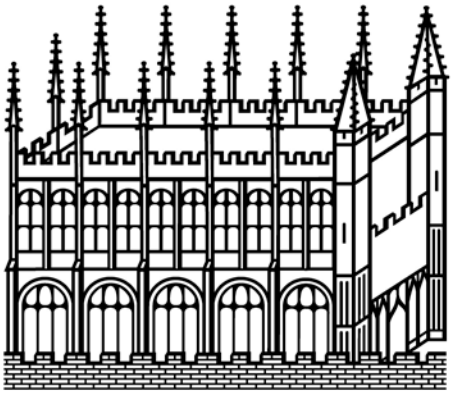


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MEDICAL COMMENTARIES

FOR THE YEAR M.DCC.XCII.

EXHIBITING A CONCISE VIEW OF THE

LATEST AND MOST IMPORTANT DISCOVERIES

IN MEDICINE AND MEDICAL PHILOSOPHY,

COLLECTED AND PUBLISHED BY

ANDREW DUNCAN, M.D.F.R.&A.SS.Ed.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES FOR SCOTLAND,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH,
MEMBER OF THE ROYAL SOCIETIES OF MEDICINE OF PARIS, COPENHAGEN, EDINBURGH, ETC.
AND PROFESSOR OF THE INSTITUTIONS OF MEDICINE IN THE UNIVERSITY OF EDINBURGH.

Neglecta reducit, ſparſa colligit, utilia ſeligit, neceſſaria oſtendit, ſic utile.
Baglivius.

DECADE SECOND.

VOL. VII.

EDINBURGH:
PRINTED FOR G. G. J. & J. ROBINSON, LONDON;
AND
PETER HILL, EDINBURGH
M.DCC.XCIII.



TO

Dr THOMAS FOWLER,

PHYSICIAN IN YORK,

THIS VOLUME OF

MEDICAL COMMENTARIES

Is

Reſpectfully Inſcribed,

As a Teſtimony of

The Eſteem and Affection

Of

His ſincere Friend,

ANDREW DUNCAN.

PREFACE.

IN the preſent volume, the ſection appropriated to the analyſis of books, is extended to an unuſual length. This has ariſen from a deſire to preſent to the reader, a full view of the new Medical Conſtitution, propoſed for the kingdom of France by the Royal Society of Medicine of Paris. And, to prevent any miſconception reſpecting the intended reformation, it has been thought better to inſert a full tranſlation of that article, than to give merely an analyſis of it. For this tranſlation, I am indebted to an ingenious young friend, Dr James Hamilton, ſon to Dr Alexander Hamilton, Profeſſor of Midwifery in the Univerſity of Edinburgh, whoſe induſtry

and abilities are already ſo well known, and have been demonſtrated on ſo many occaſions, even at his early period of life, that his reputation can derive no addition from the mention of his name on the preſent occaſion.

How far the plan propoſed at Paris, for the inſtruction of thoſe who are to practiſe medicine, and for the improvement of the art itſelf, will ever be fully carried into execution in any country, is indeed very doubtful. How far intelligent readers will think it the beſt plan that could be deviſed, muſt be left to their deciſion. For myſelf, I muſt acknowledge, that many parts of it appear to me liable to ſtrong, and even unſurmountable objections. At the ſame time, I cannot help thinking, that every one who beſtows upon it a ſerious conſideration, will be ſatisfied, that it affords many uſeful ſuggeſtions which may tend to the improvement of every medical

medical ſchool: and, independently of this, that, when duly attended to, it may, with every individual, contribute, in no inconſiderable degree, both to his own improvement, and to that of the Healing Art, if he have leiſure and inclination to communicate to the public the fruits of that experience which has been inſtructive to himſelf.

On account of the length of this article, although the preſent volume, in place of four hundred, contains near ſix hundred pages, yet, ſeveral important original articles have been neceſſarily deferred till a future publication. This, however, will not, I hope, prevent intelligent correſpondents from communicating to the public, through the medium of theſe Commentaries, important obſervations which may occur to them in actual practice. And I have only to requeſt, that thoſe who cannot find a con-

venient opportunity for tranſmitting ſuch communications directly to Edinburgh, would ſend them to the care of Meſſrs Robinſons, bookſellers in London, by whom they will be duly forwarded to

Their moſt obedient Servant,

ANDREW DUNCAN.

EDINBURGH,
DEC. 1. 1792.

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Read— et ſur les avantages, que peut retirer de ſon emploi, la medecine, &c.

MEDICAL COMMENTARIES,

FOR THE YEAR 1792.

VOL. VII. DECADE II.

SECT. I.

Account of New Books.

I.

Of the different Species of Inflammation, and of the Cauſes to which theſe Differences are to be aſcribed. *By* James Carmichael Smyth, *M. D. Fellow of the College of Phyſicians and of the Royal Society, and Phyſician Extraordinary to his Majeſty.* Vide *Medical Communications, Vol. II.* 8vo, London.

DR SMYTH is of opinion, in this intereſting publication, that the principal cauſes of ſpecific diſtinction amongſt inflammations, may be referred to one or other of the four following circumſtances.

1*ſt*, The cauſe exciting the inflammation.

2*d*, The function or uſe, in the animal œconomy, of the part inflamed.

3*d*, The natural texture or ſtructure of the ſame.

4*th*, That texture or ſtructure of a part which is not natural to it, but is the conſequence of ſome previous diſeaſe.

Although the proximate cauſe of inflammation muſt be the ſame in every inſtance, the more remote and evident cauſes, the objects of ſenſe and of obſervation, are widely different, and have conſiderable influence in varying both the appearance and nature of the diſeaſe.

The *ſecond* circumſtance mentioned as a cauſe or ſource of ſpecific diſtinction amongſt inflammations, was, the function of the part inflamed. This circumſtance, perhaps the leaſt important of any, has given riſe to the greateſt number of diſtinctions among inflammations, phyſicians having looked upon the inflammation of every particular organ of the body as a diſtinct and ſpecific diſeaſe. This is evident from the long liſt of names to be met with in every book of phyſic, expreſſive of each

each individual part of the body with the Greek termination (*itis*) as Phrenitis, Pleuritis, &c. Now, although the propriety, and even advantage, of diſtinguiſhing, with accuracy, the organ immediately affected by inflammation, cannot be called in queſtion; yet, Dr Smyth thinks, that, in all ſuch caſes, the great difference in the ſymptoms is more owing to a difference in the function of the part inflamed, than to any ſpecific difference in the nature of the inflammation.

The *third* circumſtance ſtated as a cauſe of ſpecific diſtinction among inflammations, was, the peculiar texture or ſtructure of the part inflamed; a circumſtance which, though hitherto overlooked, or but ſlightly attended to, ſeems to our author to conſtitute one of the moſt important diſtinctions of this diſeaſe.

Experience has long ſince taught us, that every part of the animal body, the cuticle and hair perhaps excepted, is liable to inflammation; and, by attending ſtrictly to the phænomena, it is equally evident, that, according to the nature of the part affected, the diſeaſe puts on a different appearance, is accompanied by different ſymptoms, is of various termina-

tion, becomes more or leſs acute or chronic, and requires a different, or, at times, an oppoſite treatment.

The following then, Dr. Smyth thinks, may be juſtly conſidered as diſtinct ſpecies of inflammation, each of them having a ſpecific character ſtrongly marked, which, in every inſtance, ſeems entirely to depend upon the peculiar ſtructure of the part inflamed.

1. The inflammation of the Skin, *Eryſipelas.*
2. — — Cellular membrane, *Phlegmon.*
3. — — Diaphanous membranes.
4. — — Mucous membranes.
5. — — Muſcular fibres.

Of the Eryſipelas, or Inflammation of the Skin.

ALTHOUGH ſome phyſicians have excluded Eryſipelas from the claſs of inflammations; yet, that it is a true inflammation, he thinks, is proved by the redneſs, heat, ſwelling, and pain of the part.

That

That the ſkin is the part principally affected, is obvious to the ſight; and although the ſwelling of the part depends upon the extravaſation of a fluid into the cellular membrane, it does not follow that this membrane is in a ſtate of actual inflammation. The contrary, Dr Smyth thinks, is clearly proved by the abſence of pulſation, and of ſuppuration; and although inſtances occur, where, the inflammation having been communicated from the ſkin to the cellular membrane, ſuppuration and abſceſs have been the conſequence, yet before ſuch an event takes place, the inflammation has ceaſed to be eryſipelatous, or has at leaſt become of a mixed kind. That the ſkin then is the true ſeat of the Eryſipelas, he obſerves, muſt be univerſally admitted: But he has gone a ſtep farther, and maintains, that the phænomena of this inflammation, and the peculiarity of the ſymptoms, are to be attributed entirely to the nature and texture of the ſkin.

This aſſertion, he thinks, will not ſeem improbable to thoſe who reflect on the analogy between the ſkin and other membranes, or who conſider with attention the ſymptoms that characterize the diſeaſe; which cannot, Dr

Smyth ſuppoſes, be explained on any other hypotheſis. The moſt remarkable of theſe are, the uniformity in the heat and redneſs of every part of the inflamed ſurface, the extent of the inflammation, the ſudden and irregular manner in which it ſpreads, the peculiarity of its termination, which, while it remains purely eryſipelatous, is never in ſuppuration, but in veſications, ſloughineſs, or gangrene. But what ſeems to him moſt concluſive in regard to the queſtion, is, that the pathognomonic ſymptoms are conſtantly and uniformly the ſame, though the cauſes which produce them be numerous and of great variety. An idea, however, has prevailed, that theſe cauſes, though different in appearance, might be all referred to acrimony alone. But, that this concluſion has been too haſtily made, he thinks will plainly appear from conſidering the five following heads, under which he has arranged the different cauſes of this affection.

1*ſt*, Mechanical injury, as, wounds or diſtenſion.

2*d*, Heat and cold.

3*d*, The bite or ſting of inſects.

4*th*, Chemical acrimony.

5*th*,

5*th*, Fever.

To the four firſt inſtances of eryſipelatous inflammation, the effect of cauſes merely local, ſyſtematic writers have given the name of Erythema, to diſtinguiſh them from the ſame diſeaſe, when connected with fever, or the conſequence of ſome general indiſpoſition.

Of eryſipelatous inflammation connected with fever, there are ſeveral varieties. The following are what we moſt frequently meet with in practice.

The Roſe, or eryſipelas of the extremities, which is commonly preceded by lowneſs, laſſitude, loſs of appetite, and always by coldneſs or ſhivering, ſucceeded by a very ſmart fever, reſembling the paroxyſm of an intermittent, during which the patient is ſometimes delirious; but the febrile ſymptoms, though violent, are ſeldom of long duration, and ſubſide almoſt immediately upon the appearance of the inflammation, and ſoon ceaſe entirely, where the natural progreſs of the diſeaſe is not interrupted.

In the Sideratio, or eryſipelas of the head, the ſymptoms of fever are not always mitigated on the appearance of the inflammation: on

the contrary, the pulſe, in ſome caſes, becomes more frequent, while the inflammation continues for ſome days to ſpread or ſhift from place to place. Dr Smyth, however, conſiders the Eryſipelas in this caſe, as well as in the former, to be a critical ſolution of the fever; and thinks, that the difference between them, depends upon the inflammation, or exanthema, being ſlower in coming out on the head and face, and upon its being accompanied, from the greater pain and irritation, with a higher ſecondary or ſymptomatic fever.

The Zona or Belt, though commonly reckoned an Eryſipelas, he thinks ſeems to partake more of the nature of a herpes coming out in puſtules or pimples: it commonly ſpreads round the waiſt, and ſometimes on the neck and ſhoulders. This ſpecies has been undeſervedly accounted extremely dangerous, unleſs when the patient is in the decline of life, has ſome of the viſcera in a diſeaſed ſtate, or is, in other reſpects, in a bad habit of body.

Beſides theſe three kinds of eryſipelatous inflammation, which are all more or leſs critical, it ſometimes occurs, in fevers, merely as a ſymptom altogether unconnected with the ſolution

or termination of the diſeaſe, as in moſt epidemic fevers.

Having had, in the preceding account, Dr Smyth obſerves, occaſion to remark, that Eryſipelas is excited by very oppoſite cauſes, we ſhould be apt to conclude, that in this, as in other inflammations, the appearance and termination of the diſeaſe muſt be ſomewhat affected by the difference of the cauſe producing it; and experience evinces the truth of this analogical reaſoning, as we find that even thoſe ſymptoms which characterize the diſeaſe, appear ſomewhat different, according to the difference of the cauſe.

He then proceeds, from the preceding obſervations, to draw the following concluſions.

1*ſt*, That Eryſipelas is an inflammation of the ſkin only. 2*d*, That the peculiarity of the inflammation depends ſolely on the nature and texture of the ſkin. 3*d*, That acrimony is not the only cauſe capable of producing it. And, 4*th*, That though the difference of the cauſe cannot alter, yet it has conſiderable influence on, the ſymptoms and appearance of the diſeaſe.

Dr

Dr Smyth concludes this head of his Eſſay, by making ſome obſervations on the various methods of cure employed in Eryſipelas: for, while ſome phyſicians, influenced by the affinity between this and other inflammations, have ſtrictly adhered to the antiphlogiſtic plan; others, apprehenſive of its termination in gangrene, have as conſtantly, and from the beginning, followed an oppoſite mode of treatment. Sometimes the one, ſometimes the other method, is preferable; and, often, neither the one nor the other can be ſtrictly adhered to. A judicious phyſician will always be more guided by the particular circumſtances of the caſe, than the name of the diſeaſe.

Of the Phlegmon, or Inflammation of the Cellular Membrane.

This ſpecies of inflammation, he obſerves, is the moſt frequent of any, and was known to the Greeks by the name of Phlegmone. Galen, to whom we are indebted for this information, has, in his definition* of it, pointed

* Hoc phlegmones nomen Græcis dici conſuevit, de carnoſis partibus majorem in molem cum tenſione, renixu, dolore pulſatorio, calore et rubore extuberantibus. *Galen de Tumor. præter naturam*, Lib. i. cap. 2.

ed out, not only the moſt diſtinguiſhing ſymptom, *(dolor punctorius)*, but alſo the ſeat of the complaint; to which two circumſtances he might have added a third, equally characteriſtic, viz. its termination in ſuppuration or abſceſs.

He includes under this ſpecies, the inflammation, not only of the cellular membrane, ſtrictly ſo called, but alſo of all parts of a looſe ſpungy texture, conſiſting principally of cellular membranes, connecting a ſeries of minute blood-veſſels and nerves, ſuch as the adipoſe membrane, glands, and viſcera.

The following he thinks are the moſt common cauſes of this inflammation.

1. Mechanical Injury.
2. Acrimony.
3. Obſtruction.
4. Fever.

As Acrimony, he obſerves, has by ſome been reckoned the only cauſe of Eryſipelas, ſo likewiſe an opinion has prevailed, that it was the cauſe of Eryſipelas alone. But the venereal bubo, is an example of a real phlegmonic affection, occaſioned by acrimony.

Although

Although ſuppuration be the uſual termination of Phlegmon, yet it ſometimes terminates in gangrene; never, in Dr Smyth's opinion, from the violence of the ſymptoms, or pain, but from the nature of the cauſe, or conſtitution of the patient. It may alſo terminate differently, according to the organization of the part.

There is certainly no inflammation, which, in general, in the firſt ſtage, requires a more free uſe of the lancet, or bears it better, than Phlegmon. The phlegmonic inflammation, eſpecially of the lungs, is not always purely inflammatory. It is ſometimes combined with catarrh, with gout, or ariſes from cauſes which have a ſeptic tendency: In all ſuch caſes, bleeding is of doubtful efficacy, if not improper, When the termination in ſuppuration is unavoidable, bleeding is evidently prejudicial. The ſtrength of the patient muſt be ſupported, whilſt the veſſels of the part are relaxed by a moiſt heat, or even ſtimulated by warmer applications.

Of the Inflammation of Diaphanous Membranes.

Under this name, Dr Smyth comprehends all thoſe membranes of a firm hard texture, and

and a certain degree of tranſparency, viz. the pleura, peritoneum, pericardium, membranes of the brain, tunica vaginalis teſtis, perioſteum, and the capſular ligaments of the joints.

It is aſſerted by the illuſtrious Haller, that theſe membranes, from the ſmall ſhare of ſenſibility they ſeemed to poſſeſs, could not be the ſeat of inflammation or acute pain. But, from accurate obſervation and experiment, it is now aſcertained, that theſe membranes, which ſhow little ſigns of ſenſibility in the natural ſtate, become, when affected by inflammation, exquiſitely ſenſible, and the ſeat of the moſt acute pain.

The particular ſymptoms which characterize this ſpecies of inflammation, are not yet accurately aſcertained. We are certain, however, that it is attended with great pain and high fever, which, in this caſe, as in Phlegmon, is in proportion to the inflammation and pain. It is moſt particularly diſtinguiſhed from Phlegmon and Eryſipelas, by its termination.

Diaphanous membranes, in conſequence of inflammation, are found thickened, opaque, ſloughy, with a gelatinous or purulent exudation on their ſurface, ſometimes cauſing preternatural

ternatural adheſions; at other times, the cavities lined by theſe membranes, are filled with a turbid ſerum, with filaments floating in it.

Amongſt the cauſes of inflammation peculiar to Diaphanous membranes, Dr Smyth obſerves, that he knows none which is general, but Air, and, even that, perhaps, does not affect the perioſteum. Venereal virus, Gout, and Scrophula, are partial cauſes: the firſt attacking the perioſteum, the ſecond the capſular ligament, the third both. Pregnancy may be reckoned a prediſpoſing cauſe, at leaſt, to peritoneal inflammation.

With regard to the treatment, he is inclined to believe, that it bears purging better than Phlegmon, though it does not admit of ſo liberal an uſe of the lancet; the ſtrength of the patient being more apt to ſink upon bleeding, and the diſeaſe to terminate in gangrene.

Of the Inflammation of Mucous or Pituitous Membranes.

Notwithstanding there is great reaſon to believe, that the ſtructure of theſe membranes are different in different parts, it is apparent

parent that there are certain qualities which they have in common, ſeemingly connected with the peculiarity of their function, and which ſerve to diſtinguiſh them from all others. Their texture is more ſoft and ſpungy than that of other membranes, their ſurface villous, and interſperſed with the ſmall openings of a number of glandular follicles, perpetually pouring out a thin tranſparent ropy fluid, which, while it moiſtens their ſurface, ſerves to protect them from the acrimony of the fluids to which they are expoſed. Membranes, with ſuch properties as have been now deſcribed, are found lining the noſe, fauces, larynx, trachea, pharynx, œſophagus, ſtomach, inteſtines, veſica urinæ, urethra, vagina, uterus, palpebræ, and forming the tunica adnata of the eye. In all thoſe parts they are liable to be inflamed, and the inflammation of them is always attended with ſimilar ſymptoms. The chief of which are the following—

An increaſed thickneſs and ſenſibility of the membrane; the villous ſurface red and ſpungy, with a conſiderable ſenſe of heat and ſoreneſs, though ſeldom any very acute pain, unleſs what is occaſioned by a fluid paſſing along an inflamed ſurface.

The

The mucus, which, in a natural ſtate, is a mild tranſparent ropy fluid, loſes its tenacity, in conſequence of inflammation. At firſt, it is thin and acrid, frequently excoriating the neighbouring parts; but, towards the end, it puts on a purulent appearance.

When fever accompanies this inflammation, he obſerves, that the fever is not a ſymptom of the inflammation; although this laſt, in many caſes, may with propriety be conſidered as a ſymptom of the fever.

When this inflammation terminates favourably, the ſymptoms gradually ſubſide. The diſcharge diminiſhing, at firſt reſembles purulent matter; and at laſt, acquiring more tenacity and tranſparency, it regains every property of real mucus. In caſes, where the termination is leſs favourable, the diſcharge ſometimes excoriates and ulcerates the membrane itſelf; or, ſtopping ſuddenly, occaſions phlegmonic inflammation and abſceſs in the cellular membrane, or neighbouring parts. There are alſo inſtances, though rarely, of its termination in gangrene.

Theſe three firſt ſpecies of inflammation are, in the ſtricteſt ſenſe of the word, acute diſ-

eaſes,

eaſes *, their ſymptoms being violent, and their termination ſpeedy; whereas, the inflammation of mucous membranes, is often ſo long without increaſe or decreaſe, that the diſeaſe is rather chronic than acute.

The principal cauſes of this ſpecies are, Catarrh, Contagion, Scrophula, Venereal virus, Error loci, Mechanical or Chemical acrimony.

But if the inflammation of mucous membranes, differs from other inflammations in ſymptoms and termination, it differs from them not leſs remarkably in the mode of treatment.

As this inflammation hardly ever occaſions any conſiderable pain or fever, general bleeding is ſeldom neceſſary, local blood-letting being, in moſt inſtances, ſufficient; and purging is commonly attended with the moſt evident advantage. Opiates alſo, are here of ſingular efficacy. Cold and aſtringent topics, which in every other inflammation are hazardous or prejudicial, in this, are frequently employed, and, in general, with the very beſt effect.

* The ſcrophulous, and poſſibly the venereal inflammation of the perioſteum, he thinks, are exceptions to this rule.

Of the Inflammation of the Muſcular Fibres.

A FIFTH ſpecies of inflammation, different in many reſpects from any of the preceding, and whoſe ſpecific difference is likewiſe owing to the peculiar ſtructure of the part, is the inflammation of the muſcular fibre, commonly called Acute Rheumatiſm.

This inflammation is characterized by violent or acute pain, accompanied by fever, without any very conſiderable ſwelling of the part, and greatly aggravated by motion or diſtenſion. An inflammatory cruſt alſo appears on the blood that is taken away, and the diſeaſe is ſeldom cured without repeated bleedings, and a ſtrict antiphlogiſtic regimen.

It never terminates, ſo far as Dr Smith has obſerved, in ſuppuration or gangrene; but when it continues long, or is not completely cured, it occaſions debility, palſy, and rigidity of the muſcular fibres or tendons, with an extravaſation of a gelatinous matter about their ſheaths, and about the ligaments of the larger joints, entirely deſtroying the motion of the limbs.

This

This inflammation differs alſo materially from the others with reſpect to the period of its duration; for though the pain and fever accompanying it, be as violent as in any caſe whatever, the complaint is neither ſo acute, nor of ſo ſpeedy a ſolution, as the three firſt ſpecies of inflammation, but, like the fourth, is apt to degenerate into a chronic diſeaſe, the pains and ſwellings remaining after the fever and primary inflammation have entirely ſubſided.

Its cauſes, in general, are extremely uncertain. Cold and moiſture applied, in particular circumſtances, ſeldom fail to produce it: mercury, imprudently adminiſtered, is a pretty frequent cauſe; and perhaps other acrimonies, introduced into the habit, may have a ſimilar effect.

With regard to the cure, Dr Smyth obſerves, that the illuſtrious Sydenham, who at firſt propoſed to cure acute rheumatiſm by copious bleedings, was wiſe enough to rectify this miſtake by his after experience, confeſſing that ſo great a loſs of blood as was neceſſary to cure the diſeaſe, produced conſequences which were not eaſily remedied. Some phy-

ſicians, to obviate the inconveniences of this practice, have ſubſtituted topical for general bleeding; but where bleeding is neceſſary, the relief obtained by this is comparatively trifling; and, at any rate, in moſt caſes bleeding ſerves only to palliate the ſymptoms, without removing the cauſe. This, he obſerves, can only be done by promoting a diaphoreſis, which therefore deſerves to be ranked among the principal means of curing Rheumatiſm, although, at times, it has been productive of the moſt baneful effects, when injudiciouſly employed.

After finiſhing the deſcription of theſe five ſpecies of inflammation, the learned author concludes with obſerving, that if he has ſucceeded in proving, that the ſpecific diſtinctions in theſe depend principally on the natural ſtructure or texture of the part inflamed, it follows as a neceſſary corollary, that the form or ſpecies of inflammation, ſo far as it is connected with texture, will be equally diverſified by a difference in this particular, whether natural or adventitious.

II.

II.

An Inquiry into the Nature, Cauſe, and Cure of the Gout, and of ſome Diſeaſes with which it is connected. *By* John Gardiner, *M. D. Fellow of the Royal College of Phyſicians, and of the Royal Society of Edinburgh.* 8vo, Edinburgh.

IN his preface, Dr Gardiner obſerves, that a queſtion has been long agitated, whether the ſolids or fluids be primarily affected in diſeaſes. This he reſolves, by endeavouring to ſhew, that while ſome diſeaſes may ariſe from a morbid affection of the ſolids, and others derive their origin from certain morbid changes in the fluids, yet no permanent affection of the ſolids, or conſiderable changes in the fluids, can take place, without their mutually affecting each other.

Our author declines giving a minute hiſtory of the Gout, both as the moſt remarkable

ſymptoms are mentioned in the courſe of the work, and as it has been already ſo well deſcribed by practical authors.

Gout, he obſerves, is a diſeaſe, rather of cold than of warm climates, of winter than of ſummer; and, when not hereditary, intemperance, a full diet, and ſedentary life, are conſidered as its remote cauſes. Theſe do not act with equal force in all; for ſome have eſcaped, although they have long expoſed themſelves to their action; while hereditary gout has attacked others, in ſpite of the ſtricteſt attention to exerciſe and temperance: when, however, the remote cauſes are applied to ſuch a conſtitution, they act with double force.

What ſome enumerate as remote cauſes, our author thinks ſhould rather be conſidered as occaſional or exciting. Theſe are, whatever produce debility, and its concomitant, a preternatural irritability of the ſyſtem. Genius, he obſerves, only prediſpoſes to gout, ſo far as it is connected with a ſedentary life, and full diet. In the ſame manner, he accounts for the effects of corpulency; for when it depends upon a peculiarity of conſtitution, he does not think it at all obnoxious to this diſeaſe. Although

though regular gout occurs moſt frequently in robuſt habits, yet it is not until they have expoſed themſelves long to its remote cauſes.

Notwithſtanding the great diverſity of opinion concerning the origin of gout, yet there is nothing more general than a belief in its remote cauſes, as above enumerated. Our author, therefore, remarks, that it is ſurpriſing, and much to be regreted, that men of abilities, in treating of this diſorder, have not proſecuted, with ſufficient ardour, an inquiry into the effects of theſe remote cauſes on the conſtitution.

Dr Gardiner now proceeds to examine the effects of diet; and obſerves that, although nature allows us a conſiderable latitude in its uſe with impunity, yet when the quantity of food and of ſtrong liquors taken, is diſproportioned to the powers and exerciſe of the body, diſorders occur in the primæ viæ, and digeſtion is weakened, which, in more delicate and irritable conſtitutions, gives riſe to nervous, hypochondriac and hyſteric diſorders; and in ſuch caſes, he rejects the uſe of ſtrong liquors after meals, as he thinks they rather tend to exhauſt than to raiſe the ſpirits, from the excitement they oc-

caſion. Thoſe of a firmer habit, indulging in full diet and ſedentary life, are attacked with complaints, neither ſo numerous, ſo violent, nor ſo permanent, as more delicate men and women; yet their intervals of eaſe are neither ſo long, nor ſo complete, as in thoſe who, from the greater ſtrength of their conſtitution and digeſtive organs, have regular fits of gout.

Dr Gardiner next offers ſome proofs to ſhew, that an acrimony may be generated in our fluids; and takes notice of an affinity between certain periodical eryſipelatous inflammations, and the gout. The variety of complaints, he thinks, ariſe not ſo much from a difference in the ſpecies of acrimony, as from a difference of conſtitution. Our author obſerves, that it is not thoſe who have perſevered in a ſteady courſe of intemperance that are moſt ſubject to the regular gout. With ſuch, the functions of the digeſtive organs are much injured, which is incompatible with the production of that diſtemper. It is perſons with ſtrong conſtitutions and good appetites, that have not hurt their digeſtive organs by intemperance, but who indulge in a full diet, and a regular, though moderate uſe of ſtrong liquors, and now and then

then an accidental exceſs in their uſe, with a ſedentary life, that are moſt liable to the true gout.

While the conſtitution remains unimpaired, the generation of arthritic acrimony is very gradual, and its accumulation at firſt extremely ſlow; ſo that the interval may be protracted to ſome years. As the conſtitution, by repeated fits, begins to decline, they become ſhorter, till, at laſt, the fits return twice a year. Our author ſuppoſes this acrimony to ariſe from ſome deficiency in the digeſtive powers, or from the too great quantity, or acrid quality of the chyle to be aſſimulated into the nature of our fluids by the force of the circulation, and other functions in the animal body. He obſerves, that the accumulation of this acrimony is not in proportion to its generation in the body; for nature is conſtantly employed throwing it off by the ſkin, kidneys, inteſtines, and lungs. A diminution of their functions, he thinks, is partly at leaſt the cauſe of its accumulation.

In hereditary gout, he obſerves, the firſt attack is earlier, the intervals ſhorter, and the atonic ſtate takes place ſooner, than in the acquired gout. He accounts for the ſhortening of the intervals,

intervals, from the quicker accumulation of the arthritic matter, and by obſerving, that when nature is accuſtomed to a particular mode of acting, to free the habit from an acrimonious fluid, ſhe will more readily and eaſily renew the ſame proceſs, when ſimilarly ſtimulated. Beſides, in every fit of the gout, there is more or leſs of a noxious fluid depoſited in the cellular ſubſtance, or neighbourhood of the tendons and ligaments; and thus gradual ſtiffneſs of the joints comes on.

Gout, our author ſuppoſes to ariſe from a defect in the functions of the primæ viæ, which is owing to a morbid condition of the nerves of the ſtomach and bowels, either derived from parents, or induced by an indulgence in the remote cauſes of the diſeaſe. He ſuppoſes the principle of life to be a conſiderable agent in digeſtion; and as the nerves are the conductors of this principle, it ſeems probable, that when a morbid change is induced upon them, particularly thoſe of the ſtomach, there will be a proportionable alteration in the ſecretion of the gaſtric fluids. In this ſtate, an acid fermentation eaſily takes place in the ſtomach, which keeps up the weakneſs of the

the nerves; and as the ſtomach is the centre of ſympathy, its irritability is ſoon communicated to the reſt of the ſyſtem. In ſuch a ſtate, he endeavours to ſhew, that ardent ſpirits do not prevent the generation of acid, but rather keep up the debility. He next proceeds to explain why the ſame cauſes in ſome conſtitutions produce gout, and, in others, hyſteric and hypochondriac affections. This he aſcribes to the difference of irritability; the exceſs of which, in the latter caſes, will prevent any accumulation of this acrimony in the ſyſtem, by its cauſing an excitement to throw itſelf off by the uſual emunctories. Robuſt habits, on the contrary, are capable of reſiſting its action for ſome time, until, by the application of the occaſional cauſes producing debility, and proportionable irritability, if the arthritic acrimony prevail in the habit, there will be an excitement of the ſyſtem in the production of a paroxyſm. No regular fit of the gout, he obſerves, can take place, while an exceſs of debility prevails. Debility, he thinks, is attended with a proportionable increaſe of irritability, until a certain degree, when the ſenſes begin to fail, and the irritability is proportionably diminiſhed.

niſhed. This laſt ſpecies of debility ſeems to accompany the depreſſing paſſions of the mind; and, in ſuch a ſituation, the regular gout degenerates into the atonic ſtate; when, he thinks, there is reaſon to believe, the arthritic matter acts on the brain and nerves. The ſympathetic affections, he obſerves, increaſing with a more advanced ſtate of gout, have led ſome people to aſſert, that gout is a nervous diſorder, and to deny the exiſtence of any morbific matter. To this he anſwers, that although the nerves be affected in every diſeaſe, yet only a particular claſs of affections is ſtrictly denominated nervous, in which gout cannot be ranked, as, in its regular attacks, it is evidently inflammatory.

In order to acquire a juſt notion of the nature of gout, he thinks it neceſſary that an accurate view ſhould be taken of its ſtate in different conſtitutions, and at its moſt remarkable periods; and this he endeavours to do at ſome length. The diviſion of gout into the Regular, Irregular, and Atonic, ſeems to our author the beſt. He conſiders a regular fit of gout, as a ſalutary paroxyſm, excited by certain laws in the ſyſtem, to free the body of a morbid matter, generated in the fluids, which,

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if retained, would prove hurtful to the conſtitution. Under the Irregular gout, he comprehends not only what is called the Retrocedent, and the Miſplaced gout, but every other morbid ſtate of the body and mind, ariſing from a defect in the critical diſcharge of the arthritic matter. The irregular, he thinks, moſt probably ariſes from ſome peculiarity of conſtitution, or defect in the nerves of the primæ viæ: "For," (ſays he) "notwithſtanding I have "alleged that the regular gout ariſes from "ſome deficiency in the digeſtive organs, yet "I am alſo of opinion, that a certain degree "of firmneſs in the primæ viæ, and in the "ſyſtem in general, is requiſite for the forma-"tion of a regular paroxyſm. But when this "degree of firmneſs is wanting, and the ſto-"mach and bowels are in their debilitated "ſtate, approaching to that of hypochondriac "patients, it is the Irregular gout that com-"monly takes place."

He confines the term, Atonic gout, to ſuch caſes as thoſe in which the arthritic acrimony prevails, but in which no effectual exertion of the ſyſtem takes place, to free the body from the arthritic matter; and he conſiders it mere-

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ly as an advanced ſtate of the irregular gout. The occurrence of any inflammation, he obſerves, gives relief in the irregular gout, in like manner as a regular fit; and this he mentions as an additional evidence of the exiſtence of a materies morbi. He then proceeds to explain the difference between a nervous diſeaſe, and nervous complaints in the gout. The ſymptoms previous to a regular paroxyſm, he thinks, may ariſe from the action of the arthritic matter on the extremities of the nervous filaments.

To ſympathy he aſcribes the quick tranſition of pain from the one foot to the other: and the progreſs of the pain from one joint to another, he refers to the inability of the veſſels of one part to throw out all the acrimony.

The morbific matter of meaſles, ſmall-pox, and eryſipelas, he ſuppoſes thrown out of the ſyſtem in the ſame manner as that of gout. In inflammatory rheumatiſm, the ſecretion of morbific matter, according to our author, commences among the ligaments and tendons; then moves, with an alleviation of pain, to the integuments, and is at laſt performed by the excretory veſſels of the ſkin, which produce copious

perſpiration

perſpiration towards the declenſion of the diſeaſe. This, he obſerves, divides the progreſs of inflammation into three diſtinct ſtages, perfectly ſimilar to a fit of gout.

After this, Dr Gardiner proceeds to conſider the general doctrine of inflammation, and obſerves, that an increaſe of ſtimulus applied to the internal ſurface of the ſmall arteries, may produce a ſecretion, by the excretory veſſels, of a morbid matter; but he doubts if any increaſe of ſtimulating power in the blood be capable of producing a permanent inflammation previous to ſuch a ſecretion. As he conſiders irritation as the cauſe of every kind of inflammation, he takes a view of its effects. On the application of external ſtimuli, a greater quantity of blood than in a natural ſtate is propelled through the ſmall veſſels of the part affected: their action is increaſed, and their diameters enlarged: the redneſs becomes vivid; and, from the extenſion of theſe veſſels, and from others, which were before inviſible, coming into view, a ſwelling is, of courſe, obſerved, attended with increaſe of heat, pain, and throbbing. During this period, ſome obſtruction ſeems to be given to free circulation; which,

which, he thinks, does not ariſe from any diminution of the diameters of the arteries, but from a larger quantity of blood being propelled through them than formerly. From the great force of the ſmall arteries, in this ſtate of obſtruction, to propel their fluids, the very ſmall veſſels ariſing from them, carrying in their natural ſtates pellucid fluids, are gradually enlarged, and carry to their terminations thicker fluids, and ſometimes even blood. Such an inflammation may terminate by reſolution, ſuppuration, or mortification. In the action of bliſtering plaſter, he obſerves, the gradual effects of external ſtimuli are clearly ſhewn. Since irritation, externally applied, uniformly produces inflammation, it is reaſonable to ſuppoſe that the operations of nature muſt be ſimilar. There is, however, a difference in the action of the acrimonious fluids, ſome appearing to excite inflammation immediately on being ſecreted, while others ſeem to remain in a ſtate of ſtagnation for ſome time, before they acquire a ſufficient degree of acrimony to produce the ſame effect. He here introduces ſome remarks on the cure of inflammation by reſolution; although, he obſerves, it is not always

ways adviſeable. Nature excites pain, he thinks, in order to call our attention to the ſeat of diſeaſe. It is likewiſe, he imagines, of great benefit, by being attended with a proportionably increaſed ſecretion of morbid matter. Thus reſolution may be ſometimes hurtful. In order to account for the morbid matter which produces rheumatiſm and gout, always attacking the joints, he only ſuggeſts the idea of ſpecific ſtimuli, which eſpecially affect particular parts.

In the *ſecond* ſection, Dr Gardiner treats of the method of cure. The oppoſite of the remote cauſes ſeem naturally the moſt effectual means in the cure of gout. They alſo fulfil the two principal curative indications; for by temperance we prevent, as much as poſſible, the generation of arthritic matter; and, by exerciſe, we promote its expulſion when generated, by the excretories of the ſkin and other emunctories.

He is of opinion, that gout may be cured, and regrets the general notion of its being incurable. The preſervation of the ſtrength of the patient muſt be well attended to in the

method of cure. The diet ought to be diminiſhed gradually, and variety at meals avoided. Water ſhould be the only beverage, and vinous liquors only uſed as a cordial.

