed. The hardy inhabitants of the Arran Isles are at one season of the year fishermen, and at another hus- bandmen. The cavities and fissures on their coast also being the resort of great numbers of sea-fowl, they are caught for their feathers, by men suspended by a rope from the summit of the precipices. The mutton of these islands is highly esteemed for its flavor. The principal curiosity of these isles is a circle composed of very large stones, piled up without cement, called Dun Angus, on a high cliff projecting into the sea, in the island of Arranmore: in the same island is said to have been an abbey, which was burnt early in the eleventh century.

The county of Galway sends two members to parliament, and the borough one; the landed property of the Roman Catholics returning the members for the county. The freeholders amount to 4000. In 1809 the Catholics in this county were, to the Protestants, as forty or fifty to one. In the western parts, there are districts of fifty miles, perhaps, in extent, where there is neither a church nor a single Protestant inhabitant. The militia are nearly all Catholics; and ten Catho- lics are called on the grand jury. The Pro- testant population seems to be stationary; but, in several parishes, the increase of the Catholic, in fifteen years before 1811, is stated to have been as five and a half to seven. In the county of Galway, the services of the Catholic church are performed by the priests in Irish.

Galway, a town of Ireland, and capital of the foregoing county, is situated on a bay, shel- tered by the isles of Arran, and having a safe and deep harbour. Its population has been conjecturally stated at about 15,000. It is the only parliamentary borough. The harbour is defended by a strong fort: the town is surrounded with strong walls, and contains several large and regular streets; the houses are generally of stone and well built. The parish church is a large and beautiful gothic structure; it has also an exchange, an hospital, a charter-house, and

an extensive barrack for foot soldiers. It is governed by a mayor, sheriffs, and recorder. Galway has been considered as one of the strongest towns in Ireland, and held out a considerable time against general Ginkle, who invested and took it after the battle of Aghrim; since which time the bastions have been suffered to go to decay. Several religious houses were in this neighbourhood, but the ruins were entirely demolished in 1652, to prevent Cromwell from turning them into fortifications. The salmon and herring-fisheries are carried on here with great spirit, and employ several hundred boats: it has a considerable trade in making and exporting kelp, and the linen manufactures have, of late, been much improved. It is 108 miles south-west of Dublin.

GAMA (Vasco de), a Portuguese admiral, celebrated for his discovery of the passage to the East Indies, by the Cape of Good Hope, was born at Synes; and, in 1497, was sent to the Indies by king Emanuel; he returned in 1502, and sailed thither again with thirteen vessels richly laden. He was made viceroy of the Indies by king John III., and died at Cochin on the 24th of December, 1525. Stephen and Christopher de Gama, his sons, were also viceroys of the Indies, and celebrated in history.

GAMBADE', *n. s.* } Italian, *gamba*, a leg.
GAMBA'DO, *n. s.* } Spatterdashes, or boots worn upon the legs above the shoe.

The pettifogger ambles to her in his *gambadoes* once a week. *Dennis's Letters.*

GAMBIA, a river of Western Africa, formerly supposed to be one of the branches by which the Niger emptied its waters into the ocean; an opinion which has been completely refuted by Mr. Park. Its sources have never been actually visited; but they are ascertained to exist among that range of lofty mountains which form the eastern frontier of Foota Jallo. In the higher parts of its course it is called the Ba Deema.

The Gambia empties itself by a mouth three leagues wide, between the Birds' Island on the north and Cape St. Mary on the south; is navigable for vessels of 300 tons, sixty leagues; and, for those of 150 tons, 250 leagues; or to Barraconda, to which distance the tide is felt in the dry season from December to June. From June to September the ascent is impossible, from the rapidity of the current, and in these months it also overflows and inundates the low country on its banks, which latter are generally covered with mangroves. Its waters are at all times muddy: it abounds in fish, but is infested with crocodiles. The hippopotamus also inhabits it. At Barraconda it is crossed by a bank of rocks; above which the obstructions increase in all directions.

There are two channels into the river; the northernmost, or grand channel, is between the Birds' Island and a bank named Banguion; it is two leagues wide, with six and seven fathoms. The southern, or little channel, is between the same bank and Cape St. Mary, and has only eight or nine feet depth.

The trade of the Gambia belonging almost exclusively to Great Britain, she has several establishments on it: of which the principal is Fort James, on an island ten leagues above the entrance; and at which the depth of the river is not less than five fathoms. This island is only 200 yards long and fifty broad; it was originally fortified by the English, but being taken by the French, in 1688, they destroyed the works, and it has never been found necessary to restore them. The second establishment is Jillifree, on the right bank opposite Fort James; it is in an healthy situation, and the neighbouring country is extremely fertile. On the left, or south bank of the river, are Vintain, two leagues above Jillifree; Tancrowal, twelve leagues further; Joukakonda, six day's navigation above Vintain. The French factory of Albreda is a league below Jillifree. The river Bintan empties itself into the Gambia on the left bank, a league above Fort James, and is navigable for large boats, at all seasons, to the village of Bintan, chiefly inhabited by African Portuguese, who are described as having good houses and a neat church. The territory along the banks of the Gambia is divided among a multitude of petty sovereignties, among which, that of Boor Salum is a principal one. The northern bank is chiefly inhabited by the Taloffs and Mandingoes; the southern by the Feloops.

GAMBIA is also the name of an island in the river Bunch, which falls into the Sierra Leone from the south; on which the French attempted a settlement in 1784.

GAMBIER'S ISLANDS, several high islands of the South Pacific Ocean, lying in 23° 12′ S. lat., 135° 0′ W. long., occupying a space six leagues long, surrounded by a coral reef, and appearing to be well inhabited. They were discovered by captain Wilson, of the missionary ship Duff, in May, 1797. The inhabitants opposed all attempts to land. The principal island is high, and the reef by which they are surrounded shelters all of them from the billows of the main ocean, so that the sea around is calm. They present a barren appearance, but the valleys seemed covered with trees. Duff's Mountains are two lofty mountains, visible here at the distance of fourteen or fifteen leagues, and are in long. 225° 0′ E., lat. 23° 12′ S.

GAMBIER'S ISLES are also several small islands on the south coast of New Holland, at the mouth of Spencer's Gulf. Wedge Island, the largest, is in long. 136° 29′ E., lat. 35° 11′ S.

GAM'BLER, *n.s.* } A cant word for game-
GAM'BLING, *part.* } ster: a knave, whose practice it is to invite the unwary, to game and cheat them.

She had an inward abhorrence of *gambling*. *Looker-on* xxi.

GAMBOGE', *n. s.* Pret. from Cambogia, whence it first came. A resinous gum, used in medicine and painting.

***Gamboge* is a concreted vegetable juice, partly of a gummy, partly of a resinous nature, heavy, of a bright yellow colour, and scarce any smell. It is brought from America and the East Indies, particularly from Cambaja, or Cambogia.** *Hill.*

GAMBOGE is a concrete vegetable juice, partly of a gummy, and partly of a resinous nature. It is chiefly brought to us in large cakes or rolls

ambaja in the East Indies. The best sort deep yellow or orange color, breaks shind free from dross: it has no smell. It iately communicates a bright golden color rit of wine, which almost entirely dis- it. Geoffroy says, except the sixth part. ne salts enable water to act upon this subpowerfully as a menstruum: the solution iewhat transparent, of a deep blood-red and passes the filtre: the dulcified spirit ammoniac readily and entirely dissolves l takes up a considerable quantity; and olution mixes either with water or spirit, it growing turbid. As a pigment, it makes itiful yellow, which is much used by the rs. Dr. Lewis says, that it makes a beaund durable citron yellow stain upon marwhether rubbed in substance on the hot or applied in form of a spirituous tincture. it is applied on cold marble, the stone afterwards be heated, to make the color rate. As a medicine, gamboge evacuates fully both ways; some condemn it as act- with too great violence, and occasioning rous hypercatharses. Geoffroy seems fond and informs us, that he has frequently given two to four grains, without its proving at netic; and that from four to eight grains it vomits and purges, without violence; that peration is soon over; and that if given in uid form, and sufficiently diluted, it stands n need of any corrector; that in the form bolus or pill, it is most apt to prove emetic, very rarely has this effect if joined with mer- is dulcis. He nevertheless cautions against se where the patient cannot easily bear vog.—It has been used in dropsy with cream rtar or jalap, or both, to quicken their open. It is also recommended by some to the nt of fifteen grains, with an equal quantity egetable alkali, in cases of the tape-worm. dose is ordered in the morning; and, if the n is not expelled in two or three hours, it peated even to the third time with safety and acy. It is asserted that it has been given to extent even in delicate habits. This is said be the remedy alluded to by Baron Van eten, which was employed by Dr. Herensard.

GAM'BOL, *v. n.* & *n. s.* Fr. *gambiller*. To ce, leap, or skip; the act of dancing or leap: a frolic; a wild prank. From *gamb*—in *jambe*, the leg, literally leaping into the air.

'Tis not madness
hat I have uttered; bring me to the test,
nd I the matter will record, which madness
Would *gambol* from. *Shakspeare. Hamlet.*

Bears, tigers, ounces, pards,
Gambolled before them.
Milton's Paradise Lost.

The king of elfs, and little fairy queen,
Gambolled on heaths, and danced on every green.
Dryden.

The monsters of the flood
Gambol around him in the wat'ry way,
And heavy whales in awkward measures play.
Pope.

GAMBOLD (John), a modern bishop of the Moravian church, was born at Haverfordwest in the early part of the last century. In 1734 he took the degree of Master of Arts at Christchurch, Oxford, and was afterwards presented by archbishop Secker to the living of Stanton Harcourt; but he resigned this preferment in 1748, having become a convert to the opinions of Zinzendorf, an account of whose life and character he now published. In 1754 he was consecrated a prelate of this ancient episcopal church, in which situation he displayed much activity until his death, which took place at his native town in 1771. While at Oxford he published in 1740 a sacred drama, on the martyrdom of St. Ignatius, and in 1742 superintended an edition of the Greek Testament printed at the Clarendon press. At a subsequent period of his life he assisted in translating Crantz's History of Greenland, and was the author of Maxims and Theological Ideas; a volume of Sermons on the second article of the Church of England, &c.

GAMBREL, *n. s.* Ital. *gamba*, *gambarella*, the leg of a horse.

What can be more admirable than for the principles of the fibres of a tendon to be so mixed as to make it a soft body, and yet to have the strength of iron? as appears by the weight which the tendon, lying on a horse's *gambrel*, doth then command, when he rears up with a man upon his back. *Grew.*

GAME, *n. s.* & *v. n.*
GAME'COCK, *n. s.*
GAME'-EGG, *n. s.*
GAME'KEEPER, *n. s.*
GAME'SOME, *adj.*
GAME'SOMENESS, *n. s.*
GAME'SOMELY, *adv.*
GAME'STER, *n. s.*

Saxon, ȝaman, from Goth. *gamm*, a tipler; Isl. *gaman*, a jest. The radical, game, whence all the rest are derived, implies simply sport, and this idea enters into all the compounds, as gamecock, the bird which is bred to fight; game-egg, that from which the birds are bred; game-keeper, a person who takes care of the birds and animals which are kept for sport. The other derivatives are expressive of various acts, and manners connected with the original meaning: gamester is a person who is engaged at play, whether viciously, or otherwise; a merry, frolicsome person; used also in a licentious sense.

Beryn wan the first, the seconde, and the third,—
And at the fourth *game*, in the ches amid,
The burgeyse was ymated.
Chaucer. The Merchantes Second Tale.

——— Take up also
The coper teine, (not knowing thilke preest,)
And hid it; and him hente by the brest,—
And to him spake, and thus said in his *game*.
The Chanones Yemannes Tale.

Then on her head they set a garland green,
And crowned her 'twixt earnest and 'twixt *game*.
Spenser.

The *games* are done, and Cæsar is returning.
Shakspeare.

If about this hour he make his way,
Under the colour of his usual *game*,
He shall here find his friends with horse and men,
To set him free from his captivity. *Id.*

She's impudent, my lord,
And was a common *gamester* to the camp. *Id.*
We have had pastimes here, and pleasing *game*.
Id.

Your're a merry *gamester*,
My lord Sandys. *Id. Henry VIII.*

A man may think, if he will, that two eyes see no more than one; or that a *gamester* seeth always more

than a looker-on: but, when all is done, the help of good counsel is that which setteth business strait. *Bacon.*

A *gamester*, the greater master he is in his art, the worse man he is. *Id.*

When we observe the ball, how to and fro
The *gamesters* force it; we may ponder thus
That whilst we live we shall be played with so,
And that the world will make her *game* of us.
George Withers.

What meanes this countrey-peasant skipping here
Through prickling thistles with such *gamsom* cheere
And plucking off their tops as though for posies
He gathered violets or toothlesse roses. *Id.*

Milo, when entering the Olympick *game*,
With a huge ox upon his shoulders came.
Denham.

Do they not seek occasion of new quarrels,
On my refusal, to distress me more;
Or make a *game* of my calamities?
Milton's Agonistes.

What arms to use, or nets to frame
Wild beasts to combat, or to tame,
With all the mysteries of that *game*. *Waller.*

This seems to be the present *game* of that crown, and that they will begin no other 'till they see an end of this. *Temple.*

Mutual vouchers for our fame we stand,
And play the *game* into each other's hand.
Dryden.

Some sportsmen, that were abroad upon *game*, spied a company of bustards and cranes. *L'Estrange.*

Gaming leaves no satisfaction behind it: it no way profits either body or mind. *Locke.*

They manage the dispute as fiercely as two *game-cocks* in the pit. *Id.*

This *gamesome* humour of children should rather be encouraged, to keep up their spirits and improve their strength and health, than curbed or restrained. *Id.*

When I see a young profligate sqandering his fortune in bagnios, or at the *gaming-table*, I cannot help looking on him as hastening his own death, and in a manner digging his own grave. *Connoisseur.*

Thus boys hatch *game-eggs* under birds of prey,
To make the fowl more furious for the fray. *Garth.*

Could we look into the mind of a common *gamester*, we should see it full of nothing but trumps and mattadores: her slumbers are haunted with kings, queens, and knaves. *Addison.*

Whose table wit, or modest merit share,
Unelbowed by a *gamester*, pimp, or player. *Pope.*

Proud Nimrod first the bloody chace began,
A mighty hunter, and his prey was man:
Our haughty Norman boasts that barbarous name,
And makes his trembling slaves the royal *game*. *Id.*

All the superfluous whims relate,
That fill a female *gamester's* pate;
What agony of soul she feels
To see a knave's inverted heels. *Swift.*

Her youngest daughter is run away with a *gamester*, a man of great beauty, who in dressing and dancing has no superior. *Law.*

Avarice itself does not calculate strictly when it *games*. *Burke on Parliament.*

It will bear a doubt, if a *gamester* has any other title to be called a man, except under the distinction of Hobbes, and upon claim to the charter of homo hominis lupus. As a human wolf I grant he has a right to his wolfish prerogatives. *Cumberland.*

A phantasy which sometimes seizes warriors
Unless they are *game* as bull-dogs and fox-terriers.
Byron.

GAME, in law, signifies birds, or prey, taken or killed by fowling or hunting. The property of such animals feræ naturæ as are known under the denomination of game, with the right of pursuing, taking, and destroying them, is vested in the king alone, and from him derived to such of his subjects as have received the grants of a chase, a park, or a free warren. By the law of nature, indeed, every man, from the prince to the peasant, has an equal right of pursuing, and taking to his own use, all such creatures as are feræ naturæ, and therefore the property of nobody, but liable to be seized by the first occupant. But it follows, says Blackstone, from the very end and constitution of society, that this natural right, as well as many others belonging to man as an individual, may be restrained by positive laws enacted for reasons of state, or for the supposed benefit of the community. This restriction may be either with respect to the *place* in which this right may, or may not, be exercised; with respect to the *animals* that are the subjects of this right; or with respect to the *persons* allowed or forbidden to exercise it. And, in consequence of this authority, we find, that the municipal laws of many nations have exerted such power of restraint; have in general forbidden the entering on another man's grounds, for any cause, without the owner's leave; have extended their protection to such part cular animals as are usually the objects of pursuit; and have invested the prerogative of hunting and taking such animals in the sovereign of the state only, and such as he shall authorise. Many reasons have concurred for making these constitutions: as, 1. For the encouragement of agriculture and improvement of lands, by giving every man an exclusive dominion over his own soil. 2. For the preservation of the several species of these animals, which would soon be extirpated by a general liberty. 3. For prevention of idleness and dissipation in husbandmen, artificers, and others of lower rank; which would be the unavoidable consequence of universal license. 4. For prevention of popular insurrections and resistance to the government, by disarming the bulk of the people: which last is a reason oftener meant than avowed, by the makers of forest or game laws. Nor, certainly, in these prohibitions is there any natural injustice, as some have weakly enough supposed: since, as Puffendorf observes, the law does not hereby take from any man his present property, or what was already his own; but barely abridges him of one means of acquiring a future property, that of occupancy; which indeed the law of nature would allow him, but of which the laws of society have in most instances very justly and reasonably deprived him. Yet, however defensible these provisions in general may be, on the footing of reason, or justice, or civil policy, we must, notwithstanding, acknowledge, that, in their present shape, they owe their immediate original to slavery. It is not till after the irruption of the northern nations into the Roman empire, that we read of anv other prohibitions, than that natural one of not sporting on any private grounds without the owner's leave. With regard to the rise and original of our pre-

'il prohibitions, it will be found, that all nd game laws were introduced into at the same time, and by the same po- it gave birth to the feudal system; when warms of barbarians issued from their n hive, and laid the foundation of most present kingdoms of Europe on the ruins western empire. For when a conquering came to settle the economy of a van- l country, and to part it out among his s or feudatories, who were to render him y service for such donation; it behoved order to secure his new acquisitions, to he rustici or natives of the country, and o were not his military tenants, in as low lition as possible, and especially to pro- hem the use of arms. Nothing could do ore effectually than the prohibition of g and sporting, and therefore it was the of the conqueror to reserve this right to lf, and such on whom he should bestow it; were only his capital feudatories or greater s. And, accordingly, we find, in the feudal tutions, one and the same law prohibiting ustici in general from carrying arms, and proscribing the use of nets, snares, or othe- es for destroying the game. This exclusive lege well suited the martial genius of the s, who delighted in a sport, which in its nit and slaughter bore some resemblance to

'Vita omnis,' says Cæsar, speaking of the nt Germans, 'in venationibus atque in studiis militaris consistit.' And Tacitus in like ner observes, that 'quoties bella non ineunt, um venatibus, plus per otium transigunt.' , indeed, like some of their modern succes- , they had no other amusement to entertain r vacant hours; they despising all arts as ef- inate, and having no other learning than was ched in such rude ditties as were sung at the mn carousals, which succeeded these ancient tings. It is remarkable, that in those na- s where the feudal policy remains the most ltered, the forest or game laws continue in ir highest rigor. In France, before the re- ution, all game was properly the king's; and some parts of Germany it was death for a sant to be found hunting in the woods of the bility. With us in Britain, also, hunting has r been esteemed a most princely diversion l exercise. The whole island was replenished th all sorts of game in the times of the Bri- s; who lived in a wild and pastoral manner, thout enclosing or improving their grounds; d derived much of their substance from the ase, which they all enjoyed in common. But en husbandry took place under the Saxon go- rnment, and lands began to be cultivated, im- oved, and enclosed, the beasts naturally fled to the woody and desert tracts, which were lled the forests; and, having never been dis- osed of in the first distribution of lands, were erefore held to belong to the crown. These ere filled with great plenty of game, which our yal sportsmen reserved for their own diversion, n pain of pecuniary forfeiture for such as in- rfered with their sovereign. But every free- older had the full liberty of sporting upon his wn territories, provided he abstained from the king's forests. However, upon the Norman conquest, a new doctrine took place; and the right of pursuing and taking all beasts of chase or venary, and such other animals as were accounted game, was then held to belong to the king, or to such only as were authorised under him. And this, as well upon the principles of the feudal law, that the king is the ultimate proprietor of all the lands in the kingdom, they being all held of him as the chief lord, or lord paramount of the fee; and that, therefore, he has the right of the universal soil, to enter thereon, and to chase and take such creatures at his pleasure: as also upon another maxim of the common law, that these animals are bona vacantia, and, having no other owner, belong to the king by his prerogative. As, therefore, the former reason was held to vest in the king a right to pursue and take them any where, the latter was supposed to give the king, and such as he should authorise, a sole and exclusive right. This right, thus vested in the crown, was exerted with the utmost rigor, at and after the time of the Norman establishment; not only in the ancient forests, but in the new ones which the conqueror made, by laying together vast tracts of country, depopulated for that purpose, and reserved solely for the king's royal diversion; in which were exercised the most horrid tyrannies and oppressions, under color of forest laws for the sake of preserving the beasts of chase; to kill any of which, within the limits of the forest, was as penal as the death of a man. And, in pursuance of the same principle, king John laid a total interdict upon the winged as well as the four-footed creation; capturam avium per totam Angliam interdixit. The cruel and unsupportable hardships, which these forest laws created to the subject, occasioned our ancestors to be as zealous for their reformation, as for the relaxation of the feudal rigors and the other exactions introduced by the Norman family; and accordingly we find the immunities of charta de foresta as warmly contended for, and extorted from the king with as much difficulty, as those of magna charta itself. By this charter, confirmed in parliament, 9 Hen. III., many forests were disafforested, or stripped of their oppressive privileges, and regulations were made in the regimen of such as remained; particularly killing the king's deer was made no longer a capital offence, but only punished by a fine, imprisonment, or abjuration of the realm. And by a variety of subsequent statutes, together with the long acquiescence of the crown without exerting the forest laws, this prerogative is now become no longer a grievance to the subject. But as the king reserved to himself the forest for his own exclusive diversion, so he granted out from time to time other tracts of land to his subjects under the names of chases or parks; or gave them license to make such in their own grounds; which indeed are smaller forests in the hands of a subject, but not governed by the forest laws; and by the common law no person is at liberty to take or kill any beasts of chase, but such as hath an ancient chase or park; unless they be also beasts of prey. As to all inferior species of game, called beasts and fowls of warren; the

liberty of taking or killing them is another franchise, or royalty, derived likewise from the crown, and called free warren; a word which signifies preservation or custody: as the exclusive liberty of taking and killing fish in a public stream or river is called a free fishery; of which, however, no new franchise can at present be granted by the express provision of magna charta, c. 16. The principal intention of granting a man these franchises, or liberties, was in order to protect the game, by giving him a sole and exclusive power of killing it himself, provided he prevented other persons. And no man but he who has a chase or free warren, by grant from the crown, or prescription, which supposes one, can justify hunting or sporting upon another man's soil; nor indeed, in thorough strictness of common law, either hunting or sporting at all. However new this doctrine may seem, it is a regular consequence from what has been before delivered, that the sole right of taking and destroying game belongs exclusively to the king. This appears, as well from the historical deduction here made, as because he may grant to his subjects an exclusive right of taking them; which he could not do, unless such a right was first inherent in himself. And hence it will follow, that no person whatever, but he who has such derivative right from the crown, is by common law entitled to take or kill any beast of chase, or other game whatsoever. It is true that, by the acquiescence of the crown, the frequent grants of free warren in ancient times, and the introduction of new penalties of late by certain statutes for preserving the game, this exclusive prerogative of the king is little known or considered; every man that is exempted from these modern penalties looking upon himself as at liberty to do what he pleases with the game: whereas the contrary is strictly true, and that no man, however well qualified he may vulgarly be esteemed, has a right to encroach on the royal prerogative by the killing of game, unless he can show a particular grant of free warren, or a prescription which presumes a grant; or some authority under an act of parliament. As to the latter, there are but two instances wherein an express permission to kill game was ever given by statute; the one by 1 Jac. I. cap. 27, altered by 9 Jac. I. cap. 11, and virtually repealed by 22 and 23 Car. II. cap. 25, which gave authority, so long as they remained in force, to the owners of free warren, to lords of manors, and to all freeholders having £40 per annum in lands of inheritance, or £80 for life or lives, or £400 personal estate (and their servants), to take partridges and pheasants upon their own, or their masters' free warren, inheritance, or freehold; the other by 5 Anne cap. 14, which empowers lords and ladies of manors to appoint game-keepers, to kill game for the use of such lord or lady, which with some alteration still subsists, and plainly supposes such power not to have been in them before. The truth of the matter is, that these game laws do indeed qualify nobody, except in the instance of a gamekeeper, to kill game: but only to save the trouble and formal process of an action by the person injured, who perhaps too might remit the offence, these statutes inflict additional penalties to be recovered either in a regular or summary way, by any of the king's subjects, from certain persons of inferior rank, who may be found offending in this particular. But it does not follow that persons excused from these additional penalties are therefore authorised to kill game. The circumstance of having £100 per annum, and the rest, are not properly qualifications but exemptions. And these persons so exempted from the penalties of the game statutes, are not only liable to actions of trespass by the owners of the land; but also, if they kill game within the limits of any royal franchise, they are liable to the actions of such who may have the right of chase or free warren therein. Upon the whole, it appears that the king, by his prerogative, and such persons as have, under his authority, the Royal Franchise of Chase, Park, or Free Warren (See these articles), are the only persons who may acquire any property, however fugitive and transitory, in these animals feræ naturæ, while living; which is said to be vested in them propter privilegium. And such persons as may thus lawfully hunt, fish, or fowl, ratione privilegii, have only a qualified property in these animals: it not being absolute or permanent, but lasting only so long as the creatures remain within the limits of such respective franchise or liberty, and ceasing the instant they voluntarily pass out of it. It is held indeed, that if a man starts any game within his own grounds, and follows it into another's, and kills it there, the property remains in himself. And this is grounded on reason and natural justice; for the property consists in the possession; which possession commences by the finding it in his own liberty, and is continued by the immediate pursuit. And so, if a stranger starts game in one man's chase or free warren, and hunts it into another liberty, the property continues in the owner of the chase or warren; this property arising from privilege, and not being changed by the act of a mere stranger. Or if a man starts game on another's private grounds, and kills it there, the property belongs to him on whose grounds it was killed, because it was also started there; this property arising ratione soli. Whereas if, after being started there, it is killed in the grounds of a third person, the property belongs not to the owner of the first ground, because the property is local; nor yet to the owner of the second, because it was not started in his soil; but it vests in the person who started and killed it, though guilty of a trespass against both the owners. See Laws respecting Game.

Games, in antiquity, were public diversions, exhibited on solemn occasions. Such among the Greeks were the Olympic, Pythian, Isthmian, Nemean, &c. games; and, among the Romans, the Apollinarian, Circensian, Capitoline, &c. games. See Apollinarian, Olympic, Pythian.

Games, Modern, are usually distinguished into those of exercise and address, and those of hazard. To the first belong chess, tennis, billiards, &c.; and to the latter those performed with cards, or dice, as back-gammon, ombre, picquet, whist, &c. See Back-gammon, Cards, Dice, Gaming, &c.

[ELIA, in Grecian antiquity, a nuptial
· rather sacrifice, held in the ancient
amilies on the day before a marriage; so
from a custom they had of shaving them-
n this occasion, and presenting their hair
e deity to whom they had particular obli-

MELION, in the ancient chronology, was
ghth month of the Athenian year, con-
twenty-nine days, and answering to the
January and beginning of February. It
us called, as being, in the opinion of the
ans, the most proper season of the year
rriage.

MING, the art of playing or practising any
particularly those of hazard; as cards,
ables, &c. Gaming has at all times been
lered as of pernicious consequence to the
onwealth; and is therefore severely prohi-
by law. It is esteemed a practice intended
ply, or retrieve, the expenses occasioned
xury; it being a kind of tacit confession,
he company therein engaged do, in general,
d the bounds of their respective fortunes;
herefore they cast lots to determine upon
n the ruin shall at present fall, that the rest
be saved a little longer. But, taken in any
, it is an offence of the most alarming nature;
ng, by necessary consequence, to promote
ic idleness, theft, and debauchery, among
: of a lower class; and, among persons of a
rior rank, it has frequently been attended
the sudden ruin and desolation of ancient
opulent families, and abandoned prostitution
ery principle of honor and virtue, and too
has ended in suicide. To restrain this
icious vice among the inferior sort of people,
statute 33 Henry VIII. cap. 9, was made;
ch prohibits to all but gentlemen, the games
ennis, tables, cards, dice, bowls, and other
wful diversions there specified, unless in the
: of Christmas, under pecuniary pains and
risonment. And the same law, and also the
ute 23 Geo. II. cap. 14, inflict pecuniary pe-
ies upon the master of any public house,
rein servants are permitted to game, as well
upon servants themselves who are found
ning there. But this is not the principal
und of complaint; it is the gaming in high
that demands the attention of the magistrate;
assion to which every valuable consideration
acrificed, and which we seem to have inherited
m our ancestors, the ancient Germans; whom
citus describes to have been bewitched with
spirit of play to a most exorbitant degree.
'hey addict themselves,' says he, 'to dice
hich is wonderful) when sober, and as a se-
us employment; with such a mad desire of
nning or losing, that, when stripped of every
ng else, they will stake at last their liberty,
d their very selves. The loser goes into a vo-
ntary slavery; and, though younger and
onger than his antagonist, suffers himself to
bound and sold. And this perseverance in
bad a cause they call the point of honor; ea
t in re pravâ pervicacia, ipsi fidem vocant.'
ne would almost be tempted to think Tacitus
as describing a modern Englishman. When
en are thus intoxicated with so frantic a spirit, laws will be of little avail: because the same false sense of honor that prompts a man to sacrifice himself, will deter him from appealing to the magistrate. Yet it is proper that laws should be, and be known publicly, that gentlemen may consider what penalties they wilfully incur, and what a confidence they repose in sharpers; who, if successful in play, are certain to be paid with honor, or, if unsuccessful, have it in their power to be still greater gainers by informing.

GAMING, CHANCE IN. Hazard, or chance, is a matter of mathematical consideration, because it admits of more and less. Gamesters either set out upon an equality of chance, or are supposed to do so. This equality may be altered in the course of the game, by the greater good fortune or address of one of the gamesters, whereby he comes to have a better chance, so that his share in the stakes is proportionably better than at first. This more and less runs through all the ratios between equality and infinite difference, or from an infinitely little difference till it come to an infinitely great one, whereby the game is determined. The whole game, therefore, with regard to the issue of it, is a chance of the proportion the two shares bear to each other. The probability of an event is greater or less, according to the number of chances by which it may happen, compared with all the chances by which it may either happen or fail. M. de Moivre, in a treatise de Mensurâ Sortis, has computed the variety of chances in several cases that occur in gaming, the laws of which may be understood by what follows. Suppose p the number of cases in which an event may happen, and q the number of cases wherein it may not happen, both sides have the degree of probability, which is to each other as p to q. If two gamesters, A and B, engage on this footing, that, if the cases p happen, A shall win; but if q happen, B shall win, and the stake be a; the chance of A will be $\frac{p\,a}{p+q}$, and that of B $\frac{q\,a}{p+q}$; consequently, if they sell the expectancies, they should have that for them respectively. If A and B play with a single die, on this condition, that if A throw two or more aces at eight throws, he shall win; otherwise B shall win; what is the ratio of their chances? Since there is but one case wherein an ace may turn up, and five wherein it may not, let $a=1$, and $b=5$. And again, since there are eight throws of the die, let $n=8$; and you will have $\overline{a+b}|^n - b^n - nab^n - 1$, to $b_n + nab^n - 1$: that is, the chance of A will be that of B as 663,991 to 10,156,525, or nearly as 2 to 3. A and B are engaged at single quoits; and after playing some time, A wants 4 of being up, and B 6; but B is so much the better gamester, that his chance against A upon a single throw would be as 3 to 2; what is the ratio of their chances? Since A wants 4, and B 6, the game will be ended at nine throws; therefore, raise $a+b$ to the ninth power, and it will be $a^9+9a^8b+36a^7bb+84a^6b^3+126a^5b^4+126a^4b^5$, to $84a^3b^6+36aab^7+ab^3+b^9$: call a 3, and b 2, and you will have the ratio of chances in numbers, viz. 1,759,077 to 194,048. A and B play at single quoits, and A

is the best gamester, so that he can give B 2 in 3: what is the ratio of their chances at a single throw? Suppose the chances as z to 1, and raise $z+1$ to its cube, which will be z^3+3z^2+3z+1. Now, since A could give B 2 out of 3, A might undertake to win the throws running; consequently the chances in this case will be as z^3 to $3z^2+3z+1$. Hence $z^2=3z^2+32+1$; or $2z^3=z^3+3z^2-3z+1$. And therefore $z\sqrt[3]{2}=z+1$; and, consequently, $z=\frac{1}{\sqrt[3]{2}-1}$. The chances, therefore, are $\frac{1}{\sqrt[3]{2}-1}$ and 1, respectively. Again, suppose I have two wagers depending, in the first of which I have 3 to 2 the best of the lay, and in the second, 7 to 4; what is the probability I win both wagers? 1. The probability of winning the first is $\frac{3}{5}$, that is the number of chances I have to win divided by the number of all the chances: the probability of winning the second is $\frac{7}{11}$: therefore, multiplying these two fractions together, the product will be $\frac{21}{55}$, which is the probability of winning both wagers. Now, this fraction being subtracted from 1, the remainder is $\frac{34}{55}$, which is the probability I do not win both wagers: therefore the odds against me are 34 to 21. 2. If I would know what the probability is of winning the first, and losing the second, I argue thus: the probability of winning the first is $\frac{3}{5}$, the probability of losing the second is $\frac{4}{11}$: therefore multiplying $\frac{3}{5}$ by $\frac{4}{11}$, the product $\frac{12}{55}$ will be the probability of my winning the first, and losing the second; which being subtracted from 1, there will remain $\frac{43}{55}$, which is the probability I do not win the first, and at the same time lose the second. 3. If I would know what the probability is of winning the second, and at the same time losing the first, I say thus: The probability of winning the second is $\frac{7}{11}$; the probability of losing the first is $\frac{2}{5}$: therefore, multiplying these two fractions together, the product $\frac{14}{55}$ is the probability I win the second, and also lose the first. 4. If I would know what the probability is of losing both wagers, I say, the probability of losing the first is $\frac{2}{5}$, and the probability of losing the second $\frac{4}{11}$: therefore the probability of losing them both is $\frac{8}{55}$: which, being subtracted from 1, there remains $\frac{47}{55}$: therefore, the odds of losing both wagers is 47 to 8. This reasoning is applicable to the happening or failing of any events that may fall under consideration. Thus if I would know what the probability is of missing an ace four times together with a die, this I consider as the failing of four different events. Now the probability of missing the first is $\frac{5}{6}$, the second is also $\frac{5}{6}$, the third $\frac{5}{6}$, and the fourth $\frac{5}{6}$; therefore the probability of missing it four times together is $\frac{5}{6}\times\frac{5}{6}\times\frac{5}{6}\times\frac{5}{6}=\frac{625}{1296}$; which being subtracted from 1, there will remain $\frac{671}{1296}$ for the probability of throwing it once or oftener in four times; therefore the odds of throwing an ace in four times, is 671 to 625. But if the flinging of an ace was undertaken in three times, the probability of missing it three times would be $\frac{5}{6}\times\frac{5}{6}+\frac{5}{6}=\frac{125}{216}$; which being subtracted from 1, there will remain $\frac{91}{216}$ for the probability of throwing it once or oftener in three times: therefore the odds against throwing it in three times are 125 to 91. Again, suppose we would know the probability of throwing an ace once in four times, and no more: since the probability of throwing it the first time is $\frac{1}{6}$, and of missing it the other three times, is $\frac{5}{6}\times\frac{5}{6}\times\frac{5}{6}$, it follows, that the probability of throwing it the first time, and missing it the other three successive times, is $\frac{1}{6}\times\frac{5}{6}\times\frac{5}{6}\times\frac{5}{6}=\frac{125}{1296}$; because it is possible to hit every throw as well as the first, it follows, that the probability of throwing it once in four throws, and missing it the other three, is $4\times\frac{125}{1296}=\frac{500}{1296}$; which being subtracted from 1, there will remain $\frac{796}{1296}$ for the probability of throwing it once, and no more, in four times. Therefore, if one undertake to throw an ace once, and no more, in four times, he has 500 to 796 the worst of the lay, or 5 to 8, very near. Suppose two events are such, that one of them has twice as many chances to come up as the other: what is the probability that the event, which has the greater number of chances to come up, does not happen twice before the other happens once, which is the case of flinging 7 with two dice before 4 once? Since the number of chances is as 2 to 1, the probability of the first happening before the second is $\frac{2}{3}$, but the probability of its happening twice before it is but $\frac{2}{3}\times\frac{2}{3}$ or $\frac{4}{9}$: therefore it is 5 to 4, seven does not come up twice before four once. But, if it were demanded, what must be the proportion of the facilities of the coming up of two events, to make that which has the most chances come up twice, before the other comes once? The answer is, 12 to 5 very nearly: whence it follows, that the probability of throwing the first before the second is $\frac{12}{17}$, and the probability of throwing it twice is $\frac{12}{17}\times\frac{12}{17}$, or $\frac{144}{289}$: therefore the probability of not doing it is $\frac{145}{289}$: therefore the odds against it are as 145 to 144, which comes very near an equality. Suppose there is a heap of thirteen red cards, and another heap of thirteen black cards, what is the probability that, taking one card at a venture out of each heap, I shall take out the two aces. The probability of taking the ace out of the first heap is $\frac{1}{13}$, the probability of taking the ace out of the second heap is $\frac{1}{13}$; therefore the probability of taking out both aces is $\frac{1}{13}\times\frac{1}{13}=\frac{1}{169}$, which being subtracted from 1, there will remain $\frac{168}{169}$; therefore the odds against me are 168 to 1. In cases where the events depend on one another, the manner of arguing is somewhat altered. Thus, suppose that out of one single heap of thirteen cards of one color, I should undertake to take out first the ace; and, secondly, the two: though the probability of taking out the ace be $\frac{1}{13}$, and the probability of taking out the two be likewise $\frac{1}{13}$: yet, the ace being supposed as taken out already, there will remain only twelve cards in the heap, which will make the probability of taking out the two to be $\frac{1}{12}$; therefore the probability of taking out the ace, and then the two, will be $\frac{1}{13}\times\frac{1}{12}$. In this last question the two events have a dependence on each other; which consists in this, that one of the events being supposed as having happened, the probability of the other's happening is thereby altered. But the case is not so in the two heaps of cards. If the events in question be n in number, and be such as have the same number a of chances by which they may happen, and likewise the same number b of chances by which they may fail, raise $a+b$ to the

And if A and B play together, on condition ither one or more of the events in question A shall win, and B lose, the probability of ning will be $\frac{|a+b|^n - b^n}{|a+b|^n}$; and that of B's $\frac{b^n}{|a+b|}$; will be $|a+b|$; for when $a+b$ is actual- d to the power n, the only term in which not occur is the last b^n: therefore all the ut the last are favorable to A. Thus if raising $a+b$ to the cube $a^3+3a^2b+3ab^2$, the terms but b^3 will be favorable to A; and re the probability of A's winning will be $\frac{3ab^2}{|a+b|^3}$, or $\frac{|a+b|^3 - b^3}{|a+b|^3}$; and the proba- of B's winning will be $\frac{b^3}{|a+b|^3}$. But if A play on condition, that if either two re of the events in question happen, A shall but in case one only happen, or none, B vin; the probability of A's winning will be $\frac{nab^{p-1} - b^p}{|n+b|^n}$; for the only two terms in *aa* does not occur are the two last, viz. b^{p-1} and b^p.