The exerciſe is to be adapted to the ſtrength and quantity of food taken by the patient. It ſhould never amount to fatigue, but be employed ſo far as to keep up a free perſpiration. Its effects may be aſſiſted by friction, the uſe of flannel and the warm bath, all which he prefers to copious perſpiration raiſed by internal remedies. The cure, he obſerves, is not to be attempted by Peruvian bark, Bitters, or Aromatics; as they often ſtop the paroxyſm, without acting on the cauſe of the diſeaſe; and the patients are ſoon ſeized with ſome more dreadful malady. He then gives an account of the compoſition and effects of the moſt faſhionable gout powders; and obſerves, that the miſchiefs imputed to ſome of them muſt be conſidered as a proof of their powers; and that they rather did too much than too little. Hepar ſulphuris, he thinks, may be uſed with advantage, as promoting the expulſion of the arthritic matter by the ſkin and inteſtines.

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The benefits derived from alkaline remedies, both in gravel and gout, he aſcribes to the ſympathy exiſting between the urinary paſſages and the ſtomach. They neutralize whatever acid may be found in the ſtomach, and are powerful ſolvents of phlegm. Thoſe hurtful ſtimuli being thus taken away, the nerves of the primæ viæ gradually recover their natural ſtrength. Much, however, is to be aſcribed to the regimen obſerved during their uſe; it ſhould be neither ſo low as to induce debility, nor ſo high as to hazard indigeſtion.

As it is obſerved, that when the ſwellings of the joints ſuppurate, the intervals are more complete, the paroxyſms leſs ſevere, and the atonic gout retarded, it is natural to ſuppoſe that artificial iſſues will poſſeſs ſome of theſe good effects.

Dr Gardiner now proceeds to take notice of the means employed for mitigating the paroxyſms. He thinks it moſt adviſeable for the patient to continue his uſual mode of living during the fit, unleſs the ſymptomatic fever be conſiderable, when no meat ſhould be allowed. The great point, however, he obſerves, is to

procure a plentiful perſpiration in the feet; and he deſcribes the beſt method of effecting it, by flannel ſocks and oil'd ſilk bootikens. Until the patient be able to walk about in his uſual way, theſe coverings of the feet ſhould not be laid aſide. He alſo recommends eaſy ſhoes, and walking as ſoon as the pain will permit. In caſes of extreme pain, or want of reſt, opiates, he obſerves, are to be ſparingly uſed. In ſympathetic affections of the ſtomach, lungs, &c. when acidity, bile, phlegm, or indigeſtion is the cauſe, vomiting is to be excited by warm water, aided by a little volatile alkali, or muſtard flower, or by ipecacuhan. After their operation, an opiate is in general of ſervice. When the ceaſing of the pain indicates that the fit is incomplete, he recommends the moderate uſe of wine, or brandy, with ſpices; bathing the feet with warm water, and the application of ſinapiſms. If theſe be ineffectual, bliſters muſt be applied to the ancles, thighs, arms, or part affected. He relates a caſe in which leeches were applied to the pained part with conſiderable relief. With the ſame intention of abating the inflammation and ſeverity of pain, cataplaſms have been recommended;

commended; but our author is afraid of their becoming cold, and of courſe dangerous.

He points out the great danger to be dreaded from the acceſs of cold air, and the application of cold water to gouty inflammations. He obſerves, that there are many caſes which ſerve rather to aſtoniſh than to inſtruct, as they do not admit of a ſatisfactory explanation. But the more knowledge we acquire concerning the nature of any diſeaſe, the fewer of theſe will occur. He has given an ingenious explanation of a caſe of gout mentioned by Dr Clarke, which was cured by the patient's eating boiled ſalted herrings at bed-time, without ſatisfying his thirſt that night. Now, our author obſerves, that this patient's thirſt muſt have been exceſſive; and as thirſt is the criterion of the increaſed action of the abſorbents, we may, he thinks, ſafely conclude, that after a ſupper of three ſalt herrings from the pickle, unwaſhed and broiled, without the patient being permitted to drink till next day, the abſorption of the ſecreted arthritic matter muſt have been conſiderable.

In the atonic gout, the ſkill of the phyſician reaches no farther than to alleviate pain, and

the anomalous complaints incident to this diſeaſe, by a proper regulation of diet, and the uſe of exerciſe, or rubbing with a flannel or fleſh bruſh. The warm bath, when not contraindicated by debility, and the employment of warm clothing, are much recommended to promote perſpiration.

III.

III.

An Inquiry into the remote Cauſes of Urinary Gravel. By Alexander Philip Wilſon, *M. D.* 8vo. London.

THE firſt part of this ingenious work contains the relation of many accurate experiments, which tend principally to prove, that, *cæteris paribus*, acidity of the primæ viæ increaſes the tendency of the urine to depoſite lithic acid; that diluents diminiſh the quantity of lithic acid in any given portion of urine; that exerciſe, ſudorifics, and diaphoretics, leſſen the depoſition of lithic acid; and that an acid matter is carried off by inſenſible perſpiration. For an account of the ingenious manner in which theſe experiments were conducted, we muſt refer the reader to the work itſelf.

Our author obſerves, that urine, when left to itſelf, depoſites, in a few hours, either a whitiſh matter, rendering it muddy, or chryſtals of lithic acid, or both. Theſe depoſitions he found to be, in ſome degree, incompatible

with each other, ſince, when the quantity of the one was increaſed, that of the other was proportionably diminiſhed. He has alſo found, that while the lithic acid was preſent in greateſt quantity in the urine of a perſon living on an aceſcent diet, the cream-coloured depoſition was increaſed by food of a contrary tendency; that any cauſe increaſing perſpiration, while it diminiſhes the quantity of lithic acid, tends to produce the cream-coloured ſediment in the urine; that the cream-coloured ſediment is more ſoluble in urine, and more eaſily acted upon by acids, than the lithic acid. Hence he infers, that it is the lithic acid which is apt to form concretions in the urinary paſſages, and that the ſecretion of any acid matter by the kidneys, tends to increaſe its depoſition: for experiments prove, that the addition of an acid to urine out of the body, always produces a depoſition of lithic acid. He alſo takes notice of ſeveral effects of acids upon urine; and as the nature of lithic acid is well known, he proceeds to inquire into the properties of the cream-coloured ſediment. He thinks that experiment proves it to be a neutral ſalt, containing lithic acid, which may be precipitated from

from it by other acids, in the form of fine ſand, while the new compound being more ſoluble, renders the urine tranſparent.

From the different appearances of the urine, he takes notice of three diſtinct ſtates in which it exiſts at different times, indicating different ſtates of its ſecreting organs. The firſt is, when the veſſels of the kidney are conſtricted, and then the urine flows limpid, and with little ſediment of any kind. The ſecond is, when the urine is as high-coloured as uſual, but depoſites leſs lithic acid, and more cream-coloured ſediment, the kidney ſeems now in a ſtate of relaxation.

When the vigorous action of the kidney takes place, it forms the third ſtate. Here the urine is not higher coloured, but depoſites more lithic acid. Theſe three ſtates every perſon, he thinks, experiences, in a greater or leſs degree, once a day. At night, he ſuppoſes, a febrile ſtate, formed even in the moſt healthy, and the urine, he obſerves, is always paler. This, then, is the firſt ſtate. The ſecond takes place in the night-time, as, during ſleep, there is a relaxation of that febrile ſtate formed in the evening. The mid-day urine forms the third

third ſtate. He alſo ſuppoſes a like diurnal revolution to take place in the ſkin, being conſtricted in the evening, relaxed during ſleep, and in vigorous action in the day-time. Hence there will be conſtantly an accumulation of acid in the night-time, to be thrown off the following day by the renewed vigour of the ſkin and kidneys.

From theſe obſervations, he concludes, that it is by the vigorous action of the ſkin and kidneys that any dangerous accumulation of acid muſt be guarded againſt.

The prediſpoſing cauſes of gravel, he thinks, are, too great a proportion of ſolid, from the particular formation of the body; old age; exceſſive labour; high living; and the liberal uſe of fermented liquors; indolence; and too much heat applied to the body in general, or kidneys in particular. Theſe act, partly by their debilitating effects, partly by the check they give to perſpiration, from the accretion of the ſmall veſſels of the ſkin. Gout, he thinks, does not prediſpoſe to gravel; nor does he ſee any reaſon for ſuppoſing theſe two diſeaſes to be eſſentially connected; becauſe, when gravel is the primary diſeaſe, it is not accompanied by gout;

gout; becauſe it is often induced by other accidents; becauſe it is not induced by gout, till it has been preſent ſome time, and the prediſpoſing cauſes have been remarkably applied; and becauſe we can otherwiſe account for their concurrence, ſince the ſame cauſes, applied through life, tend to induce both diſeaſes.

All the prediſpoſing cauſes induce the ſame change on the body, viz. the inactivity of the ſkin and kidneys; hence there will be an over proportion of acid matter in the ſyſtem, and a depoſition of lithic acid from the urine, ſo ſoon as it paſſes by the kidneys. This inactivity of the ſkin and kidneys, he therefore reckons the remote cauſe of gravel.

Our author now proceeds to ſhew, when it is moſt probable that the remote cauſe of gravel is preſent. As an over proportion of acid is gradually accumulating in the ſyſtem, gravel, he thinks, muſt be a periodical diſeaſe, whoſe intervals will gradually ſhorten. When the paroxyſms of the gout have become frequent, an accumulation of acid he ſuppoſes to have taken place. This is likewiſe the caſe, when Hypochondriaſis comes on in old age, after the prediſpoſing cauſes of gravel have been applied.

plied. Every old perſon, of a temperament prediſpoſing to gravel, particularly if it has been hereditary in the family, may dread an accumulation of that noxious matter, which, ſooner or later, will make its appearance, by inducing a fit of gravel.

When it appears that the remote cauſe of gravel is preſent, we muſt uſe every means for correcting this morbid condition, and preventing the body from relapſing into the ſame ſtate. 1*ſt*, By ſtrengthening and aſſiſting the digeſtive organs. 2*dly*, Avoiding ſuch ingeſta as increaſe the quantity of the matter we endeavour to expel. 3*dly*, Uſing ſuch as have an oppoſite tendency. 4*thly*, Throwing out this matter. With regard to the firſt indication, he refers to the ſecond part of his Treatiſe. The two next are fulfilled, by living as much as poſſible on alkaleſcent food, particularly fiſh, and uſing lime-water, aerated alkaline water, &c. Diluents ſeem to be of leſs ſervice, in fulfilling the laſt indication, than might be ſuppoſed. Dieuretics, he thinks, anſwer better; but he places more confidence in ſudorifics and diaphoretics, particularly mercury and tartar emetic,

emetic, when given in ſuch doſes as not to excite nauſea.

Our author now proceeds to make ſome obſervations on Dyſpepſia, and opens the ſubject, by an enquiry into the efficient cauſe of digeſtion; and on this he delivers the following opinion: That an incipient fermentation, by minutely ſeparating the more ſolid parts of our food, in a manner ſimiliar to maſtication, renders it more perviable by the gaſtric liquor, and conſequently more eaſily digeſted.

But he thinks it equally neceſſary, to enquire into the proximate cauſe of the failure of digeſtion. Dyſpepſia, according to authors, is owing, either to a diminution of the muſcular action of the ſtomach, to a vitiated ſtate of the gaſtric liquor, or to its deficiency. He adopts the laſt hypotheſis, as he thinks it more probable that the occaſional cauſes, which are all ſuch as weaken the ſtomach or ſyſtem, ſhould rather produce a deficiency, than change the properties of the gaſtric liquor. Beſides, although a dyſpeptic cannot digeſt an ordinary quantity of food, without morbid ſymptoms, yet he will a ſmaller, perfectly; and if he faſt longer than uſual, the fermentation in the ſtomach

mach will be corrected, and the digeſtion become complete. He alſo mentions his own caſe, when ſeized with anorexia. Having ſucked an orange the night before, he next morning complained of nauſea and oppreſſion, referred to the ſtomach; which induced him to evacuate it, by irritating the fauces, about eight hours after he had taken the orange-juice, and found it unaltered and unmixed. This dyſpepſia then, was clearly owing to deficiency of gaſtric liquor. He has alſo ſhewn, by experiment, that, by freeing the ſtomach of gaſtric liquor, anorexia can be nearly produced, and the ſenſation of hunger almoſt taken away. He brings further arguments in ſupport of his opinion, from the manner in which the remedies act. Stimulants relieve the ſymptoms of dyſpepſia, by producing a more copious ſecretion of the gaſtric liquor, certainly not in a vitiated ſtate. But, when too often repeated, they increaſe the tendency to dyſpepſia, by inducing debility in the ſtomach, which muſt tend to leſſen its ſecretion.

Vomiting, he thinks hurtful in dyſpepſia, as, with its morbid contents, it evacuates the ſtomach of its gaſtric liquor. But if the patient, after

after vomiting, ſhould faſt till the gaſtric liquor flow in ſufficient quantity, and only take a ſmall quantity of food, the dyſpeptic ſymptoms he thinks will not ſo readily recur. As frequent vomiting weakens the ſtomach, it ought to be avoided, and, in general, he obſerves, it can be ſo; for faſting alone will often remove dyſpepſia. In young people, this diſeaſe is generally accompanied by a morbid irritability, which ſeems often to give riſe to it. In ſuch, and indeed in all dyſpeptics, thoſe remedies muſt be employed which act on the ſyſtem in general, and which give the body the proper ſtimulus, without any ſubſequent injury; with this caution, that they be not applied in too great a degree, or when the body is too weak. Theſe remedies are, exerciſe, cold-bathing, and the uſus modicus Veneris. He alſo conſiders the regulation of the ſleep, as eſſential to the cure of dyſpepſia. Some is neceſſary, to refreſh the body, while too much relaxes it. As the continuation of the febrile ſtate, formed in the evening, debilitates the body, it muſt be avoided; and as this indication is fulfilled by repoſe, hence the advantage of going early to bed. With regard to the regulation

of

of the mind in this diſeaſe, he lays it down as a rule, to keep it conſtantly employed, but never to fatigue or overſtretch it. The general view in this treatment, he obſerves, is more adapted to the young than the old; for, where digeſtion is ſo weakened, that the body can hardly be ſupported, artificial means muſt be uſed to ſtrengthen the digeſtive powers. Stimulants and tonics, while they relieve the urgent ſymptoms, increaſe the tendency to the diſeaſe; and our author thinks, that, in the gaſtric liquor of other animals, introduced into the ſtomach, a remedy may be found which has not that inconvenience. He thinks it might alſo be employed with advantage, in thoſe caſes where it is neceſſary to nouriſh per anum. He concludes with obſerving, that, whether by promoting the action of the ſkin and kidneys, in the manner above directed, we ſhall be enabled to relieve a gravelly diſpoſition, experience muſt determine; but every age has told us, that living in ſuch a manner as ſupports the neceſſary excretions, and, at the ſame time, tends to preſerve the vigour of the digeſtive organs, is a method of avoiding a diſeaſe which ſo often makes the decline of life almoſt intolerable.

lerable. This can only be done, by ſteadily obſerving ſobriety, and uſing that degree of exerciſe which nature has deſigned for us.

How far the ingenious conjectures, thrown out in this treatiſe, both with reſpect to calculous and dyſpeptic affections, are well founded, we cannot pretend to determine. But the intelligent reader will readily perceive, that they have not only a claim to novelty, but that, if they ſhall be confirmed by future obſervations, they will lead to not a few important changes in practice. The conſequences reſulting from theſe, however, can only be determined by accurate and candid obſervations, confirmed by the concurring teſtimony of different practitioners.

IV.

A Treatiſe on the Mineral Waters of Harrogate, containing the Hiſtory of theſe Waters, their Chemical Analyſis, Medicinal Properties, and Plain Directions for their Uſe. By Thomas Garnett, *M. D. Phyſician at Harrogate, &c.* 8vo, London.

IN the firſt part of this ingenious work, Dr Garnett gives a ſhort hiſtory of the diſcovery of the ſeveral ſprings, and a conciſe analyſis of the authors who have treated of them.

He then proceeds, in the ſecond part, to give an account of the ſulphur water; and informs us, that there are four ſulphur wells very near each other, at Low Harrogate, which differ only in the quantity of impregnating principles. That which is commonly uſed for drinking, is the ſtrongeſt; the others ſupply water for the baths. Of theſe four ſulphur wells, he calls the drinking well, the firſt; that about a yard to the right, the ſecond; and, proceeding

proceeding ſtill to the right, the third and fourth are found. The firſt, he obſerves, is the moſt ſtrongly impregnated; the third the next; the ſecond and fourth are conſiderably weaker than the others. Although the ſecond and fourth have been frozen, yet the firſt and third reſiſt the moſt extreme froſts, having a temperature ſeveral degrees below the freezing point. This, he thinks, is owing to the great quantity of ſalt with which they are impregnated. His experiments are confined to the firſt, as it is the only one uſed for drinking. With regard to its phyſical properties when taken up from the well, its water is perfectly clear and tranſparent, and ſparkles when poured out of one glaſs into another. The taſte is very ſaline, and at firſt diſagreeable. It has a ſtrong hepatic or ſulphureous ſmell, ſimilar to bilge water, or the ſcourings of a gun. When expoſed to the open air, it ſoon begins to grow turbid, and acquires, in ſome degree, a greeniſh tint. A white powder is gradually depoſited, and it loſes its ſulphureous ſmell. He found its ſpecific gravity to be to that of diſtilled water as 1.0064 to 1.0000, the temperature of both being 60 degrees.

From a ſeries of accurate experiments, our author concludes, that a wine gallon of the ſulphur water, taken from the drinking well, contains

	oz.	dwt.	gr.
Of Muriat of ſoda, or common ſalt, - -	1	5	15.5
Muriat of lime -	0	0	13
Muriat of magneſia -	0	3	19
Carbonat of lime -	0	0	18.5
Carbonat of magneſia	0	0	5.5
Sulphat of magneſia, or Epſom ſalt -	0	0	10.5
	1	11	10

Of Aeriform fluids,

	Cubic inches.
Carbonic acid gas, or fixed air	8
Azotic gas - -	7
Sulphurated hydrogen gas, or hepatic air - -	19
	34

He alſo obſerves, that large bubbles of azotic gas riſe from the bottom of the baſon, and

and break at the ſurface two or three times in a minute; and that ſome of the wells in the bog above the village, afford it in a much greater quantity.

The Old Spa water, he obſerves, has a pleaſant chalybeate taſte; is exceeding clear, and ſparkles when poured from one glaſs into another. Its ſpecific gravity at the temperature of 60 deg. is to that of water, as 1.00014 to 1.00000. From a wine gallon of this water he obtained

		Grains.
Of Carbonat of iron	-	2
Sulphat of ſoda	-	3
Sulphat of lime	-	1.5
		6.5

Of Aerial fluids,

		Cubic inches.
Carbonic acid gas	-	15.75
Azotic gas	-	4.25
		20

He next examines the Tewit water, which, he obſerves, is very clear, and ſparkles rather more than the Old Spa water. Bubbles

of air, about the ſize of a walnut, are frequently ſeen to riſe from the bottom of the ſpring, and break at the ſurface. Theſe he found to conſiſt entirely of azotic gas. At a temperature of 60 deg. its ſpecific gravity was as 1.00017 to 1.00000. It is not very briſk, but evidently chalybeate.

A wine gallon of this water afforded

	Grains.
Of Carbonat of iron	2.5
Sulphat of lime	4
	6.5

Of Aerial fluids,

	Cubic inches.
Carbonic acid gas	16
Azotic gas	5
	21

The Creſcent water, he obſerves, when firſt taken from the pump, and poured from one glaſs into another, ſparkles conſiderably, and emits numerous bubbles of air, which attach themſelves to the inner ſurface of the glaſs. It is not perfectly tranſparent, but more

more or leſs turbid at different times: in general, it has a whitiſh cloudy appearance. The taſte is ſaline, and rather vapid, imparting a certain ſmoothneſs to the palate. It is much more pleaſant than the Sulphur water: a chalybeate taſte is alſo very perceptible. It has an evident ſulphureous ſmell, or hepatic odour, though not near ſo ſtrong as that emitted by the Sulphur water. Its ſpecific gravity he found to be to that of diſtilled water, as 1.002 to 1.000, the temperature of both being 60 deg.

On the 19th of Auguſt 1790, he compared the temperature of ſeveral of the ſprings, and obtained the following reſult.

		Of Farenheit.
Temperature of	the atmoſphere	60 Deg.
—	the Creſcent water	52
—	drinking Sulphur well	54
—	well next the drinking Sulphur well	57
—	loweſt Sulphur well	56
—	St Magnus's well	51

From a ſeries of accurate experiments, a wine gallon of Creſcent water ſeems to contain

	dwt.	gr.
Of Carbonat of iron -	0	2
Carbonat of lime -	0	3.1
Muriat of magneſia -	1	21
Muriat of ſoda -	5	17
Sulphat of magneſia -	0	8
	6	51.1

Of Aerial fluids,

	Cubic inches.
Of Carbonic acid gas -	20.8
Sulphurated hydrogen gas	13.6
	34.4

After relating his experiments on theſe different waters, which afford a more accurate and juſt analyſis of them than has hitherto been preſented to the public, he ſubjoins the following table, ſhewing, at one view, the contents of a wine gallon of each of them, as well as of the Creſcent water, on which he lately publiſhed, in a ſeparate treatiſe, ſome experiments and obſervations.

A TABLE,

Exhibiting the CONTENTS, in a Wine Gallon, of each of the *Harrogate* Waters.

Names of the Waters.	*Specific gravity.*	CUBIC INCHES.			GRAINS.								
		Carbonic acid gas.	*Azotic gas.*	*Sulphurated hydrogen gas.*	*Muriat of foda.*	*Muriat of lime.*	*Muriat of magnesia.*	*Carbonat of lime.*	*Carbonat of magnesia*	*Carbonat of iron.*	*Sulphat of magnesia.*	*Sulphat of foda.*	*Sulphat of lime.*
Sulphur Water,	1.0064	8	7	19	615.5	13	91	18.5	5.5	—	10.5	—	—
Creſcent Water,	1.002	20.8	—	13.6	137	—	45	3.1	—	2	8	—	—
Tewit Water,	1.00017	16	5	—	—	—	—	—	—	2.5	—	—	4
Old Spa,	1.00014	15.75	4.25	—	—	—	—	—	—	2	—	3	1.5

Beſides theſe, there are a great variety of waters at Harrogate, of which he has not yet been able to make an accurate analyſis, but which he expects to lay before the public in the courſe of another year. Our author concludes this part of his treatiſe with ſome obſervations on the different permanently elaſtic fluids with which theſe waters are impregnated. He has given the following ingenious explanation of the manner in which azotic gas is united with water, ſince they cannot be combined by agitation. He ſuppoſes the water to abſorb atmoſpheric air, and that its oxygen is attracted by the iron which is thus rendered ſoluble in fixed air, while the azotic gas will be left looſely attached to the particles of water, and ready to break in the form of bubbles. This, he thinks, alſo accounts for oxygen, or atmoſpheric air, being never found in chalybeate waters.

M. Gengembre, he obſerves, was the firſt who, by diſſolving ſulphur in inflammable air, formed hepatic air, or ſulphurated hydrogen gas. This gas is alſo procured from hepar ſulphuris and pyrites, by the affuſion of the mineral acids. But M. Fourcroy has ſhewn, that

that dry liver of ſulphur emits no fetid odour; that it acquires this in proportion as it imbibes moiſture; that the production of this gas is owing to the decompoſition of water; and that the acid employed in obtaining it from dry hepar, is only effectual in proportion to the water it contains. As neither ſulphur nor alkali can ſeparately decompoſe water, this effect is ſhewn by M. Fourcroy to be owing to the powerful attraction with which the alkali tends to unite with the ſulphur, when converted into ſulphuric acid. In order to undergo this change, the ſulphur muſt be combined with oxygen; and its hydrogen gas being thus let looſe, diſſolves and carries with it a portion of the ſulphur. But, according to M. Chaptal, one of the properties of ſulphurated hydrogen gas is to unite with the oxygen of atmoſpheric air, and form water, depoſiting the ſulphur it held in ſolution.

Now, ſays our author, if we ſuppoſe the water to be originally impregnated with atmoſpheric air, when it meets with the hepatic air, this laſt will unite with the oxygen, and form water, while the azote will be left looſely attached to the particles of water, in the

ſame

ſame manner as in the chalybeate ſprings. But there being a greater quantity of hepatic air than will ſaturate the oxygen of the atmoſpheric air diſſolved by the water, the remainder retains its peculiar properties, and gives the water its ſulphureous ſmell.

He next inquires into the origin of the ſulphurated hydrogen gas, with which the Harrogate waters are impregnated; and obſerves, that although it may be derived from the decompoſition of pyrites, yet as, in this caſe, theſe waters would be impregnated with a good deal of vitriolic ſalt, he would rather aſcribe its origin to the decompoſition of vegetables, which we know is one of the greateſt ſources of the formation of ſulphur; and it is likewiſe well known, that hydrogen, which forms a conſiderable part of vegetables, is continually eſcaping from bogs and ponds during their decompoſition. This hydrogen, he then ſuppoſes, diſſolving a portion of the ſulphur, will be converted into hepatic air, and impregnate the water it meets with, giving it peculiar properties.

Our author opens the third part, by ſome remarks on the air, ſituation, and amuſements

of

of the place; and then proceeds to examine the medicinal virtues of the waters: And, firſt, of the chalybeates.

Iron, he obſerves, is the only metal which ſeems naturally friendly to the animal body; and he even ſuggeſts an idea, that it perhaps derives its origin from the animal and vegetable powers; at leaſt it ſeems to make a part in organic bodies. Its effects, he thinks, cannot be explained upon the ſtimulant or tonic power it is ſaid to poſſeſs; but that it acts a much greater part in the animal œconomy. As the blood acquires its red colour from its expoſure to the air in the lungs, from which nothing but oxygen is abſorbed, it ſeems probable, he obſerves, that the red particles of the blood conſiſt of iron calcined by oxygen, and reduced to the ſtate of red oxyd of iron.

Hence it appears, that chalybeates will not only increaſe the quantity of red particles on which the ſtimulant and tonic powers of that fluid depend, but will enable it to decompoſe a larger quantity of the oxygen, which is received by the lungs in reſpiration, and thus occaſion a greater evolution of heat; and he thinks it not improbable, that a change to a purer

purer air will not produce the deſired effects, without the adminiſtration of chalybeates at the ſame time.

Iron diſſolved by fixed air, he obſerves, ſeems to be its moſt uſeful preparation; for although, when united to the mineral acids, it may enter the blood more readily, and in greater quantity, yet they are more difficultly decompoſed than carbonat of iron: and, with reſpect to quantity, experience ſhews us, that ſmall doſes of iron produce better effects than large ones. The fixed air by which this metal is held in ſolution, is an agent poſſeſſing no ſmall power over the human frame; as water impregnated with it, exhilarates even to a degree of intoxication: in mineral waters it holds ſome of their moſt active principles in ſolution. The medicinal powers of azotic gas, he obſerves, have by no means been inveſtigated; but from its abundance in nature, its being a principal part of nitrous acid and volatile alkali, it would ſeem to poſſeſs no ignoble place in the animal œconomy.

Chalybeate waters, our author thinks, are uſeful in all diſeaſes depending upon debility, where the ſolids are relaxed, and the ſyſtem weakened;

weakened; and in the numerous claſs of nervous diſorders, they produce the happieſt effects. If it be difficult to eradicate theſe complaints, it is certainly poſſible to point out proper methods for preventing them, and to fix a boundary to their ravages. They almoſt all depend upon debility, and are induced by every cauſe that can relax and weaken the habit; but the moſt common cauſe, the effects of which are the moſt difficult to be removed, is to be ſought for in the mind.

In ſuch caſes, next to the regulation of the paſſions, exerciſe in the open air without fatigue, and agreeable amuſements without exceſs, promiſe the moſt relief. To theſe Dr Garnett recommends the uſe of the Tewit well, and Old Spa; and, in order to prevent coſtiveneſs, the Sulphur water now and then. In ſuch caſes, he has ſeen the Creſcent water of great ſervice. The cold bath, properly uſed, promiſes the beſt effects. He alſo ranks, among the diſeaſes of women depending upon relaxation, caſes where the natural diſcharge has been obſtructed, or immoderately increaſed. The chalybeate waters have afforded relief in the ſtone and gravel, and in the atonic gout.

They

They may be alſo employed with advantage in bilious complaints, and in ſome ſtages of conſumption; but in theſe he would rather employ the Creſcent water, as its ſalt will, in ſome meaſure, counteract the ſtimulant effects of the iron.

Chalybeates are improper, where a plethoric or vigorous ſtate of the ſyſtem prevails, where the veſſels are full of blood, and where there is a tendency to any inflammatory diſeaſe. In theſe caſes, our author obſerves, Harrogate affords a ſafe and eaſy remedy by the Sulphur water.

The ſalts with which this water is impregnated, render it a mild purgative; its hepatic air is one of the moſt powerful remedies againſt diſeaſes of the ſkin; and it ſpeedily and eaſily carries off the effects of intemperance. In perſons prediſpoſed to apoplexy, if properly adminiſtered, ſo as to keep the body regular, and rather open, it will be found one of the beſt preventives of that dreadful diſeaſe. But inſtances are not wanting, of perſons prediſpoſed to apoplexy, having a fit brought on by the improper uſe of the Sulphur water. Patients

of

of this claſs ought equally to avoid the warm and cold baths.

But it is principally in herpetic affections of the ſkin, he obſerves, that the Sulphur water is uſed. Theſe complaints, he thinks, are yet little underſtood, being all confounded, even by medical practitioners, under the general name of Scurvy; whereas they are perfectly oppoſite in the ſymptoms, appearance, and method of cure.

He agrees with Mr Bell, in arranging them under the following ſpecies:—1. Herpes farinoſus, or dry ſcaly ulcer. 2. Herpes puſtuloſus, which includes the cruſta lactea and tinea capitis. 3. Herpes miliaris: of this variety is the eruption called the Ring-worm. 4. Herpes excedens: this includes the ulcers called depaſcent and phagedænic. Theſe diſeaſes, he believes, are leſs connected with a diſeaſed conſtitution than is generally imagined. He ſuppoſes that the perſpirable matter is not poured out on the ſurface of the cuticle, but under it, and then oozes out as through a ſieve. Now, if perſpiration be any how ſtopped, there will be an accumulation of this matter under the cuticle, where it will cauſe itching, redneſs, and ſlight

inflammation; while, in many caſes, portions of the cuticle will be forced off, in the form of a ſcaly eruption.

The lepra and elephantiaſis have yielded to the uſe of the Sulphur water, after other remedies have been tried in vain.

In the treatment of all theſe diſorders, the principal circumſtance to be attended to is, that not only the parts affected, but the whole ſkin, be kept as perſpirable as poſſible. To this end, the frequent uſe of warm bathing and gentle friction, are ſingularly ſerviceable. With reſpect to the internal uſe of this water, he obſerves, it often anſwers better when taken as a gentle laxative, than as a powerful purgative.

The lumbricus and tænia are frequently evacuated by it, when taken as a briſk purgative; but the aſcarides, which generally lie low in the rectum, are moſt effectually deſtroyed by the water injected into the inteſtines.

Caſes of hæmorrhois, and of obſtinate and habitual coſtiveneſs, have been much relieved by the Sulphur water; and the warm bath is of uſe in chronic rheumatiſm. To ſcrophula, the Creſcent water is the beſt adapted, as the

ſalt

ſalt it contains is juſt ſufficient to make it active as a gentle ſtimulus upon the excretories, without operating by the inteſtines, while the iron will tend to remove the debility, which, if not the cauſe of the diſeaſe, always retards its cure. With the ſame intention the cold bath at Low Harrogate may be uſed.

The effects produced by ſulphur and hepatic air upon lead, would ſeem to recommend theſe waters as a remedy in the colica pictonum.

In the fourth and laſt part of this work, he gives directions for the uſe of theſe waters. Patients, who are to uſe the chalybeate waters, ſhould prepare themſelves, by previouſly drinking the Sulphur water for ſome days, and always take care to avoid becoming coſtive: the uſe of theſe waters at the ſame time are incompatible, as they decompoſe each other. The effects of the chalybeate waters may, in general, be much promoted by the uſe of the cold bath, where there is nothing to forbid it.

If the Sulphur water be wiſhed to act as a purgative, he adviſes patients to drink two, three, or four glaſſes, according to the difference of conſtitution, uſing gentle exerciſe for about a quarter of an hour between each glaſs. Its

operation may be quickened, by diſſolving, in the firſt glaſs, ſome purgative ſalt. The patient muſt guard againſt drinking it cold when he is warm; and as it agrees with ſome better when heated, this is beſt done by mixing with it ſome boiling water. Its uſe ought to be left off gradually; employing, for the ſpace of two or three weeks afterwards, more abſtemious diet, and guarding againſt coſtiveneſs.

With reſpect to bathing, he adviſes no one to go into a bath heated above 98 deg. of Farenheit. After he has been in a few minutes, the temperature may be raiſed three or four degrees higher; and the degree of heat always ought to be regulated by a thermometer. At firſt, a patient ſhould remain in it only five minutes; and he may gradually increaſe it to twenty. The bath may be uſed every ſecond or third night. After coming out of the bath, if it be neceſſary to encourage a free perſpiration, the patient muſt go immediately to his bed, which is previouſly to be warmed; and take from time to time a little wine whey, as long as he wiſhes the ſweating to continue. If profuſe perſpiration be not the object, he may take a light ſupper, and

muſt

muſt let himſelf cool gradually before he goes to bed.

It is impoſſible, he obſerves, to give any general rules concerning diet; but he recommends thoſe whoſe diſeaſes depend upon, or are accompanied with debility, to obſerve a generous temperance, rather than a ſevere abſtinence. Their dinner ſhould conſiſt of plain animal food, with a due proportion of vegetables during dinner. Water is the beſt drink: a few glaſſes of wine may be taken after it. For breakfaſt, tea is improper, as it decompoſes the chalybeate waters.

Another claſs of patients, who labour under diſeaſes accompanied with a plethoric or inflammatory diſpoſition, ought to live more abſtemiouſly. They ſhould drink plentifully of warm diluents; and the ſolid part of their food ſhould conſiſt chiefly of vegetables, and a ſmall quantity of animal food, at dinner. The beſt time for eating fruit is before dinner; and, if ripe, and taken in moderation, there can be no objection to the uſe of it. When ſuppers are taken, they ſhould be as light as poſſible.

After ſhewing the advantages to be derived from exerciſe, he obſerves, that when patients are weak, they ſhould uſe it very gently at firſt.

> Begin with gentler toils, and, as your nerves
> Grow firm, to hardier by juſt ſteps aſpire.
> The prudent, even in every moderate walk,
> At firſt but ſaunter, and by ſlow degrees
> Increaſe their pace.
>
> ARMSTRONG.

The beſt time for exerciſe is before dinner, as it increaſes the appetite; and beſides, after a full meal, it diſturbs digeſtion. Riding, he thinks the beſt method of taking exerciſe, as it fatigues leſs than walking.

Our author concludes, with obſerving, that although mineral waters often produce aſtoniſhing cures, yet their good effects are ſeldom evident at firſt, as they always require ſome time of trial; and patients ought not to go away diſſatisfied, if they have not received much benefit in the ſpace of a week or a fortnight, but ſhould reflect, that where diſeaſes have continued for a long time, it would be folly to expect that they could be eaſily and ſpeedily removed.

V.

V.

An Account of the Efficacy of the Aqua Mephitica Alkalina, or Solution of Fixed Alkaline Salt ſaturated with Fixible Air, in Calculous Diſorders, and other Complaints of the Urinary Paſſages. *By* William Falconer, *M. D. F. R. S. and Phyſician to the General Hoſpital at Bath.* 8vo, London.

THE merit of the original diſcovery, that alkaline ſalts were capable of being completely neutralized by fixible air, Dr Falconer thinks is due to Mr Bewly, of Great Maſſingham, Norfolk. But the honour of the diſcovery of its moſt important uſe, belongs, he tells us, to Benjamin Colborne, Eſq. who having been a ſevere ſufferer from calcalous complaints, was convinced, by experience, of the inefficacy of all the boaſted lithontriptics. From obſerving the ſolvent powers of alkaline ſalts upon uri-

nary calculus out of the body, and by remarking the changes produced by their internal uſe on the urine of thoſe afflicted with theſe diſorders, he was induced to make a trial of the remedy now under conſideration; and the event was much beyond his hopes. The diſagreeable taſte however of the alkali, and its cauſtic, ſeptic, and irritating effects on the animal ſyſtem, he thought might be deſtroyed, by combining it with fixible air, as it forms with the alkali a neutral ſalt, perfectly mild in its nature, agreeable to the taſte and ſtomach, and powerfully antiſeptic. At the ſame time, their combination is ſo looſe, that the alkali is eaſily ſeparated from the air by any other acid it may meet with. He moreover found, by experience, that this combination poſſeſſed no inconſiderable diſſolvent powers upon human calculi out of the body. Hence he was induced to make trial of it himſelf, and to recommend it to others; and Dr Falconer truſts, that experience has proved that his expectations were not ill founded.