MING, LAWS AGAINST. By stat. 16 Car. II. if any person, by playing or betting, shall nore than £100 at one time, he shall not be ellable to pay the same; and the winner forfeit treble the value, one moiety to the the other to the informer. The statute 9 c. 14, enacts, that all bonds and other se- ies, given for money won at play, or money at the time to play withal, shall be utterly : that all mortgages and incumbrances of s, made upon the same consideration, shall nd enure to the heir of the mortgager: that, ny person at one time loses £10 at play, he sue the winner, and recover it back by ac- of debt at law; and, in case the loser does any other person may sue the winner for le the sum so lost; and the plaintiff in either may examine the defendant himself upon n: and that in any of these suits no privilege parliament shall be allowed. The statute far- enacts, that if any person cheats at play, and ne time wins more than £10 or any valuable g, he may be indicted thereupon, and shall feit five times the value, shall be deemed infa- us, and suffer such corporeal punishment as in e of wilful perjury. By several statutes of the gn of king George II. all private lotteries by kets, cards, or dice (particularly the games of o, basset, ace of hearts, hazard, passage, rolly- lly, and all other games with dice, except back- mmon), are prohibited under a penalty of £200 r him that shall erect such lotteries, and £50 time for the players. Public lotteries, unless authority of parliament, and all manner of in- nious devices, under the denomination of sales otherwise, which in the end are equivalent to tteries, were before prohibited by a great variety statutes under heavy pecuniary penalties. But articular descriptions will be ever lame and eficient, unless all games of mere chance are at nce prohibited; the invention of sharpers being swifter than the punishment of the law, which only hunts them from one device to another. The statute 13 Geo. II. c. 19, to prevent the multiplicity of horse-races, another fund of gaming, directs that no plates or matches under £50 value shall be run, under penalty of £200 to be paid by the owner of each horse running, and £100 by such as advertise the plate. By statute 18 Geo. II. c. 34, the statute of 9 Ann. is further enforced, and some deficiencies supplied: the forfeitures of that act may now be recovered in a court of equity; and, moreover, if any man be convicted, upon information or indictment, of winning or losing any sitting of £10 or £20 within twenty-four hours, he shall forfeit five times the sum. Thus careful has the legislature been to prevent this destructive vice: which may show that our laws against gaming are not so deficient, as ourselves and our magistrates in putting those laws in execution.

GAM'MER, *n.s.* Uncertain as to its etymology; probably from Fr. *grand mère*, a term applied to old women, corresponding to gaffer, says Dr. Johnson; it is simply its feminine.

GAM'MON, *n.s.* Fr. *jambon;* Ital. *gambone*, the buttock of a hog salted and dried. A term used in the game called back-gammon.

Our tansies at Easter have reference to the bitter herbs; though at the same time 'twas always the fashion for a man to have a *gammon* of bacon, to shew himself to be no Jew. *Selden.*

Ask for what price thy venal tongue was sold:
A rusty *gammon* of some seven years old. *Dryden.*

The quick dice,
In thunder leaping from the box, awake
The sounding *gammer* *Thomson's Autumn.*

GAMMONING, among seamen, denotes several turns of a rope taken round the bowsprit, and reeved through holes in knees of the head, for the greater security of the bowsprit.

GAMUT, *n. s.* Ital. *gama.* The scale of musical notes.

Madam, before you touch the instrument,
To learn the order of my fingering,
I must begin with rudiments of art,
To teach you *gamut* in a briefer sort. *Shakspeare.*

When by the *gamut* some musicians make
A perfect song, others will undertake,
By the same *gamut* changed to equal it:
Things simply good can never be unfit. *Donne.*

Long has a race of heroes filled the stage,
That rant by note, and through the *gamut* rage;
In songs and airs express their martial fire,
Combat in trills, and in a fugue expire. *Addison.*

GAMUT, GAMMUT, or GAM-UT. See MUSIC.

'GAN, for began, from *'gin* for begin.

The noble knight *'gan* feel
His vital force to faint. *Spenser.*

GANA, or GHANA, a city and state of Central Africa, on the Niger. Our knowledge of it is derived almost wholly from the Arabian writers of the eleventh and twelfth centuries, at which period it was the centre of an extensive empire. It appears to have been founded by one of a Saracen dynasty, expelled from Egypt; and being a convenient emporium of trade with Northern Africa, and in the vicinity of the gold mines of Wangara, it soon rose to a high pitch of prosperity. The vicinity is said to have been very

fertile, and the pomp of the sovereign to have excited the admiration of all the surrounding kingdoms. Gana is thought to have been the country described to Horneman under the name of Cano; and to be now an appendage of Cassina, and tributary with it, to Bornou. The maps place it 100 miles south-east of Cassina.

GANCH, *v. a.* Ital. *ganciare*, from *gancio*, a hook; Fr. *ganche*. To drop from a high place upon hooks by way of punishment; a practice in Turkey, to which Smith alludes in his Pocockius.

> Cohors catenis qua pia stridulis
> Gemunt onusti, vel sude trans sinum
> Luctantur actâ, pendulive
> Sanguineis trepidant in uncis. *Musæ Angl.*

GA'NDER, *n. s.* Sax. ȝandꝛa. The male of the goose.

> As deep drinketh the goose as the *gander*. *Camden.*
>
> One *gander* will serve five geese. *Mortimer.*

GANG, *v. n.* & *n. s.* Sax. ȝangan; Dutch *gangen*; Scot. *gang*, from Goth. *ga*, to go. To go, an old word used ludicrously. A tribe or herd. The substantive is used in a contemptuous sense.

> But let them *gang* alone,
> As they have brewed, so let them bear blame. *Spenser.*
>
> O, you panderly rascals! there's a knot, a *gang*, a pack, a conspiracy against me. *Shakspeare.*
>
> As a *gang* of thieves were robbing a house, a mastiff fell a barking. *L'Estrange.*
>
> Admitted in among the *gang*,
> He acts and talks as they befriend him. *Prior.*
>
> Your flaunting beaus *gang* with their breasts open. *Arbuthnot.*

GANGES (Ganga, the River), called also Padda and Burra Ganga, the Great River. An important river of Hindostan, one of the largest in Asia, formed by two streams which take their rise in the mountains of Thibet. Some doubts having arisen respecting the direction of these streams, the Bengal government, in 1808, sent lieutenant Webb to survey the upper part of the river; and, from all the information he could obtain, he fixed the source on the south side of the great Himalaya chain. All accounts, indeed, agreed in representing the origin of the Ganges as more remote than Gangoutri (which see), and stated that, while the course was in many places visible, in others it was covered with snow and ice. The course of the Ganges and Alacananda Rivers was followed, until the former became a shallow and almost stagnant pool, and the latter a small stream; and both having, in addition to springs and rivulets, a considerable visible supply from the thawing of the snow. It is therefore concluded, from analogy, that the sources of these rivers can be little, if at all, removed from the station at which these remarks were collected. No doubt can remain, says Mr. Hamilton, that the different branches of the river above Hurdwar take their rise on the southern side of the Himalaya chain of snowy mountains; and it is presumable, that all the tributary streams of the Ganges, including the Sarjew or Goggrah, and the Jumna, whose most conspicuous fountain is at little distance from the Ganges, also rise on the southern side of that chain of mountains.

This river winds through the rugged country of Sirinagur, until at Hurdwar it finally escapes through an opening from the mountainous tract and enters the plains of Bengal, after a course of 800 miles. The breadth and depth of the river in its course through Bengal greatly vary, the former from three miles to half a mile, and in some places it is fordable; but for 500 miles from the sea, the depth in the channel is thirty feet, when the river is lowest; the current in the dry season runs three miles an hour and five miles in the wet.

At 300 miles from the sea the Ganges separates into two great branches, which in their course to the sea diverge from each other and form a delta, whose base on the coast is 200 miles: and in which there are nearly twenty openings; the whole of the delta towards the sea being composed of low alluvion islands covered with wood named Sundry, whence the tract is called the Sunderbunds.

The western branch of the Ganges is again subdivided into lesser branches, the two westernmost of which, named the Cossimbuzar and Jellinghee, unite again and take the name of Hoogly or Hughly to the sea. See Hoogly.

The latest account of the upper part of the Ganges is that given by captain Hodgson, of the tenth native infantry, who undertook to survey it in 1807. On the 31st of May, he descended to the bed of the river, and saw the Ganges issue from a very low arch at the foot of a vast bed of snow. It was bounded on each side by rocks; but in the front, over the debouche, the mass was nearly perpendicular, and from the river to the surface of the snow was 300 feet; 'probably the accumulation,' says he, 'of ages. It is in layers of some feet thick, each seemingly the remains of a fall of a separate year. From the brow of this curious wall of snow, and immediately above the outlet of the stream, large and hoary icicles depend: they are formed by the freezing of the melted snow-water of the top of the bed; for in the middle of the day the sun is powerful, and the water produced by its action falls over this place in cascade, but is frozen at night. The Gango tri Brahmin who came with us, and who is only an illiterate mountaineer, observed, that he thought these icicles must be Mahádéva's Hairs, whence, as he understood, it is written in the Shástra, the Ganges flows. I mention this, thinking it a good idea: but the man had never heard of such a place actually existing, nor had he or any other person, to his knowledge, even been here. In modern times they may not, but Hindoos of research may formerly have been here; and if so, I cannot think of any place to which they might more aptly give the name of a Cow's Mouth, than to this extraordinary débouché. The height of the arch of snow is only sufficient to let a stream flow under it. Blocks of snow were falling about us, so there was little time to do more here than to measure the size of the stream. Measured by a chain, the mean breadth was twenty-seven feet,; the greatest depth at that place being knee deep, or eighteen inches, but more generally a foot deep, and ra

s just at the edges, say nine or ten inches: r, call the mean depth fifteen inches. Be- this to be (as I have every reason to e it is) the first appearance of the famous e Ganges in daylight, we saluted her with -march, and proceeded (having to turn a ack to gain an oblique path) to the top of w-bed, having ascended it to the left.'

tain Hodges afterwards gives the follow- ount of this bed or valley of snow, which ises to the Ganges. 'It appears that we up it, somewhat more than a mile and a From our last station we could see on- as we estimated, about five miles, to there seemed to be a crest or ridge of con- ble elevation, though low when compared ne great peak which flanked it. The ge- lope of the surface of the snow valley was ich was the angle of elevation of the crest, that of the peak St. George, one of those flanked it to the left, was 17° 49′. In the we had passed over the snow bed, the s was not to be seen; it was concealed, bly, many hundred feet below the surface. ad a fair view onward, and there was no f the river; but I am firmly convinced that t appearance in day is at the débouché I lescribed. Perhaps, indeed, some of those s chasms and rents in the snow-bed, which ect it in all sorts of irregular directions, occasionally let in the light on some part bed of the stream; but the general line irection of it could only be guessed at, as it gether here far below the broken snowy e. The breadth of the snow valley or bed is a mile and a half, and its length may be six a half or seven miles from the débouché of ver to the summit of the slope, which ter- ted our view; as to the depth of the snow, impossible to form a correct judgment, but ust be very great. It may easily be ima- l, that a large supply of water is furnished s season, by the melting of this vast mass e valley, as well as by the melting of that of great peaks which bound it. From their torrents rush, which, cutting their way un- now, tend to the centre of the valley, and the young Ganges, which is further aug- ed by the waters which filter through the of the snow-bed itself. In this manner, all Himalaya rivers, whose heads I have visited, passed over, are formed; they all issue in a stream from under thick beds of snow, and r from the Ganges, inasmuch as their streams ess, and so are their parent snows. On our n down the snow valley, we passed nearer s north side than in going up, and saw ry considerable torrent cutting under it from peak; this was making its way to the centre. imes, we saw it through rents in the snow, at others, only heard its noise. As there t be several more such feeders, they will be sufficient to form such a stream as we ob- ed the Ganges to be at the débouché, in the e of six or seven miles. I am fully satisfied , if we could have gone further, we should have again seen the river, and that its ap- rance at Mahádéva's Hair was the real and débouché of the B'hagirathá. All I regret is, that we could not go to the ridge, to see what was beyond it. I suspect there must be a de- scent, but over long and impassable wastes of snow, and not in such a direction as would lead direct to any plains, as the course to bring one to such plains would be to the north-east or north; whereas the line of the river's course, or rather of the ridge in front, was to the south-east, parallel to the run of the Himalaya, which is generally from south-east to north-west. Immediately in front of the ridge no peaks were seen, but on its south-east flank, and at the distance of about eighteen miles, a large snowy peak appeared: so that I think there can be no plain within a con- siderable distance of the south-east side of the ridge: if there be streams from its other side, they must flow to the south-east. After all, I do not know how we should have existed, if we had been able to go to the ridge, for we could not have arrived there before night, and to pass the night on these extensive snows, without firewood or shelter, would have cost some of us our lives; but of that we did not then consider much. We had only a few trusty men with us, and a short allowance of grain for them, for this and the fol- lowing day, and had sent orders to the people left at Gangotri, to make their way back towards Reital, leaving us what grain could be spared, and to forward on what they might meet, as I expected some from Reital, whence we were supplied during our absence from it, of altoge- ther twenty-eight days. I cannot suppose, that by this way there can be any practicable or use- ful pass to the Tartarian districts, or doubtless the people would have found it out, and used it, as they do that up the course of the Jahnaví.'

The Ganges from the Gangoutri descends for a considerable way among the mountains. This is the B'hagirathá, or most sacred branch of it, but the Dauli, being longer, should be considered, it is said by some writers, the principal source. From Hurdwar to Allahabad, where it receives the Jumna, its width is about a mile or a mile and a quarter. After this junction its course is more winding, and its bed wider, until it is successively swelled by the Goggra, the Soane, the Gunduck and several minor streams. The channel is now at the widest, which is sometimes three miles, but it is often divided by islands. Before the in- flux of the Jumna some places are fordable; but for 500 miles above the sea, the depth, when least, is as we have said about thirty feet. Previ- ously to its junction with the ocean its breadth suddenly expands, and the current becomes so weak that it has not power to disperse the banks of mud and sand accumulated by the strong south wind, which render the principal streams too shallow to admit large vessels. The descent of the bed is nearly nine inches per mile, but the windings of the river often reduce it to four. About 200 miles in a direct line from the sea, or 300 by the course of the stream, the Delta commences. That part of the Delta bordering on the sea consists of a labyrinth of creeks and rivers, spreading over a space of coast for nearly 200 miles, called the Sunderbunds, which are principally covered with marshes and jungles.

The Ganges is subject to periodical and import- ant inundations, both from the melting of the

snows on the soutnern declivities of the Himalaya chain, and from the heavy rains of the Monsoons. The whole height of this increase is reckoned at thirty-two feet. The rain begins to descend on the mountains in April, and by the latter end of June the river has risen about six feet. The rainy season in the low country then sets in, and the rise becomes more rapid, increasing from two or three inches a day, to five or six. By the latter end of July, all the lower parts of Bengal, near the mouths of the Ganges and the Burrampooter, are overflowed. One complete sea envelopes every thing for 100 miles in width, the villages and trees appearing here and there above the water.

The *velocity* of this stream, when the water is at the lowest, is about three miles an hour, but this is increased at other seasons; and the quantity of water discharged in a second, when least, has been computed at 80,000 cubic feet. When the river is full, the quantity is double, and the velocity being increased in the proportion of three to five, the discharge is about 405,000 cubic feet per second. The medium discharge of the whole year has been stated at 180,000 cubic feet. When the floods begin to subside, the waters are so charged with earth, that the quantity deposited is inconceivable. One instance is recorded, in which a branch was filled up in a week nearly to a level with the adjacent country, though it must have required a quantity of materials equal to 900,000,000 solid feet. It also frequently encroaches upon one of its banks, and deposits the soil either in islands or on the opposite bank: it is stated that between Colgong and Sooty alone, more than 25,000 acres, or forty square miles, have been in this manner removed. Between the mountains and the sea, the Ganges is swelled by eleven large rivers equal to the Thames, and some of them as large as the Rhine. The whole of its course is estimated at 1560 miles.

'Although,' says Mr. Hamilton, 'the water of the whole river from Gangoutri to Sagor is holy, yet there are places more eminently sacred than the rest, and to these pilgrims from a distance resort to perform their ablutions, and to take up the water that is used in their ceremonies. The chief of these are the five Prayags, or holy junctions of rivers, of which Allahabad is the principal, and by way of distinction named simply Prayag. The others are situated in the province of Serinagur, at the confluence of the Alacananda, with different small rivers, and are named Devapagraya, Rudraprayaga, Carnaprayaga, and Nandaprayaga. The other sacred places are Hurdwar, where the river first escapes from the mountains; Uttara Janagiri, a short distance below Monghir and Sagor Island, at the mouth of the Calcutta River, named by Europeans the Hoogly. Besides its sanctity, the Ganges is much esteemed for its medicinal properties, and is on this account drunk by many Mahommedans. In 1792 Abd ul Hakeem, the reigning nabob of Shanoor, near the west coast of India, although at the distance of more than 1000 miles from this river, never drank any other water.

'In the Hindoo Mythology Ganga (the Ganges) is described as the eldest daughter of the great mountain Himavata; her sister Ooma as the spouse of Mehadeva, the destroying power. She is called *Ganga* on account of her flowing through gang, the earth; she is called *Jahnavi* from a choleric Hindoo saint, whose devotions she interrupted on her passage to the sea, and, in a fit of displeasure, he drank her entirely up; but was afterwards induced, by the humble supplications of the Devas (demi-gods), to discharge her by his ears. She is called *Bhaghirathi* from the royal devotee Bhagaratha, who, by the intensity and austerity of his devotions, brought her from heaven to the earth, from whence she proceeded to the infernal regions, to reanimate the ashes of some of his ancestors. She is called *Triputhaga*, on account of her proceeding forward in three different directions, watering the three worlds—heaven, earth, and the infernal regions. According to the Brahminical mythology, the sea, although dug before the descent of the Ganges from heaven, is, by the Hindoos, supposed to have been empty of water.'

GA'NGHON, *n. s.* Fr. A kind of flower.

GA'NGLION, *n. s.* Gr. γαγγλιον. A tumor in the tendinous and nervous parts.

Bonesetters usually represent every bone dislocated, though possibly it be but a *ganglion*, or other crude tumour or preternatural protuberance of some part of a joint. *Wiseman.*

GANGLION, in surgery, is a hard tubercle, generally moveable, in the external or internal part of the carpus, upon the tendons or ligaments in that part; usually without any pain to the patient.

GANGOUTRI, a noted place of Hindoo pilgrimage, situated among the Himalaya Mountains, in the northern province of Serinagur. Here the Ganges, running from the north by east, is only fifteen or twenty yards broad, the current is moderate, and it is not in general more than three feet deep. Two miles higher up is the place commonly called the Cow's Mouth, or a large stone in the middle of the river, which the water passes on each side, leaving only a small piece above the surface, which the Hindoo fancies to bear the resemblance of the sacred animal. On the bank nearly opposite is a temple, in which are two images representing the Ganges and the Bhaghirathi rivers. The Brahmins here divide the bed of the river into three portions, for the use of the pilgrims. One of these portions is dedicated to Brahma, another to Vishnu, and the third to Seva. The performance of the pilgrimage hither is supposed both to redeem the soul from troubles in this world, and to insure a happy transit through all the stages of transmigration which it may undergo. The water taken hence is drawn under the inspection of a Brahmin, to whom a trifling sum is paid for the privilege, and it is afterwards offered up by, or on the part of the pilgrim, at the temple of Baidyanath, a celebrated place of Hindoo worship in Bengal. The water of this river is said to be here so pure, as neither to evaporate, nor to become corrupted by being kept. The mountains in the vicinity have a barren appearance, the only tree produced being the Bhurjapatra.

GANGPOOR, a small independent town and district of the province of Gundwana, situated in

about the 22° of north latitude, and bounded on the north by the British district of Chuta Nagpoor, in Bahar. It was annexed to the Soubah of Allahabad, during the reign of Aurengzebe, but never in reality incorporated with his empire. It is barren and mountainous. The chief river is the Soank, and the principal towns Gangpoor and Padah.

GAN'GRENE, *n. s.*, *v. a.* & *v. n.* } Fr. *gangrene*; Lat. *gangræna*;
GAN'GRENOUS, *adj.* }
GAN'GRENATE, *v. a.* }

Gr. γαγγραινα ἀ γραινω, comedo. Medical terms descriptive of the state and tendency to mortification, or death, in different parts of the body; and of appearances indicative of such state.

In cold countries, when men's noses and ears are mortified, and, as it were, *gangrened* with cold, if they come to a fire they rot off presently; for that the few spirits that remain in those parts, are suddenly drawn forth, and so putrefaction is made complete. *Bacon.*

This experiment may be transferred unto the cure of *gangrenes*, either coming of themselves, or introduced by too much applying of opiates. *Id. Natural History.*

Wounds immedicable
Rankle and fester, and *gangrene*
To black mortification *Milton's Agonistes.*

Parts cauterized, *gangrenated*, siderated, and mortified, become black, the radical moisture or vital sulphur suffering an extinction. *Browne's Vulgar Errours.*

She saves the lover, as we *gangrenes* stay,
By cutting hope, like a lopt limb, away. *Waller.*

Gangrened members must be lopped away,
Before the nobler parts are tainted to decay. *Dryden.*

If the substance of the soul is festered with these passions, the *gangrene* is gone too far to be ever cured: these inflammations will rage to all eternity. *Addison's Spectator.*

The blood, turned acrimonious, corrodes the vessels, producing hæmorrhages, pustules red, lead-coloured, black and *gangrenous*. *Arbuthnot on Aliments.*

A GANGRENE, is a very great and dangerous degree of inflammation, wherein the parts affected begin to corrupt. See MEDICINE, and SURGERY.

GANG'WAY, *n. s.* Sax. ȝangwaȝ. In a ship; the several ways, or passages, from one part of it to the other.

GANG'WEEK, *n. s.* Gang and week. A term applied to rogation week, when processions are made to lustrate the bounds of parishes.

GANJAM, a fertile district, town, and seaport, of Hindostan, in Cicacole, constituting one of the collectorships into which that province was divided in the year 1803. The town is situated on the north-eastern bank of a river, only navigable during the rainy season, but defended by a small fort, which is a regular pentagon, well fortified, and generally garrisoned by sepoys. It is also the station of the civil judge, collector, and commercial resident of the district. Since the erection of the cotton manufactories, in England and Scotland, the trade of the port has much declined.

GAN-KING-FOG, a town of China, the capital of the province of Kiangnan, and situated upon the great river Yang-Tse-Kiang. A great part of the space enclosed by the walls consists of gardens, but the eastern quarter is composed chiefly of dwelling houses, and the western of shops, which are well furnished, particularly with porcelain, drapers' and mercers' goods, horn-lanterns, caps, and trinkets. A considerable number of shops also are in the suburbs. Long. 117° 20′ E., lat. 31° 30′ N.

GANNAT, a town in the department of the Allier, and the chief place of an arrondissement, France, pleasantly situated, but not well built. It has in its vicinity an alum mine, and a mineral spring of deleterious quality. Population 4100. Twenty-two miles north of Clermont, and thirty-six south of Moulins.

GANNET, or Soland goose. See PELICANUS.

GAN'TELOPE, *n. s.* } The latter is a cor-
GAN'TLET, *n. s.* } ruption of the former, and derived from Dut. *gant*, all, and *loopen*, to run: a military punishment, in which the criminal, running between the ranks, receives a lash from each man.

But wouldest thou friend, who hast two legs alone,
Wouldst thou to run the *gantlet* these expose,
To a whole company of hob-nailed shoes? *Dryden.*

Young gentlemen are driven with a whip, to run the *gantlet* through the several classes. *Locke.*

GANTELOPE, IN SHIPS OF WAR, is executed in the following manner:—The whole ships' crew are disposed in two rows, standing face to face on both sides of the deck, so as to form a lane, whereby to go forward on one side, and return aft on the other; each person being furnished with a small twisted cord, called a knittle, having two or three knots upon it. The delinquent is then stripped naked above the waist, and ordered to pass forward between the two rows of men, and aft on the other side a certain number of times, rarely exceeding three, during which every person gives him a stripe as he runs along. In his passage through this painful ordeal, he is sometimes tripped up, and very severely handled while incapable of proceeding. This punishment, which is called running the gantlet, is seldom inflicted, except for such crimes as will naturally excite a general antipathy among the seamen; as, on some occasions, the culprit would pass without receiving a single blow.

GANTELOPE, in the land service. When a soldier is sentenced to run the gantelope, the regiment is drawn out in two ranks facing each other; each soldier, having a switch in his hand, lashes the criminal as he runs along naked from the waist upwards. While he runs, the drums beat at each end of the ranks. Sometimes he runs three, five, or seven times, according to the nature of the offence. The major is on horseback, and takes care that each soldier does his duty.

GANYMEDES, in mythology, a beautiful youth of Phrygia, son of Tros and brother to Ilus king of Troy; or, according to Lucian, the son of Dardanus. Jupiter was charmed with him, and, carrying him away, made him his cupbearer in the room of Hebe. Some say that he caused him to be carried away by an eagle, and

others affirm he was himself the ravisher under the form of that bird. He deified this youth; and to comfort his father made a present to him of some of those swift horses that the gods rode upon.

GA'NZA, *n. s.* Span. *gansa*, a goose. A kind of wild goose, by a flock of which a virtuoso was fabled to be carried to the lunar world.

They are but idle dreams and fancies,
And favour strongly of the *ganza's*. *Hudibras.*

GAOL, *n. s.* & *v. a.* } Fr. *géole*; Welsh,
GAOL'-DELIVERY, *n. s.* } *géol*; Spa. *jaula*; Ital.
GAO'LER, *n. s.* } *gaiola, caiola*; all, perhaps, from Lat. *caveola, cavea*. A prison: to confine in a prison: the keeper of a prison: the judicial process which evacuates the prison, either by condemnation, or acquittal of the prisoners.

For he had yeven drinke his *gayler* so—
Of a clarre made of a certain wine,
With narcotikes and opie of Thebes fine,
That all the night, though that men wold him shake,
The *gailer* slept; he mighte not awake.
Chaucer. The Knightes Tale.

Then am I the prisoner, and his bed my *gaol*.
Shakspeare. King Lear.

Have I been ever free, and must my house
Be my retentive enemy, my *gaol*? *Shakspeare.*

I. we mean to thrive and do good, break open the *gaols*, and let out the prisoners. *Id.*

This is a gentle provost; seldom, when
The steeled *gaoler* is the friend of men. *Id.*

Gaoling vagabonds was chargeable, pesterous, and of no open example. *Bacon.*

Then doth the' aspiring soul the body leave,
Which we call death; but were it known to all,
What life our souls do by this death receive,
Men would it birth of *gaol-delivery* call. *Davies.*

I know not how or why my surly *gaoler*,
Hard as his irons, and insolent as power
When put in vulgar hands, Cleanthes,
Put off the brute. *Dryden's Cleomenes.*

From the polite part of mankind she had been banished and immured, till the death of her *gaoler*. *Tatler.*

GAOL. Every county has two gaols, one for debtors, which may be any house where the sheriff pleases; the other for the peace and matters of the crown, which is the county gaol. If a gaol be out of repair, or insufficient, &c., justices of peace, in their quarter-sessions, may contract with workmen for the rebuilding or repairing it: and by their warrant order the sum agreed on for that purpose to be levied on the several hundreds, and other divisions in the county by a just rate, 11 and 12 Will. III. c. 19. See PRISON.

GAOL-DELIVERY. The administration of justice being originally in the crown, in former times our kings in person rode through the realm once in seven years, to judge of and determine crimes and offences; afterwards justices in eyre were appointed; and since, justices of assize and gaol-delivery, &c. A commission of gaol-delivery is a patent, in nature of a letter from the king to certain persons, appointing them his justices, or two or three of them, and authorising them to deliver his gaol, at such a place, of the prisoner in it: for which purpose it commands them to meet at such a place, at the time they themselves then appoint; and informs them that, for the same purpose, the king hath appointed his sheriff of the same county to bring all the prisoners of the gaol and their attachments, before them at the day appointed. The justices of gaol-delivery are empowered by the common law to proceed upon indictments of felony, trespass, &c., and to order to execution or reprieve: they may likewise discharge such prisoners, as on their trials are acquitted, and those against whom, on proclamation being made, no evidence has appeared; they have authority to try offenders for treason, and to punish many particular offences, by statute 2 Hawk. 24. 2. Hale's Hist. Placit. Cor. 35.

GAOLERS. Sheriffs are to make such gaolers for whom they will be answerable: but if there be any default in the gaoler, an action lies against him for an escape, &c., yet the sheriff is most usually charged; 2 Inst. 592. Where a gaoler kills a prisoner by hard usage, it is felony; 3 Inst. 52. No fee shall be taken by gaolers, but what is allowed by law, and settled by the judges, who may determine petitions against their extortions, &c., 2 Geo. II. c. 22.

GAONS, a certain order of Jewish doctors, who appeared in the East, after the closing of the Talmud. The word gaons signifies excellent or sublime; as in the divinity schools we formerly had irrefragable, sublime, resolute, angelic, and subtile doctors. The Gaons succeeded the Seburæans, or Opines, about the beginning of the sixth century. Chanan Meischtia was the head and first of the Gaons. He restored the academy of Pandebita, which had been shut up for thirty years.

GAP, *n. s.* } Saxon, ȝeapan; Goth.
GAPE, *v. n.* } *gap*. Primary sense, an
GAPER, *n. s.* } opening; and used in re-
GAP-TOOTHED, *adj.* } ference to a variety of
GAT-TOOTHED. } subjects, both literally and figuratively. One who opens his mouth; stares vacantly and foolishly. To *stop a gap* is to supply a deficiency; to *stand in the gap* is to expose himself for the protection of some one in danger. Gap-toothed, a person whose teeth are widely separated from each other: gat-toothed in Chaucer may be understood as debauched, from Fr. *gate*; or, perhaps, gat-toothed may be simply goat-toothed.

Gat-toothed wos she sothly for to say.
Chaucer. Prologue to the Canterbury Tales.

See how he *galpeth*, lo, this dronken wight,
As though he wold us swallow anon aright.
Hold close thy mouth, man.
Id. The Manciples Prologue.

The former kings of England passed into them a great part of their prerogatives; which though then it was well intended, and perhaps well deserved, yet now such a *gap* of mischief lies open thereby, that could wish it were well stopt. *Spenser.*

The loss of that city concerned the Christian commonweal: manifold miseries afterwards ensued by the opening of that *gap* to all that side of Christendom. *Knolles.*

Each one demand, and answer to his part
Performed in his wide *gap* of time, since first
We were dissevered. *Shakspeare. Winter's Tale.*

If you violently proceed against him, mistaking his purpose, it would make a great *gap* in your honour
Id. King Lear.

iat ground *gape*, and swallow me alive,
shall kneel to him that slew my father.
Shakspeare.

men there are love not a *gaping* pig;
iat are mad, if they behold a cat. *Id.*

great horse-mussel, with the fine shell, doth
i shut as the oysters do.
Bacon's Natural History.

golden shower of the dissolved abbey-lands
vell near into every *gaper's* mouth. *Carew.*

r grim death appears in all her shapes;
igry grave for her due tribute *gapes*.
Denham.

terrours and with furies to the bounds
ystal wall of heaven; which, opening wide,
inward, and a spacious *gap* disclosed
e wasteful deep. *Milton's Paradise Lost.*

:hers will *gape* to' anticipate
cabinet designs of fate;
ly to wizards, to foresee
it shall, and what shall never be. *Hudibras.*

:e is not, to the best of my remembrance, one
gaping on another for want of a cæsura in this
Dryden.

reeve, miller, and cook, are distinguished from
ther, as much as the mincing lady prioress and
)ad speaking *gap-toothed* wife of Bath. *Id.*

As callow birds,
: mother's killed in seeking of the prey,
their nest, and think her long away;
t each leaf that stirs, each blast of wind,
for the food which they must never find. *Id.*

.at would become of the church if there were
more concerned for her rights than this? Who
stand in the gap? *Lesley.*

iere elevated o'er the *gaping* crowd,
ed in the board the perjured head is bowed,
ies retreat. *Gay's Trivia.*

ping or yawning, and stretching, do pass from
to man; for that that causeth *gaping* and stretch-
s when the spirits are a little heavy by any
ir. *Arbuthnot.*

.at all these actions can be performed by ali-
, as well as medicines, is plain; by observing
ffects of different substances upon the fluids and
s, when the vessels are open and *gape* by a
id. *Id.*

ie hiatus, or *gap*, between two words, is caused
wo vowels opening on each other. *Pope.*

She stretches, *gapes*, unglues her eyes,
nd asks if it be time to rise. *Swift.*

is policy consists in setting traps,
nding ways and means, and *stopping gaps*. *Id.*

h, Vice! how soft are thy voluptuous ways
ile boyish blood is mantling who can 'scape
fascination of thy magic gaze?
herub-hydra round us dost thou *gape*,
l mould to every taste thy dear delusive shape.
Byron. Childe Harold.

GAP, a town and bishop's see of France, the ital of the department of the Upper Alps. It nds in a deep funnel-shaped valley surrounded barren mountains, though the soil in the inity is rich, and is an ill built place, with row streets and low houses. The museum of literary society contains a variety of curious nerals, plants, and birds of the Alps. Here is o a magnificent monument of the duc de Les-guieres, too well known in the civil wars of ance. Gap is an ancient town, being mentioned ider the name of Vapinum by Antoninus. It is sacked and burnt in 1692 by the duke of voy, and which its present state shows but too plainly. Population 8000. Fifty-six miles south by east of Grenoble, and 426 south by east of Paris.

GAR, *v. a.* Isl. *giera*. To make. Obsolete, except in Scotland.

But specially I pray the hoste dere!
Gar us have mete and drinke, and make us chere
And we sal paien, trewely at the full.
Chaucer. The Reves Tale.

Tell me, good Hobbinol, what *gars* thee greet?
What! hath some wolf thy tender lambs ytorn?
Or is thy bagpipe broke, that sounds so sweet?
Or art thou of thy loved lass forlorne? *Spenser.*

GARAMA, in ancient geography, the capital of the Garamantes in Libya Interior; near the spring of the Cinyphus, now in ruins. It lay south of Gætulia, extending from the springs of the Cinyphus, and the Gir, to the mountains which form at the Vallis Garamantica (Pliny): or from the springs of the Bagrades to the lake Nuba (Ptolemy).

GARAMOND (Claude), a very ingenious letter-founder, born at Paris; where he began, in the year 1510, to found his printing-types, free from all the remains of the Gothic, or (as it is generally called) the black letter, and brought them to such perfection, that in Italy, Germany, England, and Holland, the booksellers, by way of recommending their books, distinguished the types by his name; and in particular, the small Roman was by way of excellence known among the printers of these nations by the name of Garamond's small Roman. By the special command of king Francis I. he founded three sizes of Greek types for the use of Robert Stephens, who with them printed all his beautiful editions of the New Testament, and other Greek authors. He died at Paris in 1561.

GARASSE (Francis), a remarkable jesuitical writer, the author of that irreconcileable enmity which so long subsisted between the Jesuits and Jansenists, was born at Angoulesme, in 1585, and entered the Jesuits' College in 1600. As he had a quick imagination, a strong voice, and a peculiar turn to wit, he became a popular preacher in the chief cities of France; but distinguished himself still more by his writings, which were bold, licentious, and produced much controversy. The most considerable in its consequence was entitled La somme Theologique des veritez capitals de la Religion Chretienne; which was first attacked by the abbot of St. Cyran, who observing in it a prodigious number of falsifications of the Scriptures and of the fathers, besides many heritical and impious opinions, conceived the honor of the church required him to undertake a refutation. Accordingly he published a full answer to it; while Garasse's book was also under examination of the doctors of the Sorbonne, by whom it was afterwards condemned. Garasse replied to St. Cyran; but the Jesuits were forced to remove their brother to a distance from Paris; where, probably weary of his inactive obscurity, when the plague raged at Poictiers. in 1631, he begged leave of his superior to attend the sick, in which charitable office he was infected and died.

GARB, *n. s.* Fr. *garbe*; Ital. *garbo*; Teut *garb*. Dress; fashion; external appearance.

This is some fellow,
Who, having been praised for bluntness, doth affect
A saucy roughness, and constrains the *garb*
Quite from his nature. *Shakspeare. King Lear.*

Horace's wit, and Virgil's state,
He did not steal but emulate;
And when he would like them appear,
Their *garb*, but not their clothes, did wear.
Denham.

Thus Belial, with words clothed in reason's *garb*,
Counselled ignoble ease and peaceful sloth. *Milton.*

He puts himself into the *garb* and habit of a professor of physick, and sets up. *L'Estrange.*

He saw his white walls shining in the sun,
His garden trees all shadowy and green;
He heard his rivulet's light bubbling run;
The distant dog-bark; and perceived between
The umbrage of the wood, so cool and deen,
The moving figures, and the sparkling sheen
Of arms (in the East all arm)—and various dyes
Of coloured *garbs*, as bright as butterflies.
Byron. Don Juan.

GAR'BAGE, *n.s.* } Goth. *giorb;* or Span.
GAR'BIDGE, *n.s.* } *garbear.* The internal
GAR'BISH, *n.s.* } viscera of the body.

The cloyed will,
That satiate, yet unsatisfied desire, that tub
Both filled and running, ravening first the lamb,
Longs after for the *garbage. Shakspeare. Cymbeline.*

Lust, though to a radiant angel linked,
Will sate itself in a celestial bed,
And prey on *garbage.* *Id. Hamlet.*

A flam more senseless than the roguery
Of old Aruspicy and augury,
That out of *garbages* of cattle
Presaged the' events of truce or battle. *Hudibras.*

All shavings of horns, hoofs of cattle, blood, and *garbage*, is good manure for land. *Mortimer.*

In Newfoundland they improve their ground with the *garbish* of fish. *Id. Husbandry.*

GAR'BLE, *v.a.* } Ital. *garbellare;* Span.
GAR'BLER, *n. s.* } *garbellar.* To separate, either in a good or bad sense; generally in the latter: to mutilate or abbreviate.

But you, who fathers and traditions take,
And *garble* some, and some you quite forsake.
Drydcn.

Had our author set down this command, without *garbling*, as God gave it, and joined mother to father, it had made directly against him. *Locke.*

The understanding works to collate, to combine, and *garble* the images and ideas, the imagination and memory present to it. *Cheyne.*

A farther secret in this clause may best be discovered by the projectors, or at least the *garblers* of it. *Swift's Examiner.*

GAR'BOIL, *n. s.* Fr. *garbouille;* Ital. *garbuglio.* Disorder or uproar.

Look here, and at thy sovereign leisure read
What *garboils* she awaked. *Shakspeare.*

GARCIAS-LASSO, or GARCILASSO DE LA VEGA, a Spanish poet, was born at Toledo in 1503. The younger son of a noblemane he was early distinguished for his elegant wit and fancy, and adopted the poetical principles of his friend Boscan, which he was a principal instrument in rendering popular. His works consist principally of pastorals. Garcilasso followed the profession of arms, and attended Charles V. in many of his expeditions, in one of which he lost his life at the early age of thirty-three.