Dr Falconer recommends the following method, as the moſt convenient for making the alkaline ſolution. Put two ounces and a half,

Troy

Troy weight, of dry ſalt of tartar, into an open earthen veſſel, and pour thereon five quarts, Wine meaſure, of the pureſt water, and ſtir them well together with a clean piece of wood. After ſtanding 24 hours, carefully decant from any indiſſoluble reſiduum that may remain, as much as will fill the middle part of one of the glaſs machines for impregnating water with fixible air. The alkaline liquor is then to be expoſed to a ſtream of fixible air, in the uſual manner. When the alkaline liquor has remained in this ſituation till the fixible air ceaſes to riſe, a freſh quantity of the materials for producing it ſhould be put into the lower part of the machine, and the ſolution expoſed to a ſecond ſtream of air, and this proceſs repeated four times. When the alkaline liquor ſhall have continued about 48 hours in this ſituation, it will be fit for uſe; and ſhould then be drawn off into perfectly clean bottles, and cloſely corked up. The bottles ſhould then be placed, with their bottom upwards, in a cool place; and, with theſe precautions, it will keep ſeveral weeks good. The quantity of alkaline ſolution above directed to be mixed, is judged to be ſufficient to fill the glaſs machines of the common

common ſize twice, without pouring off the liquid ſo deep as to hazard making the ſolution turbid, by ſtirring up the indiſſoluble reſiduum which is precipitated at the bottom of the veſſel. When properly prepared, the alkaline mephitic water ſhould be perfectly clear, and rather ſparkling, of an acidulous taſte, and totally free of that diſagreeable impreſſion which alkaline ſalts make upon the tongue and throat.

For moſt caſes, he obſerves, a pint in 24 hours may ſuffice. The times of taking three doſes a day, are, pretty early in the morning, about noon, and about ſix in the evening. If twice a day, about noon, and in the evening; and, if once, which in many caſes ſeems a preventive, about an hour and a half before dinner. Common ſenſe dictates, that it ſhould be taken when the ſtomach is leaſt loaded with victuals.

Dr Falconer does not find a rigid adherence to any particular diet neceſſary, and only preſcribes moderation and temperance; although he thinks it would be better to abſtain from aceſcent food, for ſome time before and after taking the doſes of the alkaline ſolution.

The

The only effect of this medicine, beſides that moſt to be wiſhed for, is to keep the body gently open: in one caſe only, it proved a pretty ſtrong dieuretic. Should it prove cold or flatulent to the ſtomach, which ſometimes happens, the addition of a ſmall portion of any ſpirituous liquor, or warm milk, in the proportion of about one-fourth, tends much to reconcile it to the ſtomach, without impairing its good qualities.

If the urinary paſſages be very ſore or tender, and the ſyſtem very irritable, opiates will become neceſſary; which however are to be laid aſide, when the pain and other urgent ſymptoms have ſo far ceaſed, as not to cauſe any great uneaſineſs.

There are a great many caſes related, which tend to prove that it is an almoſt certain remedy againſt calculus; that, if it do not improve or repair an injured conſtitution, its uſe is at leaſt perfectly innocent; that old age is no objection to its uſe; that, by continuing it for ſome time, the tendency to produce calculus may be ſubdued; that, in ſome caſes, it has proved a ſolvent of a ſtone already formed in the bladder; and that it is ſerviceable in many other diſeaſes of the urinary paſſages.

Its

Its efficacy is particularly ſhewn, in complaints ariſing from the acrimony of the urine.

From a great many important and accurate caſes, we ſhall ſelect the following, as proofs of the benefit to be obtained from it.

Caſe XXIII. communicated by Mr PERRY. —" Thomas Shell, aged 13 years, in September 1787 applied to me, at the requeſt of Mr Colborne, to be ſounded for the ſtone. He had great pain in making water, which came away by drops. He alſo complained of a bearing weight at his fundament, where nothing uncommon was to be perceived. From his ſymptoms, I ſounded him, and found a ſtone in his bladder. I deſired him to inform Mr Colborne of this circumſtance; which he did, as I was informed by that gentleman; who humanely took him under his care, and adminiſtered the ſolution, with more than uſual good effect. I believe the medicine was uſed for twelve months, at times. Within theſe ten days the lad called on me, with the greateſt pleaſure, to ſound him again; which I did repeatedly, and could not perceive any ſtone; nor did he complain of the leaſt ſymptom of it,

it, December 4. 1788. He took the water two months before he found any benefit.

" December 1. 1791.—This patient has not taken any of the mephitic alkaline water ſince December 1788. He is now in perfect health, and has been ſo ever ſince the time before mentioned."

This caſe, Dr Falconer obſerves, ſhews, in the moſt ſatisfactory manner, that the alkaline ſolution poſſeſſes a power of diſſolving urinary calculi; and he thinks it probable, from the laſt account, which ſtates that the patient continues well, notwithſtanding his leaving off the alkaline water for three years, although the whole time he uſed it did not exceed one year, that the diſpoſition to generate calculus, is ſooner overcome by this remedy in young ſubjects, than in thoſe who are advanced in life.

Caſe XXVII.—" In the year 1779 I was attacked with a ſtrangury and total ſuppreſſion of urine, for ſeveral hours, without being able to aſſign any cauſe; but, after taking emulſions and mucilages, I was enabled to paſs urine again. I had many returns of the complaint; and, in particular, one time I was adviſed to drink

drink ſome gin and water, which I ſoon found to increaſe my pain, and cauſe greater irritation to make water. I was put into a warm bath, without any good effect, and a ſurgeon drew off my water by a catheter; but he ſo wounded the paſſage near the proſtate gland, that a great quantity of blood paſſed off with the urine. He told me I had a ſtone in my bladder. Being rather alarmed, I then conſulted the late Mr Elſe, who, on paſſing a bougie, told me my complaint was not calculous, but from a ſtricture. I alſo conſulted Mr John Hunter; who likewiſe told me I had a ſtricture, and adviſed me to wear bougies. I did ſo; but not being able to indulge during wearing them, they frequently irritated the diſeaſed part very much. Here I muſt obſerve, that, on my introducing the bougies, they have ſeemed to rub againſt ſome very hard rough ſubſtance, near the neck of the bladder; but, on withdrawing them, I never could perceive any impreſſion had been made on them. During my wearing bougies, from 1779 to 1786, I had many total ſtoppages of urine; from which I could always relieve myſelf, during the firſt part of the above period, by introducing a catheter;

theter; but afterwards, the paſſage became too narrow for the ſmalleſt catheter I could get, and I made uſe of a ſmall bougie. From 1786 I left off the uſe of bougies, and continued to make urine with difficulty; but had not any total ſtoppage, until December 1790, when, having drank one evening rather freely of ſome very ſtrong brandy and water, I had frequent irritations to make water, which I then paſſed with ſome difficulty; and the next evening, being again engaged in company, I very imprudently retained my urine a long time, (though irritated to paſs it) until I felt the uſual ſymptoms of ſuppreſſion. I had no ſleep during the night; and being obliged to go from home five miles, I went on horſeback; and being a very wet and cold day, I felt a chill in my ſkin, and made many attempts to paſs my urine, but without effect. I returned home, ordered a warm bath to be got ready, and ſent for a phyſician and a ſurgeon, who, by the uſe of the warm bath, bleeding, anodynes by the mouth and clyſter, and other remedies, relieved me from the moſt diſtreſſing painful ſpaſmodic efforts to void my urine during

ring the ſuppreſſion (which continued twenty-eight hours) I had ever experienced. Then the urine began to flow by drops, and my bladder was emptied in about ſix hours. Here I muſt mention, that different ſized catheters and bougies were attempted to be introduced without effect. At the end of a month from this time, I was recovered from the weakneſs and irritability conſequent on the ſuppreſſion of urine, when I found the ſtricture and irritability of my urethra in the ſame ſtate as previous to the attack. By the ſuggeſtion of a medical friend, who was then at Bath, my urine was tried with paper ſtained with litmus, and found to be ſurcharged with acid; and, by his recommendation, I began taking the alkaline mephitic water, (prepared according to the directions in Dr Falconer's pamphlet), from which I ſoon found my urine paſs with more eaſe, and the ſtream rather fuller. By repeated trials of my urine during my taking this water, I have found it has effectually prevented my urine being acid, (for the litmus teſt-paper is not altered in colour when dipped in it), which I, as well as the medical gentlemen who attended me, think

was

was the principal, if not ſole cauſe, of the pain and inconveniences which have, at various times, been the conſequences of the ſtricture.

" I continue to drink from two-thirds of a pint to a pint of the water in a day, and have the happineſs to think I now paſs my urine with as much eaſe, and nearly as much freedom, as I ever did in my life. I abſtain from no food whatever: I drink mild beer and wine at dinner; and only avoid ſpirits, fruit, and acids. I have not even found the aqua mephitica to diſagree with me. I have a good appetite, and am well in health.

" P. S. When I have been in London for a ſhort time, and have omitted to take the water, I have felt a return of the ſtricture; but on going into the country, and again taking the uſual quantity of the water, it has always been immediately relieved."

This caſe, Dr Falconer obſerves, is a diſorder of the urinary paſſages, attended with great pain and ſtricture, perhaps ſome diſeaſe of the proſtate gland, but probably without any formed calculus. This caſe, he thinks, evinces clearly, that the pain was cauſed by the acrimony of the urine, and the diſeaſe kept

up, if not induced by it. When this acrimony, which was evidently of the acid kind, was neutralized by the alkaline water, both the pain and ſtricture abated, and returned when that was omitted. He alſo reckons this caſe the more important, as it proves that the alkaline water is capable of giving permanent relief, if not of effecting a cure, in complaints of the urinary paſſages, not proceeding from calculus, provided a trial be made before any irreparable injury be done to the parts.

In this treatiſe are related ſome experiments made by Mr Colborne, to diſcover the ſolvent power of the mephitic alkaline water upon calculi, by immerſing them in it; and they ſeem to prove, that, at a medium, after the calculi have been immerſed 31 days, they loſe half their weight; and he obſerves, that they were corroded in holes like a worm-eaten piece of wood, but externally preſerved their original figure, till they all at laſt fell to pieces.

The following experiments by the ſame gentleman ſeem to prove, that the urine of thoſe taking the mephitic alkaline water, has the power of diſſolving calculi.

October

October 16. 1786.—A fragment of calculus, weighing 55 grains, was put into a large wide-mouthed vial, and upon it was poured daily the firſt urine that was paſſed, after taking a doſe of the mephitic alkaline water, by a perſon that was in the courſe of taking it every day. The vial was ſet in a moderately cool place, and the urine regularly changed.

		Loſs of weight.
Oct. 16. 1786, it weighed	55 gr.	
Nov. 16. -	53	2 gr.
Dec. 16. -	46	7
Jan. 16. 1787, -	36	10
Feb. 16. -	26	10
Mar. 16. -	22	4
Apr. 16. -	18	4
In ſix months it had loſt	—	37 gr. Total loſs.

January 24. 1787.—An entire calculus, weighing ſixty grains, treated as above, in the ſpace of two months was diminiſhed in weight eight grains; and in another month the whole diminution was 25 grains. The laminæ that form the calculus began to ſeparate, and it appeared that the action of the ſolvent had

penetrated much deeper in one part than in another. Another weighing 54 grains, treated in the ſame manner, in the ſame time loſt 17 grains.

A fragment of the ſame calculus, uſed in the firſt of theſe experiments, had every day poured upon it the urine of a healthy perſon, who never had any ſigns of gravel, and who was not in the habit of taking any medicine whatever; and from October 16th to December 16th, it had loſt none of its original weight. From the latter end of this month the ſame urine remained upon it until January 26th; during which time the urine had become fetid and alkaline, the calculus had fallen into three pieces, and loſt in weight ten grains. From that time the urine was changed regularly every day.

		Gain of weight.
Jan. 26. it weighed -	35 gr.	
Mar. 26. -	36½	1½ gr.
Apr. 26. -	37½	1

The ſame ingenious gentleman has alſo made the following remarks on the effects of the mephitic alkaline water.

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The urine of moſt people ſubject to the ſtone, and of people in general, will turn paper ſtained with the juice of turnſole, red; but the urine which is made firſt after taking the mephitic alkaline water, in thoſe perſons who have taken it for ſome time, will change the teſt-paper to a blue colour. But if the urine of the patient, previous to its uſe, turn the paper blue, it is generally fetid and putreſcent. In ſuch caſes, the alkaline water will take off the fœtor, and abate the general ſymptoms; but muſt not be depended upon for a cure.

Mr Colborne adviſes perſons ſubject to the ſtone or gravel, to obſerve accurately the ſtate of their chamber-pot, whether it keeps free of fur or other adheſions to its bottom and ſides, this being the principal criterion by which the increaſe or amendment of the complaint can be aſcertained. The urine of almoſt every perſon in health, if ſuffered to remain for 24 hours in the chamber-pot, forms more or leſs incruſtations on its bottom and ſides. This, he believes, never takes place in the urine of thoſe who are in the habit of taking the mephitic alkaline water.

As this medicine is ſo efficacious in obviating the acrimony of the urine, he thinks it ſeems likely to be of ſervice, if given immediately after the operation of lithotomy, as it is well known that the healing of the wound is often much retarded by the irritation of that diſcharge.

Dr Falconer now proceeds to relate experiments of his own; ſome of which tend to corroborate thoſe of Mr Colborne; others to prove the antiſeptic powers of the mephitic alkaline ſolution; while, from others, he concludes, that two ounces of this ſolution contain thirteen ounce meaſures of fixible air; which quantity he ſhews to be to that contained in ſalt of tartar, as twenty-four to eleven.

Dr Falconer then proceeds to draw ſome concluſions from theſe caſes and experiments; and obſerves, that although he thinks it probable that the principal advantage derived from this remedy is owing to the change it produces on the urine, yet the experiments ſhew that it poſſeſſes conſiderable powers as a ſolvent of the calculus. This, he thinks, depends upon a double elective attraction, the alkaline ſalt attracting the acid of ſugar, one of

of the component parts of calculus, while the other, the calcareous earth, is united to the fixible air. The former of theſe compounds is perfectly ſoluble in water; and the other alſo, when the fixible air is redundant.

The effects aſcribed to the waters of Carlſtadt, in Bohemia, ſeem to prove, that the foſſil alkali, prepared in the ſame manner, might poſſeſs like powers: And he thinks it probable, that alkaline ſalt, ſaturated with fixible air, when cryſtallized, might be equally effectual with the ſolution, while it would be a more convenient form for uſe: But of this, he obſerves, he has had no experience.

VII.

A Treatiſe on the Digeſtion of Food. By G. Fordyce, *M. D. F. R. S. Fellow of the Royal College of Phyſicians, and Reader on the Practice of Phyſic in London.* 8vo, London.

LIVING beings, Dr Fordyce obſerves, both of the vegetable and animal creation, conſtantly expend ſome part of their fluids or ſolids, or both, when they are exerting any action, or performing any function of life; and, during a certain period of their lives, they are acquiring new parts, and increaſing in bulk. It is neceſſary, therefore, that food ſhould be employed to ſupply matter for this formation and increaſe.

Our author here remarks one great diſtinction between animals and vegetables; for animals have organs of digeſtion, in which the food remains for ſome time before it gets into the general ſyſtem; while, in vegetables, the food

food paſſes directly into the general ſyſtem, without being detained, or ſuffering any previous alteration.

He thinks it reaſonable to ſuppoſe, that the food is ſtopped in the organs of digeſtion, in order to undergo ſome change; and as, in different animals, the organs of digeſtion are various, it is therefore probable that the changes which take place, in different animals, are different; or that the mode of life, or ſome other accident, renders a different apparatus neceſſary for this proceſs. There are other ſubſtances, beſides the food, which are poured into the cavities of the organs of digeſtion, from the veſſels of the animal himſelf, which ſerve either for aſſiſting the change, or enter into the ſubſtances formed.

Our author, therefore, divides his ſubject into the ſtructure of the organs of digeſtion in the human body; the ſubſtances which are applied to the food during the time of the digeſtion in the human body; the ſtructure of the organs of digeſtion, and the ſubſtances applied to the food in other animals; the qualities of the ſubſtances to be formed by the digeſtion; the ſubſtances that are capable of being digeſted;

geſted; their qualities; and if ſuch qualities be different from thoſe of the ſubſtances to be formed. He, laſtly, propoſes to conſider the manner by which the peculiar qualities of the food are to be taken away, and the qualities of the ſubſtances to be formed given to it.

Accordingly, after giving an accurate, though conciſe, anatomical deſcription of the organs of digeſtion, he proceeds to conſider the ſubſtances applied to the food during the digeſtion.

As he has often occaſion to uſe the word *mucilage*, he defines it to be a claſs of animal and vegetable ſubſtances, ſolid, brittle, inflammable, decompoſeable by heat, capable of being combined with water in their natural ſtate, capable of being combined with water by decoction or Papin's digeſter, ſo as to form a fluid; and he remarks, that he never means to annex the term to a ſolution of this ſolid ſubſtance in water.

This claſs of ſubſtances, and no other, is ſubject, he obſerves, to a particular chemical change, called Coagulation. The only difference that he ſuppoſes coagulation to produce in the properties of mucilages, is in their ſolubility in water, by occaſioning them to ſepa-

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rate, partly, or entirely, from the water with which they were combined; that is to ſay, if the whole water be ſeparated from a portion of any of them by coagulation, and from another portion by a heat not capable of coagulating it, they are perfectly undiſtinguiſhable; excepting that the portion which was dried without coagulation, will combine with water again, in the ſame manner that it was combined before; while that part which was coagulated, will not. All colourleſs animal mucilages, he obſerves, are exactly the ſame in all their properties after coagulation; which proves, that they differ only in their ſolubility in water.

The ſaliva, he ſuppoſes to be a fluid, conſiſting of water, with which a colourleſs mucilage and ſaline ſubſtances are combined. Saliva is viſcid; difficultly diffuſible in water; and coagulable, but not readily. Its ſalts are probably ſea ſalt and ſal ammoniac. He endeavours to refute Dr M'Bride's idea, of ſaliva being a ferment; and denies that it is ſecreted in very large quantities during deglutition; and is of opinion that ſaliva is of little or no effect in the digeſtion of the food in the ſtomach.

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The next ſubſtance applied to the food, is the gaſtric juice. The juices ſecreted in the ſtomach, he obſerves, are by no means homogeneous; and although it be difficult to ſeparate them, yet we have a diſtinct idea of each. They ſeem to be a mucus, having properties ſimilar to the mucus in other parts; a juice flowing from the exhalents, which is water containing the neutral ſalts of the blood; and a ſolid or fluid, difficultly diffuſible through water, having a ſtrong power of coagulating many animal, and perhaps ſome vegetable, mucilages. In diſeaſe, he thinks the ſtomach has a power of forming other ſubſtances. In the duodenum, the bile is applied to the food; probably, he obſerves, after it has undergone ſome proceſs in the ſtomach.

The bile he has found to be a compound of mucilage and water. The mucilage is not in itſelf coagulable; but there is ſometimes a mixture of coagulable matter, perhaps ſerum along with it. It is capable of being diffuſed through any quantity of water; but, in the gall bladder, it is united with ſuch a quantity, as to render it a fluid of oleaginous viſcidity, and then it is not more putreſcent than the ſe-

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rum of the blood; but, if diffuſed through a large quantity of water, it putrefies much more readily. This mucilage is very different from the colourleſs animal mucilages in its ſenſible qualities; and it is not coagulated, but decompoſed by acids; a part being precipitated, which is reſinous, or at leaſt which melts in a moderate degree of heat; and is ſoluble in alkohol, although incompletely. Our author ſuppoſes that it is always decompoſed in the duodenum, as it would be otherwiſe carried into the ſyſtem, where it is never found, unleſs in a morbid ſtate of the body.

The pancreatic juice, he obſerves, it is difficult to collect; but it ſeems ſomewhat ſimilar to ſaliva in its properties. The fluids formed in the other glands found in the duodenum, have hitherto eluded all reſearches; but he obſerves, that there is evidently mucus formed on its ſurface.

He next proceeds to conſider, what ſubſtances are capable of being employed for nouriſhment. Vegetables, he obſerves, afford nouriſhment for animals, but vegetables themſelves are nouriſhed; and he ſuppoſes water and pure

air

air to be ſufficient for the nouriſhment of vegetables.

From ſome facts and experiments, he concludes, that certain animals may live on pure air and pure water. The fluids of vegetables he conſiders as of two kinds; ſuch as, on evaporation, leave a mucilage behind, and ſuch as leave none. All the ſolids of vegetables conſiſt of mucilages combined with water, excepting reſins and other oily ſubſtances.

He conſiders the whole nouriſhment which animals derive from vegetables, as conſiſting in their mucilages, and that none of the reſinous parts are digeſted.

All mucilages of vegetables, he thinks, are capable of affording nouriſhment to ſome one ſpecies of animal. In like manner, he divides all animal fluids into ſuch as contain, and ſuch as do not contain, mucilage. Animal ſolids, according to our author, conſiſt of mucilage and water; and he endeavours to ſhew, that all animal and vegetable ſolids and fluids, containing mucilage and expreſſed oils, and poſſibly eſſential oils, in the form of reſins, are capable of giving nouriſhment to ſome one or other ſpecies of animal.

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He next conſiders, what ſubſtances are capable of giving nouriſhment to the human body.

" I am not (he ſays) to enquire what is the " natural food of man, who has no natural food; " but into what he has been able to render " proper for his nouriſhment, and been able to " produce for himſelf, by his own induſtry."

The firſt he takes notice of, is a vegetable mucilage called Farinaceous matter. This is found more particularly in the ſeeds of the gramina, which alſo contain a ſugar, a mucilage very apt to ferment, and an aſtringent juice. Farinaceous matter, he obſerves, is alſo contained in the ſeeds of the legumina, and in many other ſeeds; ſuch as, the nut-tribe, in fruits, in the ſtems of ſome plants, and in many roots. In all theſe, he conſiders the farinaceous matter as exactly the ſame, and conſiſting of a mucilage, combined with water, ſo as to form a ſolid. It is hardly ſoluble, he obſerves, in water heated to leſs than 100 deg. of Farenheit's thermometer, unleſs ſome fermentation has taken place in it. It diſſolves in water, in a heat from 160 to 180 deg., forming a viſcid ſolution. A heat above 180 deg. coagulates it, whether it be applied immediately

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to it, or to a ſolution of it in water. Men, he obſerves, generally coagulate it before they uſe it as food.

The next ſubſtance he treats of, taken from vegetables, which men uſe for nouriſhment, is ſugar. This, he obſerves, is found in every vegetable production except the fungi, although its ſources for the purpoſes of food are confined to ſome of the fruits. Sugar, when ſeparated from all extraneous matter, he imagines to be a mucilage capable of combining with water, ſo as to form cryſtals which are readily ſoluble in nearly half their weight of water, in a heat of 50 deg. forming a viſcid ſolution, which is readily diffuſible through any quantity of water, in any heat the water will bear.

The other ſubſtances capable of giving nouriſhment to man, are the expreſſed oils; gums, he here means, ſuch as are compoſed of a mucilage not coagulable by heat, and neither diſpoſing to, nor preventing fermentation; a mucilage, which is not only in itſelf very apt to ferment, but is alſo extremely powerful in leading other matters into fermentation; another mucilage which reſiſts fermentation; and the native vegetable acid: He is not certain

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if the two laſt be digeſtible. The fungi, as food, he claſſes with animals.

He next proceeds to point out the different ſubſtances found in animals, proper for food, or capable of being digeſted. All the ſolid fibres of animals which afford nouriſhment, he ſuppoſes to conſiſt of a mucilage combined with water, ſo as to form a ſolid, not diffuſible through more water, if it be applied in a moderate degree of heat, without a fermentation taking place. They are all coagulable by heat, and many other applications; when freed from extraneous matter, they are colourleſs, inſipid, and inodorous; and agree in their chemical properties, yet differ much in their eaſineſs of digeſtion.

He alſo ſuppoſes all animal fluids, conſiſting of mucilage and water, as capable of digeſtion.

Theſe ſubſtances, in the organs above deſcribed, and with the admixture of the fluids enumerated, are converted into chyle, which is afterwards formed into blood.

As far as experiments have been carried, he thinks that chyle conſiſts of three parts: a fluid that coagulates upon extravaſation; a fluid that is coagulable by heat; and a part, con-

 ſiſting

ſiſting of globules, which render the whole white and opaque.

A great many ſubſtances, he believes, may enter the lacteals along with the chyle, even ſolids, reduced to fine powder; and from ſome facts, he concludes, that the lacteals would ſeem to be ready to take in many things not digeſted, but not all.

As the eſſential parts of the chyle are ſo different in their properties from the ſubſtances employed for food, a change muſt have taken place; and he now proceeds to examine the proceſs by which the food is formed into chyle and blood.

He begins this part of his ſubject, with ſhewing that the opinion, that it is owing to trituration dividing the food into ſmall particles, cannot be admitted; as each particle of a maſs of matter muſt have the ſame ſpecific qualities with the whole maſs.

He next conſiders another idea held on this ſubject, that there is a menſtruum found in the ſtomach, which unites with the ſubſtances employed for food, and forms the different eſſential parts of the chyle. But he obſerves, that none of the fluids of the ſtomach, or duodenum,

num, appear, from any experiment that has been made, to unite with, or precipitate from ſarinaceous matters, any thing like the parts of chyle; but, on the contrary, they either form a paſte with it, or have a tendency to coagulate it. Farther, as the properties of farinaceous matter, and the matter of a muſcular fibre, are totally different, he obſerves, that the menſtruum in the ſtomach cannot be ſuppoſed to form with each a compound, having the ſame properties; but chyle is always the ſame in whatever animal it be found, and on whatever food they may have lived.

He alſo endeavours to refute an opinion, that vegetable ſubſtances, in order to be digeſted, muſt go through the vinous and acetous fermentations; and that animal ſubſtances muſt go through the firſt ſtage of putrefaction; by obſerving, that the formation of acid in the ſtomach during digeſtion, is always produced by the digeſtion not going on perfectly, the powers of the ſtomach not being ſufficient to overcome the diſpoſition of vegetable ſubſtances to run into the ſaccharine, vinous, or acetous fermentations; and that when the organs of digeſtion are weak or diſordered, or when we

give an animal food not adapted to its organs of digeſtion, a greater or leſs portion of the food is not governed by the ſtomach, but runs into the fermentations which would ariſe if it were not influenced by its power. Beſides, meat already fetid and tender from putrefaction, after having been ſubjected to the action of the ſtomach, is found to be firmer, and free from fœtor.

He then proceeds to draw ſome concluſions of his own, from obſerving what happens in ſound and healthy ſtomachs; and he begins by conſidering how farinaceous matter, which is one ſpecies of matter only, can be converted into a chyle, which conſiſts of three diſtinct ſpecies, mixed together.

He firſt ſuppoſes, that if we have three ſpecies of matter, and take the ſmalleſt poſſible part of each, viz. A, B, C.:—A, may unite with B, and form a compound M; which may unite with C, and form a compound particle X: or A combined with C, may form N; which, combined with B, may form a compound particle Y: or B and C may form a compound O; which, combined with A, may form a compound particle Z. Thus then he obtains

obtains three different compounds, X, Y, Z; and as they each contain the ſame matter exactly, they muſt differ, not in their elements, but in the manner in which theſe are combined. Thus, he thinks, one ſpecies of matter may be entirely converted into another ſpecies of matter, without any loſs or addition whatever.

In the ſame manner, he ſhews, that if A and B unite to form M, and C and D to form N, and if M and N united form X, this compound X may be decompoſed, ſo that A united with D may form O, while B and C form P, and theſe compounds O and P may not be capable of combining with each other; and thus, from X, two other compounds, O and P, may be formed, containing exactly the ſame matter, and incapable of uniting with each other.

And as, upon diſtillation, chyle, and a piece of a muſcle, afford the ſame empyreumatic oil, volatile alkali and charcoal; it appears that they do not differ in any other reſpect, excepting that the elements of which they both equally conſiſt, are united by one mode of combination in the muſcle, and by another mode in the chyle. Thus he ſuppoſes the converſion of the muſcle into chyle, to be a ſepara-

tion of its elements from each other, and a recombination of them in a different manner; ſo that the compound ſhall have new properties: And ſince, by putrefaction, vegetable matter may be made to yield exactly the ſame elements as chyle, it follows, that, in digeſtion, the elements of the vegetable are only ſeparated from each other, and recombined in ſuch a manner as to produce and become chyle.

He now proceeds to inquire, by what power a compound may be decompoſed, and its elements reunited in a new manner. Between different ſpecies of matter, he obſerves, there exiſt what are called attractions, and that theſe vary according to the circumſtances in which the matter is placed: So that, although there be always preſent, ſubſtances capable of being converted into chyle, yet that change will never take place, unleſs they be influenced by the action or circumſtances which they meet with in the organs of digeſtion of a living animal; ſo that no chyle ever has been produced in any other ſituation. The effects of the action of the living ſtomach, he proves by obſerving, that if more food be taken than it can digeſt, the overplus falls into the ſame

fermentation

fermentation as if placed in ſimilar circumſtances in a dead ſtomach.

With regard to the wholeſomeneſs of food, he obſerves, that no food is in itſelf wholeſome or unwholeſome, but as it is compared with the preſent ſtate of the ſtomach.

The uſe of the coagulating juice found in the ſtomach, he ſuppoſes to be, to detain the food there, until, by its action, it be converted into a new ſubſtance, whoſe properties are at preſent unknown; which new ſubſtance is the only one which can be converted into chyle in the duodenum and jejunum. This action is therefore the moſt material part of digeſtion; for, no food that is not there converted into this new ſubſtance, can ever become chyle, but muſt paſs forwards to be evacuated. Hence he obſerves, chyle is not always in proportion to the quantity of food.

VII.

Des proprietés de la plante, appellée, Rhus radicans. De ſon utilité, & des ſucces qu'on en a obtenu pour la gueriſon des Dartres, des Affections dartreuſes, & de la Paralyſie des parties inferieures. Des proprietés du Narciſſe des pres, & des ſucces qu'on en a obtenu pour la gueriſon des Convulſions. Par M. du Freſnoi, *M. D.* &c. &c. 8vo, A Leipſic, 1788. Vide *Commentarii de Rebus in Scientia Naturali et Medicina geſtis.* 8vo, Lipſiæ, *Vol. XXXIII.*

IN this treatiſe, the author ſhews how poiſonous and deleterious plants may become efficacious, or even ſpecific remedies againſt diſeaſes, hitherto the diſgrace of the healing art. He firſt treats of the uſe of the poiſonous tree which is the ſubject of this diſſertation, in Herpetic affections, and in Paralyſis. Accident ſuggeſted to him its uſe; and, that others might not ſuffer by his experiments, he began by taking himſelf the infuſion of one of the

the three folioli of which each leaf of this plant conſiſts; and as this doſe produced no ſenſible effect, he increaſed the number to twelve. Then, indeed, his perſpiration and urine were increaſed in quantity; and he had ſome pains in his belly. Seven caſes which he relates, ſerve, he thinks, to put the efficacy of the infuſion, and diſtilled water of the leaves, in herpetic affections, beyond all doubt. From theſe we ſhall ſelect the following.

"A country woman came to me (ſays our author) in the month of July 1780, to conſult me about the herpes farinoſa, with which her face had been covered for more than a year. She was ordered to take an infuſion of this plant, and in ſix weeks was entirely free from the diſeaſe.

"The patient ſuffered no inconvenience from her cure; and told me, that being naturally of a melancholic temperament, whenever ſhe drank the infuſion, ſhe became cheerful, and was leſs anxious about herſelf. Other patients who afterwards took this medicine, ſaid the ſame."

Five caſes of paralyſis are related, which were cured by the uſe of this vegetable. The accurate

curate deſcriptions of theſe caſes are worthy of a peruſal in the work itſelf.

The leaves of this plant are to be cut when in the greateſt vigour, that is, about the month of June; and this muſt be done with all that caution a plant ſo poiſonous requires.

"The men (ſays our author) wear leathern gloves, which reach up to their elbows, and are tied, to prevent their coming down. Hence the plant never hurts them; at leaſt he never obſerved this, excepting in one caſe, where inflammation of the eye-lids was induced by the vapour from the plant. On the contrary, however, others ſuffered no inconvenience, although they gathered the leaves even without gloves."

"I diſtilled (ſays M. Freſnoi) four pounds of the leaves with thirty-two pounds of water. This diſtilled water had a ſlight odour, although the plant is entirely free from it. When taſted, it was pungent, and inflamed the mouth. The decoction which remained in the ſtill was of a brown colour, and covered with a clammy light pellicle. When ſtrained and evaporated, it gave a ſhining extract of a fine black colour. The leaves inflamed and ſwelled the

the hands and arms of thoſe that took them out of the ſtill, and brought on an itching, which remained for ſeveral days."

" Forty-two pounds of leaves gave twenty ounces of extract, of a proper conſiſtence for the formation of pills."

In ſacred proceſſions, the people of Flanders, particularly at Valenciennes, ſtrew the way with the flowers of the ſeaſon. The Narciſſus pratorum is therefore uſed in April, which the country people bring to be ſold in town.

" In the year 1786, (ſays our author) two out of three proceſſions which ſhould have happened in April, did not take place on account of the badneſs of the weather. On this account, a girl, already ſubject to hyſterics and ſlight convulſions, laid the flowers intended for ſtrewing the ſtreets at the proceſſion, in her bed-room. Next day ſhe told me, that ſhe had undergone a great change; that ſhe had had no fits, and ſlept much better. It occurred to me, that the cauſe of this change was to be ſought for in the flowers with which her room was filled. That I might not be deceived, I cauſed freſh Narciſſi to be put into her chamber, and the night was ſpent quietly, and free

free from convulſions, which had not been the caſe for ſome time before. Next day, I made the flowers be removed, and the windows flung open; and that night, and the two days following, the convulſions reappeared. The flowers being again brought into the room, the day was ſpent without any fits. I was now perſuaded that the alleviation of the diſeaſe was to be aſcribed to the ſmell of the flowers; and I thought that the effects of the extract ſhould be tried in allaying convulſive motions. The ſucceſs of this medicine exceeded my hopes. By its uſe, forty-two children were cured of the tuſſis convulſiva, which was epidemic at Valenciennes during the end of the year 1786. Four grains of the extract were diſſolved in four ounces of ſyrup, and a table-ſpoonful given to the children every third hour; by which means the cough gradually abated, and at laſt entirely left them."

VIII.

VIII.

Obſervations ſur les Proprietés Febrifuges de l'Ecorce de Marronier d'Inde, et ſur les Avantages retirer de ſon emploi que peut la médecine dans le traitement des Fievres intermittentes. *Par* M. Cuſſon, *M. D.* 4to, A Montpelier. Vide *Commentarii de Rebus in Scientia Naturali et Medicina geſtis.* 8vo, Lipſiæ, *Vol. XXXIII.*

THE ſpirit of philoſophic inveſtigation peculiar to this age, has been the origin of many uſeful diſcoveries in botany. But it is aſtoniſhing, as the author of this diſſertation juſtly obſerves, that while our ſhips return loaded with the products of another hemiſphere, we ſhould neglect the plants with which nature has abundantly ſupplied Europe. We deſpiſe them only, without doubt, becauſe they are ſo common. Of late, however, phyſicians have paid attention even to the plants indigenous in their own country; and the account

of

of their labours evinces their ſucceſs, and ſhews it to have been the ſource of very uſeful diſcoveries.

Although the obſervations of the ingenious M. Cuſſon upon the febrifuge powers of the Æſculus hippocaſtanum, cannot be ſaid to increaſe our knowledge in that particular, yet they tend to ſupport the expectations of the ſucceſs which may be derived from the uſe of this bark in the cure of intermittent fevers. By its uſe, our author thinks the Peruvian bark may be almoſt entirely ſuperſeded; at leaſt, in his opinion, it has deſervedly the preference with regard to the poor.

The Æſculus hippoſtanum Linn. or horſe-cheſnut, is a plant indigenous in the north of Aſia, and was brought to Europe in 1550. It has however ſo acquired the habit of our plants, as to be generally reckoned a native of Europe. The verdure of its foliage, the ſhade it affords, the ſweetneſs and beauty of its flowers, were long the reaſons why it was enumerated in the liſt of trees deſerving culture on account of their elegance. Now, however, the medical and œconomical uſe of its fruit and bark are ſufficiently evident.

From

From the bark, an eſſential ſalt may be procured, alike in colour, ſhape, and properties, to that obtained from the Peruvian bark. Indeed, there is a ſtriking analogy between their conſtituent parts in every particular. On theſe accounts, it is not wonderful that the bark of the Horſe-cheſnut ſhould be uſeful in combating intermittent fevers, in reſtoring tone to debilitated patients, and in ſtopping the progreſs of mortification.

Our author, after having given an account of the beſt experiments and obſervations of others upon this ſubject, thus proceeds to his own.

" A proper opportunity having offered, for the firſt time, in the month of Auguſt 1779, I preſcribed the bark of the Æſculus hippocaſtanum. The patient was thirty years old, of a bilious temperament, and had already laboured under a tertian fever for ſix weeks. The ſucceſs of the trial anſwered my expectations; for, twelve drachms of this bark, taken in the intervals between three paroxyſms, effected a cure. Encouraged by the firſt ſucceſs of this bark, I have uſed it in all the caſes in which I thought it proper. I have been ſo lucky as

to

to be generally ſucceſsful; and during the many years in which I have made uſe of it, I have cured many caſes of intermittents, as completely as I could have done by the uſe of the Peruvian bark. The numerous cures performed by it at the public hoſpital, of which I am phyſician, force me to confeſs, that I have found in it thoſe powers which were thought peculiar to the Peruvian bark; and I am inclined to think, that it might be ſubſtituted in its place."