GARCINIA, in botany, a genus of the monogynia order and dodecandria class of plants, and in the natural method ranking under the eighteenth order, bicornes: CAL. tetraphyllous inferior, there are four petals; the berry is octospermous, and crowned with a shield-like stigma. Species four, all East Indian trees; the principal one is, G. mangostana, a tree of great elegance, growing to about seventeen or eighteen feet high, 'with a straight taper stem like a fir;' having a regular tuft in form of an oblong cone, composed of many branches and twigs, spreading out equally on all sides without leaving any hollow. Its leaves are oblong, pointed at both ends, entire, smooth, of a shining green on the upper side, and of an olive on the back. Its flower is composed of four petals almost round, or a little pointed; their color resembles that of a rose, only deeper and less lively. The calyx of this flower is of one piece, expanded, and cut into four lobes. The two upper lobes are something larger than the lower ones; they are greenish on the outside, and of a fine deep red within: the red of the upper ones is more lively than that of the lower ones. This calyx encloses all the parts of the flower; it is supported by a pedicle, which is green, and constantly comes out of the end of a twig above the last pair of leaves. The fruit is round, of the size of a small orange, from an inch and a half to two inches in diameter. The body of this fruit is a capsula of one cavity, composed of a thick rind, a little like that of a pomegranate, but softer, thicker, and fuller of juice. Its thickness is commonly of a quarter of an inch. Its outer color is a dark brown purple, mixed with a little gray and dark green. The inside of the peel is a rose color, and its juice is purple. This skin is of a styptic or astringent taste, like that of a pomegranate; nor does it stick to the fruit it contains. The inside of this fruit is a furrowed globe, divided into segments, like those of an orange, but unequal in size, and not adhering to each other. The number of these segments is always equal to that of the rays of the top which covers the fruit. The fewer there are of these segments, the bigger they are. There are often in the same fruit segments as big again as any of those that are on the side of them. These segments are white, a little transparent, fleshy, membranous, full of juice like cherries or raspberries, of the taste of strawberries and grapes together. Each of the segments encloses a seed of the figure and size of an almond stripped of its shell, having a protuberance on one of its sides. These seeds are covered with two small skins, the outermost of which serves for a basis to the filaments and membranes of which the pulp is composed. The substance of these seeds comes very near to that of chestnuts, as to their consistency, color, and astringent quality. 'This tree originally grows in the Molucca islands, where it is called mangostan, but has been transplanted thence to the islands of Java and Malacca, at which last place it thrives very well. Its tuft is so fine, so regular, so equal, and the appearance of its leaves so beautiful, that it is at present looked upon at Batavia as the most proper for adorning a garden and affording an agreeable shade. There are few seeds,

r, to be met with in this fruit that are
r planting, most part of them being abor-
Rumphius observes, that the mangos-
universally acknowledged to be the best
olesomest fruit that grows in India; that
is juicy, white, almost transparent, and
licate and agreeable a flavor as the richest
the taste and smell being so grateful,
s scarcely possible to be cloyed with eating
adds, that when sick people have no re-
any other food, they generally eat this
reat delight; but, should they refuse it,
ecovery is no longer expected. On the
the fruit is the figure of five or six small
s joined in a circle; and at the bottom
hollow green leaves, which are remains
lossom. When they are to be eaten, the skin,
er flesh, must be taken off; under which
nd six or seven white kernels, placed in a
r order; and the pulp with which these
veloped is the fruit, than which nothing
more delicious. It is a happy mixture
tart and the sweet, which is no less whole-
han pleasant: and, like the sweet orange,
wed in any quantity to those who are
d with putrid or inflammatory fevers.

RBIE, that division of Lower Egypt
is included between the Nile of Rosetta,
he Nile of Damietta. It is the best wa-
and most fertile part of the Delta, and is
ected by numerous canals, but it has no
al variety of surface: its ornaments are the
iant vegetation, and numerous villages,
which it is covered. Me-Mehallet el
r is the principal town.

RD, a department of France, part of Lan-
oc, and surrounded by the Mediterranean
he departments of the Lozère, the Ardeche,
Rhone, the Herault, and the Aveyron. It
ided into the four arrondissements of Nismes
chief town), Uzès, Alais, and Vigan, and
a population of more than 322,000. It
s part of the ninth military division, and of
liocese of Avignon: in regard to jurisdic-
it is subject to the cour royale at Nismes.
is department is on the south, level and
e: winter is here scarcely known, but the
co, and the crowds of mosquitoes are trou-
ome: thunderstorms are also frequent.
northern part lies among the Cevennes, is
ed and barren, but populous, and carrying
number of manufactures. It also has mines
opper, lead, iron, pit-coal, vitriol, and some
old and silver. This department is on the
le considered one of the most thriving in
nce. The Protestant and Catholic popula-
, however, being nearly equal, frequent re-
ous disputes still occur, and are urged with
raceful animosity. Hence the wars of the
ennes so destructive. In our own day, the
ning of houses, and the massacre of their
abitants, occurred after the second return of
is XVIII.

GARD, PONT DU, is a celebrated Roman aque-
t, in the department of the Gard, joining
mountains, and passing over the Gard or
rdon. It is 157 feet in height, 530 in length
he bottom, and 872 at the top, and consists
three tiers of arches. The lowest tier has six arches, the second eleven, and the third thirty-five, but these last are much smaller than the others. It supports a canal of four feet wide, and five deep, lined with a strong cement, which has never failed. The road to Nismes is made by a band of some miles to pass by this aqueduct, and a bridge is thrown over the Gardon, close to its eastern side. It is accessible only at its southern extremity. Its boldness and simplicity always excite the admiration of travellers. Rousseau says, the Romans alone were capable of producing such a work.

GARD, or GARDON, a river of Lower Languedoc, France, which rises in the Cevennes, and falls into the Rhone, three miles above Beaucaire. It is small, but is often increased by land floods.

GARDA, a lake of Austrian Italy, formed by the rivers Trent, Saraca, and Tuscolano; thirty-five miles long, and from three to fourteen broad: the depth varies from ten to 300 feet. The whirlwinds from the mountains of Trent and Verona gave it a stormy motion resembling the waves of the sea. It was anciently named Banacus, and is described by Virgil in his Georgics, lib. 2, as peculiarly subject to these tempestuous motions:—

'Benacus with tempestuous billows vext.'

From this, its ancient name, is derived the modern name of the department, Benaco, seated on its banks. Its fish are famous for their delicious flavor; and the fishery was formerly farmed at 8000 silver ducats. It belonged entirely to Verona before the treaty of Campo Formio. Near this lake Buonaparte's principal exploits against the Austrians took place in 1796.

GARDA, a small open town of Italy, in the Veronese, north of Lacize; it was anciently a fortress, with a citadel now in ruins, where the empress Adelheit, widow of Lothair, and wife of Otho I., was confined by Berenger II. It is seated at the end of the above lake, seventeen miles north-west of Verona.

GARDEN, *n. s.* & *v. a.* } Sax. ȝarda; Swe.
GARDENER, *n. s.* } *garda*; Goth. *gard*;
GARDENING, *n. s.* } Fr. *jardin*; Ital. *giardino*; Welsh, *gardd*. A piece of ground enclosed and cultivated, or laid out for pleasure: and hence any place peculiar for its fruitfulness and beauty, used in composition, as garden-mould, garden-tillage, garden-ware. The act of planning, and laying out a garden: the person who cultivates and superintends it.

Whan I thus herd the foules sing,
I fell fast in a waimenting,
By whiche art or by what engin
I might come into that *gardin*
But waie I couthe ne finden none
Into that *gardin* for to gone.
Chaucer, Romaunt of the Rose.

Thy promises are like Adonis's *gardens*,
Which one day bloomed, and fruitful were the next.
Shakspeare.

My lord of Ely, when I was last in Holbourn,
I saw good strawberries in your *garden* there. *Id.*

Our bodies are our *gardens*, to the which our wills are *gardeners*; so that, if we plant nettles, or sow lettuce, the power lies in our will. *Id.*

I am arrived from fruitful Lombardy,
The pleasant *garden* of great Italy. *Id.*

In the royal orderiug of *gardens*, there ought to be *gardens* for all the months in the year. *Bacon.*

When ages grow to civility and elegancy, men come to build stately sooner than to *garden* finely; as if *gardening* were the greater perfection. *Id.*

Gardeners tread down any loose ground, after they have sown onions or turnips. *Id. Natural History.*

At first, in Rome's poor age,
When both her kings and consuls held the plough,
Or *gardened* well. *Ben Jonson's Catiline.*

Some Trees, when men oppresse their aged heads
(With waighty stones) they fructifie the more;
And, when upon some Herbs the *gard'ner* tread,
They thrive and prosper, better than before.
Geo. Withers.

They delight most in rich black *garden-mould*, that is deep and light, and mixed rather with sand than clay. *Mortimer.*

A clay bottom is a much more pernicious soil for trees and *garden-ware* than gravel. *Id.*

Peas and beans are what belong to *garden-tillage* as well as that of the field. *Id. Husbandry.*

My compositions in *gardening* are after the Pindarick manner, and run into the beautiful wildness of nature, without affecting the nicer elegancies of art. *Spectator.*

Common understandings, like cits in *gardening*, allow no shades to their picture. *Shenstone.*

Earths coarsest tread, the *garden's* homeliest roots,
And scarce the summer luxury of fruits
His short repast in humbleness supply,
With all a hermit's board would scarce deny.
Byron. Childe Harold.

Gardens, Floating. Abbé Clavigero, in his History of Mexico, says, that when the Mexicans were brought under subjection to the Colhuan and Tepanecan nations, and confined to the miserable little islands on the lake of Mexico, they had no land to cultivate, until necessity compelled them to form moveable fields and gardens, which floated on the waters of the lake. The method which they adopted to make these is extremely simple. They plait and twist together willows and roots of marsh plants or other materials, which are light, but capable of supporting the earth firmly united. Upon this foundation they lay the light bushes which float on the lake; and over all the mud and dirt which they draw up from the bottom. Their regular figure is quadrangular; their length and breadth various; but generally they are about eight perches long, and not more than three in breadth, and have less than a foot of elevation above the surface of the water. These were the first fields which the Mexicans had after the foundation of Mexico: there they first cultivated maize, pepper, and other plants. In time, as these fields became numerous from the industry of the people, they cultivated gardens of flowers and odoriferous plants, which they employed in the worship of their gods, and for the recreation of their nobles. All plants thrive in them surprisingly; the mud of the lake affords a very fertile soil, and requires no water from the clouds. In the large gardens there is commonly a little tree, and even a little hut to shelter the cultivator and defend him from rain or the sun. When the Chinampa, or owner of a garden, wishes to change his situation, to remove from a disagreeable neighbour, or to come nearer to his own family, he gets into his little vessel, and by his own strength alone, if the garden is small, he tows it after him, and conducts it wherever he pleases.

Gardens, Hanging, in antiquity, gardens raised on arches by Nebuchadnezzar, king of Babylon, to gratify his wife, Amyctis, daughter of Astyages, king of Media. Q. Curtius makes them equal in height to the walls of the city, viz. fifty feet. They contained a square of 400 feet on every side, and were carried up into the air in several terraces laid one above another, and the ascent from terrace to terrace was by stairs ten feet wide. The arches sustaining the whole pile were raised one above another, and it was strengthened by a wall, surrounding it on every side, of twenty-two feet in thickness. The floors of each of the terraces were laid in the following manner:—On the top of the arches were first laid large flat stones, sixteen feet long and four broad. Over them was a layer of reed mixed with a great quantity of bitumen; over which were two rows of bricks, closely cemented together by plaster, and over all were laid thick sheets of lead; and upon the lead was laid the mould of the garden. The mould, or earth, was of such a depth as to admit the largest trees to take root and grow; and it was covered with various kinds of trees, plants, and flowers. In the upper terrace there was an engine, whereby water was drawn up out of the river for watering the whole garden.

Gardening. See Horticulture

GARDNIA, or Gardenia, a genus of the monogynia order, and pentandria class of plants, natural order thirtieth, contortæ. The lobes of the corollæ are bent obliquely to the right; style elevated; two-lobed; segments of the calyx vertical. Species nineteen; chiefly East Indian plants. From the bark of some species exudes a gum, like gum elemi, and the fruit of G. dumetorum, thrown into the water, intoxicates fishes.

GARDINER (colonel James), a brave and pious officer in the army, the son of captain Patrick Gardiner. His father had served under king William III. and queen Anne, and died in Germany after the battle of Hochstet. Our hero was born at Carriden, January the 10th, 1688. He was educated at Linlithgow, and made a very considerable progress in the languages, but, having an attachment to the military life, he served very early as a cadet; and, at fourteen years of age, bore an ensign's commission in a Scots regiment in the Dutch service, wherein he continued till 1702; when he received a similar commission in a British regiment from queen Anne, which he bore in the famous battle of Ramillies. In this memorable action, being sent on a desperate service, he very narrowly escaped with his life. While calling to his men, a musket ball entered his mouth, and, without touching his tongue or his teeth, went through his neck, and came out about an inch and a half on the left side of the vertebræ. Not feeling the pain at first, he began to suspect he had swallowed the ball, till he fell with loss of blood. After this he passed two nights and all next day in the open air, in extreme cold weather, and had his wound dressed at last by an ignorant barber-surgeon; in spite of all which he reco

n 1706 he was raised to a lieutenancy, after made a cornet in lord Stair's regi- Scots Greys; and, in 1715, a captain- t of dragoons. When the earl of Stair assador to France, he appointed him r of horse. In 1715 he was promoted aincy; and, in 1717, to a majority. In was made major of an older regiment; he was advanced to the rank of lieute- nel; and, in 1743, to that of colonel of nt of dragoons, at the head of which he ting bravely, at the battle of Preston n the 21st of September, 1745, in the th year of his age. In his person he graceful, strong built, and well-propor- He, in his younger years, plunged so every fashionable vice, that his compa- yled him the happy rake. But, in this f vice and dissipation, he was suddenly in a manner which he always consi- s miraculous. Our limits permit us not e the full account, given by Dr. Dodd- but the substance of it is as follows:— , 1719, major Gardiner, having spent the evening with some gay company till and having an assignation with a married at twelve, in order 'to kill the tedious took up a book, left by his mother or his chamber, entitled the Christian Sol- wherein he expected to find some amuse- rom the author's spiritualising the terms profession. But, while reading it care- he was surprised by a sudden and extra- ry blaze of light; and, upon looking up, , to his astonishment, a visible represen- of our Saviour on the cross, suspended in r, and surrounded with glory; while, at the time, he thought he heard a voice, saying, sinner, did I suffer this for thee, and are thy returns?' Struck with this amazing menon, he sunk down in his arm-chair, ontinued for some time insensible; from circumstance Dr. Doddridge often sug- d to him, that he was, perhaps, all the time p, and dreaming; but he himself considered not a dream, but a real waking vision. From time to his death he became as eminently guished for piety as he had formerly been rofanity. In July, 1726, he married lady ces Erskine, daughter of the earl of Buchan, hom he had thirteen children. From the erous anecdotes recorded by Dr. Doddridge, hall only add one more, which may afford eful example to others in an age wherein ling is so frequent. He had been so much cted to this fashionable folly in his younger s, that he had fought three duels before he quite a man; but, to a challenge he re- ed after his conversion, he made this calm y:—'I fear sinning, though you know I do fear fighting.' Dr. Doddridge has summed his character in few words, in the quotation n Virgil, prefixed as a motto to his work:—

—Justior alter
Nec pietate fuit, nec bello major et armis.

GARDINER (Stephen), bishop of Winchester, l chancellor of England, was born at Bury St. lmund's, in 1483. He was natural son to Richard Woodville, the brother of queen Elizabeth, wife to Edward IV., and was educated at Cambridge. He signed the divorce of Henry VIII. from Katharine of Spain; abjured the pope's supremacy; and wrote De Verâ et Falsâ Obedientiâ, in behalf of the king: yet in Edward VI.'s reign he opposed the Reformation, and was imprisoned; but was liberated by queen Mary. He drew up the articles of marriage between her and Philip II. of Spain. He was violent against the reformers, but on his deathbed often repeated these words, Erravi cum Petro, sed non flevi cum Petro; 'I have sinned with Peter, but I have not wept with Peter.' He died in 1555.

GARDNER (Alan, lord) a distinguished naval officer, born in the north of England, at the age of thirteen became a midshipman, and was made post-captain in the Preston, of fifty guns, which he commanded on the Jamaica station in 1766. In 1782 he removed to the Duke, of ninety-eight guns, in which ship he first broke the French line on the 12th of April. He was made rear-admiral in 1793, and appointed commander-in-chief on the Leeward Island station. After an ineffectual attempt on Martinico he returned home, and was employed as rear-admiral of the white under lord Howe. On the 1st of June, 1794, he so distinguished himself that he was made a baronet and major-general of marines. In 1800 he was created an Irish peer, and succeeded earl St. Vincent in 1807 in the command of the channel fleet. He sat in three successive parliaments, and was finally made a British peer with the title of baron Gardner of Uttoxeter. He died at Bath in 1809.

GARGANO, Mont, a mountainous tract of Italy, bounded by the gulf of Venice on the north-east and south, and the Neapolitan province of the Capitanata on the west. It is subject to Naples, and lies between 15° 37′ and 16° 21′ of E. long. and 41° 30′ and 41° 58′ of N. lat., including a territorial extent of 600 square miles. It consists of a circular range of mountains and hills, which enclose noble fertile valleys. The most remarkable points are Monte Calvo in the centre, Monte Sagro to the east, Monte Spigro to the north, Monte Gargarans to the west, and Monte di Rignano to the south. Monte Calvo, the highest, is supposed to be 5000 feet above the sea. The whole mass consists of secondary limestone, formed apparently at different times; containing metallic veins; but no mines have ever been opened: and the unadventurous inhabitants manufacture nothing, and neglect agriculture: many medical plants are however reared. Population 86,000.

GAR'GARISM, *n. s.* } Fr. *gargarisme*; Gr.
Gar'garize, *v. a.* } γαργαρισμος. A liquid form of medicine, used to wash the mouth and throat.

Apophlegmatisms and *gargarisms* draw the rheum down by the palate. *Bacon's Natural History.*

Vinegar, put to the nostrils, or *gargarised*, doth ease the hiccough; for that it is astringent, and inhibiteth the motion of the spirit. *Id.*

Gargarisms are used when the mouth and throat are inflamed, or ulcerated. A small quantity may be taken into the mouth, and moved

briskly about, and then spit out; or, if the patient cannot do this, the liquor may be injected by a syringe. When gargles are required, their use should be more frequently repeated than is done in common practice.

GARGET, *n. s.* A distemper in cattle.

The *garget* appears in the head, maw, or in the hinder parts. *Mortimer's Husbandry.*

GARGIL, a distemper in geese, which by stuffing the head frequently proves mortal. Three or four cloves of garlic, beaten in a mortar with sweet butter, made into little balls, and given fasting, are the ordinary means of cure.

GARGLE, *n. s.* & *v. a.* Fr. *gargouiller;* Ital. *gargagliari;* Ger. *gurgel*, from Lat. *gurgulio*, the throat. To wash the throat with a liquid, which is not swallowed: a liquid prepared for this use. To warble a play in the throat—this use is improper.

Gargle twice or thrice with sharp oxycrate. *Harvey.*

Those which only warble long,
And *gargle* in their throats a song. *Waller.*

They comb, and then they order every hair;
Next *gargle* well their throats. *Dryden's Pers.*

So charmed you were, you ceased awhile to doat
On nonsense *gargled* in an eunuch's throat. *Fenton.*

The excision made, the bleeding will soon be stopt by *gargling* with oxycrate. *Wiseman's Surgery.*

His throat was washed with one of the *gargles* set down in the method of cure. *Id.*

GARGOL, *n. s.* A distemper in hogs.

The signs of the *gargol* in hogs are, hanging down of the head, moist eyes, staggering, and loss of appetite. *Mortimer.*

GARIDELLA, in botany, fennel flower of Crete, a genus of the trigynia order, and dodecandria class of plants; natural order twenty-sixth, multisiliquæ: CAL. pentaphyllous, with leaves resembling flower-petals; there are five bilabiate and bifid nectaria: CAPS. polyspermous, and adhering together. Species one only, a Cape climber.

GARLAND, Fr. *garlande, guirlande;* Span. *girlanda*, probably of Lat. *gero*, to bear: or 'from *gird* and *lada*, or *lindo*, a fillet.'—Thomson. A wreath of flowers: used also figuratively as expressive of esteem and value.

And to the grove of which that I you told,
By aventure, his way he gan to hold,
To maken him a *gorlond* of the greves,
Were it of woodbind or of hawthorn leves.
Chaucer. The Knightes Tale.

With every minute you do change a mind,
And call him noble that was now your hate,
Him vile, that was your *garland*. *Shakspeare.*

A reeling world will never stand upright,
'Till Richard wear the *garland* of the realm.
—How! wear the *garland!* do'st thou mean the crown?
—Ay, my good lord. *Id. Richard III.*

An Anne is with a *garland* here extended;
And as the Motto saith it is intended
'To all that persevere.' This being so
Let none be faint in heart though they be slow
For he that creepes, until his Race be done
Shall gaine a wreath, as well as they that runne
This being so let no man walk in doubt
As if God's Arme of Grace were stretched out
To some small number: For, whoe'er begins
And perseveres, the proferred *garland* winns.
Geo. Withers.

Strephon, with heavy twigs of laurel-tree,
A *garland* made, on temples for to wear;
For he then chosen was the dignity
Of village-lord that Whitsuntide to bear.
Sidney.

Then party-coloured flowers of white and red
She wove, to make a *garland* for her head.
Dryden.

Vanquish again; though she be gone,
Whose *garland* crowned the victor's hair,
And reign; though she has left the throne,
Who made thy glory worth thy care. *Prior.*

Her gods and godlike heroes rise to view,
And all her faded *garlands* bloom anew. *Pope.*

From morn till night, from night till startled morn
Peeps blushing on the Revels laughing crew,
The song is heard, the rosy *garland* worn,
Devices quaint, and frolicks ever new.
Byron. Childe Harold.

GARLICK, *n. s.* } Saxon ȝan, a lance
GARLICK-EATER, *n. s.* } and leek. A well-known plant, having a bulbous root, consisting of many small tubercles included in its coats: the leaves are plain; the flowers consist of six leaves, formed into a corymbus on the top of the stalk; and are succeeded by subrotund fruit, divided into three cells, which contain roundish seeds. Garlick-eater is used to describe a mean dirty fellow.

You've made good work,
You and your apron-men, that stood so much
Upon the voice of occupation, and
The breath of *garlickeaters.*
Shakspeare. Coriolanus.

This tree is pretty common in Jamaica, and several other places of America, where it usually rises to the height of thirty or forty feet, and spreads into many branches. When the flowers fall off the pointal, it becomes a round fruit, which, when ripe, has a rough, brownish rind, and a mealy sweet pulp, but a strong scent of *garlick.* *Miller.*

Garlick is of an extremely strong smell, and of an acid and pungent taste. It is extremely active, as may be proved by applying plasters of *garlick* to the feet, which will give a strong smell to the breath. *Hill.*

GARLICK Pear tree. See CRATEVA.

GARMENT. Old Fr. *guarniment.* A covering for the body.

My body to clothe, it maketh no force;
A morning mantle shal be sufficient
The grevous woundes of his pitous corse
Shal be to me a ful royal *garnement.*
Chaucer. Lament of Mary Magdaleine.

——— Each gan undight
Their *garments* wett and weary armour free
To dry themselves by Vulcanes flaming light,
And eke their lately bruyed parts to bring in plight.
Spenser. Faerie Queene.

Hence, rotten thing, or I shall shake thy bones
Out of thy *garments.* *Shakspeare. Coriolanus.*

Our leaf, once fallen, springeth no more; neither doth the sun or summer adorn us again with the *garments* of new leaves and flowers. *Raleigh's History.*

Three worthy persons from his side it tore,
And dyed his *garment* with their scattered gore.
Waller.

The peacock, in all his pride, does not display half the colours that appear in the *garments* of a British lady, when she is dressed. *Addison's Spectator.*

GARNER, *n. s.* & *v. a.* Fr. *greniar*, from Lat. *grana;* Ital. *grenario.* A place in which

l grain is kept: the act of storing it up ers.

But se what golde han userers,
And silver eke in his *garners*.
Chaucer. Romaunt of the Rose.

For sothe it is—whom it displese—
There maie no marchaunt live at ese;
* * * * * * *
* * * * * * *
Ne never shall, though he hath getten
Though he have golde in *garners* yeten;
For to be nedy he dredeth sore. *Id.*

Earth's increase, and foyson plenty,
Barns and *garners* never empty. *Shakspeare.*
ere, where I have *garner'd* up my heart,
re either I must live, or bear no life. *Id.*
or sundry foes the rural realm surround;
fieldmouse builds her *garner* under ground;
gathered grain the blind laborious mole,
winding mazes, works her hidden hole.
Dryden.

RNERIN (——), a celebrated aëronaut, he first who made the experiment of de- ing in a parachute. This he accomplished e 21st of September, 1802, ascending from closure in North Audley-street, Grosvenor- e. At the computed height of 4154 French the intrepid voyager cut the rope which hed the car to the balloon, and descended y in the fields near Kentish Town, the bal- falling the next day near Farnham in y. M. Garnerin's death was occasioned by olexy in the Theatre du Jardin Beaujolin at s, August, 1823. Having the rope which ained the curtain in his hand, by a sudden xation of his grasp, he allowed it to fall, n one of the weights struck him on the l, and he never fully recovered from the v.

ARNET, *n. s.* Ital. *garnato, grenato* (from resemblance to the pomegranate seed, or from Lat. *granatus*). A precious stone.

he *garnet* seems to be a species of the carbuncle of ancients: the Bohemian is red, with a slight cast flame-colour; and the Syrian is red, with a slight of purple. *Woodward's Met. Foss.*

he *garnet* is a gem of a middle degree of hardness, ween the sapphire and the common crystal. It is nd of various sizes. Its surfaces are not so smooth olite as those of a ruby, and its colour is ever of a ng red, with a plain admixture of blueish: its gree of colour is very different, and it always wants ch of the brightness of the ruby. *Hill.*

GARNET (Henry), an English Jesuit of noto- ty, was born in Nottinghamshire in 1555, and ucated at Winchester school. He then went Rome and entered the Jesuits' College in 1575, here he became professor of philosophy and the- ogy. In 1586 he returned to England as provin- al of his order; and abode here without moles- tion for several years. But he now held a se- ret correspondence with the court of Spain; and y an answer which he gave to a case of consci- nce submitted to him, in regard to the destruc- ion of heretics, is said to have given an impulse o the gunpowder plot. He was tried as an ccomplice in it, and executed at the west end of St. Paul's, May 3rd, 1606.

GARNET, in mineralogy, a genus of the si- icious kind, divided by Kirwan into oriental garnet, common garnet, and amorphous garnet and by professor Jameson, into pyramidal, dode- cahedral, and prismatic. We shall here, however, treat only of the garnet, properly so called, which is a dodecahedral of Jameson, and is divided into the precious or noble, and the common gar- net:—

Precious or noble garnet.—Colors dark red, falling into blue. Seldom massive, sometimes disseminated, most commonly in roundish grains, and crystallised. 1. In the rhomboidal dodeca- hedron, which is the primitive form; 2. Ditto, truncated on all the edges; 3. Acute double eight-sided pyramid; and 4. Rectangular four- sided prism. The surface of the grains is gene- rally rough, uneven, or granulated; that of the crystals is always smooth. Lustre externally glistening; internally shining, bordering on splendent. Fracture conchoidal. Sometimes it occurs in lamellar distinct concretions. Trans- parent or translucent. Refracts single. Scratches quartz, but not topaz. Brittle. Rather difficultly frangible. Sp. gr. 4·0 to 4·2. Its constituents are, silica 39·66, alumina 19·66, black oxide of iron 39·68, oxide of manganese 1·80.—Berzelius. Be- fore the blowpipe it fuses into a black enamel, or scoria. It occurs imbedded in primitive rocks, and primitive metalliferous beds. It is found in various northern counties in Scotland; in Nor- way, Lapland, Sweden, Saxony, France, &c. It is cut for ring-stones.

Common garnet.—Deep red, inclining to vio- let, or verging to black, or olive, or leek-green, or brown, seldom yellow. Its external lustre casual, internal 2·3. Transparency, 2·31. Of the brownish and blackish, most frequently, 0. Of the green at most, 2. Crystallised as the former variety, the surface of the crystals often diagonally seamed, frequently found also in rough rounded grains, or fragments. Fracture uneven, inclining to the conchoidal, flat or im- perfect, often to the splintery. Hardness, from 10 to 11. Yet sometimes only 9. Sp. gr. of the red, from 3·941 Werner, to 4·000 Brisson; of the green, from 3·75 to 3·800.

Kirwan found that of some small garnets 3·63.

Both varieties exert most commonly some ac- tion on the magnetic needle. According to Bergman, they are fusible, per se, by the blow- pipe, sometimes into a transparent green glass, but most commonly into a black slagg. Alkalies flux them with great difficulty; borax and micro- cosmic salt convert them into a green or black glass. Gerhard tells us, that in a strong heat they form a gray glass; yet Fourcroy, in a strong heat of eleven hours, found garnets powdered, barely softened, and agglutinated. Observing these different results, he exposed thirty-five grains weight of small Bohemian garnets, whose sp. gr. was 3·63, to a blast heat for a few minutes, and found them melted into an opaque dark gray, fine-grained porcelain, by a heat of 136°.

By Bergman's account this stone contains mor silex than argill, and more argill than calx; o iron it contains from 0·02 to 0·20.

By Achard, red Bohemian garnet contains 0·483 silex, 0·30 argill, 0·116 calx, and 0·10 iron.

Weigleb found the green garnets of Saxony to

contain 0·3645 of silex, 0·3083 calx, and 0·2875 of iron. If so, the green garnets being also specifically lighter, we may suspect them to be specifically different from the red. In another experiment, however, Weigleb found the argillaceous ingredient also in the green; and so did Merz; for, in that of Ehrenberg, he found 0·40 of silex, 0·20 argill, 0·08 calx, and 0·20 of iron. The twelve grains missing must have been air and water, and perhaps a casual loss; but it appears the calx is aërated, as Weigleb found also a considerable deficit.

It is commonly found in schistose mica, or gneiss, more rarely in argillites or granites.

GARNETS, COUNTERFEIT, are made as follows. Take prepared crystal, 2 oz. red lead, 6 oz. manganese, 16 gr. zaffre, 3 gr.: Mix all well, put them into a crucible, cover it well with lute, and set in a potter's kiln for twenty-four hours. Or take crystal 2 oz. minium, 5½ oz. manganese, 15 gr. and zaffre, 4 gr. but the best are composed of,

Strass	0·6630
Glass of antimony	0·3320
Purple of Cassius	0·0025
Oxide of manganese	0·0025
	1·0000

Mix and bake them as above.

GARNISH, *v. a.* & *n. s.* } Fr. *garnir*; Ital. *guarnire*; Span. and Port. *guarnicer*; Lat. *ab ornare*.—Minsheu. To ornament; embellish. Any decoration, whether of the person, table, or mind. It is a cant term in gaols for fetters: an acknowledgment in money when a prisoner goes to gaol.

GARNISHMENT, *n. s.* }
GARNITURE, *n. s.* }

All within with flowers was *garnished*,
That, when mild Zephyrus amongst them blew,
Did breathe out bounteous smells, and painted colours shew. *Spenser.*

With taper light
To seek the beauteous eye of heaven to *garnish*,
Is wasteful and ridiculous excess. *Shakspeare.*

So are you, sweet,
Even in the lovely *garnish* of a boy. *Id.*

Paradise was a terrestrial garden, *garnished* with fruits, delighting both the eye and the taste. *Raleigh.*

All the streets were *garnished* with the citizens, standing in their liveries. *Bacon's Henry VII.*

The church of Sancta Guistiniana in Padoua is a sound piece of good art, where the materials being ordinary stone, without any *garnishment* of sculpture, ravish the beholders. *Wotton.*

There were hills which *garnished* their proud heights with stately trees. *Sidney.*

With what expence and art, how richly drest!
Garnished with 'sparagus, himself a feast! *Dryden.*

As nature has poured out her charms upon the female part of our species, so they are very assiduous in bestowing upon themselves the finest *garnitures* of art. *Addison's Spectator.*

Plain sense, which pleased your sires an age ago,
Is lost without the *garniture* of show. *Granville.*

GARONNE, UPPER, a south-west department of France, consisting of part of Languedoc and Gascony, and bounded on the south by Spain, and on the west by the department of the Upper Pyrenees. It has a territorial extent of 2840 square miles, is divided into the four arrondissements of Toulouse (the capital), St. Gaudens, Muret, and Villefranche. The southern part, lying among the Pyrenees, is mountainous; the rest consists of hills, extensive valleys, and small plains. In the arrondissement of St. Gauden's the soil is scarcely fit for any thing but pasturage; throughout the rest it is rich and fertile, producing not only corn, but most of the fruits of warm countries, and particularly wine. The mountains contain mines of copper, lead, iron, and coal. Garonne exports corn, cattle, and the produce of its mines, together with woollen stuffs and leather. Population 367,500, of whom 18,000 are Protestants.

GARONNE, a large river of France, which rises among the Pyrenees, on the borders of Catalonia, and flows in a north-west direction through part of Languedoc and Guienne. It becomes navigable at Muret, and receives the Dordogne at Bourg-sur-Mer, when it takes the name of the Gironde. Passing by Bourdeaux, it falls into the Atlantic, by two mouths, called the Pas des Anes and the Pas de Grave. At its mouth it is above three miles wide, and the tide rises to Beaucaire, nine miles below Bourdeaux. In its course, which is above 400 miles, it receives the Arriege, the Tarn, the Baise, the Lot, and the Dordogne, besides a number of smaller rivers.

GAROUS, *adj.* Resembling pickle made of fish.

In a civet-cat an offensive odour proceeds, partly from its food, that being especially fish; whereof this humour may be a *garous* excretion, and olidous separation. *Browne.*

GARRAN, *n. s.* Erse; the same as gelding. A small horse. A Highland horse which when brought to the north of England is called a galloway, q. v.

When he comes forth, he will make their cows and *garrans* to walk, if he doth no other harm to their persons. *Spenser.*

Every man would be forced to provide winter-fodder for his team, whereas common *garrans* shift upon grass the year round; and this would force men to the enclosing of grounds, so that the race of *garrans* would decrease. *Temple.*

GARRET, *n. s.* } Fr. *garite*, the tower of a
GARRETEER, *n. s.* } citadel, from Goth. *wara*; Sax. *warian*, to guard. A room on the highest floor of the house. Also rotten wood, but in this sense it is out of use. An inhabitant of a garret.

The colour of the shining part of rotten wood, by daylight, is in some pieces white, and in some pieces inclining to red, which they call the white and red *garret*. *Bacon.*

The mob, commissioned by the government,
Are seldom to an empty *garret* sent. *Dryden.*

John Bull skipped from room to room; ran up stairs and down stairs, from the kitchen to the *garret*. *Arbuthnot's John Bull.*

On earth the god of wealth was made
Sole patron of the building trade;
Leaving the arts the spacious air,
With licence to build castles there:
And 'tis conceived their old pretence,
To lodge in *garrets*, comes from thence. *Swift.*

GARRICK (David), the Roscius of his age and country, was born at the Angel Inn Hereford in 1716. His father, captain Peter

k, was of a French refugee family, and had of horse which were then quartered in that This rank he maintained in the army for years, and was a major at his death. Mr. k received the first rudiments of his educa- Litchfield; which he afterwards completed chester, under the celebrated Mr. Colson, professor at Cambridge. Dr. Johnson and e fellow students at the same school; and ip to London to push themselves into ac- fe, in the same coach. On the 9th March he was entered at Lincoln's Inn. He soon d the law, and followed for some time the ess of a wine merchant; but at last he gave to the irresistible bias of his mind, and l a travelling company of comedians at Ips- where he went by the name of Lyddle. ng in this poor school of Apollo obtained acquaintance with the theatric art, he burst ce upon the world, in 1740, 1741, in all the of perfection, at the little theatre in Good- s Fields, then under the direction of Henry rd. The character he first performed was ard III. to witness which the theatres at the end of the town were soon deserted; and lman's Fields, from being the rendezvous of ns and their wives, became the resort of all s till the close of the season. Being offered advantageous terms for performing in Dub- during part of the summer 1741, he went to Ireland, and found the same just homage to his merit which he had received from countrymen. In the following winter he en- d with Fleetwood then manager of Drury e: where he continued till the year 1745, n he again went over to Ireland, as joint nager with Mr. Sheridan of the theatre royal moke Alley. Thence he returned to England, engaged for the season of 1746 with Mr. h at Covent Garden. This was his last per- nance as an hired actor; for in the close of t season Fleetwood's patent for the manage- nt of the theatre in Drury Lane being expired, . Garrick and Mr. Lacy purchased the pro- ty of it, with the renovation of the patent; l in winter 1747 opened it with the greatest part Mr. Fleetwood's company; and with the addi- n of Barry, Mrs. Pritchard, and Mrs. Cibber from vent Garden. To trace Mr. Garrick through the various occurrences of his public life uld swell this account to many pages. Suf- e it to say, he continued in the full enjoyment fame to the period of his retirement, and that s universality of excellence never once admitted a competitor. Tragedy, comedy, and farce, e lover and the hero, the jealous husband, and e thoughtless rake, were all alike his own. age and ridicule, doubt and despair, transport d tenderness, compassion and contempt; love, alousy, fear, fury, and simplicity; all took turn possession of his features, while each of em appeared to be the sole possessor of his eart. In the several characters of Lear and lamlet, Richard, Dorilas, Romeo, and Lusig- ane; in his Ranger, Bayes, Drugger, Kitley, Brute, and Benedict, we saw the appropriate in- ication of passion accurately discriminated. There is one part of his theatrical conduct which vill ever be recorded to Mr. Garrick's honor, viz. the zeal which he showed to banish from the stage all those plays that have an immoral tendency, and the purity of the English drama was beyond a doubt much more fully established during the administration of this theatrical minister, than it had ever been under former management. Notwithstanding the numberless and laborious avocations attendant on his profession as an actor, and his station as a manager; yet still his active genius frequently burst forth in various dramatic, and poetical productions, and though his merit as an author is not of the first class, yet his great knowledge of men, manners, and stage effect, and his happy turn for lively and striking satire, made him generally successful in the drama, and his innumerable prologues and epilogues have been greatly admired. His ode on the death of Mr. Pelham ran through four editions in less than six weeks. Among his original productions are, the Farmer's Return, and Linco's Travels, interludes; The Guardian, Lethe, Lying Valet, Miss in her Teens, Male Coquet, Irish Widow, and other comedies in two acts: The Enchanter, a musical entertainment: Lilliput, the Christmas Tale, and many others. We have thus traced him to the period of his retirement in spring 1776; when with a splendid fortune, and advancing in years, he sought to enjoy in the vale of life that dignified and honorable ease, which he had so well earned by the activity and merits of his dramatic reign. But short was the period allotted to him for retirement: for he died on the 20th January 1779.