"In ſome caſes, I have ſeen it act as a purgative, and in others as a tonic. This ſerves but to ſtrengthen the analogy. Therefore I think that the name of Cinchona Europea would not be undeſervedly given to the Æſculus hippocaſtanum, ſince its bark deſerves, equally well with the Peruvian, to be enumerated among the febrifuges in our diſpenſatories. The bark of the Horſe-cheſnut requires cautions in its uſe, on the obſervance of which its efficacy in a great meaſure depends."

"There muſt be particular care taken to procure good bark. That ſeems beſt which is obtained from trees of a moderate ſize in the ſpring, when the tree abounds with juice. That too

too is to be preferred which is not deſtroyed by vermin, but ſound, ſolid, and dry. Experience likewiſe ſhews, that a proper preparation of the patient renders its uſe more efficacious. With this deſign, blood-letting, relaxants, and evacuants, are to be employed, according to the nature of the diſeaſe, and the ſtrength and conſtitution of the patient. Nor is this bark, he tells us, to be uſed, until the patient has had ſeveral paroxyſms, and until it be certain that the febrile matter is already partly formed by nature. At the end of this uſeful treatiſe, twelve caſes of fevers, cured by the uſe of this bark, are related; the firſt of which we ſhall tranſlate.

" Auriac, a ſtone-cutter, aged 30 years, of a pituitous temperament, had been already ſubject to paroxyſms of a tertian for ſix weeks, when he conſulted me in the month of March 1779. As he had uſed evacuants from the beginning, the bark was preſcribed to be taken on the third day after he had been purged, by my direction. And on the firſt day free from a paroxyſm, he was ordered to take a dram

of the powder, every four hours, to the extent of half an ounce.

" Next day, the paroxyſm was much milder, and he was almoſt entirely free from the cold fit. The remedy was repeated, the ſecond day free from a paroxyſm. The violence of the paroxyſm was now ſtill more broken, as the patient ſcarcely perceived it: he was entirely free from the cold fit, and had only very ſlight pains in his head, a ſmall degree of heat, and an almoſt inſenſible perſpiration. The third exhibition of the remedy, entirely freed him from every appearance of a paroxyſm; nor had he any retnrn of his complaint after he had drunk the decoction of this bark for one week."

IX.

IX.

Obſervations chirurgico-legales ſur un point important de la Juriſprudence Criminelle, lues à la ſcéance publique de l'Academie des Sciences de Dijon. Par *le* Profeſſeur Chauſſier. 8vo, A Dijon, 1790.—Vide *Commentarii de Rebus in Scientia Naturali et Medicina geſtis.* 8vo, Lipſiæ, *Vol. XXXIII.*

THE moſt ſevere ſtudy of the laws, the greateſt prudence and ſtricteſt integrity in a judge, are not always ſufficient to enable him to give a juſt ſentence. For caſes occur, which require a knowledge of other ſtudies, particularly ſuch as relate to diſeaſes, wounds, or the inveſtigation of the cauſes of death. Here the moſt attentive is eaſily deceived, unleſs he be experienced in the knowledge of the laws of animal organization, which can be obtained only by practice, and which want cannot be ſupplied by reaſon or judgement.

On this account, Profeſſor Chauſſier has publiſhed this work, which contains many obſervations, extremely uſeful in directing the opinion of a medical practitioner, whoſe aſſiſtance is required by a judge. For, by attention to theſe, errors may be with certainty avoided, into which even the moſt experienced obſervers might fall. Why? Is death always the immediate conſequence of a recent quarrel? May not the ſlighteſt contuſion, or moſt ſimple wound to appearance at firſt, afterwards degenerate? If this happen, ſuch are often followed by death, or by tedious and ſevere diſeaſes. Nor does it happen unfrequently, that the perſon who is wounded, ſpurred on by hatred, revenge, and his own intereſt, exaggerates the injury, and counterfeits pains and diſeaſes which he does not ſuffer. Nay, do not inſtances occur, of perſons guided by the baſeſt paſſions, that would expoſe themſelves raſhly to danger, endeavour to provoke an injury, gladly ſeize upon the ſlighteſt difference, to raiſe the moſt dreadful tumults, and even wound themſelves? Has not the malicious ſpirit of man gone ſo far, as to load with inſults, mutilate, deface, and mangle even the dead? Queſtions with reſpect to theſe,

are

are beſt explained by medical men. He alſo takes notice of the credit to be given to witneſſes; and points out many obvious faults in the anſwers of the ſworn ſurgeons, (chirurgi jurati). From this work we ſhall extract the following obſervations.

Whoever conſiders the very important neceſſity of the reſponſe of a ſurgeon, in criminal caſes, for eaſing the mind of the judge, for defending the life and character of the accuſed, and for preſerving that order on which public ſafety depends; whoever reflects upon how much care, attention, and induſtry, ſuch a reſponſe requires, will be eaſily convinced, that the province of giving it, ought to be aſſigned to the moſt deſerving, upright, and ſkilful; and that rules and cautions ſhould be preſcribed by the laws, by which the truth of theſe reſponſes may be examined, and their defects avoided, or, at leaſt, immediately diſcovered, that they may be removed. But it muſt be acknowledged, that it is far otherwiſe. Every where, the right of giving theſe reſponſes is diſpoſed of, or bought by money; and thus

it is often exerciſed by young and inexperienced practitioners.

At this time, when the French are modelling a new conſtitution, the illuſtrious Chauſſier propoſes the following three remedies, for the many inconveniencies often found in the anſwers of the ſworn ſurgeons, as they have been called.

1ſt, The ſurgeons called in, ſhould be obliged to follow one conſtant and immutable form or method, in making out their reſponſes. For inſtance, of deſcribing, according to the common and uſually received form, firſt, what happened before the viſitation; ſecondly, the ſtate of the wounded perſon; and, laſtly, what conſequences ſeem likely to follow.

2dly, The viſitation and examination of the wounded perſon ſhould be always before two witneſſes, according to the decree of the National Aſſembly, for the reformation of the criminal juriſprudence.

3dly, The reſponſes ſhould be always written in the place of viſitation. This rule has already been preſcribed by ſeveral decrees, which, though expreſs enough, are ſeldom obſerved: For cunning men can always find ſpecious reaſons for their ſubterfuges.

That

That this moſt uſeful, but much neglected part of the healing art may be reſtored to perfection, our author adviſes, that in all medical univerſities, an annual public courſe of lectures on medical or ſurgical juriſprudence, ſhould be given; and that no practitioner be allowed to give his evidence, until it be known that he has diligently attended theſe lectures, and has ſubjected himſelf to a public examination upon this moſt material ſubject. From theſe regulations he obſerves, it will ſoon happen, that the ſurgeons in France will be learned in the manner of giving reſponſes, and, in this particular, rival, in fame, the Germans.

At the end of this treatiſe, we find the following important articles propoſed.

1*ſt*, That the office of chirurgus, or medicus juratus, be aboliſhed.

2*d*, That the judge have a power of naming and chooſing thoſe who are moſt deſerving of being truſted, and who can beſt execute what is required.

3*d*, Nor is it leſs neceſſary that a general formula of anſwers be fixed, leſt various objects be confounded.

4*th*, That the wounded perſon be viſited always in the preſence of two appointed witneſſes.

5*th*, That when a body is to be examined or diſſected, beſides two ordinary witneſſes, a third be added, who is always to be taken from among the practical phyſicians.

6*th*, That the reſponſe be always written in the place of viſitation, in the preſence of the witneſſes, who ſhould ſign it.

7*th*, That the reſponſes be depoſited within twenty-four hours in the records (*greffe*) of the place, and ſhewn to the judge; and that an accurate copy be immediately ſent to the chamber of verification (*bureau de verification*).

8*th*, That in the metropolis of each province, a chamber of verification for the reſponſes of ſurgeons, be inſtituted.

9*th*, That the reaſons for the opinion of thoſe whoſe duty it is to give the verification, be written on the copy of the reſponſe; which is to be immediately ſent back to the judge.

10*th*, That if the reſponſe be diſapproved of by the chamber of verification, the judge

ſhall

ſhall cauſe a ſecond viſitation to be made by others; but if approved of, that it ſhall be admitted at the trial, as if endowed with the power of proving.

11*th*, That both in the faculty of law, and in the medical univerſities, a public courſe of medical juriſprudence, be appointed to be delivered.

12*th*, That no one be admitted as a medical practitioner, either for the town or country, unleſs he has attended theſe lectures, and been publicly examined on the ſubject.

X.

Examen chimique des Larmes et de l'Humeur des Narines, auquel on a joint de nouvelles conſiderations ſur quelques-unes des Maladies auxquelles ces Liqueurs donnent naiſſance. Par M. M. Fourcroy & Vauquelin. Vide *Journal de Phyſique. Tome XXXIX. Part. II. 1791, Octobre.*

THIS eſſay is introduced, with the following account of what has hitherto been written upon the tears.

The tears have been conſidered as an aqueous, limpid, ſaline liquid, which leaves almoſt no reſiduum upon evaporation. There has been hitherto no proper chemical analyſis of this fluid; indeed, it is extremely difficult to procure a ſufficient quantity for examination. Some obſervers have ſeen cryſtals formed in the tears; and they have given riſe to a kind of calculi, like the other fluids of the human body. Blaſius has ſeen them in the caruncula lachrymalis.

malis. Schoeper has found cryſtals adhering to the eye-lids after ophthalmia. Such is the ſum of the obſervations which Haller has given us, upon the nature of tears.

Nothing marks, more obviouſly, the abſolute want of the labours and reſearches of philoſophers, than this chaſm in a work, the fruit of the deepeſt erudition, which preſents to medical men the moſt complete collection of obſervations, and throws the greateſt light on the animal œconomy. This want of facts upon the nature of tears, was not the only motive which prompted us to attempt a work upon this liquor. We thought, that being collected, and remaining in organs always in contact with air, they might undergo alterations, which might be accurately aſcertained, and which might throw ſome light upon the functions of theſe organs. The unknown nature of the naſal mucus, its continual mixture with the tears, and the uſe attributed to theſe laſt, of diluting the mucus of the noſtrils, appeared to us to be worthy of a careful examination. This examination might lead to the knowledge of ſome of the diſeaſes of the eye-lids, lacrymal ducts, and naſal ſi-

nuſes.

nuſes. The ſequel will ſhew, that theſe motives were well founded.

In the *ſecond* ſection, an account is given of the means employed to procure the lacrymal and naſal fluids. It is well known, that it is almoſt impoſſible to obtain the fluid ſecreted from the lacrymal gland, alone, and ſeparated from the naſal mucus, with which it generally mixes itſelf: for this purpoſe, we required ſome of thoſe rare caſes where the ſecretion of the lacrymal gland is increaſed. Such an effect is the conſequence of the paſſions of joy and grief; but when under their influence, people do not eaſily ſubject themſelves to experiment. However, we have ſometimes uſed this expedient in procuring the lacrymal fluid.

Obſervation has remarked a lively ſympathy between the organs of ſmell and ſight, which depends upon their nervous, vaſcular, and membranous communications. If the membrane of the noſe be ſtimulated, either by acrid ſubſtances or mechanical irritation, a greater quantity of tears will flow than can be abſorbed by the puncta lacrymalia, or carried off

off by the naſal ducts, on account of the abundance and rapidity of their excretion.

Nature has offered us other means, more advantageous than thoſe already mentioned. Some individuals have their eyes ſo tender, that cold makes them water abundantly. Many people have been ſo obliging as to render us a ſervice, by carrying with them, when they expoſed themſelves to ſevere cold, a ſmall glaſs veſſel, in which they collected the tears as they fell.

In caſes where the lacrymal ducts are affected, the tears cannot take their courſe through the noſtrils, but are obliged to paſs over the under eye-lid, and run down the cheek. This has furniſhed us with the means of procuring the greateſt quantity of this fluid. Laſtly, we have alſo had opportunities of making experiments upon the tears of ſome, in whom the naſal ſac was affected only at its extremity; and in whom this fluid collected, could be eaſily drawn up, from time to time.

We have analized the mucus of the human noſe in many circumſtances.

1ſt, In a ſtate of health.

2d,

2*d*, At the commencement and end of that affection, called cold in the head.

3*d*, In great degrees of cold, when, by the ſudden impreſſion of the air, a clear liquor, more or leſs viſcous, flid down the noſe.

Having been often expoſed to the action of oxigenated muriatic acid, and having found that it occaſioned a running of the noſe, we have ſometimes made uſe of that expedient to procure the naſal mucus.

With regard to the Phyſical properties of the Tears, we have made the following obſervations:

I. The tears are clear and tranſparent like water; they have never ſeemed to have any very ſenſible ſmell; their taſte is always evidently ſaline; their ſpecific gravity has always appeared to us a little greater than that of diſtilled water, though the difference be hardly perceptible in ſmall quantities. They do not change the colour of an infuſion of turnſole, nor of paper coloured by it; but they give a green colour to paper ſtained with the juice of violets or mallows. This green colour is permanent, which ſhews that it is owing to a fixed alkali.

II.

II. Tears ſhewed no remarkable phænomena from the action of caloric; they boiled like other aqueous fluids, although the number of permanent bubles on their ſurface, ſhewed that they were of a mucilaginous nature. By continuing the action of the caloric, the water was almoſt entirely ſeparated, and there remained a dry matter of a yellowiſh colour, which was hardly 00.4 of the quantity of tears employed. The decompoſition of this fluid in cloſe veſſels, gave a little oil and water, while there remained a charcoal containing much ſaline matter.

III. Dry air robbed the tears gradually of their moiſture, and at length evaporated it completely. But as the ſpontaneous evaporation of the water was very ſlow, towards the end, cubical cryſtals were formed, ſurrounded by an animal mucilage. Theſe cryſtals, obtained ſeparate by means of alcohol, which diſſolved them without acting on the animal mucilage, preſented the ſame properties with the muriat of ſoda, or ſea-ſalt. Their ſolution, however, turned paper, ſtained with vegetable colours ſenſible to alkalies, to a green: but we ſhall find, that this was owing to an

alkaline matter contained, as well as ſea-ſalt, in the tears. In proportion as theſe phænomena take place in this fluid expoſed to air, it puts on a yellow colour while thickening: ſometimes it is greeniſh or bluiſh, according as the air, being more or leſs warm, requires a longer or ſhorter time to deprive it of its moiſture.

IV. Cold and hot water unite in all proportions with tears recently ſhed; but after that fluid has been expoſed to air, ſo long as to acquire conſiſtency and a yellow colour, it refuſes abſolutely to mix with water, and will remain ſuſpended in it, without appearing to change its nature; although the water in which thickened tears have remained, be capable of being made frothy by agitation, which ſhews, that it has diſſolved a portion of them. It is proper to remark here, that an animal matter, which was naturally ſoluble in water, has become gradually inſoluble, by having that fluid evaporated by the contact with air. This phænomenon, is analogous to what we have diſcovered and deſcribed in another place, of vegetable ſubſtances diſſolved in water, which become inſoluble

inſoluble by expoſure to air, and the abſorption of oxygen.

V. Alkalies unite very eaſily with tears, and give them more fluidity; they alſo diſſolve that fluid dried by air, and on which, water has almoſt no action. They ſeemed to have no other effect worth deſcribing.

VI. Of all the acids, the oxygenated muriatic acid alone, in its action upon tears, diſcovered any thing remarkable, or that deſerved to fix our attention. This acid, poured upon tears, coagulated them into white flakes, which became yellow, if a ſufficient quantity of the acid had been uſed. The flakes produced in this experiment, are not ſoluble in water, and are exactly ſimilar to tears thickened by the action of air. The acid loſes its particular odour, and all its remarkable properties. It is, therefore, by depriving the oxygenated muriatic acid of its oxygen, that the tears are coagulated, and become of a yellow colour. By comparing with theſe phænomena, what we have obſerved to happen to this fluid, while drying in atmoſpheric air, it ſeems evident, that the new properties which it acquires during deſiccation, are

owing to the ſame cauſe, the abſorption of oxygen.

The analogous reſults of theſe two experiments, induce us to think, that a ſimilar phænomenon takes place in this fluid, when confined for ſome time in the lower part of the lacrymal ſac, in thoſe who have this organ obſtructed. When the ſac has been diſtended ſome hours by the congeſtion of the tears, a gentle compreſſion, excited by the pain owing to the diſtenſion, cauſes the puncta lacrymalia to pour out a matter very thick, yellow, and perfectly inſoluble in water; whereas, this matter, frequently preſſed out from the lacrymal ducts, is as liquid as water, and eaſily combined with it. Indeed, the action of the oxygen, which tends to thicken the tears, is aided by a conſiderable evaporation; for, accurate experiments, made with the intention, prove, that four times more matter can be obtained from the lacrymal ſac, by emptying it every hour, than only at the end of four hours: there muſt be, then, a pretty rapid evaporation or filtration of the more liquid part of that fluid, down the noſtrils.

It is alſo owing to the ſame chemical agent, oxygen,

oxygen, that the formation of that ſubſtance, ſolid, yellow, and inſoluble in water, called gore of the eyes (*chaſſie*), is to be aſcribed.

The ſulphuric and muriatic acids, produced no change upon tears recently ſhed; but they cauſed a ſenſible effervescence with them, dried in air. The effervescence produced by the ſulphuric acid, is owing to a mixture of muriatic acid gas, and carbonic acid gas. That produced by the muriatic acid, is owing to the carbonic acid gas alone. This laſt, is alſo much leſs conſiderable, as there is but one ſubſtance decompoſed, while the ſulphuric acid decompoſes two. After the action of the muriatic acid, the only ſalt contained in the mucilage, is muriat of ſoda. Theſe two experiments prove, that the tears contain muriat of ſoda, and ſoda; this laſt is certainly in its cauſtic ſtate, ſince lime-water produced no precipitation in that fluid, when recent, although it made a ſolution of the product of tears, by ſpontaneous evaporation, muddy. M. Vauquelin has already ſhown, that he found cauſtic, or pure ſoda, in the human ſeminal liquor; and that, like the tears, that liquor expoſed to air, gradually abſorbed the carbonic acid.

The effects produced upon the tears by the action of alcohol, are next conſidered.

Alcohol, poured in ſufficient quantity upon the tears, decompoſes them, and precipitates from them the mucus, in the form of large white flakes. If the alcohol be evaporated, after having ſeparated the mucous precipitate, it leaves marks of muriat of ſoda, and of ſoda. This menſtruum might then ſerve to diſcover the proportion between the mucous and ſaline part of the tears.

The burning of the product of tears thickened by the air, has only pointed out to us the preſence of calcareous phoſphat: the phoſphat of ſoda is hardly perceptible. As to phoſphat of ammonia, it could not exiſt in it, as it contains pure ſoda, by which it would be inevitably decompoſed.

The reſult of theſe experiments, proves, that tears are a combination of a particular mucilage, which, after the water, conſtitutes the largeſt proportion of their bulk; of muriat of ſoda, which poſſeſſes the third place; of ſoda, which is next; and of the phoſphats of lime and of ſoda, which are very ſmall, and hardly perceptible.

In

In the fourth ſection, is given an account of the Mucus of the Noſe.

The fluid here treated of, is that liquid which is afforded very copiouſly by the membrana pituitaria, in the diſeaſe, commonly called, cold in the head, becauſe it can only be procured in ſufficient quantity in ſuch a caſe.

At the commencement of the diſeaſe, it is clear and tranſparent like water; its odour is ſcarcely ſenſible, and its taſte is ſaline, and ſlightly acrid. Hence it tickles and irritates, and gives riſe to ſneezing, as it exudes from the glands of the membrana pituitaria.

As, in this ſtate, it preſents us with almoſt the ſame properties with the tears, we will only take notice of a few ſlight diſtinctions we have obſerved.

Like the lacrymal fluid, it contains muriat of ſoda, ſoda, and ſome particles of phoſphat of lime, and of ſoda. At the end of colds of the head, and after the irritation of the membrana pituitaria has ceaſed, this fluid flows more ſlowly, and remains longer attached to the ſide of the naſal cavities. There it undergoes ſeveral alterations, of which, the reſults

have long been known, but whoſe cauſe has hitherto eſcaped the notice of phyſicians.

1*ſt*, The heat produced by the topical inflammation of the parts, thickens the fluid more quickly.

2*d*, The air, which paſſes in great quantity through the noſtrils, depoſites there a quantity of oxygen; and hence, the thick puriform conſiſtence, and yellow or greeniſh colour of this fluid.

3*d*, A portion of the carbonic acid, expired by the lungs, unites with the ſoda of the mucus of the noſe, and gives it the property of precipitating lime-water, and barytic ſalts.

It is thus, we imagine, that the matter which adheres to the windpipe and bronchiæ of thoſe labouring under cold of the breaſt, is thickened, and becomes yellow. The mucus of the noſe, when thickened, in general gets a deeper yellow colour than the tears in the lacrymal ſac, which is the natural conſequence of the cauſe of theſe changes; the mucus of the noſe being in continual contact with the air, while the tears are expoſed to it only as they paſs along the ſurface of the eye, to enter the puncta lacrymalia. Hence alſo, the

the mucus of the noſe gets more viſcoſity and tenacity than the tears, in conſequence of the change.

In order to avoid the objections which might be made to our experiments, on account of the mixture which happens of the tears, and mucus in the cavities of the noſe, we collected this laſt in a perſon whoſe lacrymal ducts were obſtructed at their lower part; and we found it perfectly ſimilar in its properties to the lacrymal fluid.

The diſeaſe produced in the noſe by the oxygenated muriatic acid, and its analogy with ſome natural diſeaſes of the naſal cavities, is next conſidered.

The naſal mucus, which we obtained by reſpiring the vapour of oxygenated muriatic acid, was exactly of the ſame nature with that excreted in colds of the head, except that the firſt portions did not contain pure ſoda, and did not turn vegetable blues green. This analogy is not wonderful, as there is no difference between the natural affections of the membranes of the noſe, and the ſymptoms which the action of that acid gives riſe to in theſe parts. The firſt ef-

fect of the vapour of the oxygenated muriatic acid, is to cauſe a ſenſe of ſtricture, and inſupportable pain in the frontal ſinuſes, and ſtill more in the poſterior naſal ſinuſes: ſneezing ſoon follows, and preſently there is an abundant effuſion of a liquid as clear as cryſtal. The ſneezings are ſometimes ſo quickly repeated, that an abundant ſweat covers the body of the perſon who experiences this effect from the acid. M. Vauquelin has ſometimes had his breaſt ſo tired, that he dreaded hæmoptyſis; but, although very often expoſed to the action of this acid, he has never ſpit up blood. The effuſion of the naſal mucus has been ſometimes ſo copious in his caſe, that he has collected two ounces in half an hour. After the moſt violent ſymptoms of this kind of artificial flux, from the membranes of the noſe and bottom of the throat, has ceaſed, there ſtill remains for ſeveral hours, a tightneſs, or a kind of inſupportable ſtiffneſs, in all the parts which were ſubjected to the action of the oxygenated muriatic acid. When the running has ſtopped entirely, the canals and ſinuſes of the noſe are ſtuffed; they do not allow the paſſage of air for reſpiration;

ſpiration; and a ſenſation, as if much affected with cold in the head, is felt.

The mucus is ſo thickened, that it is impoſſible to extract it by the action of blowing the noſe, until it be (if we may ſay ſo) ripe: then it detaches itſelf in conſiderable maſſes, very thick, of a greeniſh yellow colour. If the vapour of the acid paſſed into the windpipe, or if its effects ſpread by degrees to that organ, the conſequence was, a cold of the breaſt, with regular and conſtant periods. An acrid heat was felt in the breaſt; a hard cough laſted ſeveral days; the voice became hoarſe; the appetite diminiſhed; and the food ſeemed to want ſavour: nay, there was often a pretty ſmart fever, and a dull headach, which ſtupified the ſenſes, and put the perſon who tried the experiment, in a very diſagreeable ſituation for ſeveral days.

After theſe facts, there can be no doubt of the oxygen of the muriatic acid having produced here an artificial cold, ſince the vapour of other acids, which did not contain the oxygen in a ſtate ſo detached, did not produce the ſame effects. The condenſed oxygen ſeemed to irritate the glands

of

of the membrane of the noſe, by cauſing them to contract; while, at the ſame time, a greater quantity of fluid than ordinary is expreſſed from them. Is there not, then, an analogy between the cauſe of theſe artificial colds of the head and breaſt, and that which generally gives riſe to natural colds? May it not, in many caſes, be aſcribed to the oxygen in the atmoſphere being too much condenſed by ſevere and penetrating cold? When expoſed to very dry cold air, does not a conſtriction take place in the membranes which line the noſe and windpipe? May we not aſcribe to the ſame cauſe, the irritation of the fibres for the ſecretion of mucus, the extraordinary flow of mucus, and the thickening which takes place when that fluid begins to be leſs abundant?

An analogy, ſtriking to thoſe who are ſubject to that diſeaſe, and who are violently affected by the oxygenated muriatic acid, between the ſenſations produced by cold and by this acid, and an almoſt perfect identity of the ſymptoms in the two diſeaſes, add, without doubt, great weight to this opinion: but we muſt grant, that, in natural colds, the cauſes are often complicated.

We

The ſame ingenious authors have promiſed to proſecute their reſearches into the nature of theſe fluids, and to enter more into the detail of this ſubject, in a Memoir upon the cauſes and progreſs of colds, or rheums in the head, and of ſeveral diſeaſes of the breaſt.

XI.

XI.

Pharmacopœia Collegii Regii Medicorum Edinburgenſis. 8vo, 1792.

THE College of Phyſicians of Edinburgh, have followed, with reſpect to their Pharmacopœia, a plan different from that of the London College. The latter allowed near half a century to elapſe between the publication of the laſt edition of their Pharmacopœia, which appeared in the year 1788, and that which immediately preceded it, which was publiſhed as early as the year 1746. The Edinburgh College, on the other hand, have made it a rule, to publiſh a new edition of their Pharmacopœia, every ten or twelve years. This plan, we are inclined to think, is in many reſpects preferable to the other. For, by this means, the ſucceſſive improvements gradually made in the practical part of medicine, and thoſe ſciences moſt nearly connected with it, are

are ſooner introduced into eſtabliſhed practice, and recommended by reſpectable authority. But, beſides this, when the publication of different editions takes place at ſhort intervals, fewer changes become neceſſary, and conſequently they are more readily and more eaſily adopted. For alterations may with eaſe be effected in a gradual manner, which cannot be accompliſhed at once, without very great trouble. Even the interval between publications which has been allowed to elapſe by the Edinburgh College, ſeems to be too long. And perhaps it would be an improvement of medical police, if the Britiſh Legiſlature were to direct the Colleges of Phyſicians under their juriſdiction, which may be conſidered as councils of health for the kingdom, to publiſh a new edition of their Pharmacopœia, every five years. For, by this means, uſeful alterations would neceſſarily be ſooner introduced into common practice.

To this eighth edition of the Edinburgh Pharmacopœia, an addreſs to the reader is prefixed, which firſt appeared at the beginning of their Pharmacopœia, publiſhed in 1722, and which was reprinted in ſeveral ſucceeding editions.

editions. The intention, of again reprinting it, is probably to ſhew apothecaries the authority poſſeſſed by the College of Phyſicians of Edinburgh, founded on an act of the Parliament of Scotland, for regulating the practice of Pharmacy in that part of Britain.

In an additional preface, peculiar to the preſent edition, the reader is informed, that, in the work now preſented to the public, the College have chiefly followed the ſeventh edition of their Pharmacopœia, never deviating from it, without ſtrong reaſons. From an attentive compariſon, however, of the two, it will ſoon appear to the diſcerning reader, that not a few changes have been thought neceſſary.

In the liſt of the Materia Medica, the College, in place of referring, as formerly, to an old edition of the Species plantarum of Linnæus, have, in general, referred to the edition of the Syſtema vegetabilium of that illuſtrious author, publiſhed by the late celebrated Profeſſor Murray of Gottingen, which contains not only all the improvements made by Linnæus himſelf during his lifetime, but likewiſe moſt of the diſcoveries of ſucceeding botaniſts. But where particular articles have been more minutely

minutely deſcribed by eminent botaniſts, in publications of ſtill later date, ſuch as, the Geoffræa inermis by Dr Wright, the Styrax Benzoe by Dr Dryander, &c. theſe deſcriptions are quoted from the Acta Londinenſia, Holmienſia, and other works of credit.

To the preſent liſt of the Materia Medica, ſeveral articles, which did not enter the laſt, ſuch as the Anguſtura, Arſenicum, Barytes, Cajaputa, Lactuca viroſa, Nicotiana and Spongia, are added. A very few, as the Cinnabaris factitia, and Fæniculum vulgare, have been thrown out. The Cinnamomum, as the reader may readily conclude, from obſerving that it enters into various compoſitions in the after parts of the work, has been accidentally omitted. Several names, formerly affixed to articles in this liſt, which were derived from erroneous ideas reſpecting the nature of theſe ſubſtances, and which, of courſe, tended to miſlead, have been altered. Thus, the name Catechu, is ſubſtituted for *Terra* japonica, the article being in reality a vegetable extract; *Lapilli* cancrorum, is employed for *Oculi* cancrorum; and *Sevum* ceti, for *Sperma* ceti.

On

On the ſame principles, the removal, viz. of abſurd names, and the introduction of ſuch as will convey a juſt idea of the nature of the ſubſtance employed, more numerous changes have taken place among the names uſed in the ſecond part of this work, that, viz. which reſpects the Medicamenta præparata et compoſita. It has, in general, been the aim of the College, to name every article, not from its ſuppoſed virtues, but from thoſe parts on which its activity principally depends. Thus, in place of the terms, Elixir Proprietatis, Stomachicum, Traumaticum, Paregoricum, Sacrum, Salutis, &c. they have employed Tinctura Aloes cum Myrrha, Gentianæ compoſita, Benzoini compoſita, Opii ammoniata, Rhei compoſita, Sennæ compoſita, &c. Among the chemical preparations, there was ſtill greater latitude for a change being made with advantage. Thus, the diſtilled waters are no longer confounded with the ſpirits obtained from the ſame articles; and, of courſe, the term Aqua ſpirituoſa, is entirely rejected. A ſimilar ſyſtem of change has been adopted through the ſaline and metallic preparations; and from the names now introduced, thoſe who have even but

but a very ſlight acquaintance with chemiſtry, can be at no loſs in forming a juſt idea of the nature and compoſition of every article.

In this important change of nomenclature, it muſt, indeed, be allowed, that the Edinburgh College have only followed the example of that of London; and it ſeems to have been their view, to render the medical language for preſcription, in different parts of Britain, not diſſimilar. But the Edinburgh College have, by no means, implicitly followed that of London, in their change of names. Thus, for expreſſing the foſſile alkali, the London College have employed the term Natron, a word of ambiguous meaning among the ancients, and approaching very nearly to the term Nitrum, with which, it has often been confounded. To avoid the inconvenience ariſing from theſe ſources, the Edinburgh College, for expreſſing the foſſile alkali, have employed the term Soda; a word ſanctioned, at leaſt, by the authority of the moſt eminent modern chemiſts. For expreſſing the vegetable alkali, the London College have employed the term Kali; a word not only exceptionable, from its being indeclinable, but from its

being already appropriated by the Botaniſts, to a particular plant, from the aſhes of which, the foſſile alkali is very frequently obtained. For theſe reaſons, the Edinburgh College thought another term neceſſary; and have employed that of Lixiva; a word ſanctioned by the authority of Pliny, Columella, and ſome other diſtinguiſhed ancients. Theſe changes neceſſarily lead to ſome difference in the names of the compound ſalts. Thus, what was formerly known by the name of diuretic ſalt, or regenerated tartar, is the Kali acetatum of the one college, and the Lixiva acetata, of the other. The purging ſalt, which formerly derived its name from Glauber the chemiſt, is the Natron vitriolatum of the one, the Soda vitriolata of the other. From this variety, however, hardly any difficulty can ariſe to any one, qualified for being employed in the ſhop of an apothecary. And from the new names employed by both Colleges, ſome knowledge will neceſſarily be obtained of the nature of the article. We cannot help thinking, however, that, in theſe particulars, the nomenclature adopted by the Edinburgh College, is, upon the whole, preferable.

To

To prevent, as far as poſſible, any miſtake or inconvenience from the new names, they have not only ſubjoined to this edition of their Pharmacopœia, an Index nominum mutatorum, but have alſo, in the text, reprinted the vulgar as well as the proper names. By this means, a very ſlight degree of attention only, will be ſufficient to enable any one to acquire a full acquaintance with their new nomenclature.

But, beſides the change of names, the Edinburgh College, in the preſent edition of their Pharmacopœia, have, in almoſt every ſection of that part of their work, which treats of the Medicamenta præparata et compoſita, made conſiderable improvements, by the alteration of ſome compoſitions, and the addition of others.

Under the head of the Præparationes ſimpliciores, they have introduced an Opium purificatum, an article highly neceſſary for avoiding the uncertainty and inconvenience which often reſults, from various foreign matters which opium frequently contains, in the ſtate in which it is imported to us. They have added Conſerva Cynoſbati, an article frequently employed as a vehicle for more active ſub-

ſtances; and Succus ſpiſſatus lactucæ viroſa, an article repreſented by ſome accurate obſervers, as poſſeſſing very active powers. Among the Infuſions, they have introduced an infuſum catechu, a much more elegant formula for the exhibition of that vegetable aſtringent, than the diffuſion of the electuarium japonicum, as it was formerly called, in water. For, by this means, the medicine is entirely freed from thoſe impurities, often attached in ſuch quantities to the extractum catechu, as to lead to its being miſtaken for an earth.

To the Decoctions ſeveral are added, as the Decoctum Cinchonæ, Geoffrææ, Mezerei and Sarſaparillæ. Theſe, indeed, are extemporaneous articles, which cannot be kept ready prepared in the ſhop of the apothecary: and the ſtrength of decoctions of theſe articles, muſt often be accommodated to the circumſtances of the caſe. But, at the ſame time, no inconvenience can ariſe, and ſome benefit may be obtained, from there being a fixed formula, to which a practitioner may have recourſe when he thinks neceſſary.

An alteration is made in the preparation of the Syrupus Limonum, with the view of rendering

rendering it a more agreeable, and of the Syrupus papaverum, with the view of rendering it a more ſteady, medicine. The Vinum antimoniale of the laſt edition, is expunged, as being much more precarious, in point of ſtrength, than the Vinum antimonii tartariſati, which anſwers the ſame purpoſes; and the Vinum millepedatum, is left out, as being an uſeleſs article. But a Vinum nicotianæ, is introduced, which is one of the beſt formulæ under which that active article can be exhibited, when intended to act as a diuretic. A formula is introduced for an Acetum aromaticum; an article which may be of conſiderable uſe, where vinegar is employed for counteracting contagion; and which may be conſidered as an elegant reformation of what was formerly known under the name of Thieves vinegar, an article celebrated even againſt the contagion of the plague.

The Tinctura ſaturnina is omitted, as being, in reality, in the mode in which it was directed to be made, a preparation rather of iron than of lead, as was intended. A Tinctura Colombæ has been added, as being an elegant and advantageous form for exhibiting

that uſeful article in many different caſes. A conſiderable alteration is made in the ſtrength of the Tinctura opii, that the Liquid Laudanum, as it is called, prepared in London and in Edinburgh, may not differ ſo much in point of ſtrength, as was formerly the caſe. But although the Edinburgh College now direct only one part of opium to twelve of menſtruum, in place of one to nine, their former proportion; yet the difference of ſtrength is leſs conſiderable than might at firſt be imagined, as the Tincture is now directed to be prepared with purified opium. And by this alteration, the medicine will unqueſtionably be more ſteady than when prepared with opium, containing very different proportions of foreign matter.

Among the ſaline preparations, the Edinburgh College have introduced a Soda Phoſphorata. This new purging ſalt, which, as may be inferred from the name, is a compoſition of the fixed foſſile alkali, with the Phoſphoric acid, and therefore is nearly allied to the Soda vitriolata, or Glauber's ſalt, and to the Soda tartariſata or Rochelle ſalt, has now, we believe, for the firſt time, a place in any

pharmacopœia,

pharmacopœia. For the invention of this compoſition, and its introduction into the practice of medicine, the public are indebted to that ingenious phyſician, and able chemiſt, Dr George Pearſon of London. It may certainly be conſidered as an important addition to the ſhops of the apothecaries. Although it cannot be repreſented as equally adapted to every caſe, and to every conſtitution; yet it is, we think, upon the whole, preferable to any of the purging ſalts yet introduced into the practice of medicine. For, when taken in a ſufficient quantity of veal broth, beef tea, or any ſimilar fluid, it gives no more taſte than would ariſe from a proper proportion of common culinary ſalt; and, at the ſame time, operates freely, without gripes, or any other uneaſineſs, to the patient.

Under the head of Mercurial preparations, the Edinburgh College have now, for the firſt time, given a place to a Hydrargyrus acetatus, which, as the name imports, conſiſts of mercury brought to a ſaline ſtate by means of the acetous acid. It contains, therefore, the ſame conſtituent parts with a celebrated arcanum, which has long been vended under the

name of Keyſer's pill. And although the mode of preparation here directed, be much more ſimple than that publiſhed ſeveral years ago, by authority of the French Government, after the ſecret had been purchaſed from Mr Keyſer, yet there cannot be a doubt, that this formula furniſhes a medicine, in no reſpect inferior to the pills prepared by Mr Keyſer himſelf.