Garrick (Eva Maria), wife, and long the relict, of the celebrated David Garrick, was born at Vienna, February 29th, 1725. Her maiden name, Viegel, she changed by command of the empress-queen, Maria Theresa, to that of Violette, a translation of the German word vielge, the anagram of her name. She was at this time a favorite dancer at the Imperial court. In 1744 she came to England, bringing with her a recommendation from the countess of Stahremberg to lady Burlington, who received her as an inmate of Burlington-house, and ever after treated her with great affection; a circumstance which gave rise to a general but erroneous idea, that she was a natural daughter of the earl's. While under this protection, mademoiselle Violette formed an attachment with Mr. Garrick, and on the 22nd of June, 1749, the nuptials were celebrated, with the sanction of the countess Burlington, a marriage portion of £6000 being bestowed by her upon the bride. In 1751 and in 1763 she accompanied her husband to the continent; after whose death, though strongly solicited by several persons of rank and fortune, she continued a widow, residing in her house on the Adelphi-terrace, where she died suddenly, October 16th, 1822.

GARRISON, *n. s.* & *v. a.* Fr. *garnison*. See Garret. A fortified town or place; the soldiers who are placed there to defend it; the act of securing by fortresses.

> Eke jelousie may God confounde!
> That hath maked a toure so rounde,
> And made about a *garrison*,
> To sette Bialacoil in prison.
>
> *Chaucer. Romaunt of the Rose.*

Some of them that are laid in *garrison* will do no great hurt to the enemies. *Spenser on Ireland.*

How oft he said to me,
Thou art no soldier fit for Cupid's *garrison*.
Sidney.

Whom the old Roman wall so ill confined,
With a new chain of *garrisons* you bind.
Waller.

Others those forces join,
Which *garrison* the conquests near the Rhine.
Dryden's Juvenal.

GARROWS, a mountainous but fertile district on the north-east frontier of Bengal, situated between 25° and 26° of N. lat. Its chief town is Ghosegong. In the bed of one of its rivers is abundance of coal; but the natives are half savages, and not acquainted with the art of working it. They go nearly naked, and, although they call themselves Hindoos, eat all kinds of food, and drink spirituous liquors. They are said to be mild in their tempers, and of gay dispositions. The poverty of this country has alone prevented it from being added to Bengal; but it is tributary to the British.

GARRU'LITY, *n. s.* } Lat. *garrulus*. The
GAR'RULOUS, *adj.* } disposition or act of talking too much; inability to keep a secret.

Let me here
Expiate, if possible, my crime,
Shameful *garrulity*. *Milton's Agonistes.*

Some vices of speech must carefully be avoided; first of all, loquacity or *garrulity*.
Ray on the Creation.

Old age looks out,
And *garrulous* recounts the feats of youth.
Thomson.

GARRY, a lake in Perthshire, of considerable extent, which discharges itself by a river of the same name. The river, taking a south-westerly course, receives the Bruar near Dalnacordoch inn, the Tilt near the castle of Blair-Athol, and the Tummel several miles below the pass of Killicrankie, and finally falls into the Tay, near Logierait. In its turbulent and rapid course there are several small water-falls.

GARSTANG, a populous town of Lancashire, 229 miles from London, in the post road between Preston and Lancaster. It is near a mile in length, but built very irregularly. The church is a stately Gothic structure. It is seated on the Wyre, and by means of the navigable canal from Kirby-Kendal to West Houghton, which passes the town end, Garston has communication with the Trent, Severn, and Mersey. There is no manufactory immediately in the town, except flax-dressing, and the weaving of sacks, and other coarse articles; but there are considerable cotton-works in the adjacent townships, within the limits of the parish. Three miles west of Garstang is the east-side of Pilling-moss, the scene of a phenomenon of which an account, to the following effect, was given in the Philosophical Transactions, No. 475. 'On Sunday, the 26th of January, 1744—5, a part of Pilling-Moss, lying between Hescomb Houses and Wild Bear, was observed to rise to a surprising height. After a short time it shrunk as much below the level, and moved slowly towards the south side; and in half an hour it covered twenty acres of land. The improved land adjoining to that part of the moss which moves in a concave circle, containing nearly 100 acres, is nearly filled up with moss and water, and in some parts is thought to be five yards deep. One family is driven out of their house, which is quite surrounded, and the fabric is tumbling down. The part of the moss which is sunk, like the bed of a river, runs north and south, and is above a mile in length, and half a mile in breadth. When the moss began to move, a man was passing over it from the west, who perceived, to his great astonishment, that the ground moved southward. By a speedy return, he had the good fortune to escape being swallowed up.'

GARTER, *n. s.* & *v. a.* Fr. *jartière*; Welsh *garders, gar*. A string or riband which retains the stocking on the leg. A mark of the highest order of knighthood in England; the name of the officer called the principal king at arms; to bind as with a garter.

He, being in love, could not see to *garter* his hose.
Shakspeare.

Now by my george, my *garter*,
—The george, profaned, hath lost his holy honour,
The *garter*, blemished, pawned his knightly virtue.
Id. Richard III.

Let their heads be sleekly combed, their blue coats brushed, and their *garters* of an indifferent knit.
Id. Taming of the Shrew.

You owe your Ormond nothing but a son,
To fill in future times his father's place,
And wear the *garter* of his mother's race.
Dryden.

When we rest in our clothes we loosen our *garters*, and other ligatures, to give the spirits free passage.
Ray.

Handsome *garters* at your knees. *Swift.*

There lay three *garters*, half a pair of gloves,
And all the trophies of his former loves. *Pope.*

GARTER, ORDER OF THE, a military order of knighthood, the most noble and ancient of any lay order in the world, instituted by Edward III. The knights companions are generally princes and peers; and the king of England is the sovereign of the order. The number of knights was originally twenty-six; but six were added in 1786, on account of the increase of the royal family. They are a corporation, having a great and little seal, &c. Their officers are a prelate, chancellor, register, king at arms, and usher of the black rod. They have also a dean, with twelve canons, and petty canons, vergers, and twenty-six pensioners, or poor knights. The prelate is the head. This office has always been invested in the bishop of Winchester. Next to the prelate is the chancellor; which office is vested in the bishop of Salisbury, who keeps the seals, &c. The next is the register, who by his oath is to enter upon the registry, the scrutinies, elections, penalties, and other acts of the order with all fidelity: the dean of Windsor is always register ex officio. The fourth officer is garter, and king at arms, being two distinct offices united in one person. He is the principal officer within the college of arms, and chief of the heralds. All these officers, except the prelate, have fees and pensions. The college of the order is seated in the castle of Windsor, within the chapel of St. George, and the charter-house, erected by the founder for that purpose. The

and ensign of the order are a garter, mantle, George, and collar. The first three were ed the knights companions by the founder; ie George and collar by Henry VIII. The challenges pre-eminence over all the other of the dress, as from it the order is deno- ed. It is the first part of the habit pre- l to foreign princes and absent knights, as well as all other knights elect, are there- irst adorned: and it is of so great honor randeur, that by the bare investiture with oble ensign, the knights are esteemed com- ns of the greatest military order in the . It is worn on the left leg between the and calf, and is enamelled with this motto, soit qui mal y pense.

e mantle is the chief of those vestments use of on solemn occasions. It is of blue t lined with white taffeta; and to its collar tened a pair of long strings, with large tas- called 'cordons,' made of blue silk inter- d with gold. On the left breast of this le are placed the arms of the order within garter, richly embroidered. The mantle by the sovereign is distinguished by having nger train than that of the knights. The r of these mantles is, by the founder's statute, inted to be blue; and it so continued till eign of queen Elizabeth, when it was changed urple, and this was retained till about the fth year of king Charles I., when he restored color of the mantle to its original institution.

he surcoat, or kirtle, as well as the mantle, originally composed of woollen cloth, and so tinued till the reign of Edward IV., about ch time it was also made of velvet. Anciently, color of this vesture changed every year, monly into blue, scarlet, sanguine in grain, white; it is now made of crimson velvet, d with white taffeta.

The hood was formerly worn on the head at public ceremonies, and made of the same ma- ials as the mantle, and sometimes was trimmed set off with a small proportion of garters; but is not now used in the same manner as for- rly, but remains fixed to the mantle as part of habit; and, instead of the hood, the knights w wear on their heads a cap of black velvet, ep in the crown, lined with taffeta, and adorned th a large plume of ostrich feathers, in the cen- of which is a tuft or aigrette of heron's fea- ers; these feathers are usually fixed to the cap a band of diamonds. The custom of wearing ese caps and feathers, at the great solemnities the order, had sometimes been omitted, in d before the reign of James I., and therefore, a chapter held on the 13th of April, in his nth year, the custom of wearing the cap and athers was established.

The collar of the order is of gold, weighing irty ounces Troy; it is composed of twenty-six ieces, in the form of the garter enamelled blue, ith the motto of the order in gold; in the cen- e of each garter is a rose, enamelled red, eeded gold, and leaved green: these twenty-six arters are fastened together with as many knots f gold. At the middle of it, pendent to one of he garters, is the badge of the order, being the igure of St. George armed, sitting on horseback, and with a spear, encountering a dragon, which lies on his back under the horse's feet.

The left shoulder has from the institution been adorned with a larger garter, with the device, Honi soit, &c. Within this is the cross of the order, which was ordained to be worn at all times by king Charles I. At length the star was introduced, being a sort of cross irradiated with beams of silver. In 1551 Edward VI. made some alterations in the ritual of this order: that prince composed it in Latin, the original whereof is still extant in his own hand-writing. He there ordained, that the order should no longer be called the order of St. George, but the order of the garter; and, instead of the George, hung at the collar, he substituted a cavalier, bearing a book on the point of his sword, with the word, protectio graven on the sword, and verbum Dei on the book: with a buckle in the left hand and the word fides thereon. When the knights do not wear their robes, they are to have a silver star on the left side; and they commonly bear the picture of St. George; enamelled on gold, and beset with diamonds, at the end of a blue riband, crossing the body from the left shoulder. They are not to appear abroad without the garter, on penalty of 6*s*. 8*d*. paid to the register.

As this is one of the most splendid and favorite orders of the knighthood in this country, or even in Europe, we add an account of the Installation of the duke of Rutland, the earl of Hardwicke, the duke of Beaufort, the marquis of Abercorn, the earl of Pembroke and Montgomery, the earl of Winchelsea and Nottingham, and the earl of Chesterfield, on the 23rd of April, 1805.

On the morning of installation, at ten o'clock, the Knights Companions began the procession, in the following complete habit of the order, consisting of a black velvet plume, white ostrich feathers, and heron sprig: a purple velvet mantle, lined with white silk; gold and purple cordons; collar of the order; crimson velvet hood, and crimson velvet surcoat; silver tissue jacket, and puffed breeches; white silk pantaloons; white kid shoes; silver shoe roses, and silver knee ditto, garter, &c. The officers of the order in their mantles, the Knights elect in their under habits, having their caps and feathers in their hands, and the honorable captain Yorke, the proxy of the earl of Hardwicke, in his ordinary habit, attended the Sovereign in the royal apartment. The Officers of Arms, and the four Serjeants at Arms, with their maces, attended in the Presence Chamber; the Prebends, Poor and Naval Knights, as also the kettle drums, and house trumpets, in the Guard Chamber. The honorable captain Yorke, proxy for the earl of Hardwicke, walked in the procession, dressed in his naval uniform. At eleven o'clock, a discharge of guns announced the procession.

The Sovereign coming under his state, Garter King of Arms called over the knights; and a procession was made from the royal apartment, through the Presence and Guard Chambers; the end of St. George's Hall; the late private chapel: the passage leading to the great stairs; descending which, through the hall to the great court; and from thence, to the south door of St. George's Chapel, in the following order:—

Two Fife-Majors.
Four Drum-Majors of the Household.
— Lamb, Esq. Drum-Major of England, uncovered.
Fourteen Trumpets.
Two Trombones.
Two side-Drums.
Six Naval Officers of Travers' College, two and two.
Eighteen Poor Knights of Windsor, two and two.
Ten Prebends, two and two.
Pursuivants and Heralds, two and two.
Norroy (King at Arms), Clarencieux (Ditto).

KNIGHTS ELECT,

(Having their caps and feathers in their hand); viz.
Earl of Chesterfield. Earl of Winchelsea.
Earl of Pembroke. Marquis of Abercorn.
Duke of Beaufort.
Duke of Rutland.

KNIGHTS COMPANIONS; viz.

Earls Camden, Spencer,
Westmoreland, Salisbury,
Earl of Chatham,
Duke of Devonshire,

Two Serg. at Arms, a little before the Sword of State.

Prince William, D. of Gloucester,
D. of Cambridge, Duke of Sussex,
D. of Cumberland, Duke of Kent,
Duke of Clarence, Duke of York,
Prince of Wales.
The Register (the Dean),
Having Garter King at Arms on his right, and Deputy Black Rod on his left hand.
The Chancellor with the Purse,
Having on his right hand the Prelate.

Two Serg. at Arms, a little before the Sword of State.

Lord Chamberlain. The Sword of State.

Gentlemen Pensioners

THE SOVEREIGN.
His Train borne by the Marquisses of Worcester and Tavistock, and the Honourable Mr. Villiers.

Gentlemen Pensioners

The Officers of State, viz.
The Earl of Harrington, Gold Stick.
Marquis of Hertford, Master of the Horse.
Earl Macclesfield, Captain of the Yeoman of the Guards.
Lord St. Helens, Lord in Waiting.
Band of Gentlemen Pensioners.
Ten of His Majesty's Pages, in a new uniform.

In this manner, moving to the Chapel, the procession entered the south door; passed down the south aisle, and up the centre, or nave, then turning to the left proceeded up the north aisle, to the Chapter-house; the organ and band playing the March in Hercules; the Naval and Poor Knights dividing on either side, at some distance from the Chapter-house; then the Prebends, next above; and the Officers of Arms nearest to the Chapter-house. None entering with the Sovereign into the Chapter-house, but the Knights Companions, and the sworn Officers of the order; the Knights elect retired to their chairs in the aisle behind the altar. The Sovereign's train was carried into the Chapter-house by Garter; and borne out of the Chapter-house by Deputy Black Rod, and then again carried by the Train Bearers. Deputy Black Rod, and the Register, not having been sworn, remained in the aisle, opposite to the Knights elect. The Sovereign and the Knights Companions, being seated, the latter according to their seniority, and their stalls in the Chapel; Garter acquainted His Majesty, that Robert Quarme, Esq. Deputy Black Rod, waited at the door and humbly prayed admittance to take the oath of Office: and he being thereupon introduced by Garter, kneeled near the Sovereign, on the left hand, when Garter, holding the Gospels, administered the oath. Deputy Black Rod, having kissed the Sovereign's hand, retired to his place at the bottom of the table. Then Garter, in the absence of the Chancellor (who was indisposed), acquainted His Majesty that the dean of Windsor, the honorable and reverend Dr. Edward Legge, attended at the door, and prayed admittance to take the oath, as the Register of the Order. He was thereupon introduced by Garter and Deputy Black Rod; the latter carrying the ensigns of the Register's office: the locum tenens administered the oath; and Register being invested, and having kissed the Sovereign's hand, withdrew to his place at the bottom of the table. Then, by the Sovereign's command, the officer acting for the Chancellor standing on the left hand of His Majesty, read the new statute. Which done, the Register returned to his place.

Garter then, by the sovereign's command, introduced the duke of Rutland between two knights, viz. their royal highnesses the dukes of York and Clarence, who was received at the door by the two junior knights, and conducted to the table, where the surcoat, girdle, and sword had been placed: and Garter presenting the surcoat to the two senior knights, they invested his grace therewith, the Register reading this admonition: take this robe of crimson, to the increase of your honor, and in token and sign of the most noble order you have received, wherewith you being defended, may be bold not only strong to fight, but also to offer yourself to shed your blood for Christ's faith, the liberties of the church, and the just and necessary defence of them who are oppressed and needy. Then Garter presented the girdle in like manner, and afterwards the sword, which they put on his grace, who then took his place near the table. Garter then introduced the honorable captain Yorke, the proxy for the earl of Hardwicke, lord lieutenant of Ireland, and knight elect of the order, who stood at his excellency's place near the table, between their royal highnesses the dukes of Cumberland and Kent.

The duke of Beaufort and his companions were then severally introduced between two knights in like manner, and invested with the surcoat, girdle, and sword.

The knights elect and the proxy continued in the Chapter-house, while the procession to the Chapel was made down to the bottom of the north aisle and up the nave, into the choir, in the following order:—First, the naval and poor knights, who, coming into the choir, made their reverences, first to the altar, then to the sovereign's stall, and placed themselves, on each side, near the altar. The prebends made their reverences in like manner, and went to their places under the stalls. The officers of arms, making their reverences, stood next to the poor knights. Then the knights companions, each in the order in which he had walked, made their reverences, and retired under their banners, where they re-

l standing. The Register, Garter, and y Black Rod, making their reverences to- stood before their form. The Prelate and ellor did the same. The Sword of State, ıe Lord Chamberlain on his left hand (the ign being seated), stood on the steps be- r under the sovereign's stall. The Sove- nade one reverence to the altar; and, being stall, repeated the same; the train bearers ng upon the steps leading to the sovereign's

ter then went into the middle of the choir, aking his double reverence, waved his scep- wards his Royal Highness the prince of ; who, thereupon came from under his r, made his reverences, and ascended into his where, repeating his reverences, he sat down. ıe other knights continued standing under anners. The Prelate was conducted to the by the verger of St. George's Chapel; and o Prebends, by the same Verger.

en Garter, with the usual reverences, the and band playing the Dead March in and Dirge in Sampson, took up the banner s Serene Highness the late duke of Saxe a; and holding it up, the Provincial Kings rms joined, and making their reverences, red to the two senior knights; who there- joined, making their reverences together, eceived the banner from Garter, which they d, the point foremost, a little declining; eing preceded by the said Provincial Kings rms, advanced to the first step of the altar; e they repeated their reverences; and com- o the rails, made reverences to the altar; kneeling, they delivered the banner to the ate, who, assisted by the Prebends, placed right at the south end of the altar.

ıe two knights then returned with like re- nce, and stood upon their banners. The d was then delivered by Garter to the next r knights; who, attended by the said Pro- ial Kings of Arms, offered the same, the hilt ards, with like ceremonies. The helm and t were offered by the two next senior knights, the same ceremony, attended by the said vincial Kings of Arms. The achievements ıe late marquis of Stafford, of the late duke of ufort, and the late duke of Roxburgh, were red with the same ceremonies, by the six se- knights, not of the blood royal, attended each by two heralds, in rotation. Then Garter, ring to each knight (the senior first), sum- ned him to ascend into his stall; when he le his reverences, and the same were repeated n in the stalls. All the knights being in ır stalls, Garter summoned the two senior ghts under their banners, in order to install duke of Rutland; and a procession was made the Chapter-house, all making the usual erences, on going out of the choir.

The procession passing to the west end of the ir only, entered the choir, all making the ıal reverences; Garter, with the Register and puty Black Rod, went under the stall ap- inted for his grace; Garter placing the cushion on the desk of the lower stall.