Another new mercurial, introduced into the preſent edition of the Edinburgh Pharmacopœia, is the Hydrargyrus muriatus præcipitatus. By this proceſs, that article, long known in the ſhops by the name of Calomel, the Hydrargyrus muriatus mitis, as it is now ſtyled, is obtained in the liquid way. And it poſſeſſes not a few advantages over that formed from ſublimation. For here, there is no riſk of ſuperabundant acid; and, by the mode of preparation, it is at once obtained under the form of a ſubtile powder, without the trouble of levigation, which is required to be performed with very great attention, where Calomel is prepared in the ordinary way. Although, therefore, the preparations of mercury have already, perhaps, been multiplied much farther than is neceſſary, as will appear from the

tables

tables of mercurials introduced into different chemical works; yet, to the ſelection which the Edinburgh pharmacopœia contained, theſe two may be conſidered as no unimportant addition.

The method now adopted by the Edinburgh College, for the preparation of the Antimonium muriatum, formerly ſtyled the Butyrum antimonii, or Cauſticum antimoniale, is a conſiderable improvement of that which was directed in laſt edition of their Pharmacopœia. And by the proceſs now recommended, this article can be made at much leſs expence; a circumſtance the rather deſirable, becauſe it is from the Antimonium muriatum, that the Edinburgh College direct the Antimonium tartariſatum, or Tartar emetic, as it is commonly called, the moſt common, and moſt uſeful of all the antimonials to be prepared. And there is reaſon to believe, that Tartar emetic, prepared from the Antimonium muriatum, is a more uniform and ſteady medicine, than when it is made, either with the Vitrum antimonii, formerly uſed by the Edinburgh College, or with the Crocus antimonii, now directed by that of London.

A new antimonial is introduced into the preſent edition of the Edinburgh Pharmacopœia, under the title of Antimonium Calcareophoſphoratum. For this, as well as the Soda phoſphorata, the publick are indebted to Dr Pearſon. By a very ingenious and judicious analyſis, publiſhed in the Philoſophical Tranſactions, Dr Pearſon has demonſtrated, that this article, which has alſo a place in the London Pharmacopœia, under the title of Pulvis antimonialis, is preciſely the ſame with that which has been ſo long celebrated under the name of Dr James's Fever powder. And, although experience has now demonſtrated, that this fever powder by no means poſſeſſes thoſe extraordinary virtues which were once attributed to it; yet it may juſtly be conſidered as well deſerving a place in our Pharmacopœias.

On the powders, electuaries, and pills, few changes have been made; and the ſame ſyſtem, as formerly, is adopted with regard to the ointments, liniments, cerates and plaſters, by introducing a Linimentum, Unguentum, Ceratum et Emplaſtrum ſimplex, which ſerve as a baſis for all other compoſitions of this kind. But the laſt formula in the preſent Pharmacopœia,

pœia, the Emplaſtrum cantharidum, or common bliſtering plaſter, is conſiderably improved by the ſubſtitution of ſheep ſuet, for hogs lard, which was directed in the former edition. By this change, the plaſter becomes more adheſive, and much leſs apt to melt from the heat of the body; while it ſtill continues ſufficiently ſoft to admit of being ſpread, without having recourſe to a hot iron, by which the flies are in danger of being burnt.

To this edition of the Edinburgh Pharmacopœia, beſides the indexes already referred to, is annexed a table, ſimilar to that in the London, and ſeveral foreign Pharmacopœias, pointing out the quantity of opium, antimony, and mercury, entering a determined quantity of the different compoſitions. The reader is alſo informed, by an advertiſement ſubjoined to the work, that, on the recommendation of the College of Phyſicians, glaſs meaſures for wine, water, and watery fluids, accommodated to the Troy weight, and phials of a particular ſhape, intended to be appropriated to Laudanum only, are made by the Edinburgh Glaſs-houſe company, and ſold by the principal druggiſts and apothecaries in Edinburgh.

From

From the employment of theſe articles, which have never hitherto been introduced into the ſhops, many conveniences muſt ariſe, as tending to facilitate the buſineſs of the apothecary. The London College, indeed, for obtaining that facility in compoſition which meaſuring affords, have, throughout their Pharmacopœia, in general directed the quantity of fluids entering compoſitions to be determined by meaſure; and accordingly, in every formula, they have ſubjoined the letters P and M, to denote whether the article is to be taken *pondere* or *menſura*. But it need not be obſerved, that the employment, in the ſame receipt, of the terms pounds and ounces, denoting different quantities of matter, muſt be productive of many inconveniences; and that, in moſt inſtances, where the quantity of the ſubſtance acted upon is determined by Troy weight, and that of the menſtruum by Avoirdupois weight, a very tedious, and often a very difficult calculation will be neceſſary, for aſcertaining the proportion which the one bears to the other. But, by poſſeſſing proper meaſures, accommodated to the Troy weight, all this inconvenience is avoided; and from theſe meaſures being

ing made of glaſs, not only greater cleanlineſs, but many other advantages alſo, may be obtained. Such meaſures have long been employed by the chemiſts; and may, at leaſt, with equal facility and advantage, be introduced into the ſhops of the apothecaries.

From appropriating to Laudanum only, phials of a particular ſhape and ſtructure, many advantages may be obtained. By this means, it will hardly be poſſible to employ, by miſtake, a phial containing Laudanum, for one with any other fluid of nearly the ſame colour; and thus the future occurrence of thoſe unfortunate and melancholy accidents, which have ſometimes ariſen from inattention, will be prevented. But, beſides this, when it is conſidered that the doſe of Laudanum is generally limited by the number of drops, and that the ſize of a drop is much varied by the ſhape of the mouth of the phial, it is evident, that it is only from having phials of the ſame ſhape in different ſhops, that any uniformity in doſe can be obtained. For theſe reaſons, the Edinburgh College have recommended, that the phials appropriated to Laudanum, in the ſhops of all the apothecaries, ſhould not only be of a

peculiar

peculiar figure, but ſhould alſo be as nearly as poſſible of the ſame ſhape, and the ſame thickneſs of lip.

In all theſe different particulars which have been pointed out, the preſent edition of the Edinburgh Pharmacopœia muſt appear to be an attempt towards progreſſive reformation; and we hope, that it may at leaſt tend ſomewhat towards the gradual improvement of the healing art.

XII.

XII.

Nouveau Plan de Conſtitution, pour la Médecine en France. Vide *Hiſtoire de la Société Royale de Médecine, Années* 1777-8. 4to, Paris, 1790.

THIS elaborate production, the work of a Committee of the Royal Society of Medicine at Paris, may juſtly be conſidered as, on many accounts, claiming the moſt ſerious attention from every medical practitioner. We are indeed, of opinion, that the plan here propoſed for the inſtruction of thoſe who are to practiſe medicine, and for the improvement of the art itſelf, will never be fully carried into execution in any country. And we alſo think, that, in not a few particulars, it is liable to very great objections. Yet we believe, that there is no ſchool of medicine at preſent in exiſtence, which may not be materially improved, by adopting ſome things here ſuggeſted. And we

we are perſuaded, that there is no practitioner of medicine, anxious either to increaſe his own knowledge, or to advance the progreſs of the healing art, who may not receive eſſential information from an attentive peruſal of it. As any analyſis or abridgment would be but an inadequate method of obtaining theſe benefits, we ſhall here preſent our readers with a complete tranſlation of this important article, omitting only a few ſections, which, to us, do not ſeem to be immediately connected with the improvement of medical education or practice.

INTRODUCTION.

General Views on the Reform which the Healing Art requires, and on the neceſſity of again reducing it to that ſimple ſtate in which it was in the time of Hippocrates, by uniting the practice of Phyſic with that of Surgery.

As public inſtruction is one of the principal foundations on which public liberty ſhould reſt, the numerous alterations in that part of Government, acknowledged to be neceſ-

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ſary, cannot be too ſpeedily accompliſhed. The moſt eſſential departments of literary education have been neglected; and, with reſpect to medicine, the Commiſſioners who have drawn up the following plan, have facts to repreſent, which appear to them to merit the greateſt attention from the legiſlators of France.

They can with truth ſay, that there does not exiſt, within the kingdom of France, a ſingle ſchool of medicine, in which the fundamental principles of the healing art are taught to their full extent; that the medical profeſſion is perhaps the only one, where the practitioner, formed by his own experience, does not ſerve as a guide to the ſtudent; that to become inſtructed by his own proper errors, is the only reſource for the acquiſition of knowledge, which is left for the young phyſician; that, in conſequence of eaſy, and almoſt nominal examinations, the number of ignorant phyſicians and greedy quacks, is ſo much multiplied, that the fortune and health of the citizens, are every where liable to become their prey; that this numerous body perſecutes with violence thoſe who act differently from its members;

and that the public has but two often ſhewn itſelf obedient to its dictates; that the inhabitants of the country, ſtill more unfortunate than thoſe of the towns, affected with ruinous epidemics, have either remained without aſſiſtance, or been almoſt always conſigned to the care of thoſe whom their inexperience has rendered an additional ſcourge; that the medicines which are diſtributed among the people, faulty in their compoſition, and adulterated by improper mixtures, may be conſidered as ſo many poiſons. They may add, that the healing art, practiſed by two claſſes of men, almoſt always enemies or rivals, has but too often proved fatal to patients concerning whom their diſputes have originated. It will therefore appear neceſſary to reform ſo many evils, and to put an end to the diſſenſions between Phyſicians and Surgeons.

It may perhaps be neceſſary to detail theſe important truths more particularly, that they may be better perceived.

When the preſent mode of teaching the healing art is attentively conſidered, it can no longer be doubted that it is very imperfect.

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For, in fact, little can be expected from ſome years of ſtudy, paſſed in hearing or reading obſervations introductory to the practice of medicine, formed ſolely of dry and unintereſting definitions and diviſions. What can be expected from ſchools, where neither Anatomy, nor the art of Diſſection, nor Botany, nor Medical chemiſtry in its full extent, nor Pharmacy, nor the art of Preſcribing, nor Noſology, nor the hiſtory of Medicine, nor the hiſtory of Diſeaſes, are taught; where not a word is ſaid on the public duties of a phyſician; where no one has an opportunity of practiſing at the bedſide of the patient, and from which, in ſhort, the ſtudents depart, without having acquired any of that knowledge which a practitioner of the healing art ought to poſſeſs? When the mode of teaching medicine is ſo foreign to the intended purpoſe, the Profeſſors would act in contradiction to themſelves, if they were ſevere in their examinations. Hence all thoſe who offer themſelves as candidates for degrees, are generally admitted to that honour. The theſis is defended by the Profeſſor, while the candidate preſerves a profound ſilence; and it will ſcarcely be believed,

that to ſuch phyſicians, inſtructed in ſo inadequate a manner, and examined ſo ſlightly, the moſt ſacred rights over the lives of the citizens are intruſted.

It is therefore highly neceſſary, that the young practitioner of the healing art, ſhould endeavour to ſupply the deficiencies of his education by reading. But, whom has he to direct him in the choice of books? In a ſcience compoſed of ſo many other ſciences, who can point out what ought to be borrowed from one, and added to the other? The moſt ſenſible young practitioners obſerve attentively for a long time before they act, by which they do not at leaſt counteract nature; but, an experienced guide, would lead forward him who deliberates. It would be of great importance for the young practitioner, to be allowed to accompany an experienced phyſician in his viſits at the bedſide; but he is alſo deprived of this mode of inſtruction; and, in ſhort, no darkneſs can be more profound, than that by which he is for a long time ſurrounded.

If the practice of the healing art is ever attended with difficulties, it muſt be particularly ſo, when, during public calamities, it is direct-

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ed towards the preſervation of a great number of people collected together. But there is no ſchool, where the mode of affording aſſiſtance, when an hoſpital, city, or diſtrict, is attacked with an epidemic, is taught. Phyſicians for the country are nowhere educated, although the education of ſuch ought to be very different from that of phyſicians of univerſities and great cities; for they muſt learn the healing art, detached from every ornament, and reduced to thoſe principles which are really uſeful, and which are of the greateſt importance.

When the country, which ought to be an object of much attention, ſince it is the ſource of riches, is examined, it is found to contain phyſicians without experience, ſurgeons without knowledge, and quacks without honeſty. It may therefore be doubted, whether, thus taught, and thus practiſed, Medicine can be conſidered as an uſeful ſcience, and whether it deſerves to be ſtyled the *Healing Art*.

Beſides, the contraſt between the pretenſions of thoſe who have acquired or uſurped the title to practiſe medicine, is very conſiderable. Some of the Faculties diſtribute two kinds of licences, the one for practiſing in the

country only, the other in cities; and, for the latter of theſe, more ſtudy is neceſſary, and more money is required. Others oblige the young phyſicians to reſide for ſeveral years in the country, or in the ſuburbs, before they can be permitted to practiſe in a city. Some phyſicians are allowed to practiſe in ſmall towns, who have no right to ſuch privileges in large cities. In ſhort, one would imagine, by ſuch extraordinary regulations, that theſe places are not inhabited by the human race. And, beſides, what ſhould be thought of thoſe diſtinctions of Licenciate, Doctor, Fellow, Regent, and not Regent, by all which a right of practiſing the healing art is underſtood, but, by which, certain unintelligible privileges are refuſed, which appear to be valued more than thoſe circumſtances which affect, in the moſt material degree, the lives of the citizens?

There is, independent of the Faculties, a claſs of men, whom the public engages in the practice of phyſic, although, at firſt ſight, they ſeem to be quite foreign to the Faculties, and are not in the ſmalleſt degree licenſed by their ſtatutes: theſe are the ſurgeons. Several of them

them, after having practiſed phyſic for a long time, have, it muſt be allowed, at laſt been able to learn that art. But, ſince the moſt urgent reaſons induce them to practiſe it, the nation is very much intereſted that they ſhould ſtudy it; and hence ought to oblige them to do ſo. It is therefore no longer merely expedient, but highly juſt, and abſolutely neceſſary, that, for the future, every ſurgeon ſhall be a phyſician.

In order that this new arrangement be productive of the expected advantages, in the firſt place, the great number of perſons who have not originally had proper education, (without which the knowledge of the art cannot be acquired), muſt be prevented from exerciſing the important functions of ſurgeons; and then it will be neceſſary, not merely to approximate, but to reunite, and to mingle together under the ſame roof, and in the ſame ſchool, all the children of one family, too long divided among themſelves. All diviſion of intereſt ought to ceaſe; and every one ſhould, on the ſame terms, be allowed the ſame hopes, and the ſame privileges. It certainly cannot be denied, that ſurgery has always been regarded as a part of medicine; and it muſt be granted, that, from

the firſt leſſon of theory, to that where the means of cure are pointed out, the education of phyſicians and ſurgeons has been conducted on the ſame principles. If this be really the caſe, no good reaſon can be alleged, why they ſhould not both be taught in common; why the branches of a tree, which is weakened by being torn, ſhould be ſeparated from the very root; why there ſhould be two diſtinct orders of colleges; or why two academies. A ſolemn feſtival ought to unite them together. In that event, the largeſt amphitheatres will with difficulty contain the ſtudents of medicine and ſurgery; the pupils of both will contend for the various places of employment in the public laboratories and hoſpitals, by means of induſtry and ſtudy; and the public, fatigued for ſo long a time by their diſputes, will at laſt reap the advantages of that concord, which ought to unite them for ever.

By thus reſtoring ſurgery to medicine, and medicine to ſurgery, the moderns will follow more cloſely the laws of nature, from which they have improperly deviated ſince the time of the ancients. In the ſchools of Cos, Smyrna,

Smyrna, and Alexandria, all the phyſicians were ſurgeons. The treatiſes of Hippocrates on ſurgery, are reckoned amongſt the beſt of his works. Galen wrote on the ſame art, and practiſed it with ſucceſs. In the time of Celſus, medicine was divided into three parts, the firſt of which comprehended the treatment of Internal diſeaſes; the ſecond, that of External ones; and the third part reſpected Dietetics, the knowledge of which is as neceſſary to ſurgeons as to phyſicians. In the time of Ætius, the phyſicians ſtill practiſed ſurgery. This fortunate union of the two ſciences, which ſhould never have been interrupted, ceaſed when, on the decline of the ſchools of the Empire, Juſtinian withdrew the revenues of the Chairs, to beſtow them on the Church.

The eccleſiaſtics then became the depoſitaries of all that was known in medicine, as of every other branch of knowledge; for they alone were capable of acquiring learning and ſciences. But religious motives made them imagine, that they ought to abſtain from the ſtudy of anatomy and ſurgery. The former of theſe arts became forgotten, and the practice of the latter, reduced to a very ſmall number

number of operations, was intruſted to inferior people; and medicine, ſuch as it was, taught in the moſt celebrated Colleges of Bagdad, Cordoué, &c. was a ſcience of erudition, which conſiſted merely of repeating what had been already ſaid. The ſciences having at laſt been brought over to Italy, the univerſities of Bologna and of Padua, that of Montpellier, and afterwards that of Paris, began in the fourteenth century to teach anatomy; and ſurgery, ſtudied by laymen, has ſince that time been gradually improved, eſpecially in France, inſomuch, that other nations have become jealous of it on that account.

Boerhaave has given a juſt idea of that ſcience, by ſtyling it a kind of medicine, which exhibits externally, the exact picture of the diſeaſes which attack the viſcera internally; and which, conſequently, ought to form the firſt ſubject of the ſtudy of phyſicians. But it is alſo neceſſary, that the ſurgeons ſhould ſtudy medicine; for there is ſcarcely any diſeaſe, even of the claſs of thoſe called external or chirurgical diſeaſes, which does not affect the general ſyſtem, and, in the treatment of which, the

the ſurgeon can confine himſelf ſolely to the means furniſhed by his own proper art. But, however well diſpoſed he may be to do ſo, it is not poſſible that he can call a phyſician to every patient. It is therefore only in dangerous caſes, that people expect he ſhould do ſo; in every other caſe, he exerciſes, in fact, without challenge, the two powers: hence it follows, that the phyſician and ſurgeon ought to be well acquainted with both the departments which each do profeſs, or rather, that they ought to ſtudy and practiſe them in common.

Thoſe who may be aſtoniſhed at this concluſion, ought to reflect, that the diviſion of diſeaſes into external and internal, being erroneous, the ſeparation of medicine and ſurgery, founded on that diviſion, muſt fall to the ground.

In this view of the abuſes which muſt be reformed, the intention of the Commiſſioners is evident: they wiſh to offend no one, but they wiſh to ſpeak the truth. They do not deny, that there are ſeveral faculties of medicine where ſeveral branches of that ſcience are uſefully

uſefully and faithfully taught. It is certain, beyond doubt, that, notwithſtanding the faults of ſome ſchools, and the inutility of others, phyſicians of eminence have been educated at them: but it is alſo certain, beyond doubt, that, by a better diſpoſition of affairs, a much greater number would be formed; and that the art, ſo much retarded in its progreſs, would make rapid advances in improvement. Thoſe perſons are blinded, and are to be pitied, who conſider the corporations to which they belong, as the moſt perfect in the world; and who cannot believe any thing to be ſuperior to their ancient cuſtoms.

They will ſome day be undeceived, and will think like the authors of the following plan, who enjoy before hand the pleaſure which they will feel, when ſuch perſons, renouncing their prejudices, will commend a reform which has been neceſſary for ſo long a time, and which has been ſo often propoſed in vain.

In order that this reform ſhould agree with the new Conſtitution, the commiſſioners who have formed the plan of it, have thought, that the greateſt liberty ought to be eſtabliſh-

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ed, in teaching medicine both publicly and privately; and alſo in the practice of the art, in the ſucceſſion and duration of ſtudies, and in the works and correſpondence which the phyſicians ſhall be invited to undertake.

1ſt, Agreeably to theſe principles, every man of the profeſſion, having ſubmitted to rigorous and legal trials, ought to have a right to teach in his turn.

2d, He ought alſo to have the power of practiſing his art throughout the whole kingdom; for, in the eye of the laws, every citizen is equal.

3d, The ſtudents ought alſo, to be under no reſtriction in their ſtudies; and they ſhould freely ſearch after knowledge from every ſource.

4th, As the corporation ſpirit is the ſource of diſtinctions among the citizens, and from its nature, is quite oppoſite to public ſpirit, the inconveniences ariſing from the numerous corporations of phyſicians, ought undoubtedly to be avoided. The members of theſe corporations, under the pretext of watching over one another, eſtabliſh an inquiſition over ſeveral among them,

them, which muſt be ſuppreſſed in a free ſtate.

5th, As the inhabitants of the country are perhaps the only perſons to whom the healing art has not been really uſeful, particular inſtitutions ſhould be eſtabliſhed for their benefit; and the moſt numerous and certain meaſures ſhould be adopted, in order that, in each canton, the ſubjects of public ſalubrity may be ſubmitted to the direction of a well informed phyſician; and that, in difficult caſes, that phyſician may be aided, without delay, with the advice of the moſt ſkilful practitioners of the medical profeſſion.

The commiſſioners have been guided by theſe principles, which will be found to be invariably obſerved in every part of the ſubſequent work.

In the *firſt* part of the following plan, the mode of teaching medicine, and every thing relating to it, is detailed; in the *ſecond*, the practice of medicine, as it reſpects public ſalubrity, is conſidered; in the *third*, the medical police is exhibited; in the *fourth*, every thing relating to the veterinary art, is pointed

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out; and in the *fifth*, the manner of improving the healing art, is deſcribed *.

PART FIRST.

Of the mode of Teaching Medicine, and every thing relating to it.

CHAP. I.

Of Inſtruction in general.

As the ſame ſcience is cultivated in various ways, and with different views, it is evident, that there ought to be ſeveral modes of inſtruction. Some ſtudents endeavour only to obtain uſeful principles: hence, all their wiſh is, to learn the method, and acquire the habit, of ſtudying. Others are fond of theoretical ſpeculations; their active minds comprehend

* In the original, there is a ſixth part, which contains an account of ſeveral eſſays received by the Societé de Medecine, from its correſponding members, on the manner of improving the mode of teaching and practiſing medicine; but as this conſtitutes no part of the plan which the Society have propoſed, it ſeemed unneceſſary to inſert it.

comprehend every thing relating to the ſcience which they ſtudy. For the former, elementary inſtructions, ſuch as are already given in the Colleges, are alone neceſſary: but for the latter, a more extenſive courſe of educationis required. The inveſtigations which it ſhould include, ought to connect it with the works of the academies. For the elementary or practical inſtructions, a ſmall number of profeſſors ſhould only be employed. They ought to confine their obſervations to leading principles, and ſhould impreſs on the minds of their pupils, nothing but relative facts, uſeful articles of information, and invariable rules. For the academical inſtructions, on the other hand, it will be proper to eſtabliſh a great number of Profeſſorſhips; to extend every ſpecies of inſtruction; to preſent, in detail, every thing which, in the elementary courſes, is treated compendiouſly; and, to exhibit even what are merely ſubjects of curioſity, for what is ſuperfluous, may, in that way, become neceſſary, by leading to important concluſions, and hence prepare, as it were, new materials for the arts. Thus the ſtudents will have acceſs to every ſource of emulation; and each may, without

without reſtraint, adopt that plan of ſtudy which ſhall beſt ſuit his ſituation and abilities.

Theſe views were not entirely diſregarded by the former government. The inſtructions of the College royale, are really academical. In the greateſt number of profeſſorſhips eſtabliſhed there, the lectures include nothing which is abſolutely neceſſary for the acquiſition of any degree whatever. The ſame obſervations may be applied to ſeveral branches of inſtruction inſtituted at the Jardin du Roy; and alſo, to the profeſſorſhips of Mathematics, Experimental Philoſophy, &c. founded in this capital.

But theſe detached branches of inſtruction, theſe ſcattered profeſſorſhips, are only the fragments of a magnificent whole, which, it is the intereſt, and ſhould be the glory of the nation, to eſtabliſh and exhibit, for the admiration and imitation of all Europe. That beautiful plan propoſed by Marſigli, which has neceſſarily remained incomplete at Bologna, ought to be executed at Paris in its full extent.

It is propoſed, then, to eſtabliſh in the capital of the French empire, a great Encyclopedical Inſtitution, in which, under the ſame

management, ſeveral academical bodies ſhall be united; ſome of whom ſhall be employed in promoting the progreſs of learning, and the arts and ſciences; and others ſhall be entruſted with the charge of various ſpecies of inſtruction, including every thing which can adorn or enlighten the mind, or which the imagination can purſue.

The extent of this project may ſeem, at firſt ſight, to require ſuch an enormous expence, as to render it almoſt impracticable. It is, however, incumbent on great nations, to undertake great works: but beſides, it may be eaſily proved, that the execution of the enterprize will be neither very difficult, nor very expenſive.

In the firſt place, it will not be neceſſary to collect in one place, all the profeſſorſhips: it would even be an error to attempt it; an error indeed, which Marſigli, in his inſtitution, has committed.

It will be ſufficient that all the branches of inſtruction ſhall be eſtabliſhed; that they be all connected by invariable ties; that they form part of one ſyſtem; and that they be governed by the ſame principles, and ſubjected to the

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ſame authority. Several ſpecies of education, ought undoubtedly to be taught at a diſtance from the capital, which ſhould form the centre of the inſtitution, without comprehending all its branches. Thus, thoſe works of art, for the acquiſition of which, a knowledge of ſome parts of the determinate ſciences is neceſſary, may be reduced to a certain number of claſſes. The moſt neceſſary and uſeful arts ſhould be taught principally in the neighbourhood of great manufactories, and in thoſe cities where their ſeveral branches are carried on with the greateſt ſucceſs and celebrity. The arts and ſciences which relate to Navigation, ſhould be explained in the ſea-port towns of the kingdom; and thoſe which relate to Tactics, Artillery, and Fortification, in garriſoned cities. Mineralogy ought to be taught in the neighbourhood of great mines. At Paris, the fine arts ſhould keep up the honour of the Louvre. Medicine ought to be ſtudied in hoſpitals; and the languages, hiſtory, and the belles lettres, in the Bibliotheque du Roy, and in the College royale. The Jardin du Roy, ſhould be appropriated to natural hiſtory; and in one of the antient monaſteries of the capital, the remaining de-

partments of this great inſtitution may be eſtabliſhed.

In the ſecond place, the execution of this project will not be productive of much expence; for the greateſt number of the propoſed profeſſorſhips is already eſtabliſhed and endowed. Some additional encouragements to thoſe who profeſs the arts of commerce and of war, will induce them to teach the principles of theſe arts; and the greateſt number of new profeſſorſhips, ſhould be allotted to members of the academies, who will be contented with a moderate addition to their preſent ſalaries.

It is unneceſſary, however, to ſtate to the repreſentatives of the nation, that the charges incurred in the cultivation of learning, and of the arts and ſciences, are to be conſidered as the moſt neceſſary of all expences; for the progreſs of knowledge is eſſentially connected with the public ſafety and proſperity, as the people can only prove themſelves deſerving of liberty, by becoming enlightened.

By following Bacon's table of the branches of knowledge neceſſary for mankind, or that which, in imitation of him, the illuſtrious authors of the Encyclopædia have placed at the beginning

beginning of that great work, no article of importance will be overlooked; and all the parts of this new ſyſtem will be linked together.

By this means, the places in this ſyſtem, which medicine and ſurgery, as they relate to man and other animals, ought to poſſeſs, will be aſcertained. All the ſuperfluous obſervations introduced in the elementary inſtruction of theſe ſciences, ſhall be carried back to their proper places, in order to ſatisfy the curioſity of thoſe ſtudents, who, from being engaged in particular inveſtigations, or in learning the great art of teaching, or, ſolely, from a wiſh to indulge their taſte, may chooſe, although attached to one ſcience, to ſtudy, and to be acquainted with all.

CHAP. II.

Of particular Inſtruction.

MEDICINE and Surgery ſhall be taught in two ways, viz. in colleges and in practical ſchools in the ſeveral diſtricts, for the inſtruc-

tion of phyſicians and ſurgeons in the country. In the former, the ſeveral branches of medical education ſhall be complete; in the latter, however, they muſt be frequently imperfect; and therefore, the ſtudies of the pupils belonging to them, ought to be continued at the colleges.

SECTION I.

Of the Mode of teaching Medicine in Colleges.

§ I. *Of the Order and Diviſion of Profeſſorſhips.*

In the medical colleges, the inſtructions muſt relate to five principal ſubjects:

1. The knowledge of the animal œconomy. This is acquired by the ſtudy of Anatomy, Chemiſtry, and Phyſiology, or the natural philoſophy of man in health.

2. The knowledge of the ſubſtances, both ſimple and compound, which act on the animal œconomy. Theſe neceſſarily belong to one of the three kingdoms of nature. Their hiſtory, qualities, &c. are learned by the ſtudy of

of the Materia Medica, Chemiſtry, and Pharmacy.

3. The choice of the means moſt conducive to the preſervation of the body in a ſtate of health. For this purpoſe, the ſtudy of Natural Philoſophy, Chemiſtry, and Phyſiology, is neceſſary.

4. The knowledge of the various diſeaſes, of their ſymptoms, their nature, and the remedies moſt capable of curing them. This is learned by the ſtudy of Pathology, or of the natural philoſophy of man in a ſtate of diſeaſe; of Semeiology, Noſology, Therapeutics, and Clinical Medicine and Surgery.

5. The hiſtory of medicine and ſurgery, and the beſt manner of ſtudying theſe ſciences. By this, a complete view of the healing art, in its whole extent, will be exhibited. What has been done, and what remains to be accompliſhed, will thus be ſeen.

The various ſubjects, therefore, of theſe inſtructions, arranged in an elementary order, are,

1. The plan of ſtudying Medicine.

2. General and experimental Natural Phi-

loſophy, in ſo far only as it is connected with Medicine.

3. Chemiſtry.

4. Anatomy.

5. Phyſiology.

6. Materia Medica, comprehending every thing uſeful in the healing art, which Zoology, Botany, and Mineralogy, afford.

7. Pharmacy.

8. The Art of Preſcribing.

9. The general means of preſerving health, or Hygieine.

10. Pathology.

11. Semeiology.

12. Noſology.

13. Therapeutics.

14. The Medical and Chirurgical treatment of diſeaſes.

15. Clinical Medicine and Surgery.

16. The hiſtory of Medicine and Surgery.

Under another point of view, theſe different branches of medical inſtruction ought to be divided into Theoretical and Practical.

The

The theoretical medical ſciences, conſiſt of preliminary ſciences, and thoſe which are immediately neceſſary.

The former comprehend Anatomy, Chemiſtry, Phyſiology, Pharmacy, and Materia medica.

The object of the latter, is to apply theſe preliminary ſciences, to accompliſh the preſervation of health, and cure of diſeaſes. Theſe direct or immediately neceſſary theoretical ſciences, are Hygieine, or general means of preſerving health, Pathology, Semeiology, Noſology, and Therapeutics.

The practical department of medicine, conſiſts in diſtinguiſhing and treating diſeaſes.

Since it is neceſſary to entruſt to a certain number of perſons, the charge of teaching theſe different branches of the healing art, while, at the ſame time, it is neither poſſible nor eligible, that there ſhould be as many profeſſors as there are diviſions in the above table; proper meaſures muſt be adopted, in order that ſeveral departments ſhall be taught by ſingle profeſſors. This has always been done at Leyden, at Edinburgh, and at Gottingen. Boerhaave taught five of the moſt important

portant branches of medicine, viz. Chemiſtry, Phyſiology, Botany, and the Inſtitutions and Practice of Medicine.

If a ſingle man poſſeſſed ſuch an extraordinary degree of genius, and ſuch a ſhare of health, as to be able to teach all the departments of medicine, the ſtudents would derive the moſt important advantages from his labours; becauſe every part of the whole ſyſtem would be conſiſtent with another. In proportion as profeſſors are multiplied, there will be danger of contradictions in their inſtructions, and of inferiority in their talents.

The following motives, render it proper to unite ſeveral branches of inſtruction.

1. Anatomy may be ſeparated from phyſiology; but phyſiology cannot be taught by itſelf: it ought to be conjoined with the ſtudy of the human body; otherwiſe, every phyſiological ſyſtem will be erroneous.

When the anatomy of the human body is conſidered ſeparately from that of other animals, many important views, neceſſary references, and uſeful concluſions, are loſt. Several of the animal functions are even inexplicable, without the aſſiſtance of comparative anatomy,

anatomy. The charge of teaching Zoology, ought therefore to be intruſted to the profeſſor of anatomy and phyſiology.

2. Mineralogy cannot be underſtood by confining the obſervations to the external appearances of the various minerals: the changes which they ſuffer by the operation of chemiſtry muſt therefore be detailed. It is eaſy for the chemiſt to teach Pharmacy; and the art of preſcribing is intimately connected with the ſcience of Pharmacy. All theſe departments of the art ought therefore to be taught by the ſame perſon.

3. The Profeſſor of Materia Medica, muſt neceſſarily be very well acquainted with natural hiſtory. The ſtudy of the three kingdoms of nature, ought to be very familiar to him. He ſhould therefore be capable of giving lectures on Zoology, Mineralogy, and Botany. But as the two former of theſe departments are properly aſſigned to the Profeſſors of Anatomy and Chemiſtry, it will not be conſidered improper to require, that the Profeſſor of Materia Medica, ſhould alſo teach Botany, not only in a Botanic garden, containing the uſual officinal plants, and in the fields, but alſo

ſo in hot-houſes, to make the pupils acquainted with the exotic plants uſed in medicine.

It may here be remarked, that the Profeſſor of Materia Medica, after having exhibited a complete hiſtory of the various medicines, and after having ſhewn ſpecimens of each, ought to content himſelf, both in his lectures on Materia Medica, and on Botany and Pharmacy, with enumerating the qualities and doſes of the medical ſubſtances; and ſhould refer to the Profeſſors of Therapeutics, and of the Practice of Medicine, the charge of explaining the principles which regulate their uſe, and their modus operandi; and to detail the particular caſes in which they ſhould be employed.

Without this reſtriction, Materia Medica, Botany and Pharmacy, could not be claſſed among the preliminary ſciences; and a confuſion in the duties of the profeſſorſhips would thence enſue.

4. No phyſician ought to be ignorant of Natural Philoſophy; it ought always to ſerve as a guide in the ſtudy of the preliminary ſciences. For this reaſon, all the medical profeſſors ſhould be capable of teaching it; but no profeſſor is required to excel in that

ſcience

ſcience ſo much as the Profeſſor of Hygieine. He will, therefore, without any difficulty, be able to give a courſe of lectures on Natural Philoſophy; a ſcience, to which his attention cannot be too often directed.

5. Pathology, Semeiology, Noſology, and Therapeutics, ought not to be taught ſeparately from each other: For it certainly is the duty of the ſame profeſſor, to conſider man in a ſtate of diſeaſe; to exhibit the ſymptoms of the complaints, the cauſes of which he ſhall have explained; to aſcertain, from the hiſtory of the ſymptoms, the nature of the diſeaſe, that of its ſtages or periods, and the prognoſis; and to point out on what principles the treatment ought to be conducted.

It may be added, that one of theſe four branches, which, it is propoſed, ſhall be taught by one Profeſſor, *viz.* Semeiology, cannot be explained by itſelf, without occaſioning numberleſs repetitions, and a great confuſion of ideas, ſince the detail of the ſymptoms of diſeaſes is included in Pathology; and the ſame detail is the ſubject of Noſology, which forms the baſe of the obſervations of the Profeſſor of the Practice of Medicine.

6. The Profeſſors of the Practice of Medicine, ſhould teach that great and noble ſcience in its full extent.

Their courſes ſhould occupy two years; one of which ought to be appropriated to Acute, and the other to Chronic, diſeaſes; but they ſhould give theſe courſes by turns; ſo that, while one is employed in detailing the treatment of acute diſeaſes, the other ſhould be engaged in treating chronic ones. By this plan, the ſtudents will have an opportunity of attending a complete courſe every year.

7. The Methodus ſtudii, cannot be pointed out with more advantage, than by the profeſſor of the hiſtory of medicine, who muſt neceſſarily have occaſion, every day, to obſerve the ſucceſſion of works which are undertaken to advance the progreſs of that ſcience.

Guided by theſe motives, after many trials, the following diſtribution of all the different departments of Phyſic and Surgery, among ten profeſſors, is propoſed.

1. A courſe of lectures on Anatomy, including Phyſiology.

2. A courſe of lectures on Zoology.

Theſe

Theſe two courſes ſhall be given by the ſame Profeſſor.

3. A courſe of lectures on Chemiſtry, including Mineralogy.

4. A courſe of lectures on Pharmacy, including the Art of Preſcribing.

Theſe two courſes ſhall be given by the ſame Profeſſor.

5. A courſe of lectures on Materia Medica.

6. A courſe of Botany.

Theſe two courſes ſhall be given by the ſame Profeſſor.

7. A courſe of lectures on experimental Philoſophy, with its application to Medicine.

8. A courſe of lectures on Hygieine, or the general means for the preſervation of health.

Theſe two courſes ſhall be undertaken by the ſame Profeſſor.

9. A courſe of lectures on the Theory or Inſtitutions of Medicine, including Pathology, Semeiology, Noſology, and Therapeutics.

This courſe ſhall be given by one Profeſſor.

10. & 11. A courſe of lectures on the Practice of Phyſic, including the medical treatment

treatment of diſeaſes, Clinical Medicine, properly ſo called, and Medical Juriſprudence.

For this courſe there ſhall be two Profeſſors. The courſe ſhall be divided into two parts, the one conſiſting of obſervations on acute, and the other on chronic, diſeaſes; and it ſhall occupy the ſpace of two years. The Profeſſors ſhall undertake theſe parts of the courſe alternately.

12. & 13. A courſe of lectures on the Practice of Surgery.

There ſhall be two Profeſſors for this charge. The courſe ſhall be divided into two parts, and ſhall continue for two years; one year to be chiefly dedicated to Midwifery. The Profeſſors ſhall, by turns, undertake the departments of Surgery and Midwifery; and one of them ſhall teach Chirurgical Juriſprudence.

14. A courſe of lectures on the hiſtory of Medicine and Surgery.

15. A courſe of lectures on the Methodus ſtudii et obſervandi. This ſubject is one of the moſt philoſophical which can be preſented to the conſideration of ſtudents.

Theſe two courſes ſhall be intruſted to the ſame Profeſſor.

It muſt be obſerved, that none of theſe Profeſſors ought to be allowed to teach privately. They ſhould not be liable to the ſuſpicion of neglecting, through intereſted motives, their lectures in the College, in order to enhance the value of their private lectures.

The ſame branch of inſtruction ought, on no account whatever, to be intruſted to two Profeſſors; one of whom, under the title of Regius Profeſſor, lectures; and the other, under that of Demonſtrator, deſcribes and demonſtrates. That barbarous cuſtom, though ſtill retained in ſome faculties, ſhould be conſidered as the remains of antient ignorance; it excites jealouſies among the Profeſſors, and it ſhocks the ſtudents; it ought to be exploded from modern ſchools, as it occaſions tedious, contradictory, and tireſome diſcuſſions.

If a medical college ſhould be eſtabliſhed in a city, where, from motives of œconomy, or from the ſtudents not being ſufficiently numerous, it ſhould become neceſſary to reſtrict the number of Profeſſors, it might be reduced to ſeven, by allowing only one Profeſſor for the Practice of Phyſic, one only for that of Surgery, and by aſſigning to the Profeſſor

of the Hiſtory of Medicine, the charge of the lectures on Natural Philoſophy and Hygieine.

Reflections.

After having thus arranged the order and diſtribution of the profeſſorſhips, a few important reflections may be added.

Hitherto, medical inſtruction has conſiſted only in words, which is the reaſon why ſo little advantage has been derived from it; whereas, on the contrary, it ought to be founded principally on facts.

Natural Philoſophy, Natural Hiſtory, Anatomy, Chemiſtry, and Clinical Obſervations, are the foundations on which the ſtructure of the medical inſtitution, conſidered in its full extent, ought to be placed. All the truths of which theſe ſciences conſiſt, are deduced directly from experiment; and if there are ſome branches of inſtruction, ſuch as, certain parts of Pathology and Therapeutics, which cannot be proved in the ſame manner, they muſt be connected with experiments and obſervations, by a chain of inferences. All the obſervations muſt be referred to principal facts; all the

the degrees of uncertainty muſt be diſtinctly marked; in ſhort, the profeſſors ſhould, in their remarks, be explicit, diſtinct, decided, and ought always to adhere ſtrictly to truth. Theſe advices are principally directed to the profeſſor of the Theory of Medicine. The other profeſſors will be conſtantly led to make general remarks from the nature of their ſubjects. But he will certainly wander, if, having no object of demonſtration to place before his pupils, he do not reſtrict himſelf rigorouſly to circumſtances, with the truth of which he is intimately acquainted; to obſervations deduced from facts; and to that plan which he ſhall have formed in ſilent meditation and ſtudy.

The profeſſors muſt carefully avoid enlarging on diſcuſſions which relate ſolely to learning; a common fault of thoſe who are directed by the opinions of others. When an explanation is given of what has been ſaid by others, it becomes particularly neceſſary to be conciſe. The profeſſor of the Hiſtory of Medicine, ought to ſet the example of ſuch caution; he ſhould trace curſorily the ſeveral remarkable æras of medicine; he ſhould compare

different ſects, by contraſting their principles; he ſhould aſcertain the local modes of practice, which the nature of different climates require; and, without ever entering into uſeleſs inveſtigations, he ſhould point out, amidſt the conteſts of all ſects, what are to be regarded as truths; and he ſhould explain the chief cauſes which have conſtantly led to error.

The profeſſor of the Hiſtory of Medicine, would be of very little uſe to the ſtudents, if, after the example of ſeveral great men who have pointed out the method of ſtudying the healing art, he ſhould content himſelf with giving them a numerous liſt of books of all kinds. The ſtudents only require to be directed in their choice of books; and the real principles of the art will be found in the works of a ſmall number of authors. The young phyſicians, after having for ſome time ſtudied the books containing the elements of the art, ſhould read, with care, thoſe original works which bear the ſtamp of nature. Copyiſts have taken theſe works to pieces, and have disfigured them; copyiſts ſhould not therefore be read: and, by that reform alone, the taſks which young phyſicians, with little conſideration,

conſideration, have generally undertaken, will be very conſiderably leſſened. Beſides, it is leſs neceſſary to point out the order of reading, than to regulate the direction of the mind. The ſtudents ought to be obliged, not merely to ſtudy the works of others; they ought to make obſervations, and to undertake experiments; and it is on that latter occaſion, that the advice of a well informed phyſician, will prevent their falling into great errors, and will contribute much to their improvement.

Chemiſtry, Natural Hiſtory, Botany which forms a part of it, and all the ſciences which have been termed Preliminary, ought to be taught in ſuch a manner, that their connection with medicine may alone be exhibited; for as theſe ſciences are become very diffuſe from their extent, few men poſſeſs memories capable of digeſting ſuch extenſive details, and few perſons have genius enough to profit by them.

While the preliminary ſciences ſhould be abridged; the immediately neceſſary ſciences, and the practical department of medicine, ought to be detailed in a very full manner. The inſtructions in Hygieine, or the general means

of preſerving health, and in Clinical medicine, will be inſtitutions perfectly new in France; for Hygieine, in the manner in which it has hitherto been taught in Colleges, comprehends only a few trivial facts: and inſtructions in the Practice of Medicine, ſo long wiſhed for, are ſtill unknown in France.

The whole of the propoſed ſyſtem, ſhews the intimate relations by which ſurgery is connected with medicine: it was only neceſſary to add the two profeſſorſhips of the Practice of Surgery, to complete the picture.

No particular mention has been made of the art of the Dentiſt, Oculiſt, &c. from the conviction that theſe ſmall parts of a great whole, which have been conſidered as too important, and of which ſome dexterous perſons have made a ſeparate profeſſion, cannot be well taught, but along with the fundamental principles of the ſcience in general; without the knowledge of which, ſuch perſons are commonly very ignorant, and very greedy.

It may be objected, that ſeveral of the ſciences included in the table, ſuch as Zoology, and the Hiſtory of Medicine, do not afford eſſential information to thoſe who dedicate themſelves

themſelves to the Practice of Medicine; and that there are others, ſuch as Natural Philoſophy, with which the ſtudents are ſuppoſed to be acquainted, before they enter ſchools of medicine.

But it may be obſerved, that in a courſe of public inſtructions, which, in Colleges, ought to be complete in all its parts, a proviſion muſt be made, not ſolely for thoſe who do not extend their views to any thing which is not abſolutely neceſſary, but an opportunity muſt alſo be provided for ſatisfying the laudable wiſhes of thoſe poſſeſſed of more enterprizing minds. The Profeſſor of Anatomy, to whom the inſtructions in Zoology are intruſted, ought therefore to avoid all diſcuſſions which are foreign to the deſigns which he ſhould keep in view. It is true, that it is not indiſpenſably neceſſary for phyſicians to ſtudy the ſtructure of animals; but it muſt be allowed, that there are ſome who ought to be acquainted with the elements of rural œconomy, and of the veterinary arts.

The Profeſſor of the Hiſtory of Medicine, and of the Methodus ſtudii medici, ſhould be an uſeful guide to the ſtudents; and his duties

ſhould be truly paternal. Beſides, it is to be remarked, that theſe various ſubjects ought not to form part of the public examinations; for the ſtudents ſhould be encouraged, and not conſtrained to attend to them.

With reſpect to Natural Philoſophy, the elements of that ſcience ſhould not be taught; its application to medicine ſhould alone be pointed out; a circumſtance which is ſo much overlooked, that thoſe who prepare themſelves for the ſtudy of the healing art, cannot be too often reminded of it. The Profeſſor of Hygieine, to whoſe charge the inſtructions in Natural Philoſophy are conſigned, ought therefore to confine himſelf within the limits which his duty preſcribes, beyond which he cannot wander, without being neceſſarily recalled by reaſon, and by the murmurs of his pupils.

The profeſſors ought not to dictate any ſyllabus; if they adopt any particular textbook, they muſt publiſh it; if not, they ſhould point out thoſe publications which are moſt conformable to their plan. They ought ſometimes to deſcend to familiar inſtructions, by interrogating the ſtudents, in order to make them underſtand properly the principles of what they teach.

The

The long diſcuſſions, and miſplaced digreſſions, with which thoſe profeſſors, who have ill digeſted their plan, indulge themſelves, ſhould be carefully avoided; and, in order to accuſtom the profeſſors to ſtudy arrangement, and for the ſake of thoſe pupils who have not much time to ſpend in ſtudy, it would be of conſequence, that each annual courſe of lectures were terminated by an abridgment of the whole courſe; in which, within a ſmall number of lectures, in a ſimple order, every thing of importance, which each ſection of the propoſed table contains, ſhould be collected.

The execution of this regulation will be equally advantageous for the profeſſors and ſtudents.

§ II. *Of the Fees of the Profeſſors, and of the Sums to be paid by the Students* *.

All the Profeſſors of the Preliminary Sciences, and of thoſe which relate immediately

* In the original, § II. is intituled, "On each Profeſſorſhip, conſidered ſeparately;" but, as it conſiſts merely of the repetition of a few general reflections, and of a reference to the fourth chapter of the ſecond part, the tranſlator has taken the liberty to leave it out.

ately to the ſtudy of medicine, (being ſix in number), ought to receive the ſame fees, and ſhould be compenſated for the prohibition of teaching privately.

The two, or four Profeſſors, of the Practice of Medicine and Surgery, who have the charge of two departments, *viz.* the Treatment of Diſeaſes, and Clinical Medicine or Surgery, and muſt therefore ſpend a great part of each day in the hoſpital to which they belong, ought to have fees double of thoſe which are allotted to the former profeſſors.

In this arrangement of the fees for the profeſſors, the proportions ſhould be fixed in ſuch a manner, that part ſhould be paid from the public treaſury, and part by the ſtudents, who ſhall be allowed to attend, without any reſtraint, thoſe lectures which they ſhall have voluntarily choſen. Thus, private teaching, which ought to be much encouraged, will be put in competition with the public courſes of inſtruction; which will oblige the profeſſors, from intereſt and ambition, to beſtow much pains on their lectures. It is, however, to be underſtood, that proper meaſures ſhall be adopted, for allowing thoſe ſtudents who are unable to afford the

the fees, to attend, gratis, the ſeveral courſes. The Directories of the departments and diſtricts, ſhall make theſe proviſions; as will be particularly mentioned, when the aſſiſtance to be given to the indigent ſick of cities, and of the country, is pointed out.

The ſum to be paid by ſtudents for inſtructions, ſhould be very moderate; it ought not to exceed, for each, for the whole period of their ſtudies, the ſum of 500 or 600 livres *.

It is of importance, to remark, that this expence ſhall be the whole to which ſtudents ſhall be ſubjected; for the examinations, as well as the admiſſions as phyſician, &c. ought to be perfectly gratuitous. Unleſs this clauſe be conſidered as conſtitutional, all the abuſes which it is ſo neceſſary to reform, will be again renewed.

§. III. *Of the Conſtitution and Inſpection of the Medical Colleges.*

1. EACH medical college ſhall be compoſed of ten or ſeven profeſſors, and a ſecretary.

2. At

* viz. 20l. 16. 2d., or 25l. Sterling.

2. At the beginning of each ſeſſion, the profeſſors ſhall chooſe one of their number to preſide at all public buſineſs. But the preſident ſhall, on no pretext whatever, continue in office more than ſix months.

3. In all public ceremonies, the rank which the profeſſors ſhall hold, next to the preſident, ſhall be determined by their ſeniority in the exerciſe of their public duties of inſtruction.

4. The profeſſors ſhall have no influence nor right of ſuperintendance over the other phyſicians of the city or diſtrict in which they are placed, nor, except within the college, over the ſtudents who ſhall be governed by the public police.

5. All the authority with which the profeſſors ſhall be veſted, ſhall be employed in the public or private buſineſs at which one of them preſides: as they are to be regarded as the principals, they ſhall be obeyed in every thing relating to the police of the college.

6. The profeſſors ſhall elect one of their number to diſcharge the duties of librarian; and another, to whom the care of the muſeums of the college ſhall be entruſted. Theſe

Theſe profeſſors will have, as ſhall be afterwards ſpecified, pupils under their direction, who ſhall perform the drudgery of theſe different employments. Theſe elections ſhall be renewed every two or three years.

7. The medical profeſſors ſhall confine themſelves to their reſpective duties, to which they ſhould dedicate themſelves entirely; and, without undertaking any other charge, they ought to obey, in quiet, the laws by which they ſhall be governed.

8. Three cenſors choſen by the electoral body (ſpecified in § V.) of the phyſicians of the diſtrict of the college, ſhall be appointed, to ſee that all the branches of inſtruction, the deciſions in the competitions for profeſſorſhips, and the examinations and admiſſions of practitioners, ſhall be carried on according to the regulations. They ſhall viſit the college as often as they can; they ſhall aſſiſt at all the public buſineſs of the college; they ſhall attend to the complaints of ſtudents, when neceſſary; and they ſhall lay their remarks before the Miniſters who ſhall have the ſuperintendance of public inſtructions. Theſe cenſors ought to be renewed every two years; and,

and, before going out of office, they ought to give a public account of the commiſſion with which they had been entruſted.

§ IV. *Of the Number and Juriſdiction of the Medical Colleges.*

MEDICAL colleges, may be ſtyled public bodies, compoſed of profeſſors appointed to teach every department of the healing art; and authoriſed to admit phyſicians and ſurgeons to the right of practiſing in every part of the kingdom, without exception, according to regulations determined by law.

Such bodies ought not to be numerous. If they were too much multiplied, the places of profeſſors, leſs honourable, and leſs lucrative, would be leſs eagerly ſought; the duties of teaching would be leſs faithfully fulfilled; the admiſſion of practitioners would become more eaſy; and hence, all the advantages of the reform which is wiſhed to be executed, would be loſt.

Theſe colleges ſhould, therefore, be only four or five in number. One ſhould certainly be founded at Paris, another at Montpellier, one

one at Straſbourg or at Nancy, Beſançon, or Dijon, and perhaps two others; of which, one may be at Nantes or Rennes, and the other at Bourdeaux.

The circumſtance which renders it proper to eſtabliſh one of theſe colleges at Straſbourg, is, that as the faculty of medicine of that city, has, for a long time, been very much celebrated, ſtudents repair thither from every part of Germany; which would no longer happen, if the medical college were transferred to any other place.

With reſpect to the cities of Bourdeaux and Nantes, theſe ſeem the moſt convenient, on account of their diſtance from Paris and Montpellier. Beſides, theſe cities, from their population and opulence, are well calculated to encourage eminent phyſicians and ſurgeons to ſettle in them.

It is alſo to be remarked, that the ſtudents of ſurgery being united to thoſe of medicine, will form a great number of pupils; the greateſt part of whom, not being much indebted to fortune, will not be in a ſituation for making great journeys, and therefore, five colleges will not be too much for their reception.

It will be mentioned, when treating of competitions for vacant profeſſorſhips, that the examinators or judges ſhall be choſen by an electoral body, formed of a certain number of the electors and phyſicians of the department. It may be added, that all the phyſicians within the juriſdiction of the college, ſhall be invited to attend the meeting, at which, the electors who ſhall name the judges of the competition, are to be choſen. It is therefore neceſſary, to determine the juriſdiction of each of theſe colleges *.

The following diviſion is propoſed:

1. The college of Paris ſhall comprehend twenty-four deparments.

2. The college of Montpellier, ſhall include twenty-one departments.

3. The college of Straſbourg ſhall comprehend thirteen.

4. The college of Bourdeaux, the ſame number.

5. The college of Nantes ſhall include twelve departments.

Each

* In the original, the various departments of each college, are ſpecified; but theſe cannot be intereſting to an Engliſh reader.

Each college ſhall publiſh, annually, a liſt of the medical practitioners of its juriſdiction, ſpecifying their names, the date of their admiſſion, their places of abode, and the duties with which they are charged.

Reflections.

In the above table, the juriſdiction of the college of Paris, is the moſt extenſive of any. That capital being placed nearly in the centre, and its connections with other places, as well as its hoſpitals, being neceſſarily more numerous than thoſe of any other city in the kingdom, no inconvenience will reſult from that arrangement.

The juriſdiction of the college of Montpellier, is more extenſive than that of the other three colleges, on account of the ſituation of the city, and the great reputation which its preſent college enjoys.

The number of departments allotted to the other three colleges, is nearly equal.

Theſe various juriſdictions, will facilitate the meetings of the phyſicians of the ſeveral de-

partments, when they are ſummoned to elections, or on any other occaſion.

It is to be underſtood, that the arrangement of theſe juriſdictions, does not, in any way, affect the medical ſtudies, nor the admiſſions to the degree of Doctor, as every perſon ſhall be entitled to apply for inſtructions or degrees, to any of the five colleges which he may prefer.

§ V. *Of the Competitions for Profeſſorſhips, and the Choice of Profeſſors.*

THE choice of profeſſors is of great importance. Through their means, emulation and proficiency are diffuſed; and experience has proved, that a ſingle great man in any college, may render it the moſt celebrated in the world.

There are three ways by which a judgment may be formed of thoſe who offer themſelves candidates for a vacant profeſſorſhip, viz. by their reputation, by their publications, and by their anſwers in the competition.

The two firſt means are inſufficient. So many circumſtances affect reputation, that the world

world is every day deceived in the characters of men. Publications are often not the works of thoſe who paſs for the authors; and beſides, many excel in writing, who are unable to ſpeak in public; without which qualification, little ſucceſs in teaching can be obtained.

An election by vote, without competition, has been propoſed; but it is well known, that places are often diſpoſed of by intrigue; and that the jealouſy of thoſe of low abilities, never fails to ſet aſide men of ſuperior talents, whoſe merit muſt be publicly known, to command all the votes.

The mode of competition muſt therefore be choſen; no other can be ſubſtituted.

It may be conducted in the following manner:

1. Four months before the competition ſhall begin, the Procureur-Syndic of the department where the profeſſorſhip ſhall be vacant, ſhall give notice, by means of the public papers, to all domeſtic and foreign practitioners of medicine, that the profeſſorſhip of ———, is vacant in the city of ———, department of ——— ; and that the competition for filling it up will commence on ——.

2. Every perſon, whether natives or ſtrangers, may compete. The competitors will not be required to produce the degree of M. D.; for ſome may excel in particular departments of the theory of medicine, without being very intimately acquainted with the practice of that art, and, conſequently, without having received a degree.

3. The competitors ſhall ſend their names to the Procureur-Syndic of the department. The only requiſite for their admiſſion to the competition, ſhall be a certificate of their good moral character, ſigned by the Magiſtrate of the country where they generally reſide.

4. The cenſors or judges of the competition, ſhall conſiſt of five perſons; of whom, two ſhall always be choſen among the profeſſors of the college in which the vacancy ſhall have happened, and three among the phyſicians of the departments included in the juriſdiction of the ſaid college.

5. Theſe cenſors or judges of the competition, ſhall be choſen by an electoral body, conſiſting partly of a certain number of the electors, and of a certain number of the phyſicians of the departments. For this purpoſe, all the medical

medical practitioners within the juriſdiction of the college, ſhall be requeſted to attend the meeting, at which the phyſicians, who ſhall be members of the electoral body, are to be choſen. The only qualification for the medical electors, is a year's reſidence in any of the municipalities within the juriſdiction of the college; for aſcertaining which, a certificate muſt be produced, ſigned by one of the municipal officers. The proportion of the electors appointed by the electoral body of the department, and of thoſe appointed by the medical practitioners, ſhall be determined by the regulations which the National Aſſembly ſhall have decreed for analogous elections; and ſhall, in every reſpect, be conformable to the principles of the Conſtitution.

6. When a college ſhall be founded, and where, conſequently, there ſhall have been no profeſſors before that time, the electors ſhall chooſe the five judges of the competition, from among the medical practitioners of the departments within the juriſdiction of the college.

7. Three members of the directory of the department, ſhall attend all the meetings for the competition; and every thing not done in

preſence of them, ſhall be conſidered as void and null. The three cenſors of the college, choſen by the electoral body of the department, ſhall alſo attend theſe meetings.

8. As the ſtudents of medicine are much intereſted in the proper choice of a profeſſor, they ſhall be conſulted on the ſubject; therefore, the ſtudents who ſhall have paſſed with applauſe the two examinations on the theoretical branches of medicine, ſhall have a particular place in the hall where the competition is to be held, allotted to them; where thoſe who may deſire to vote, ſhall be obliged to attend regularly. They ſhall, every day, ſign their names on a regiſter for the purpoſe, that their attendance may be certified.

9. The remaining part of the hall ſhall be poſſeſſed by the public, who ought never to be excluded from places where their intereſts are engaged.

10. The five judges of the competition, ſhall name one of their number to preſide; he ſhall be the moderator in their public buſineſs. In all their other duties, the five judges ſhall follow the order of ſeniority.

11. The queſtions and anſwers ſhall be, in the

the ſame manner as the lectures, in the French language; in order that the merit of the competitors may be more eaſily and more generally aſcertained.

12. The examination ſhall conſiſt in written queſtions; to which, the competitors ſhall anſwer *viva voce.*

13. The judges of the competition ſhall meet ſome days preceding the examination, to prepare the queſtions which they mean to put.

14. Each competitor ſhall anſwer twelve queſtions; therefore, the number of competitors multiplied by twelve, will aſcertain that of the queſtions which the judges muſt prepare.

15. Theſe queſtions ſhall be contrived in ſuch a manner, as to comprehend the whole extent of the ſcience which ſhall be the ſubject of examination. But, in order that the competitors, in the diſtribution of theſe queſtions, may be examined on different parts of the ſcience, the notes on which the queſtions are written, ſhall be divided into twelve parts, each of which ſhall be aſſigned to one of the principal departments of the ſcience; and theſe twelve parts

ſhall be diſtributed ſucceſſively at twelve different times, in the following manner:

The notes forming the firſt part, ſhall be put, properly folded, into a vaſe; from which, each of the competitors ſhall draw one; on the back of which, he ſhall write his name, without opening it; and ſhall then deliver it to the preſident. Theſe notes ſhall be replaced in the vaſe; and the competitors ſhall anſwer, as the notes, on which their names are written, ſhall be drawn by lot. One of the members of the directory, ſhall be requeſted to draw the queſtions from the vaſe, as they are required. The ſame method ſhall be adopted for the remaining eleven parts. The anſwers of the competitors, ſhall be in the ſtyle of lectures on the ſeveral ſubjects.

16. After the examination is finiſhed, the deciſion ſhall be determined in the following manner:

(1.) The ſtudents deſcribed in the 8th article, whoſe names are written each day of the competition on the regiſter, ſhall be called according to the alphabetical order of their names. Each of them ſhall put into a vaſe, placed before the preſident, a ſlip of paper, on which

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ſhall be written the name of that competitor whom he ſhall believe moſt capable of fulfilling the duties of the vacant profeſſorſhip. The vaſe ſhall after this remain covered, till the votes ſhall be reckoned.

(2.) The competitors ſhall be next called, alſo in the alphabetical order of their names, and each ſhall put into another vaſe, a ſlip of paper, containing the name of the perſon among themſelves, whom he ſhall judge to be beſt informed. This vaſe ſhall alſo be covered till the votes are reckoned.

(3.) Laſtly, the judges of the competition ſhall be called on by the preſident; and their votes ſhall, in the ſame manner as the others, be depoſited in a vaſe.

17. The preſident, accompanied by the members of the directory, the three cenſors, and two of the competitors, ſhall then proceed publicly, and without delay, to the examination of the three vaſes. The plurality of votes of the ſtudents ſhall be reckoned as one, and that of thoſe of the competitors as another: theſe two votes ſhall be balanced with thoſe of the judges of the competition; and

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the profeſſorſhip ſhall be adjudged to the candidate in whoſe favour there is a majority.

18. In the event of an equality of votes, the votes ſhall be again called for the two candidates for whom they had been divided, and the majority ſhall decide.

It is probable, that the judges, the competitors, and the ſtudents, thus oppoſed to each other, will be obliged to be juſt; and that the candidate of merit, will be as certain of ſucceſs in the competition, as it is poſſible to be.

The profeſſors thus elected, ſhould hold the office for life, or, at leaſt, they ought not to be removed, but after a conſiderable ſpace of time, as twelve or fifteen years perhaps; and they ought even then to be continued, if the public be pleaſed with them; for, as a profeſſor cannot excel in any particular department of inſtruction, without attaching himſelf entirely to it, it is juſt that he ſhould enjoy, as long as he merits it, the advantage reſulting from that attachment. Beſides, experience has proved, beyond a doubt, that thoſe who are elected for a ſhort ſpace of time only, do not engage in the duties of office with ſufficient zeal.

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The ſuperintendance of the three cenſors, mentioned in § III.; the public account which they muſt render; the complaints of the ſtudents, to which they ſhall be obliged to attend; and the competition of private courſes of lectures, which will be preferred to theirs, if they are negligent in their inſtructions; will certainly be ſufficient to induce the profeſſors to attend to their duty, or to recal them to it, if they ſhould happen to ſtray.

But, in order to prevent that inconvenience with more certainty, if it ſhould appear neceſſary that the profeſſor of each branch ought to be re-elected after twelve or fifteen years, it may be done in the following manner:

1. The electoral body ſhall be ſummoned in the manner already fixed, and ſhall name five judges.

2. The ſtudents who ſhall have paſſed the two examinations on the theoretical parts of medicine, ſhall be alſo aſſembled.

3. The five judges, and the ſtudents, ſhall decide, by ſeparate ballots, if there ſhall be occaſion for a new competition for the profeſſorſhip.

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4. The majority of votes of the ſtudents ſhall be eſtimated at two; and theſe ſhall be balanced with thoſe of the judges ſeparately.

5. If the majority of theſe votes, which ſhall be reckoned ſeven in number, decide that there ſhall be a new competition, it ſhall be conducted in the manner already deſcribed; if not, the profeſſor ſhall continue to exerciſe the duties of his office.

§ VI. *Of the order and duration of the Medical Studies, and of the Examinations of Students.*

THE Faculty of Medicine of Vienna, the eſtabliſhment of which is very recent, ſince it is the work of Van Swieten, preſcribes five years of ſtudy to the pupils. The firſt year, they are deſired to ſtudy Anatomy, Botany, and Chemiſtry; the ſecond, Phyſiology is added to theſe; during the third year, they muſt continue the ſtudy of Phyſiology, and add that of Pathology and the Materia Medica; during the fourth year, they join to theſe two latter branches of medicine, the ſtudy of the Practice of Phyſic; and, during the fifth year, continuing to pay the greateſt attention to the Practice

Practice of Medicine, they muſt recapitulate all the other branches.

In ſeveral German univerſities, the claſſes are opened after Lent, for the Summer ſeſſion. There are ſix weeks of vacation; and the claſſes are again opened on the day after the feſtival of St Michael, for the Winter ſeſſion. M. Zenker, phyſician at Berlin, who has ſent to the Societé de Medecine, a very inſtructive eſſay on the German univerſities, mentions, that in ſome of them the duration of ſtudies is three, and, in the greateſt number, five years. In ſome, the firſt year of medical ſtudies is dedicated to Logic. In the college of Salerno, the medical pupils are obliged to ſtudy that department of philoſophy, for ſeveral years preceding the commencement of their medical ſtudies. In Pruſſia, the courſe of ſtudies is not entirely finiſhed within five years; for it is required of the young phyſician, at Breſlaw and at Berlin, that he ſhall diſſect publicly; and that he ſhall preſcribe, in a caſe of the Practice of Medicine, which is propoſed to him. At Mayence, the regulations are the ſame; and at Vienna, when De Haen and Stoll, taught Clinical medicine there,

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the candidates were required to take charge of ſeveral patients under the care of the profeſſors, before it was determined whether they ſhould enjoy the privileges of a medical practitioner.

M. Tiſſot, who has written very well on this ſubject, adviſes only four years of ſtudy. He preſcribes, for the firſt year, the ſame courſes as Van Swieten does: for the ſecond, he adviſes the ſame courſes which Van Swieten has allotted for the third, with the addition of the ſtudy of Surgery; of which no mention is made in the diſtribution of the profeſſorſhips of the Medical Faculty of Vienna: for the third year, he recommends the ſtudy of the Hiſtory of Medicine, of Hygieine, of Medical Juriſprudence, and of Clinical Medicine; on which latter, the ſtudents ought to be required to ſpend excluſively the fourth year.

Several members of the Society of Medicine of Paris, who have conſidered this ſubject, and who have communicated to that Society the reſult of their deliberations, are of opinion, that the duration of Medical Studies, ought to

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be for at leaſt ſix years; during which time, they preſcribe the following courſe of ſtudy:

1ſt Year. Natural Philoſophy, in ſo far as it is connected with Medicine, Anatomy, and Phyſiology. The ſtudents ſhould begin to learn the art of Diſſection.

2d Year. Continuation of the preceding ſtudies, Diſſection, Chemiſtry and Mineralogy, Zoology and Botany.

3d Year. Continuation of Anatomy, Chemiſtry and Botany, to which ſhall be added, Materia Medica, Pharmacy and Hygieine.

About the middle of this year, the ſtudents ſhall begin to attend the wards appropriated for the Practical or Clinical Inſtructions. They ſhall attend a courſe of lectures on the operations of Surgery, of which they ſhall ſtudy the elements. They ſhall, in their attendance on the Clinical wards, follow that profeſſor only who ſhall be intruſted with teaching that branch of medicine.

4th Year. Continuation of Materia Medica, Pharmacy and Hygieine, and the Inſtitutions of Medicine, that is, Pathology, Noſology and Therapeutics; all which ſhall be taught by the ſame profeſſor. The ſtudents

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ſhall learn the manner of applying bandages, and ſhall practiſe the operations of ſurgery on the dead body. They ſhall begin the ſtudy of Midwifery; and ſhall attend, for the firſt time, the lectures on Clinical Medicine.

5th & *6th* Years. Theſe ſhall be dedicated to the ſtudy of Clinical Medicine and Surgery. The pupils ſhall ſtudy, at the ſame time, Medical Juriſprudence; the elements of which, one of the profeſſors of the Practice of Phyſic ſhall teach them, and alſo the Hiſtory of Medicine.

Several very forcible reaſons, however, appear to render it inexpedient, that the arrangement and duration of the ſtudies ſhould be fixed by law.

A father ought to be authoriſed to educate his ſon under his own eye *. It is proper, that the houſe of his father may become a ſchool, from which the young man may offer himſelf for examination; and it is particularly neceſſary,

* The Faculty of Medicine of Paris, is perhaps the only one where this cuſtom is adopted. The ſons of the Doctors of the Faculty, are admitted to the probationary examination, without being obliged to attend claſſes; and they are exempted from part of the examination for licentiate.

neceſſary, that the education of colleges ſhould not be excluſive; and that candidates educated by private teachers, ſhould be admitted to the public examinations. It is equitable, that active minds ſhould not be forced to purſue, with painful preciſion, the ſame route with the moſt ſluggiſh genius; and that each may freely make the moſt of his natural talents. Theſe requiſites could not be accompliſhed, if the duration of ſtudies were determined by regulations. On ſuch occaſions, advice, and not orders, ought to be given. No period of ſtudy ſhould be preſcribed; no particular profeſſors ought to be pointed out: let it merely be agreed, that, with reſpect to minds of an ordinary ſtamp, ſix years will not be too much for the purpoſe of ſtudying Medicine in its full extent; that, with reſpect to the medical ſtudies, they ſhould be divided, as the branches of inſtruction, into Theoretical and Practical; and it muſt be remembered, that the Theoretical ſciences are divided into the Preliminary ones, and thoſe which are immediately neceſſary. It may be added, that the Theoretical ſciences, which are immediately neceſſary, ought not to be ſtudied till after the Preliminary ones

are perfectly underſtood; that towards the end of the ſecond year, it will be proper to conjoin the ſtudy of both, which will ſtamp an additional value on the Preliminary ſciences; and that on the third year, the pupils may attend the Clinical wards, which they ſhould not leave till towards the end of the ſixth year.

Theſe hints will be ſufficient for thoſe who have conſidered attentively the table which has been given.

As the ſtudents of medicine ought to have full liberty in the choice of their preceptors, and in the order and duration of their ſtudies; and as reſtrictions of every kind are unjuſt, ſince it is the knowledge, and not the time ſpent in acquiring it, of which a judgement ought to be formed, the ſtudents ſhall not be obliged to produce any certificates of ſtudy, in order to be admitted to examinations which ought to be open to every one: the ſtrictneſs of the examinations ſhould alone be ſufficient to keep ignorance and dullneſs at a diſtance.

The examinations on the Theory and Practice, ſhall take place at the end of the ſeſſion, the one immediately after the other; for it is proper, that the man who poſſeſſes a ſufficient degree

degree of knowledge, may proceed from the one to the other, and may acquire, without any obſtacle, the title of Phyſician if he ſhall merit it.

With theſe views, as all the branches of Medical inſtruction, ſhall every year be concluded about the 10th of September, the firſt examination on Theory may be begun on the 12th, and the ſecond on the 26th of the ſame month. The examination on the Practice of Phyſic, may be commenced on the 8th of October, after which there ſhall be a ſhort vacation; and the ſeſſion may again commence about the 10th of November.

§ VII. *Of the Examination of Students.*

Of Examinations in general, and of Medical Theſes.

EXAMINATIONS, as they are conducted in the preſent Colleges, are inſufficient to attain the propoſed end. They are carried on in Latin; and, if ever ignorance can be concealed under the veil of fluent eloquence, it muſt be chiefly in that language. As the ſtudents are examined *viva voce*, thoſe who, from want

of the habit of ſpeaking, or from timidity, are embarraſſed, may be hence completely prevented from ſucceſs. The public is not admitted to the examinations; and therefore, it is allowable to conclude, that theſe are merely formal ceremonies: and, in ſhort, the queſtions are propoſed by the judges at will, and hence their impartiality may be doubted.

In ſeveral Faculties of medicine, all the fellows have a right to put queſtions, and they do ſo in effect; therefore, theſe queſtions are without method, are quite unconnected, and are devoid of general principles; and therefore, in theſe examinations, every thing depends on chance.

None of theſe inconveniences ſhould exiſt, in the new order of affairs which ought to be eſtabliſhed.

In ſome of the univerſities of Germany, queſtions are propoſed in writing; and the ſtudents are required to bring, next day, written anſwers. It will be readily ſeen how eaſily they may procure aſſiſtance on ſuch occaſions.

The ſame obſervations are applicable to the theſes, and the kind of argumentation to which

which they lead. The former may be the work of another, and the latter may have been ſuggeſted: hence all that ceremony affords no proof of the candidate's abilities. Without entirely exploding theſes, which ought by no means to be included in the number of legal and neceſſary proofs, the ſtudents may be invited to compoſe diſſertations on various ſubjects of contemplation, of practice, or of enquiry, which they may have particularly inveſtigated: theſe ſubjects might be pointed out by the profeſſors themſelves, to ſuch ſtudents as ſhall have ſhewn the greateſt induſtry and ability. Theſe diſſertations ſhould be preſented to the college and the public. At the end of each examination, the ſtudents ſhould exhibit their views, and their principal concluſions, in a conciſe diſcourſe. This plan, while it excludes all argumentation, may contribute materially to the improvement of the healing art.

Of the Examination of Students in particular.

THE examination of ſtudents ought to be conducted in a different manner from that of

the competitions for profeſſorſhips, for the following reaſons:

1. The ſtudents, if conſulted on the anſwers of their companions, might be determined in their deciſions by motives of indulgence, which would be very oppoſite to what the public welfare requires. They are not particulary intereſted that their fellow ſtudents ſhould be well informed; but it is of material conſequence to them, that their profeſſors ſhould be as well acquainted, as poſſible, with the branches of ſcience which they teach.

2. The art of public ſpeaking is abſolutely neceſſary to profeſſors, but not to ſtudents. The difficulty of expreſſing clearly the ideas by ſpeech, forming frequently a great obſtacle to young men, it is proper that their examinations ſhould be carried on by writing.

The ſtudents ſhall be admitted to three examinations, at the end of every year, on fixed days; the two firſt of which ſhall be on the Theory of Medicine, and the latter on the Practice of Phyſic.

The following regulations are propoſed for the examinations:

Of the Firſt Theoretical Examination on the Preliminary or Introductory Sciences of Medicine.

1. THE firſt examination on the Theory of Medicine, ſhall include the Preliminary Sciences *.

2. This examination ſhall be continued for three days.

During the firſt day, the candidates ſhall be queſtioned on Anatomy and Phyſiology †; during the ſecond, on Chemiſtry as it is connected with Medicine, and on Pharmacy; and, during the third day, on Materia Medica.