The two knights, with the duke, entered into lower stall, where the Register administered following oath, Deputy Black Rod holding the Gospels:—'You being chosen to be one of the honorable company of the most noble order of the Garter, shall promise and swear, by the Holy Evangelists, by you here touched, that wittingly, and willingly, you shall not break any statute of the said order, or any article in them contained, unless you shall have first received a dispensation from the sovereign, the same being agreeable, and not repugnant to the will of God and the laws of the realm, as far forth as to you belongeth and appertaineth, so help you God and his Holy Word.' The two knights then conducted his grace into the upper stall; the Register and Garter entering into the lower stall; the Deputy Black Rod remaining in the area. Garter then presented the mantle to the knights, who invested his grace therewith, the Register reading the following admonition:—'Receive this robe of heavenly color, the livery of this most excellent order, in augmentation of thy honor, ennobled with the shield and red cross of our Lord, by whose power thou mayest safely pierce troops of thine enemies, and be over them ever victorious; and, being in this temporal warfare glorious in egregious and heroic actions, thou mayest obtain eternal and triumphant joy.' Next Garter presented the hood, which was put on over his grace's right shoulder, the ends of the tippets being brought in front, and passed under the girdle. Then garter presented the great collar and George, with which the knights invested the duke, whilst the Register read this admonition:—'Wear this collar about thy neck, adorned with the image of the blessed martyr and soldier in Christ, St. George, by whose imitation provoked, thou mayest so overpass both prosperous and adverse encounters, that, having stoutly vanquished thine enemies, both of body and soul, thou mayest not only survive this transient combat, but be crowned with palms of eternal victory.' Garter then presented the statute-book, which the knights delivered to his grace; and then placing the cap and feathers on his head, they seated him in his stall; and his grace rising up, made his double reverence, viz., first to the altar, then to the sovereign: the knights, after embracing and congratulating him, descended into the middle of the choir, and, making their reverences, went up into their stalls, and, repeating the same, sat down; the officers returning to their places.

Then garter summoned the two knights next in seniority, in order to install the honorable captain Yorke, the proxy for the earl of Hardwicke; who was thereupon conducted, with the same ceremony, into the stall under that appointed for his principal, where the Register administered to him the oath. He was then conducted into the upper stall; and, the mantle being presented by Garter, the knights put the same over his left arm, so that the cross, embroidered within the garter, might be seen. They then seated the said proxy in the stall, with the ceremony as before-mentioned, and returned to their stalls; the proxy, immediately rising, made his reverences, and remained standing during the rest of the ceremony, with the mantle on his arm.

The duke of Beaufort, the marquis of Abercorn, the earl of Pembroke, the earl of Winchilsea, and the earl of Chesterfield, were severally intro-

duced and installed, in the same manner as the duke of Rutland, and by the same Knights respectively, who introduced them into the Chapter house. The Knights thus installed, divine service began; which was the same with that used in St. George's Chapel on the Obiit Sundays; except that no sermon was preached. Proper psalms, the 21st, 146th and 147th. First lesson, 44th chapter of Ecclesiacticus. Te Deum, composed by Gibbons. Second lesson, 11th chapter of the epistles to the Hebrews. The anthem, a celebrated composition of Handel, selected for the occasion by his majesty, from Psalm the 21st, was sung at the conclusion of the first service.

Full chorus—Hallelujah. Communication service—Kyrie Eleeson, by Dr. Child.

At the words of the offertory, 'Let your light so shine, &c.'—the organ and band playing the air in 'Berenice,'—the officers of the wardrobe spread a carpet on the steps of the altar; and Deputy Black Rod, making his obeisances, went up to the rails of the altar, on the right side: where he received from the yeoman of the wardrobe, a rich carpet and cushion, which with the assistance of the yeoman, he laid down for the sovereign to kneel upon. In the mean-time, Garter summoned the knights from their stalls, beginning with the junior; each knight making his reverence in his stall, and repeating the same with his companion, in the choir, retired under his banner.—All the knights standing thus under their banners, and the prelate at the altar to receive the offerings, the sovereign, making his reverence to the altar, descended from his stall; and then making another reverence to the middle of the choir; proceded to the offering in the following order:

Garter. The Register.
The Chancellor.
The Lord Chamberlain. The Sword of State.
The Sovereign.
His Majesty's Train, borne as before.

The senior Knight, not of the Blood Royal, being the Knight appointed to deliver the offering to the Sovereign, made his reverence as the procession passed; and thereupon, placed himself a little behind his Majesty, on the right side. The Sovereign, coming to the rails of the altar, made a reverence; when Deputy Black Rod, on his knee, delivered the offering to the Knight, who delivered it to the Sovereign; and his Majesty, taking off his cap and feathers, put the offering into the basin, held by the Prelate, assisted by the Prebends. The Sovereign rising, made his reverence to the altar; and, retiring, made another in the middle of the choir; and, when in his stall, another, all the attendants turning as his Majesty did, and making their reverences at the same time. The Knight, who delivered the offering, retired under his banner, when the procession came opposite the same.

All the Knights standing under their banners, the Provincial Kings of Arms joined with usual reverences, and went to his Royal Higness the prince of Wales; who, in the middle of the choir, made his double reverence, viz., first to the altar, then to the Sovereign, and was conducted to the altar; where, taking off his cap, and making another reverence, he kneeled, and offered gold and silver into the bason; and, returning in the same order, went into his stall, where he made his reverences, and sat down. Then two Officers of Arms attended the two next Knights in seniority, being companions; who offered in like manner, and so on, till all the Knights and the Proxy, either singly or in pairs, had offered, and ascended into their Stalls. The Provincial Kings of Arms attended those Knights who were of the Blood Royal; and the senior Heralds in rotation, the other Knights Companions.

Divine service being ended, the Prelate was conducted to his seat by the Verger of St. George's chapel.

The origin of this order is variously related by historians. The common account is, that the countess of Salisbury happening at a ball to drop her garter, the king took it up and presented it to her with these words, 'Honi soit qui mal y pense,' i. e. evil to him that evil thinks. In the original statutes, however, there is not the least hint of allusion to such a circumstance, farther than is conveyed in the motto. Camden, Fern, &c., take the order to have been instituted on occasion of the victory obtained by Edward over the French, at the battle of Cressy. That prince, say some historians, ordered his garter to be displayed, as a signal of battle; in commemoration of which he made a garter the principal ornament of the order erected in memory of this signal victory, and a symbol of the indissoluble union of the knights. And they account for the motto, that king Edward, having laid claim to the kingdom of France, denounced shame and defiance upon him that should dare to think amiss of the just enterprise he had undertaken for recovering his lawful right to that crown; and that the bravery of those knights whom he had elected into this order was such as would enable him to maintain the quarrel against those that thought ill of it. This interpretation, however appears to be rather forced. A still more ancient origin of this order is given in Rastel's Chronicle, lib. vi. quoted by Granger, in the supplement to his Biographical History: viz. that it was devised by Richard I. at the siege of Acre, when he caused twenty-six knights, who firmly stood by him, to wear thongs of blue leather about their legs; and that it was revived and perfected in the nineteenth year of Edward III.

Degradation of a Knight Companion.—The degradation of a knight companion, according to the second article of king Henry VIIIth's statutes, is to be inflicted on all those who shall be found guilty of heresy, treason, or flying from battle.

When a knight companion is found guilty of any of these offences, and is in the dominions of the sovereign, he is usually degraded at the ensuing chapter; and, the sovereign having acquainted the knights companions with his intention to have the ceremony performed, he commands Garter to attend such of them as are appointed to go to the convict knight, who in a solemn manner, first take from him his George and riband, and then his garter. And at the following feast of St. George (or sooner, if the sovereign appoint) publication of his crimes and

ıtion is made by Garter, and a warrant
ɔut to him for taking down the achieve-
ɔf the knight, which is performed as fol-
—

, Garter, in his coat of arms, usually
morning prayer, standing in the middle
choir in St. George's chapel, the officers of
tanding about him, and the Black Rod
esent, reads aloud the instrument for pub-
the knight's degradation. This being
the deputed herald being placed on the
f the stall of the convict knight, when
pronounces these words: 'Be expelled
ut from among the arms, &c.' takes his
ınd violently casts it down into the choir,
terwards his banner and sword; and, when
blication is read out, all the officers at arms
the achievements out of the choir into the
ɔf the church, first the sword, secondly,
nner, and lastly the crest; so on, out of
est door, thence through the castle-gate,
:e they are thrown into the castle ditch.
a chapter held 32d Henry VIII., it was de-
ıed, that wheresoever the actions and names
ch offenders should be found in the books
order, these words, 'Vah Proditor,' should
itten in the margin, as a mark of ignominy,
ıich means the registers would be preserved
ınd not defaced by erasements.
e last knight who was thus degraded, was
uke of Ormond, anno 1, George I., for act-
ı concert with the French general.
ıRTER PRINCIPAL KING AT ARMS. This
was instituted by Henry V. Garter, and
:ipal king at arms, are two distinct offices
d in one person: garter's employment is to
d the service of the order of the garter; for
h he is allowed a mantle and badge, a house
'indsor Castle, and pensions both from the
:eign and knights, besides fees. He also
es the rod and sceptre at every feast of St.
rge, when the sovereign is present, and noti-
the election of such as are newly chosen;
ıds the solemnity of their installations, and
rals; takes care of placing their arms over
seats; and carries the garter to foreign
s and princes: for which service it has been
l to join him in commission with some peer,
ther person of distinction. Garter's oath re-
s only to services being performed within the
:r, and is taken in chapter before the sove-
n and knights. His oath as king at arms is
:n before the earl marshal.
GARTH or GIRTH, from gird. See GIRTH.
GARTH (Sir Samuel), an English poet and
'sician, descended from a good family in
rkshire. He studied at Cambridge, where he
k the degree of M. D. in 1691, and was ad-
ted into the college of physicians at London
1693. He zealously promoted the erecting of
dispensary for the relief of the sick poor.
is having exposed him to the resentment of
ıers of the faculty, he ridiculed them, with pe-
liar spirit and vivacity, in a poem called the
spensary, in six cantos, highly esteemed. He
s one of the most eminent members of the
t-Kat Club. Upon the accession of George I.
r. Garth was knighted, and made physician to
s majest" and the army. He had then gone
through the office of censor of the college in 1702; and had a very extensive practice. One of his last performances was his translation of the fourteenth book, and the story of Cippus in the fifteenth of Ovid's Metamorphoses. These were published in 1717. He died in January, 1718—19.

GARTMORN DAM, an artificial lake in Clackmannanshire, formed about the beginning of the eighteenth century, for the use of the Alloa coal-works. When full it covers 162 English acres. The head is faced with rough hewn stone, and measures 320 yards. It has a sluice, which regulates the quantity of water to be conveyed into a lade, which first drives a mill for chipping wood and dye stuffs, next a lint-mill; then it is conveyed into pipes forcing it up to two engines, that draw up the water and the coals from the pits; after which it is collected into a smaller dam, and conveyed thence, in a lade, to a set of mills in Alloa for grinding wheat, oats, malt, and barley; which are capable of grinding 400 bolls, or 250 quarters, in a day. There are two large wheels, nineteen feet diameter, in the centre of the house, which drive the whole machinery in both ends of the mills. From these mills, the water falls into a rivulet, that runs through Alloa, drives a snuff and fulling mill, and, passing through some pleasure grounds, comes near the harbour, where it is again confined by a strong dam of earth, a large sluice, and a long trough, both of stone; which gives it a considerable velocity for clearing the harbour; so that this little water, originally a branch of the Black Devon, is made to serve the most important purposes, by driving seven mills besides cleaning the harbour.

GARVE (Christian), an eminent German philosopher and public writer, was born on the 7th of January, 1742, at Breslau, where his father was a dyer. He studied at the universities of Frankfort, Halle, and Leipsic; at which last place he obtained a professorship, but was soon compelled to resign it on account of bad health. He now returned to his native town, where he continued to spend the remainder of his life. In his last years he suffered much from a painful disease, which he endured with great fortitude. He died at Breslau on the 1st of December, 1798. The celebrated Kant paid him the compliment of saying that 'Garve was a true philosopher, in the legitimate acceptation of the word.'

Garve invented no system of his own, nor did he attach himself to the tenets of any one master. He belonged to that class of philosophers who, without adopting any particular theory, take an impartial view of all systems of doctrine, and seek truth wherever it is to be found. The just and rational view which he inculcated on the subject of our moral and social duties, entitle him to the praise of a genuine practical philosopher. The history of philosophy is indebted to him for several new and ingenious illustrations: and he has left us a faithful though rapid sketch of the ancient and modern doctrines respecting the fundamental principles of moral philosophy. His literary essays display a refined taste, and a genius at once elegant and philosophical. His

style is uniformly simple, perspicuous, and correct.

His principal works are, 1. Dissertatio de Nonnullis quæ Pertinent ad Logicam Probabilium, 1766, 4to. 2. Dissertatio de Ratione Scribendi Historiam Philosophicam. 3. A prize essay, in German, on the Inclinations, which was crowned by the Royal Academy of Berlin, 1769, 4to. 4. Progr. Legendorum Philosophorum Nonnulla et Exemplum, 1770, 4to. 5. Remarks on the Character and Writings of Gellert, 1770, 8vo. in German. 6. A Dissertation(in German) on the union of morals and politics, Breslau, 1788, 8vo.; also translated into French. 7. Essays (in German) on various subjects in literature, morals, and social life. 8. A sketch (in German) of the most remarkable principles of moral philosophy, from the time of Aristotle to the present day, &c., was first prefixed to his translation of Aristotle's Ethics, and afterwards printed separately; Breslau, 1798, 8vo. 9. Some observations on the most general principles of morals, in German, ibid. 1798, 8vo. Besides these works Garve wrote a number of literary essays. He also translated into German a variety of English works. Garve's Correspondence was published at Breslau, in 2 vols. 8vo.

GARUM, in ancient cookery and medicine, is a common term for a kind of pickle, in which fish had been preserved. The principal kind of fish thus preserved was the mackerel; and the garum principally consisted of the juices of the fish and salt. We find the old writers speaking of several kinds of it: one they call Spanish garum, from the place whence they had it; another kind, from its color, was termed the black garum: this last kind seems to have been that called fæcosum by the Latin poets, as if the fæces and remains of the fish were left among it; and by others garum sanguineum, from its being sometimes tinged with their blood to a reddish color. The Romans sometimes called the Spanish kind, which was esteemed the best, garum sociorum; and Galen says that the black garum was called oxyporum; but he only means by this, that it was used in the preparations called oxypora. It served to dilute them, and thence took the name of them to itself, by way of distinction from the Spanish, and other kinds, not used for this purpose. Pliny tells us that garum was composed of all the offals of fish, of every kind, macerated in salt; it had its name, he says, from its being originally made of a fish, called by the Greeks garos; but in his time the best seems to have been made with the mackerel; but that there were several other kinds used both in food and medicine, some of which must have been made from scarce fish, for they were of great price. They were used in glysters, and externally applied in several kinds of cutaneous eruptions: the ancients had a great opinion of them in glysters, for removing the pain in the sciatica, and other like cases; and the coarser sorts were their common medicine for curing cattle of the scab, by making incisions in the skin, and laying over the part cloths wetted with them. Strabo, lib. iii. 109; Plin. lib. xxxi. cap. 8. The exact way in which the ancients prepared their garum, which they so much valued as a delicacy at their tables, is unknown to us; but it appears that some kinds of garum had no fishy matter in them, from Aetius, who gives the following prescription of a liquor, which he calls by this name:—take of common water thirty-one pints, of sea-salt two pints, and of dried figs fifty; let these all macerate together, and afterwards be strained clear for use. All the garums were esteemed hot and drying by the ancients, and were sometimes given as laxatives before food. The modern writers understand the word garum in a much more limited sense, meaning no more by it than the brine or pickle in which herrings or anchovies are preserved.

GARUMNA, a navigable river of Gaul, which, rising from the Pyrenees, anciently bounded Aquitain on the north; but, by a regulation of Augustus, divided it in the middle: running to the north of Burdegala, into the Aquitanic Ocean. It is now called Garonne. Mela observes, that unless it is swelled by winter rains, or the melting of the snow, it is for a great part of the year shoaly and scarcely navigable; but, when increased by the meeting tide, by which its waters are repelled, it is somewhat fuller, and the farther the river advances, it is broader, till at length it resembles an extensive frith; not only bearing large vessels, but swelling like a raging sea, and tossing them extremely, especially if the direction of the wind be one way and that of the current another.

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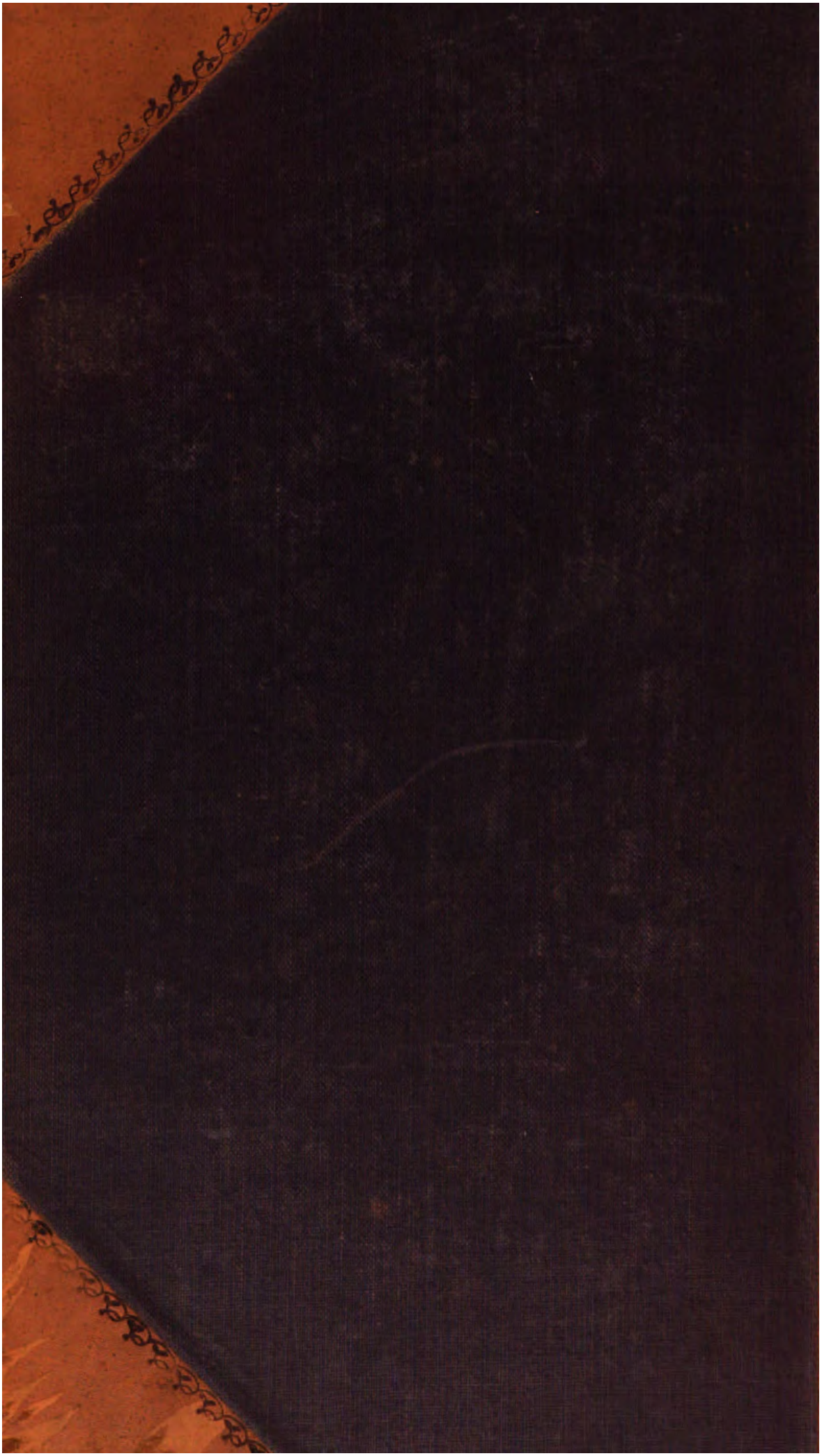
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