3. On each day, four queſtions ſhall be put to each candidate.

4. During the days preceding the examinations, the profeſſors ſhall meet, and ſhall arrange the queſtions to be propoſed. The number of theſe queſtions ſhall be equal to that of the candidates, multiplied by four.

* See Part 1. Chap. 2. Sect. 1. § 1.

† It is ſurpriſing, that in every modern plan for medical ſtudy, and in the examinations, Phyſiology ſhould ſtill be placed very much before Anatomy, as it was two centuries ago. This order is preciſely the reverſe of what the nature of the ſubjects require.

They ſhall be ſo contrived, as to comprehend the moſt uſeful parts of the ſciences which form the ſubject of the examinations. In order that each ſtudent may be queſtioned on the different departments of theſe ſciences, the numbered notes on which the queſtions for each day ſhall be written, ſhall be divided into four parts, each of which ſhall include a particular ſubject; and ſhall be parcelled out among the candidates.

5. For this purpoſe, the notes forming the firſt diviſion of the four parts of the firſt day, ſhall be put into a vaſe placed before the preſident.

The candidates, whom he ſhall call in the alphabetical order of their names, ſhall each draw a note, which he ſhall read aloud. The ſecretary ſhall write the name of the candidate on the regiſter where the queſtions ſhall have been previouſly written. The ſame ſhall be done with the other three parts; and, on each day, the queſtions ſhall be diſtributed by lot in the ſame manner.

6. The diſtribution of the queſtions ſhall be made early in the morning. The candidates ſhall begin to work immediately after, and

and ſhall continue employed till the evening. During the whole time, they ſhall obſerve the moſt profound ſilence; and ſhall, under no pretext whatever, have any communication with one another. Some truſty perſons ſhall remain in the hall to ſuperintend the candidates; they ſhall furniſh them with the neceſſary food, and ſhall accompany them always when they are obliged to leave the hall. Every ſtudent who ſhall ſpeak to any other perſon than thoſe charged to ſuperintend him, ſhall be excluded from the examination; and every one who ſhall be convicted of having procured information on the ſubject of his queſtion, ſhall be for ever precluded from the examinations.

7. In the evening, at an hour determined by the regulations, the candidates ſhall be required to deliver their anſwers to the four queſtions, written on four different papers, ſigned by them, and with the numbers correſponding to thoſe of the queſtions which they ſhall have received in the morning.

8. It is expected that the anſwers be written in ſuch a manner that they can be eaſily read; and that they be compreſſed into ſuch a form,

form, that only about ſix minutes may be ſpent in reading each of them. The anſwers, as well as the queſtions, ſhall be written in the French language.

9. The anſwers marked by the ſecretary, ſhall be delivered, at the end of each meeting, to the preſident of the College. They ſhall be examined, without delay, by a particular committee of the profeſſors, who ſhall give, in writing, a judgement, with their reaſons on theſe different anſwers. The three medical cenſors choſen by the electoral body, already mentioned, and one of the members of the directory, department, or diſtrict, ſhall be joined in the committee with the examining profeſſors.

10. One or more days ſhall be ſet apart for reading publicly the anſwers of the candidates, and the judgements of the profeſſors.

11. Each candidate, after having read his anſwers, or heard them read, ſhall anſwer two queſtions *viva voce*. Theſe queſtions ſhall have been previouſly ſettled by the profeſſors, and drawn by lot in the manner already mentioned. The intention of this regulation, is to afford each candidate an opportunity of diſplaying

diſplaying his abilities to the greateſt advantage, and of ſhewing that he is capable of ſpeaking publicly, if he ſhould fortunately poſſeſs that talent.

12. The profeſſors being thus made acquainted with the merit of the candidates, in every reſpect, ſhall paſs, on each, a definitive judgment; in conſequence of which, they ſhall be admitted, or rejected.

13. The days for reading the anſwers and judgments, ſhall be at as ſhort a diſtance as poſſible, from thoſe allotted for the work of the candidates. Three members of the directory ſhall attend at the deciſion.

14. The public, for whom the common hall ſhould always be open during examinations, ſhall be particularly invited, by an advertiſement written in the French language, to theſe latter meetings, which ought to be held with great ſolemnity.

15. The candidates ſhall be entitled to demand from the preſident, a copy of their anſwers, and the deciſions on them.

The examinations, on theſe principles, being conducted with preciſion and impartiality, will deſerve a degree of confidence which the preſent mode of examining cannot inſpire.

Of

Of the Second Theoretical Examination on the immediately neceſſary Medical Sciences.

1. The medical ſciences immediately neceſſary *, ſhall form the ſubject of this examination; which ſhall, like the former, be continued for three days.

2. On the firſt day, the queſtions ſhall relate to Hygieine, or the general means of preſerving health; on the ſecond day, they ſhall relate to Pathology; and on the third day, to Noſology and Therapeutics.

3. On each day, four queſtions in writing ſhall be propoſed to each candidate; and, in every reſpect, the ſame method ſhall be purſued, as in the firſt examination.

Of the Third Examination on the Practice of Medicine.

1. The Medical treatment of diſeaſes, and Clinical Medicine and Surgery, ſhall form the ſubject of this laſt examination, which ſhall be continued for nine days.

2. On

* See § I.

2. On the firſt day, the queſtions ſhall relate to diſeaſes of the Bones, and to the chirurgical operations which their treatment requires.

On the ſecond day, they ſhall relate to diſeaſes of the Head, Neck, and Thorax, the treatment of which requires chirurgical aſſiſtance.

On the third, they ſhall reſpect the chirurgical diſeaſes of the Abdomen, and of the Extremities, and the art of Midwifery.

On the fourth day, Acute diſeaſes ſhall form the ſubject of examination.

On the fifth day, the queſtions ſhall relate to Chronic diſeaſes.

3. On each of theſe days, four queſtions ſhall be put to each candidate, who ſhall be required to anſwer the firſt *viva voce*, and the other three in writing: in other reſpects, the ſame method ſhall be adopted, as in the firſt examination. Hence, at the beginning of each meeting, the diſtribution of queſtions ſhall be ſettled; the verbal anſwers ſhall be next required; and the reſt of the day ſhall be allotted to writing the other anſwers.

4. The ſixth, ſeventh, eighth, and ninth days of the examination on the Practice of Phyſic,

Phyſic, ſhall be ſpent in the Clinical wards, in the following manner:

The examination ſhall be made on the ſixth day, in the Anatomical Theatre of the Clinical Hoſpital. The manner of performing chirurgical operations, ſhall form the ſubject of it. Each candidate ſhall there perform three operations on the dead body. The queſtions on theſe ſubjects, ſhall be prepared and diſtributed by lot, according to the principles eſtabliſhed for the firſt examination. On this occaſion, each examinator ſhould take a note of the manner in which the candidate ſhall have operated; and on this day, they ſhould only attend to the manual part of the operations.

On the ſeventh day, there ſhall be diſtributed to each of the candidates, ſix numbers, correſponding to the ſame number of patients in the Clinical wards, allotted to Chirurgical diſeaſes. The profeſſors ſhall have previouſly examined theſe patients, and aſcertained their diſeaſes. The candidates ſhall be brought to viſit the patients, and ſhall be allowed to take with them, all the notes for which they may have occaſion. After having queſtioned the patients, they ſhall be led by the profeſſors, into a hall of the hoſpital; where, without converſing

converſing with each other, they ſhall write upon ſix different pieces of paper, in a few words, their opinion on the nature, the ſtage, and treatment of the diſeaſes, which they had obſerved. Theſe obſervations ſhall be ſigned, and delivered to the preſident, according to the regulations already eſtabliſhed in the firſt examination.

On the eighth day, the ſame method ſhall be purſued, with regard to Acute diſeaſes.

On the ninth, or laſt day, the ſame plan ſhall be adopted, with reſpect to Chronic diſeaſes.

All the opinions of the candidates, ſhall be delivered to the preſident, as already mentioned, as well as the anſwers to the queſtions propoſed, during the firſt ſeven days. All theſe anſwers ſhall be read in a ſpecial committee of the profeſſors, who ſhall paſs judgment on them in writing, with their reaſons. That committee ſhall meet in preſence of the three medical cenſors, and one member of the directory, department, or diſtrict.

5. One or more days, the leaſt diſtant from thoſe employed in the examinations, ſhall be ſet apart, for reading, publicly, the anſwers of the candidates, with the deciſions of the profeſſors;

profeſſors; by which, the former will be either admitted or rejected.

6. This ceremony ſhall be as ſolemn as poſſible; ſeveral members of the directory ſhall attend it; and all the gentlemen of the profeſſion ſhall be invited to it.

7. At the end of the meeting, the ſucceſsful candidates ſhall be proclaimed Phyſicians, after having taken the civic oath.

8. The candidates ſhall be entitled, as in the other examinations, to demand from the preſident of the college, a copy of their anſwers, and of the deciſions on them.

9. The certificates which ſhall atteſt the admiſſion of the candidates to the degree of Doctor of Medicine, ſhall be couched in few words, and in the moſt ſimple ſtyle; they ſhall be in the ſame form for every candidate.

Reflections on the Choice of the Queſtions which ought to be propoſed to the Students.

The ſtudents who offer themſelves for examination, may be divided into two claſſes, very diſtinct from each other. The members of the firſt claſs, will have received a complete courſe

courſe of inſtruction in a college; and if they have improved the opportunity, will be capable of anſwering queſtionson the whole extent of the art which theywill have ſtudied, under every point of view They are even expected to have acquired a great number of thoſe branches of knowledge, which, without forming part of Medicine, properly ſo called, connect that ſcience with thoſe which ſurround it, and afford to him who poſſeſſes them, more enlarged ideas, and more extenſive means of employing the mind.

Thoſe of the other claſs, educated in the practical ſchools of the departments, and whoſe reſidence in the places where the medical colleges are eſtabliſhed, could not neceſſarily have been for any length of time, will only have learned what was abſolutely neceſſary; their attention will only have been called to what is really indiſpenſable.

It is not eaſy to determine the meaſures which ought to be adopted, for theſe two different claſſes. A particular examination for each, would not be proper. As it is wiſhed that the art of Medicine ſhould be conſidered only in one point of view, ſo there ought to be only one mode of aſcertaining the abilities

of the ſtudents of that art. The queſtions in examinations, ſhould be confined to the branches of knowledge really ſubſervient to the practice of the art. The ſtate ought only to regard practical phyſicians. They ſhould all, therefore, be conſidered, or ſuppoſed, to have the ſame degree of capacity; and all, ſuch as they are, ought, in the eyes of the ſtate, to appear equal. Literary fame and honour, are the rewards allotted for phyſicians diſtinguiſhed by great talents; and they will obtain theſe in the academies, and in the acquiſition of profeſſorſhips.

But the more care that the examinators take, to reſtrain, within proper bounds, the queſtions by which they will judge of the abilities of the candidates, the better right they will have to be exact, and even ſevere, in requiring ſufficient proofs. It ought to be remarked, that it would be unjuſt, according to the preſent mode of teaching medicine, to ſhew ſo much rigour in the examinations; for the greateſt number of the preſent examinations, relate only to branches of knowledge, quite foreign to the healing art; ſubjects, which both the preceptors and pupils equally know to be uſeleſs.

From the old mode of teaching, the profeſ-

ſors

ſors and candidates were, in ſome meaſure, equally concerned in the errors reſulting from the examinations; for if the latter had not learned, the former had not taught. This circumſtance paſſed unobſerved, becauſe the ſuperintendants of public education were alſo culpable. But, according to this new plan, the mode of inſtruction being properly eſtabliſhed, the State, and profeſſors who ſhall have fulfilled their duties, will have a right to inſiſt, that the ſtudents ſhall alſo fulfil theirs.

From theſe principles, it will be eaſy to ſettle the form of the different examinations. It will be ſufficient, to follow conſtantly one ſimple rule of conduct. Let the profeſſors always aſk themſelves, in the choice of their queſtions, if the ſtudents properly taught in the practical ſchools of the departments, ought to be ſuppoſed capable of anſwering them; and in every examination, let them put no queſtion above the reach of the ſtudents. They will thus perfectly accompliſh the views of thoſe who propoſe this plan.

By this arrangement of ſimple queſtions, always connected with the moſt eſſential departments of the healing art, the young men who ſhall have acquired a great extent of

knowledge, will always find an opportunity of ſhewing it; and while the ſtudents of the departments will anſwer in few words, but, in ſuch a manner, as to prove that they have learned every thing which could be reaſonably expected from them, they, conſidering the queſtion under a greater number of points of view, will alſo ſhew, that their education has been more complete. By this means, the ambition of the candidates will not be checked, while the public cannot be deceived reſpecting their abilities.

It may, perhaps, appear, that this mode of examination, ſo abſolutely neceſſary when two claſſes of ſtudents, very different from each other, are to be examined, will not be leſs neceſſary, even when thoſe who have ſtudied the art in its whole extent, are alone the candidates; for it ſeems proper, that the profeſſors of a ſcience of ſuch vaſt extent, having always the choice of ſo many important queſtions, ought, in every caſe, to prefer them to thoſe which are leſs ſo, and to attend, above every thing, to what is neceſſary and uſeful, were it only from reſpect to motives of humanity.

Continuation

Continuation of Reflections on the Examinations.

As the examinations muſt be conducted with much preciſion, there is little doubt, that a great deal of uſeful information may be acquired at thoſe meetings, in which the reading of the anſwers of the candidates, is followed by that of the criticiſms and deciſions of the profeſſors. It will therefore be the intereſt of all the ſtudents, to attend theſe meetings; which will terminate, in the moſt uſeful manner, the courſes of the academical Seſſion.

At the end of each examination, the profeſſors ſhall take a note of thoſe pupils who have anſwered beſt; and the various employments of aſſiſtants in the muſeums and laboratories, &c. which, it has been mentioned, ought to be conferred on the ſtudents according to their abilities, ſhall be beſtowed on them agreeably to the judgment which the profeſſors ſhall have formed. Theſe judgments ſhall be entered on the regiſter, in preſence of the three medical cenſors named by the electoral body, and of two members of the directory, department, or diſtrict.

§ VIII. *Of the Diſtribution of Buildings ſubſervient to the Schools of Medicine, and of the various Employments to be beſtowed on Students.*

EACH medical college, muſt neceſſarily be annexed to a great hoſpital.

In whatever ſituation it may be placed, the college ſhould contain,

1. Two amphitheatres; one of which ſhall be appropriated to Anatomy, Experiments on Phyſiology, and Chirurgical operations; and the other, ſhall be ſet apart for the lectures on Natural Philoſophy, Chemiſtry, and Pharmacy.

2. Near the Anatomical theatre, one or more Diſſecting rooms.

3. One or more apartments for the Preſervation of dry and wet Anatomical preparations; in which, may alſo be placed and preſerved, diſeaſed parts; by the examination of which, a proper idea of the morbid changes which the various organs of the human body undergo, may be obtained.

4. A hall or gallery, where all the chirurgical apparatus ſhall be placed in proper order.

5. Near

5. Near the theatre for Natural Philoſophy and Chemiſtry, a room, where all the machinery and apparatus neceſſary for teaching theſe ſciences, may be depoſited.

6. A muſeum, or collection of Natural Hiſtory, comprehending only ſpecimens of every thing uſeful in the healing art, which the three kingdoms of nature afford. The lectures on Materia Medica, ſhall be given in that muſeum.

7. A hall appropriated for lectures, in which, the profeſſor has no occaſion to demonſtrate. There the lectures on Hygieine, and the Inſtitutions and Hiſtory of Medicine ſhall be delivered.

8. A great public hall for the competitions, examinations, for conferring degrees, and, in general, for all the public ceremonies of the college.

9. A library, not too extenſive, but well choſen, where the books on Philoſophy, Medicine, and Surgery, really uſeful for the ſtudy of theſe ſciences, ſhall be arranged according to the order of their various ſubjects. The pupils ſhall be admitted every day, both into the library, to obſerve the methodical arrange-

ment of theſe works, and into ſtudying rooms, where they may conſult the different books at leiſure.

10. A garden, where the officinal plants ſhall be cultivated; of which, the profeſſor of Botany, and Materia Medica, ſhall have the direction. If, in the cities where the medical colleges ſhall be eſtabliſhed, there be already Botanic gardens maintained at the expence of the public, theſe gardens ſhall be conſidered, at leaſt in part, as appendages to the medical college, to which the profeſſors of botany of theſe gardens, ſhall be annexed.

11. A number of Clinical wards ſhall be eſtabliſhed in a great hoſpital; in which ſhall be received, men, women, children, and aged people, in order that the pupils who ſhall be inſtructed in the practice of the healing art, may have an opportunity of ſeeing the diſeaſes of every age and ſex.

12. A laboratory, to be placed in the buildings of the college. There is no apothecary who will not be well pleaſed to have his ſhop in that ſituation. The laboratory ſhall be ſerved by the ſtudents of medicine. The knowledge

knowledge of the various medicines, and their preparations, is too little cultivated by young phyſicians; but this arrangement, will oblige them to attend to theſe circumſtances. This ſhop will be highly uſeful, in teaching Materia Medica and Pharmacy.

13. In a court, under ſheds, and in ſmall apartments, the various living animals ſhall be kept, for which the profeſſors may have occaſion for the purpoſe of experiments.

14. It would be deſirable, that the profeſſors were lodged in the buildings of the college, eſpecially thoſe who may have preparations to make for the illuſtration of their lectures; ſuch are the profeſſors of Anatomy, Chemiſtry, Botany, Surgery, and particularly thoſe of Clinical Medicine and Surgery, who ought to have lodgings in the hoſpitals of which they have the charge.

15. A hall ſhould be appropriated for the records of the college, near which, the ſecretary ſhould be lodged.

16. The medical ſtudents * ſhall be authoriſed, and even invited, to aſſemble in the public

* The ſtudents of Medicine and Surgery, taken collectively, are here meant.

lic hall, or in ſome other one; both for the purpoſe of repeating the obſervations of the profeſſors, of attempting various experiments, and for converſing on different medical ſubjects, in the ſame manner as the medical ſtudents of Edinburgh, who have eſtabliſhed, in that city, ſeveral ſocieties, very uſeful for the promotion of public inſtruction.

The neceſſary ſervices in the Claſſes, in the Laboratories, in the various Muſeums, in the collection of Chirurgical apparatus, in the Library, in the Botanic garden, in the Apothecary's ſhop, and in the Clinical wards, ſhall be performed by the ſtudents, on whom theſe various charges ſhall be beſtowed as the rewards of induſtry, at the concluſion of the ſeveral examinations. The duties of the pupils who ſhall have obtained theſe charges, ſhall be, to repeat the obſervations of the profeſſors, and to explain them to beginners; to regiſter the obſervations which have been made, and, in one word, to aſſiſt the profeſſors to whom the different departments ſhall be entruſted. Theſe employments ſhall be ſo much varied, that every ſtudent may find what is moſt agreeable to his inclinations; conſequently, they will

will doubtleſs become great objects of emulation among the pupils. It will be proper, for the good of the ſervice, that thoſe who perform theſe duties, ſhould be lodged in the buildings of the college.

Theſe remarks on the different apartments of the college, will enable an intelligent architect, either to form a plan for a new edifice, or, what would be more œconomical, to model, according to theſe views, ſome of the large monaſteries, which will be ſoon evacuated in all the cities of the kingdom.

SECTION II.

Of the Mode of teaching Medicine in the Practical Schools of the Departments, where the country Medical Practitioners ought chiefly to be educated.

One of the principal duties of thoſe employed in a reform of the mode of teaching and practiſing medicine, ought to be, to attend to the wants of the country. Hitherto, there has been no mode of teaching, proper for this

this purpoſe; for, on the contrary, every kind of obſtacle contributed to retard the progreſs of thoſe who ought to have attached themſelves to this charge. Theſe obſtacles were, the eſtabliſhment of teachers in great cities alone; the diſtance of ſeveral parts of the country from theſe cities; the great expence attending a reſidence there; and, above all, the almoſt abſolute inſufficiency of the means of inſtruction.

Several new plans have been propoſed, to remedy theſe errors; but, of theſe, a careful choice muſt be made; for ſome will only add to the evil. The preſent mode of teaching, is not only faulty from being deficient, as has already been remarked, but alſo from being too much extended in particular departments; and, in teaching country practitioners, that latter circumſtance muſt be particularly guarded againſt.

On this occaſion, it muſt be remembered, that the healing art depends on the pure and ſimple obſervation of nature; that it originally exiſted before general philoſophy, and quite independent of it; and that it has remained

mained the ſame, amidſt innumerable changes of that ſcience.

It therefore exiſts ſingly, and as an iſland in the middle of the ocean of human knowledge. It is true, that it borders on general philoſophy, and undoubtedly depends on it. The preliminary ſciences of medicine contribute to approximate them; and the labours of philoſophers, anatomiſts, and chemiſts, promote daily their union; but, till that ſhall be properly eſtabliſhed, the practice of medicine will be conſidered by men of abilities, as ſubjected to an order of laws which are peculiar to itſelf.

It will not, however, be expected, that by theſe obſervations, it is intended to remove philoſophy from the ſtudies of medicine. It has already been obſerved, and it may be again repeated, that the philoſophical ſciences appear highly proper to improve the healing art; and indeed, it is by means of them that its improvement will be promoted. But the cultivation or teaching of theſe ſciences, is out of the ſphere of education which is projected for the country medical practitioners.

It

It will be ſufficient if the philoſophical diſcoveries which are really applicable to the practice of medicine, are every year inſerted in the compendium deſtined for the uſe of ſuch ſtudents. By this means, the manner in which theſe ſciences may contribute towards the improvement of that art which is moſt uſeful to mankind, will be ſufficiently well pointed out.

In the different eſtabliſhments for teaching medicine * in the country, one or two profeſſors ſhall be charged with teaching the Inſtitutions. One of theſe ſhall teach Anatomy, Phyſiology, the Theory of Surgery, and the operations on the machine, and on the dead ſubject. The other ſhall profeſs Chemiſtry, Botany, Materia Medica, and Pharmacy. Theſe courſes ought to be very conciſe. The introductions to the works of Sennertus and Hoffman, may be looked over; they contain as much of the ſciences connected with the practice of medicine, as theſe authors have thought neceſſary for the deſcription of diſeaſes, and the explanation of ſymptoms and indications.

Theſe

* It is to be obſerved, that Surgery is not to be ſeparated from Medicine.

Theſe branches of knowledge are included in a few pages; and the practical part alone, forms the great bulk of their works. It is for that part, that every thing elſe ought to be ſtudied; whereas, hitherto, it has been entirely neglected. It has been conſidered as a conſequence, or corollary of the Theoretical inſtructions of colleges, which is a capital miſtake. It is, in fact, nothing leſs than that; for when young men paſs from the claſſes to the bedſide of a patient, they find that the greateſt number of the principles furniſhed by theory, are no longer applicable; and that the connection which was detailed between the Theory and Practice, is not realized.

The laws which nature obſerves in the diſeaſed ſtate of the human body, it muſt be allowed, ought to form the baſis of thoſe purely practical ſtudies which are here conſidered; and if it be judged proper to publiſh an abridgement of the lectures for the purpoſe of the projected inſtructions, the lectures, where theſe laws of nature are explained, ſhould be firſt publiſhed in this manner. There would reſult from this plan, a kind of phyſiology of the human body in a morbid ſtate; a work which

which medicine yet wants. It is only within this ſhort time, that this method has been re-introduced. Stahl and Bordeu have returned to that path which had been marked out by Hippocrates. The phænomena of diſeaſes compared with each other, arranged under ſome principal heads, and claſſed according to an invariable order, conſtitute, in their works, the theoretical ſcience or department of the healing art.

The inſtructions thus projected, can only be taught in hoſpitals; for it is, in ſome degree, more by the eyes than by the ears, that ſtudents of this kind ought to be inſtructed. Two profeſſors of Clinical Medicine and Surgery, ſhould, if poſſible, be appointed in the hoſpitals; for many inconveniences originate from collecting, about the beds of the ſick, great numbers of medical or chirurgical pupils. It will be particularly neceſſary, that in the elementary works publiſhed for the promotion of this branch of public inſtruction, the parts of Anatomy, Chemiſtry, and Materia Medica, which have any relation to each ſpecies of diſeaſe, ſhall be carefully referred to. The State ought to employ proper perſons

ſons for the publication of the neceſſary abridgements of theſe courſes. Theſe elementary works ſhould be addreſſed to the directories of the departments; and all the members of the profeſſion ſhould be invited to give their opinions, on the additions and corrections of which they may appear to them to be ſuſceptible.

It would undoubtedly be a deſireable object, that all thoſe who dedicate themſelves to the healing art, ſhould follow the plan of inſtructions which has been propoſed for the medical colleges; but the various ſpecies of education neceſſary for entering on that taſk, are without reach of the greateſt number. They require long ſtudy, great expence of living, and great abilities. If the medical aſſiſtance neceſſary in the country, and in the greateſt part of cities, depended on ſuch an education of profeſſional men, it would be almoſt null. While experience and deep thought improve ſlowly the arts and ſciences, the neceſſity of their being practiſed, is felt every day, in every place. However imperfect the means which the healing art affords may be, human nature requires them every mo-

ment. It is therefore the inſtrument, ſuch as it is, improved from year to year, or age to age, that ought to be entruſted to thoſe who know how to uſe it.

The plan which is propoſed for teaching medicine in the country, appears to poſſeſs ſeveral great advantages.

1. Young men who are not in opulent circumſtances, will not be under the neceſſity of removing to a great diſtance from their families. In ſeveral cities, many will be put to no extraordinary expence; and in country towns, the mode of living is leſs expenſive than in large cities. In ſhort, as has been already ſaid, young men may be educated by the immediate care of their relations, and ſons by that of their fathers.

2. It will be eaſy to admit into the hoſpitals, ſtudents under the title of Houſe Pupils, and to lodge and board them there, without any additional expence, either in the buildings of the hoſpital, or in its ordinary eſtabliſhment. There will reſult from this, a greater facility of inſtruction; for, in practical ſciences, a perſon cannot become a proficient, unleſs he be actually engaged in the practice of them. For this

this reaſon, the pupils admitted into the hoſpitals ſhall have a ſhare of the management of the patients; they ſhall take care of them, and live among them.

This advantage, already poſſeſſed by thoſe who ſtudy ſurgery, ſhould be enjoyed in common by every ſtudent of the healing art; as Meſſrs Chambon and Doublet have propoſed, in Memoirs on that ſubject, which they read to the Society of Medicine.

3. Another very important advantage of this plan, will be, to form perſons for the charges of teaching: this will afford an opportunity for the cultivation of genius which has never yet been held out. As the profeſſorſhips of the great colleges muſt be beſtowed by competition, it is in ſome meaſure neceſſary to prepare perſons who may appear on ſuch occaſions with eclat: the want of ſuch opportunities is perhaps the real cauſe of the ſmall degree of ſplendour of the preſent practical lectures.

It ought not to be objected, that in the country or in provincial towns, perſons capable of fulfilling ſuch duties, would not be found. The Society of Medicine knows

many who would do ſo with great ſucceſs. Beſides the learned profeſſors who conſtitute the medical college of Montpellier, the following gentlemen may be enumerated, viz. M. Durande at Dijon, Meſſrs Razoux and Baumes at Niſmes, Meſſrs Chibourg and Le Canut at Caen, M. Le Pecq at Rouen, M. Bonté at Coutance, M. Baraillon at Moulins, M. Rougnon at Beſançon, M. Jadilot at Nancy, M. Boucher at Lille, M. Dumont at Valence, M. Barberet at Toulon, Meſſrs Elie de la Poterie and Sabatier at Breſt, M. Mahon at Chartres, M. Raſt at Lyons, M. Bagot at St Brieux, &c. Beſides theſe, there are many others; for the above are cited accidentally from among the correſpondents of the Society: for example, the celebrated Queſnay, was found in obſcurity at Mantes.

It may be added, that this cuſtom is nearly followed in England; where there are teaching, operation, and diſſecting rooms, in every hoſpital. Even at Paris, there is a noble proviſion for inſtruction in Surgery at the Hotel Dieu, and the ſame alſo at Rouen.

Perhaps it might be proper, and it is a project on which the opinion of profeſſional people is requeſted, that within the great circle of inſtruction,

inſtruction, there might be included the ſame courſe of education (in a more compreſſed form) as that which has been ſketched out for the country towns. If this were the caſe, this courſe, being intruſted to people of greater abilities than thoſe in the country, might be better cultivated. It would be an object of emulation. It would become a model for the courſes of the ſame kind, which ought to be inſtituted in the beſt formed hoſpitals of the departments. Beſides, as this mode of teaching is certainly the moſt uſeful of any to the State, it would be improper to neglect any method of perfecting it. One or two additional profeſſors charged with teaching the Inſtitutes, that is to ſay, the theory of medicine, would be all the extra expence incurred in accompliſhing this purpoſe. It may even be added, that the profeſſors to whom the lectures on Hygieine, and on the Inſtitutes, in the plan for teaching in the colleges, have been aſſigned, may be charged with this duty *. With

* In this caſe, which is perhaps the moſt ſimple plan, theſe two profeſſors will be charged with the duty of teaching doubly, viz. their parts of the extenſive plan of the Medical college, and the abridged or practical courſes of this plan.

the profeſſors of the Practice of Medicine and Surgery, they may execute within the colleges the ſame plan which has been propoſed for country towns. With the ſame views, the regulation reſpecting the mode of teaching in the colleges, that every profeſſor ſhall, at the end of his courſe, give a ſummary view of his whole doctrine, was already ſuggeſted.

Theſe arrangements would produce the following advantages. By exhibiting, apart, a ſummary of the whole courſe, the profeſſors will not find ſo much reſtraint neceſſary in their great courſes, as they muſt otherwiſe do; for, without this precaution, they would be always ſtopt, from the dread of allowing themſelves to enter into too extenſive diſcuſſions.

The mode of publicly teaching medicine *, may therefore be arranged in the following manner:

1. There ſhall be five great medical colleges, which ſhall, as has already been ſaid, comprehend the whole extent of the kingdom. Theſe colleges ſhall confer degrees; they ſhall undertake

* Surgery, it is always underſtood, is included under Medicine.

undertake the great courſe of inſtruction; and alſo the more limited and practical courſe which has been deſcribed.

2. In the great hoſpitals of the ſeveral departments, public teaching on a ſmaller ſcale ſhall be allowed. It will be ſufficient to induce the ſtudents to attend ſuch lectures, to make the pupils admiſſible to degrees in the colleges, by ſhewing themſelves qualified. There ſhall be room in theſe hoſpitals for lodging a certain number of pupils, to whom the phyſicians and ſurgeons of theſe hoſpitals ſhall deliver various courſes of lectures. For this purpoſe, it will be ſufficient to allow an annual addition to the ſalaries which theſe phyſicians and ſurgeons already enjoy. They may alſo receive a ſmall fee from ſome of the ſtudents who ſhall be lodged and boarded in the hoſpital. Beſides, each department may allot an annual ſum for the encouragement of theſe particular courſes.

It may be obſerved, on this occaſion, that, in general, in the country towns, there is no want of hoſpitals for teaching; for, on the contrary, it is teaching which is required for the hoſpitals. In almoſt all the hoſpitals,

there are places for ſtudents; the medical practitioners are paid for their ſervices; there is an apothecary's ſhop, a botanic garden; and there are convenient opportunities for ſtudying anatomy, performing chirurgical operations on the dead body, and for acquiring information by the diſſection of morbid bodies. All theſe opportunities may be improved, by wiſhing to do ſo.

By allowing a medical practitioner * for each canton for the care of the poor alone, eighty-one would be required for each diſtrict; and conſequently, there would be neceſſary, for the whole kingdom, more than ſix thouſand, excluſive of the medical practitioners of the towns. It will therefore be neceſſary, that each department poſſeſs, in one of the hoſpitals within its territory, a ſchool for teaching the Practice of Medicine according to the plan ſketched out.

The duties of teaching ſhall be divided between the phyſician and ſurgeon of the hoſpital. The apothecary alſo ſhall have a ſhare; for he

* That is to ſay, a phyſician or ſurgeon. In the new plan, theſe two names are no longer diſtinguiſhed.

he ſhall exhibit the elementary operations of chemiſtry, and the preparations of medicine.

Every year, the Inſtitutes of medicine ſhall be repeated, viz. Anatomy, Phyſiology, and Chemiſtry, in Winter; and Botany, Materia Medica, and Pharmacy, in Summer. Surgery, Midwifery, and the Treatment of Diſeaſes, ſhall form the practical courſes. The care of the anatomical muſeum, and of the laboratories for chemiſtry and pharmacy, ſhall be conſigned to the charge of the pupils, to whom ſome lectures ſhould alſo be given, on the methods of drawing up caſes, on Inoculation, and on Veterinary Medicine.

The pupils ſhall paſs from theſe practical ſchools of medicine and ſurgery, to the colleges. It will be neceſſary, that, in the hoſpitals appropriated for teaching the practical departments of the colleges, there ſhould be an annual competition for places, where the moſt deſerving pupils, from every part of the kingdom, ſhould be admitted, that they may reſide for a certain period in theſe hoſpitals, to perfect themſelves. Each department, for a moderate contribution, might have a certain number of places or burſaries in theſe; an

arrangement

arrangement which might be eaſily made, ſince each college has a determinate number of departments within its juriſdiction. Thus, the opportunities for inſtruction, might be extended at little expence, and the number of uſeful phyſicians will be proportioned to the aſſiſtance which the poor of each canton may require.

PART SECOND.

Of the Practice of Medicine as it is connected with the public Salubrity.

CHAP. I.

Of the Manner in which the Phyſicians and Surgeons ought to be diſtributed, in order to aſſiſt the People of the Country and of the Cities.

It is principally for the purpoſe of taking care of the indigent ſick, and for ſuperintending the treatment of epidemic diſeaſes, that the phyſicians and ſurgeons ought to be diſperſed over the ſeveral parts of the country. The pupils educated in the practical ſchools already

already mentioned, ought to belong, in ſome meaſure, to the departments. They will have been maintained and inſtructed gratis, in the provincial hoſpitals; and on the ſuppoſition that they had been enabled to reſide, during a year or eighteen months, in the Clinical ſchools of the colleges, they will be under a new obligation, and the departments will have an additional right to claim their entire diſpoſal.

Theſe phyſicians and ſurgeons ſhould be ſettled in different parts of the country, according to the wants of each department.

This arrangement muſt be made in an accurate manner, by adopting the following principles.

Each department being eighteen leagues by eighteen, (which forms 324 ſquare leagues), will comprehend a ſpace of country of nine leagues diameter. The principal place being ſuppoſed in the centre of each department, can therefore watch over all the territory.

Each department ought to be divided into nine diſtricts, each meaſuring ſix leagues by ſix, or thirty-ſix ſquare leagues.

Each diſtrict ſhould be ſubdivided into nine cantons, each of four leagues ſquare.

This

This latter diviſion, ſhould form the baſis by which the appointment of the phyſicians for the people in the country ought to be determined.

A phyſician or ſurgeon for each canton, will only have four leagues to travel over; and, ſuppoſing him to reſide in the centre, will only have a circuit of one league.

If, therefore, all the departments are divided into nine diſtricts, and all the diſtricts into nine cantons, there will be ſix thouſand ſeven hundred and twenty-three cantons; and the number of municipalities or pariſhes, being from forty, to forty-two thouſand, there will be nearly ſix pariſhes to each canton.

Suppoſing the cantons to be leſs numerous by one third, and not to exceed four thouſand, there will be nine or ten pariſhes to each.

Therefore, the population of the kingdom, amounting to between twenty-two and twenty-four millions of people, there will be about 250,000 in each department, 30,000 in each diſtrict, and from 2 to 3,000 in every canton; and allowing one third of the inhabitants of the kingdom to reſide in the cities, there will be in every country canton, about 2,000 individuals,

duals. Suppoſing one ſick perſon for every thirty, according to the calculation made in armies, there may be in every canton, daily, from fifty to one hundred ſick perſons, or invalids; by which, allowing, as in England, the proportion of indigent, to be one twentieth of the population of France, the phyſicians or ſurgeons entruſted with the care of the poor, will only have to viſit in each canton, daily, three or four patients of that claſs; ſo that there will remain a ſufficient number of people in good circumſtances, to afford occupation to the medical practitioner.

Thus, each canton will form a convenient circle, both with reſpect to its extent, and to the number of ſick within it. By ſettling, in each canton, therefore, a phyſician or ſurgeon, he may be very uſefully employed; for he ſhould practiſe medicine, ſurgery, and midwifery; he ſhould be required to undertake pharmacy, perhaps, even the veterinary art, inoculation, and the ſuperintendance of foundlings, and of children at nurſe; and he ſhall alſo keep a regular account of every thing relating to theſe. The State ſhould pay him for the charge of the poor. The officers of health ſhall be ſubjected to the principal place of each

diſtrict.

diſtrict. At each city of the diſtrict, where there ſhall be a directory of the ſecond order, a phyſician may be ſettled, to be employed in caſes of neceſſity. He will act intermediately between the directory of the diſtrict, and the eſtabliſhed phyſicians of the country. At the diſtance of every ſix leagues, one phyſician will be ſufficient for caſes of dangerous epidemics. The directory of each department, ſhall form, by the union of the phyſicians of the city, a council of health, correſponding nearly with the nature of the preſent medical colleges, which ſhall ſuperintend the adminiſtration of aſſiſtance in epidemics, and the means to be adopted for preſerving health in unwholeſome ſituations, and ſhall take care to replace, when neceſſary, the eſtabliſhed phyſicians of the cantons.

Every thing relating to medicine, ſhall be reported to the departments, each of them being charged with the management of its own territory. But they ought all to have a common centre, where there ſhall be a medical academy, to which both the adminiſtrative bodies themſelves, and the different phyſicians or ſurgeons, may apply for advice on particular

lar caſes; and alſo the councils of health of the different departments, who ought to have a regular connected correſpondence with the academy.

With reſpect to cities, the care of the indigent in them, ſhould not be a leſs important object. In ſmall towns, there may only be one eſtabliſhed phyſician. This office may be united with that of phyſician to the hoſpital, to diminiſh the expence. This latter will be already paid; the apothecary's ſhop of the hoſpital will be very uſeful; the pupils will take charge of the ſick; and the overſeers and nurſes of the hoſpitals will wait on them. In large cities, there ought to be ſeveral penſioned phyſicians. Beſides, it is very probable, that, in large cities, hoſpitals will be eſtabliſhed in each quarter; in which caſe, the phyſician of the hoſpital ſhall alſo have charge of the indigent ſick of the quarter. The funds for theſe eſtabliſhments, may be furniſhed from thoſe allotted for hoſpitals, by increaſing theſe latter ſomewhat. It would, in fact, be attended with no advantage, if the care of the indigent poor ſhould, in cities, be diſtinct from that of hoſpitals. The one

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is a natural conſequence of the other. Beſides, there would be many advantages, if the greateſt number poſſible, of the poor, were attended in their own houſes. By this means, the advantages of the pariſh charities, would be combined with thoſe of hoſpitals; a plan, at preſent under trial in Spain. By this plan, the fatal errors in the management, and the expenſive abuſes in the maintenance of great hoſpitals, would be remedied.

In this manner, the health of the people will be watched over in cities, by the penſioned phyſicians of the quarters; and in the country, by thoſe of the cantons.

Thus, benevolence will be exerted with activity; the ſupplications of the poor will not be waited for, but their wants and wiſhes will be anticipated. This could not be accompliſhed by the various means which have hitherto been propoſed, among the reſt, by gratuitous conſultations in the principal places of the departments. The poor, in general, pay little attention to advice; it is aſſiſtance which they require: and, in order to diſtribute that properly through the various parts of the country,

try, means for affording it muſt be diffuſed through them.

The directories of the departments will have the principal charge of this duty. The neceſſary information reſpecting the ordinary and accidental wants of the people, ſhall paſs from the directories of the diſtrict to thoſe of the departments, near whom there will be a council of health; while, at the ſame time, the requiſite aſſiſtance will be conveyed from the directories of the departments to the cantons, through the medium of the directories of the diſtricts.

The general accounts on theſe ſubjects, ſhall be tranſmitted by the directories of the departments, to that branch of the executive power which ſhall have the ſuperintendance of the adminiſtrative aſſemblies of the kingdom. The medical academy, already mentioned, ſhall receive, for promoting the improvement of the ſcience, the reſult of the correſpondence of the phyſicians entruſted with the charge of ſuperintending the public ſalubrity, both in the cantons of the country, and the hoſpitals and quarters of the cities. This ſhall be tranſmitted to them, either directly, or through

the medium of the councils of health of the departments.

It will, therefore, be evident, that the phyſician of the canton, if he require advice in the treatment of any epidemic, or popular diſeaſe, will receive it from the phyſician of the diſtrict, who, on the firſt notice, ought to meet with him; that in caſes where both theſe phyſicians may have ſome doubts, they ought to conſult the council of health, eſtabliſhed in the chief town of the department; and that both the phyſicians and the council of health, may apply, on ſuch occaſions, to the medical academy placed in the capital. All theſe phyſicians, the councils of health of the different departments, and the medical academy ſituated in the centre, will maintain a continued correſpondence, and will be in a conſtant ſtate of activity, which ſhould never be interrupted; and thus, the means of aſſiſtance will be numerous and expeditious, as they ought to be, when the health of the people is concerned; for, towards the comfort and proſperity of the people, every thing ſhould be directed.

CHAP.

CHAP. II.

Of the Manner of ſupplying the indigent Inhabitants of the Country with Medicines.

THE adminiſtrative body ſhall defray the expence of the medicines neceſſary for the poor. The ſimple drugs ſhall be choſen, and purchaſed directly from the merchants who deal in them by wholeſale. The medicines which are difficultly prepared, ſhall be received from a laboratory, where they ſhall have been prepared publicly in great quantity, as will be mentioned in a ſubſequent part of this plan. They ſhall be put up and ſold in boxes, of which, the appearance ſhall be well known. The Procureur-Syndic, ſhall cauſe theſe medicines to be ſupplied, in proportion as they are required. It would not be proper, that the phyſician or ſurgeon employed in the charge of the public ſalubrity, ſhould in any caſe himſelf ſell the medicines which he preſcribes. Even although he might not deſerve any blame, yet he would not fail, occaſionally,

to receive it, ſhould he ſell medicines; and therefore, it is of conſequence, that he be without reach of ſuch ſuſpicions.

The adminiſtrative bodies ſhall tranſmit, every year, or every ſix months, to the phyſicians of the cantons, a liſt of the indigent people who ſhall have a right to their gratuitous care, and to all the aſſiſtance which they can afford.

There is a very ſimple method to oblige the apothecaries to keep in their ſhops, none but good medicines; which is, to furniſh them at prime coſt, with the chemical preparations, and the drugs moſt generally and uſefully employed in the treatment of diſeaſes. The adminiſtrative bodies may lay out the original expence, which will be afterwards reimburſed to them. By this means, the apothecaries will have no excuſe to offer, if medicines of a bad quality, are found in their ſhops.

CHAP. III.

Of the Eſtabliſhment of Midwives in the Country.

IT would, undoubtedly, be very deſirable, that the practice of midwifery, were excluſively

ly

ly confined to the ſurgeons of the cantons. But, ſince it is probable, that the prejudices in favour of midwives, will continue ſtill to prevail for a long time, it is neceſſary to endeavour to educate, for that purpoſe, women, who may be able to fulfil the duties of their profeſſion.

The great difficulty is, to find a good ſchool for inſtructing them. If it ſhould be neceſſary to ſend them, for this purpoſe, out of the departments, it would not be eaſy to perſuade them to ſubmit to this; and the expences of travelling, would be too much for them. Each department muſt therefore adopt the moſt certain means, for having, in its principal city, a ſurgeon of eminence, who ſhall be well acquainted with the practice of midwifery *. This neceſſary meaſure, without which the whole would be uſeleſs, being adopted, the midwives ſhould be admitted into a lying-in hoſpital, where they ought to be

* If it ſhould happen, that any department ſhould not have a ſurgeon acquainted with the practice of midwifery, the midwives muſt be ſent to be taught at the neareſt department, where there ſhall be the beſt informed male practitioner of midwifery.

lodged and boarded, and where all their expences ſhould be defrayed. At Rouen, at Lyons, and at the Hotel Dieu of Paris, there are ſimilar inſtitutions, which have been attended with much ſucceſs. This method appears preferable to the courſes of lectures, which Government has ſometimes charged different perſons to give, in various parts of the country; becauſe, by the means propoſed, obſervation is joined to precept; and it is by ſeeing real practice, chiefly, that women are made to attend to directions, which the greateſt number would neglect, if the profeſſor were to confine himſelf to ſimple narrative, without making references to real practice.

The midwives, after having paſſed a public examination, ſhall be ſettled in various parts of the country; but it will not be proper to allow them any fixed ſalary. The practice of midwifery, in the hands of women, affords only occaſional employment, and cannot occupy the whole time of thoſe engaged in it. A certain allowance for each delivery, will be a more œconomical and juſt plan. Formerly, in the management of the funds for the poor, the

the midwives were paid at the rate of five ſhillings for each delivery.

A ſingle midwife will be ſufficient for every two cantons, if they are moderately peopled; and if two labours ſhould occur at a time, the ſurgeon of the canton will be ready to aſſiſt.

The midwives ſhall be obliged to call him in to all caſes of difficulty. The indigent women, ſhall be aſcertained by a commiſſary of the adminiſtrative body, and ſhall receive proper aſſiſtance, gratis.

CHAP. IV.

Of the Organization of the Hoſpitals.

SECTION I.

Of the Fundamental Principles of the Organization of the Hoſpitals.

§ I. *Of the Object of Hoſpitals; of their Number, and Size.*

THE deſign of hoſpitals, is to afford to the indigent ſick, the aſſiſtance conducive to their

recovery, which they could not procure in their own houſes.

When, therefore, the indigent ſick can be taken care of in their own houſes, they ſhall be attended there, by the medical practitioners appointed to that duty by the adminiſtrative bodies.

But, if the ſick cannot be properly treated at home, notice ſhall be ſent to the neareſt hoſpitals; and they ſhall be carried thither, under the care of one of the pupils of the hoſpital, who ſhall ſee that they be conducted with attention and ſafety.

Caſes may undoubtedly occur, where the nature of the diſeaſe, and the diſtance from the hoſpital, may be ſuch, that the ſick perſon cannot be carried ſo far. It will therefore be neceſſary to eſtabliſh, in all the villages of a certain extent, an aſylum for the reception of patients of this deſcription, who ſhall there be attended by the phyſician of the canton, as if they were in their own houſes.

Each hoſpital may be reckoned to contain from fifty to ſixty beds, which will be determined by the general proportion of population, and the extent of diſtrict to which

each

each hoſpital ſhould be allotted, both in the country and in cities. In the great cities, where a crowd of ſtrangers of all ranks reſort, as hoſpitals proportioned to the original ſtate of population will not be ſufficient, there muſt be large hoſpitals *. The largeſt hoſpitals ſhould contain no greater number of beds than ſix hundred, both for medical and chirurgical diſeaſes.

Beſides the ordinary hoſpitals, there ſhall be particular ones for children, and old people. The marine and military hoſpitals, and thoſe for the reception of the indigent in the neighbourhood of the principal mineral waters, as at Bourbonne, Barreges, &c. ſhall be retained, and may be organized in the manner to be afterwards explained.

All the hoſpitals ſhall be divided, according to their ſize, into a greater or ſmaller number of ſeparate wards. It would be deſirable, that there ſhould be no ward containing more than from fifteen to twenty beds, placed at proper diſtances. With reſpect to great hoſpitals, thoſe will be the moſt healthy, which ſhall

* The former kind of hoſpitals are ſtyled, in the original, *hoſpices*, and the latter, *hoſpitaux*. *Tr.*

ſhall conſiſt of ſeveral ſeparate pavilions, according to the propoſal of the Academy of Sciences, or like the hoſpital of Rochefort.

§ II. *Of the Office-Bearers of the Hoſpitals; of their Functions, and of the Manner of electing them.*

The various duties of the hoſpitals ſhall be fulfilled by the following perſons:

1. By phyſicians and ſurgeons.
2. By a principal apothecary.
3. By the pupils of the hoſpital.
4. By keepers.
5. By domeſtic ſervants.

I. The phyſicians and ſurgeons ſhall viſit the hoſpital every day, at a certain hour in the morning; and in the evening, they ſhall viſit, for the ſecond time, thoſe patients whoſe caſes ſhall require that attention.

A ſingle phyſician and ſurgeon, will be ſufficient for each ordinary hoſpital.

No phyſician or ſurgeon ſhall have the charge of more than one hoſpital.

In the large hoſpitals, the charge of each phyſician and ſurgeon, ſhould not be ſo great

as

as to comprehend, at one time, more than eight or ten patients in a dangerous ſituation, who require particular attention. This number will generally occur nearly in every hundred and fifty beds, including convaleſcent and chronic caſes. Hence, a phyſician and a ſurgeon, cannot, in an hoſpital, each take charge of more than one hundred and fifty patients at a time.

Therefore, there will be required, at leaſt, two phyſicians and two ſurgeons, for every hoſpital containing ſix hundred beds.

The phyſicians and ſurgeons of the hoſpitals, ſhall be choſen, as will be afterwards mentioned, by an electoral body.

It may be aſked, Whether theſe phyſicians and ſurgeons, when once appointed, ſhall hold their places for life, or for a certain term of years only; or whether they may be re-elected after a certain interval *? This important queſtion cannot be inveſtigated on this occaſion, and is therefore only ſuggeſted. The two

* It might, for example, be determined, that there ſhould be a new election every ten or twelve years.—Perhaps the ſame meaſures ſhould be adopted reſpecting the profeſſors.

two laſt propoſitions ſeem to be preferable to the firſt: *1ſt*, Becauſe, by theſe means no improper perſon who may have been appointed, will be continued too long in office. *2dly*, Becauſe a phyſician will thus be prevented from keeping a place, to the duties of which his great age or infirmities may render him inadequate. *3dly*, Becauſe, in this manner, a ſpirit of emulation will be promoted, by affording a field for a great number of competitors; a circumſtance which deſerves much attention.

II. The principal apothecary ſhall have the charge of the laboratory; he ſhall prepare the medicines allotted for the hoſpital; he ſhall teach the pupils, who are under his care, to prepare the medicines by themſelves; and he ſhall frequently be intruſted with the diſtribution of the neceſſary aſſiſtance in the treatment of popular and epidemic diſeaſes.

III. The pupils of the hoſpital ſhall be choſen from among the ſtudents who ſhall have undergone the examinations on the Theory, both of the Preliminary, and the Direct branches of Medicine. They ſhall be nominated annually by the judges of the examinations, who

ſhall

ſhall chooſe thoſe who appear the beſt informed. The places of the pupils who leave the hoſpital, ſhall be filled up in a proportion to be determined by a particular regulation.

The duties of the pupils of the hoſpital ſhall be, *1ſt*, To overſee the wards, to take care that the orders are properly obeyed, and to keep the report books, and the regiſters of the different caſes. *2dly*, To perform the ſubordinate chirurgical operations. *3dly*, To prepare the medicines under the direction of the principal apothecary. *4thly* & *5thly*, To undertake the anatomical and chemical experiments and inveſtigations which ſhall be recommended to them by the phyſician or ſurgeon of the hoſpital.

There ſhall be, in all, five claſſes of hoſpital pupils, viz. Inſpectors of the wards, Surgeons, Apothecaries, Chemiſts, and Anatomiſts.

Their number ſhall be in proportion to the extent of the hoſpital. The number of inſpectors of the wards, in particular, ſhall be proportioned to that of the diviſions under which the patients ſhall be ranked; and there ſhall be a pupil of that claſs for every fifteen

or

or twenty beds. The other claſſes may be leſs numerous; but, in general, in every large hoſpital, there ſhall be under each phyſician and ſurgeon, a complete eſtabliſhment of pupils intruſted with theſe various duties.

They ſhall be under the immediate inſpection of the phyſicians; and ſhall, in every reſpect, conform themſelves to their orders.

IV. The keepers ſhall be charged with the care of the patients in every thing which regards cleanlineſs, and the different wants in which they require aſſiſtance. They ſhall perform theſe duties under the eyes of the pupils who are inſpectors of the wards.

Whoever the perſons charged with this office may be, whether they be elected and nominated by a board of adminiſtration, or whether they may conſtitute a claſs of perſons of either ſex, appointed by the State to theſe reſpectable and painful functions; they ought not, in any manner, to interfere with the duties of the pupils; and they ſhall be required to obey what the pupil intruſted with the inſpection of each ward, ſhall preſcribe for the good of the patients.

V. The domeſtic ſervants ſhall perform all the duties which do not reſpect the perſons of the

the patients; and ſhall only enter the wards, when called there by their reſpective charges.

§ III. *Of the Adminiſtration of Hoſpitals.*

THE adminiſtration, or rather the council of adminiſtration of hoſpitals, is only mentioned on this occaſion, for the purpoſe of ſuggeſting, that it is an object of great importance, that a part of that council ſhould be elected from among the officers of health; and alſo, that the phyſicians and ſurgeons of the hoſpitals ſhould form part of the council, and ſhould have a vote in the deliberations; for there are a great number of circumſtances relating to the management of the hoſpitals, on which they alone can give proper advice.

SECTION II.

General Organization of the Hoſpitals for the purpoſe of teaching the Pupils the Practice of Medicine by obſervation, or the firſt Method of Clinical Inſtruction.

ALL the hoſpitals ſhould be directed towards this great object; it is even abſolutely neceſſary, that they ſhould all for the future be organized in ſuch a manner as to accompliſh it; and

and it may be remarked, that hitherto none of them has been proper for this purpoſe.

§ I. *Of the Diviſion of Hoſpitals for the purpoſes of Medical Information, and Clinical Inſtruction.*

THE number of patients is not the only circumſtance to be conſidered in the formation of the principal diviſions in an hoſpital: it is neceſſary alſo, as much as poſſible, to arrange the patients according to their diſeaſes and wants. By this arrangement, it will be eaſier to afford the neceſſary aſſiſtance, and to exhibit the different medicines to the patients, beſides which a great advantage in the ſtudy of diſeaſes will alſo be obtained; for, in theſe, the compariſon of the different phænomena in ſimilar caſes, forms the principal and moſt important foundations of the prognoſis.

It is deemed uſeful, to detail, on this occaſion, all the reaſons for theſe diviſions; although, at the ſame time, it is not thought that theſe can be carried into execution in all places and at all times. It is left to the care of the phyſician of each hoſpital, to aſcertain thoſe arrangements which may appear to him practicable and expedient.

TABLE

TABLE *of the* CLINICAL DIVISIONS, *which may, according to circumſtances, be eſtabliſhed in Hoſpitals.*

ORDINARY HOSPITALS.

Firſt General Diviſion.	Part of the Hoſpital allotted to Men.
	Part of the Hoſpital allotted to Women.
Second General Diviſion.	Internal Diſeaſes, or thoſe, the treatment of which conſiſts chiefly in the exhibition of internal remedies.
	Chirurgical Diſeaſes, or thoſe, the cure of which depends principally on a chirurgical operation.

I. DIVISIONS FOR INTERNAL DISEASES.

Firſt General Diviſion.	Contagious Diſeaſes. [1]
	Diſeaſes not Contagious.
Second General Diviſion.	Acute Diſeaſes.
	Chronic Diſeaſes.

[1] It would be deſirable that the Contagious diſeaſes were ſeparated from each other.

Supplement to the Diviſion of Acute Diſeaſes. [2] — Ward for Patients on their admiſſion.

Ward for Delirious Patients.

Third General Diviſion. Uncommon Diſeaſes, or thoſe which require a particular mode of treatment, or on which it is propoſed to make experiments. [3]

Fourth

[2] The ſtage preceding that which diſtinguiſhes the diſeaſe, is ſometimes a very intereſting ſubject of ſtudy to the pupils, and of reflections to the phyſician. It is often attended with equivocal ſymptoms, which ſometimes reſemble each other in appearance, in caſes which, during the reſt of their courſe, are very different. It is by the compariſon of theſe ſtates that the phyſician can learn to eſtabliſh a certain diagnoſis. It is therefore uſeful, that patients ſhould not be put into the ward for acute diſeaſes, without having been previouſly placed in one conſiſting of a ſmall number of beds, called the ward for thoſe newly admitted. It is alſo uſeful, that near the ward for acute diſeaſes, there ſhould be a ſmall one, into which thoſe patients, who, by their delirium, would diſturb the others, may be carried. This ſeparation from the others, frequently advantageous for the patient himſelf, will afford, to the attentive obſerver, farther objects of compariſon, which may be of importance for eſtabliſhing the prognoſis.

[3] Theſe diſeaſes belong eſpecially to the claſs of Chronic complaints. Such are thoſe commonly called diſeaſes of the Lymphatic

Fourth General Diviſion. Venereal Complaints. [4]
Fifth General Diviſion. Diſeaſes of Artiſts. [5]

Lymphatic ſyſtem, and particularly Scrophula. Such are alſo thoſe which affect the ſubſtance of the bones; ſome of thoſe which affect the cellular ſubſtance, and, in general, the obſtinate cutaneous eruptions; madneſs and melancholy; external and internal ſchirrhous and cancerous tumours; ſcurvy, &c. All theſe diſeaſes, and ſeveral others, ought to become the object of very particular inveſtigation, both with reſpect to the ſtudy of their varieties, and the ſymptoms attending theſe varieties, and the examination of the effects of the different remedies which appear to produce any changes on theſe diſorders; and alſo, to the chemical analyſis of the changed fluids, or even organs which form the ſeat of theſe complaints. If poſſible, each ſpecies of theſe diſeaſes ought to be kept ſeparate from the others; but Maniacal affections, Epileptic and Convulſive diſorders, Gangrenous and Pſoric eruptions, and the Scurvy, muſt be abſolutely ſeparated.

[4] It is an object of importance to continue the undertaking of M. De Horne reſpecting theſe diſeaſes, for comparing the different modes of cure, and for aſcertaining the circumſtances in which one mode is preferable to another.

[5] It is highly neceſſary to collect a connected chain of obſervations on theſe diſeaſes. Another method to accompliſh this, would be, by the eſtabliſhment of hoſpitals in the vicinity of great manufactories. By this plan, a knowledge of means for preventing the complaints which affect an uſeful claſs of citizens, would be obtained. The Society of Medicine has already attended to this ſubject, and has collected a great many valuable materials; the greateſt part of which, it owes to a very reſpectable citizen, who is not a medical practitioner, M. Pajot de Charmes.

Sixth General Diviſion for that allotted to Women. — Diſeaſes of Women during the puerperal ſtate. [6]

II. DIVISIONS FOR CHIRURGICAL DISEASES. [7]

Firſt General Diviſion. Wounds, Fractures, and Luxations.

Second General Diviſion. Other diſeaſes in which Chirurgical operations are the chief means of cure. [8]

Third

[6] It is ſtill neceſſary to obſerve theſe diſeaſes with much attention; and they may afford room for very important inveſtigations. Beſides, no ſpecies of diſorder is more ſuſceptible than they, of being rendered inveterately worſe, by the dangerous circumſtances which are found combined in great hoſpitals. When, therefore, women in ſuch caſes cannot be received into the ſmall hoſpitals, nor attended at their own houſes, which would certainly be preferable, they ought to be admitted into the large hoſpitals, and placed in a ward by themſelves, ſeparated even from the lying-in women; becauſe there is no ſtate of the body in which putrid and contagious diſeaſes are more readily communicated, or more generally fatal than that.

[7] It will always be uſeful to reſerve for the large hoſpitals, thoſe diſeaſes which require important operations, for evident reaſons. In the greateſt number of ſmall hoſpitals, therefore, there will be no chirurgical wards, but for the treatment of ſimple ulcers of both ſexes, and for the delivery of pregnant women.

[8] Such are thoſe requiring the amputation of large limbs,

or

Third General Diviſion. Wounds which aſſume a bad appearance. 9

Fourth General Diviſion. A room for performing operations. 10

Wards for pregnant Women.

Fifth General Diviſion. Wards for thoſe who have been operated on.

Wards for delivered Women.

Wards for Convaleſcents. 11

or caſes of cancers of the breaſt, fiſtulæ ani, herniæ, ſtone in the bladder, &c.

9 The malignancy which ulcers ſometimes acquire in hoſpitals, may become contagious. The precaution of placing ſuch patients by themſelves, is as uſeful for them, as for thoſe from whom they are ſeparated; a fact which daily obſervation proves.

10 It is well known, that it is very neceſſary for the quiet of the patients, to avoid operations as much as poſſible in the wards.

The neceſſity of a particular ward for thoſe who have been operated on, and for women after delivery, is alſo obvious. They ought to be carried thither immediately after the operation; becauſe their cure depends on the moſt perfect quietneſs, and on their being placed in a healthy ſituation.

11 The diviſion for Convaleſcents is here common to patients affected with internal and chirurgical diſeaſes. But it will be neceſſary to eſtabliſh a diſtinction at leaſt in the arrangement of the beds, in order that the phyſician or ſurgeon, under whoſe care the patient had been, may ſtill attend him in his convaleſcent ſtate.

This

HOSPITALS FOR CHILDREN. [12]

First General Diviſion. Diſeaſes of early infancy, or of children from birth, till the firſt ſet of teeth have appeared.

Diſeaſes of childhood, from the time of the firſt dentition, till the ſecond is finiſhed.

Boys.

Girls.

Second General Diviſion. Diſeaſes which are Contagious.

Diſ-

This ſtage of diſeaſes, will afford to the ſtudents, many opportunities of making important remarks on the progreſſive return of ſtrength; on falſe convaleſcence, on relapſes, their cauſes, proportion, and the diſtance of their recurrence with reſpect to the original complaint; on the chronic diſorders which follow acute ones, which often form the criſis of the latter; and on a variety of other circumſtances which have been little deſcribed by authors, and which can only be ſtudied in the great book of nature.

It is therefore neceſſary, that the medical practitioner ſhould not neglect convaleſcents, nor omit to call the attention of the ſtudents to their caſes.

[12] It is neceſſary to remark here, that the aſſemblage of a great number of children in one place, is more unfriendly to

health,

	Diſeaſes which are not Contagious.
Third General Diviſion.	Acute Diſeaſes.
	Chronic Diſeaſes.
Fourth General Diviſion for new-born Children.	Venereal Diſorders.
Fifth General Diviſion.	Chirurgical Diſeaſes.

HOSPITALS FOR OLD PEOPLE.

Firſt General Diviſion.	Wards for the Men.
	Wards for the Women.
Second General Diviſion.	Natural Infirmities.
	Accidental Complaints.
Third General Diviſion.	Chirurgical Diſeaſes.

The Marine and Army Hoſpitals, and thoſe which are inſtituted in the vicinity of the principal mineral waters, &c. may be organized and arranged

health, eſpecially during early infancy, than that of thoſe in any other age or ſtate of life. It proves often an invincible obſtacle to the cure of diſeaſes; and hence the obſerver is liable to be miſtaken in his opinions, when the patients are expoſed to the influence of cauſes, in themſelves ſo dangerous and fatal. It will be more advantageous to eſtabliſh, within the circle of the ſmall hoſpitals, houſes both for the education of healthy children, and for the management of diſeaſed ones; and to place in them the orphans and foundlings who ſhall be ſent there from the places in which they ſhall have been found.

with reſpect to the diſeaſes which occur moſt commonly in them, according to the ſame principles.

It will be alſo readily allowed, that it is proper, in each hoſpital, beſides the diviſions enumerated, that there ſhould be a room for writing the regiſters; one for opening dead bodies, and for making anatomical demonſtrations; a laboratory for the preparation of medicines, and for chemical inveſtigations; a place for drying plants, and a botanic garden, in which may be cultivated the officinal plants, which the phyſician of the hoſpital may wiſh to preſcribe, in particular caſes, for the ſake of experiments.

§ II. *Of the Duties of the Phyſicians and Pupils of the Hoſpitals, conſidered as they regard Clinical Obſervation and Inſtruction.*

THE phyſician ſhall viſit the patients, as already mentioned. The pupils of the hoſpital ſhall mark down in a report-book, every thing which the phyſician ſhall remark and preſcribe; they ſhall keep a regiſter of the caſes; they ſhall carry the preſcriptions into execution;

execution; and they ſhall make the inveſtigations which ſhall be entruſted to them.

The ſtudents will receive inſtruction, by viſiting the patients, and accompanying the phyſician and pupils, while on their reſpective duties.

In order to underſtand all theſe duties, ſome idea muſt be formed, of the manner in which the report and caſe-books ſhould be managed. Both ſhall be kept by the pupils who overſee the wards.

There ſhall be two kinds of regiſters kept, in different books; the one ſhall contain the reports made at the viſit; the other, the regiſter of the caſes.

The former ſhall ſerve as a guide to the phyſician in his viſits, and to the pupils in the duties which are impoſed on them.

Each ward ſhall have a report-book proper to itſelf. Each leaf of that book, ſhall be made to contain the hiſtory of a ſingle viſit; and ſhall be contrived in ſuch a manner, that the report of the viſit may be made expeditiouſly, and exhibited in a perſpicuous manner.

For this purpoſe, it ſhall be divided into ſeveral columns, with printed titles, which ſhall be filled up in the following manner:

At

At the top of the leaf, ſhall be put the name of the ward, and the date and number of the viſit.

The firſt column ſhall contain the number of the bed, and the date of admiſſion of the patient; the date of the attack of the diſeaſe, if known; and alſo that of the reception of the patient into the hoſpital.

The ſecond column ſhall contain the name of the diſeaſe; that is to ſay, when it has not yet aſſumed any decided form, the moſt remarkable ſymptoms ſhall be detailed; ſuch as, for example, the fever, and the pains or the depreſſion which attend the diſeaſe. When the complaint is known, the name, merely, ſhall be marked; and when it ſhall have changed its appearance, its variations ſhall be deſcribed.

The third column ſhall contain ſummary obſervations on the daily ſtate of the patient. This column ſhall be a little larger than the others.

On the fourth column, the medicines preſcribed for internal uſe, ſhall be marked.

On the fifth, the leſſer chirurgical operations.

The

The ſixth, ſhall contain every thing relating to regimen.

The pupils who ſhall have charge of the regiſters of each ward, ſhall extract from this leaf, detached notes, which ſhall be fixed to the bed of each patient, in order to be ſeen by thoſe ſtudents who ſhall viſit them at any time different from that appropriated to the phyſician's viſit. Theſe notes ſhall contain what is written in the ſecond and third columns, and what reſpects the preſcriptions and regimen.

The report-book, ſhall alſo ſerve to determine the principal obſervations which ſhall be inſerted into the caſe-book.

The caſe-book ſhall be allotted for inſerting, in a connected order, all the circumſtances relating to the caſe of each patient.

At the top of each page, there ſhall be the name of the ward, the number of the patient, and deſcription of his diſeaſe, ſuch as it ſhall have been marked in the ſecond column of the correſpondent leaf of the report-book.

The caſe-book ſhall be divided into columns; the firſt of which, ſhall contain the date or number of days of the diſeaſe.

In

In the ſecond, ſhall be written all the ſymptoms of the diſeaſe; not only thoſe which ſhall be expreſſed ſummarily in the third column of the report-book, but alſo, thoſe which ſhall have been obſerved during the intervals of the public viſit, by the pupil who has the chief charge of the ward, and who ſhall keep the records of the caſes. On the ſame column, ſhall alſo be enumerated, obſervations on the nature of the evacuations; the reſult of the chemical inveſtigations which may have been ordered by the phyſician; and the anatomical remarks which the opening of dead bodies may ſuggeſt.

The third column ſhall contain the remedies which had been ordered, and their ſenſible and undoubted effects.

When a patient ſhall be tranſported from the ward allotted for thoſe newly admitted, to that appropriated to acute diſeaſes, the pupil who ſhall have charge of the caſe-book of the former ward, ſhall deliver up the leaf which regards that patient, in order that it may be joined with thoſe which ſhall contain the hiſtory of his diſeaſe.

The

The leaf filled up in the ward for newly admitted patients, ſhall contain, in the ſecond column, every thing relating to the preceding ſtate of the patient, and to his age, temperament, and profeſſion; and alſo, reſpecting the real or alleged occaſional cauſes of the diſeaſe, and all the other articles of information which can be learned with regard to his hiſtory.

The pupil who ſhall keep the regiſters of the ward of convaleſcents, ſhall alſo remit his leaves to the pupil who ſhall have kept the regiſter of the ward in which the patient had been treated; and from the union of theſe leaves, containing a complete hiſtory of the diſeaſe, a ſhort recapitulation ſhall be drawn up, which ſhall cloſe that caſe.

The pupil charged with the care of the caſe-book, ſhall be required to mark, on leaves for that purpoſe, all the meteorological obſervations, which ſhall be collected during the ſpace of time included in the book.

The regiſters reſpecting that part of the hoſpital, allotted for chirurgical caſes, ſhall be kept on the ſame plan.

Every year, in the months of January and Auguſt, the phyſician ſhall cloſe the caſe-books;

eſpecially

eſpecially of the ward of acute diſeaſes, by including in them, all the complete caſes, and transferring thoſe which are ſtill under treatment, to the following caſe-book.

At the cloſe of the caſe-book, a table ſhall be made out, of all the diſeaſes included in it, in order to have a complete view of the vernal and autumnal diſeaſes of the year.

During the public viſit, the phyſician ſhall be accompanied by the keeper and the pupils of each ward, which he enters.

He ſhall begin his viſit [13] at the ward appropriated to thoſe newly admitted, and ſhall, from thence, paſs into that of acute diſeaſes, and then into that for delirious patients; the beds of whom, in the ward for acute diſeaſes, ſhall be kept empty. If the ſame phyſician viſit all kinds of diſeaſes, and all claſſes of patients, he ſhould next go into the ward for chronic caſes, and into that for diſorders requiring

[13] It is to be here underſtood, that, by thus expreſſing theſe remarks in a poſitive manner, it is not meant to preſcribe, abſolutely, the line of conduct which the phyſicians ſhould adopt; but merely, to point out every thing according to the plan which, it is believed, is moſt eligible for the purpoſe of inſtruction.

quiring a particular treatment; then into that of convaleſcents, in the diviſion allotted for the men; then into that for the women; and ſhall always finiſh his viſit by the ward of contagious diſeaſes.

The public viſit ſhall be conducted in the following manner:

A pupil ſhall hold the report of the laſt viſit, and ſhall read, with an audible voice, in the ſecond and third column of that report, the ſtate of the patient at laſt viſit; or, if he have not yet been viſited, he ſhall read in the ſame columns of the report-book, relating to that patient, the remarks made reſpecting his caſe. Another pupil, holding the caſe-book, ſhall read, in the ſame manner, the remarks which ſhall have been made on the patient during the interval of the two viſits.

The phyſician ſhall then examine and queſtion the patient; and, according to his anſwers, and his ſtate, ſhall dictate, in a few words, the ſummary obſervations which ought to be written in the report-book: theſe muſt always be ſuch as ſhall determine the indications of cure to be followed.

He

He ſhall then preſcribe the remedies, and the regimen; and ſhall, if he finds it neceſſary, give his orders to the pupils charged with undertaking the ſeveral inveſtigations.

After the viſit, the phyſician ſhall examine the regiſters. If any patient be dead, he ſhall point out to the anatomical pupils, the principal circumſtances to which they ſhould attend, in opening the body. He ſhall anſwer any queſtions which the pupils may put to him. He ſhall ſee that the meteorological obſervations of the day, be accurate: and if any change in the ſtate of the weather, ſhall have been followed by an uniform change in ſeveral patients of the hoſpital, he ſhall mark it down, either at the bottom of the report-books, or on the leaf appropriated for meteorological obſervations.

After this, each pupil ſhall go to his reſpective department.

Thoſe who are entruſted with the preparation of medicines, ſhall extract from the report-book, a liſt of the preſcriptions, divided into three parts. The firſt ſhall contain the preſcriptions, which muſt be immediately prepared; the ſecond, thoſe which are appointed

ed for the reſt of the day; and the third ſhall be ſet apart for the regimen.

The chirurgical pupils ſhall perform the bleedings, and dreſs the ulcers; and if their be any, more nice, operation, as extirpations, or the opening of deep abſceſſes, they ſhall perform them under the eyes of the ſurgeon, or one of his principal pupils, who ſhall attend in the ward when deſired, and ſhall ſuperintend the operation, or do it himſelf, if neceſſary.

The pupils who have the charge of overſeeing the wards, ſhall employ themſelves in writing the caſes. Thoſe who ſhall have chemical inveſtigations to make, ſhall work at theſe; and thoſe who ſhall be charged with the opening of bodies, ſhall proceed to that duty, having under their eyes, the hiſtory of the diſeaſe, which will direct them in their inquiries.

The ſtudents who ſhall have attended the phyſician in his viſit, ſhall have the liberty of alſo attending the pupils of the hoſpital, during the exerciſe of their different functions.

In order to avoid confuſion, and alſo the conſtraint which the patients would ſuffer from a crowd of young men, the ſtudents ſhall

be diſperſed through the hoſpital in ſuch a manner, that each ſhall have a certain number of patients to attend to; and that each patient ſhall only be viſited by a certain number of ſtudents, always under the eyes of the pupil who overſees the ward. Each ſtudent ſhall be furniſhed with the number of patients to which he ſhall be obliged to reſtrict himſelf.

It will alſo be neceſſary, that, in the greateſt number of hoſpitals, except in thoſe allotted for teaching, the number of ſtudents allowed to attend the hoſpitals, be determined according to their extent; and that thoſe only ſhall enjoy that privilege, who have paſſed their firſt examination on Theory.

With reſpect to chirurgical diſeaſes, the ſurgeons ſhall viſit the patients, accompanied by the pupils, in the ſame manner as has been marked out for the phyſician.

If any operation be neceſſary, he ſhall perform it after the viſit.

When any patient ſhall have been tranſported from the wards allotted for internal diſeaſes, to the chirurgical wards, for the purpoſe of ſubmitting to ſome important operation,

tion, the phyſician who ſhall have attended him in the former, ſhall be requeſted to attend in the latter ward, in order to concert with the ſurgeon, the proper meaſures to be adopted for the management of the caſe. The pupils of the wards for internal diſeaſes, ſhall take care to continue their regiſters reſpecting this patient; and, for that purpoſe, they ſhall have acceſs to the regiſters in the chirurgical ward, in which his treatment ſhall be continued.

After the viſit, a liſt of the operations to be performed, ſhall be extracted from the report-books.

The chief ſurgeon ſhall diſtribute theſe in the following manner:

1. The leſſer operations ſhall be entruſted to the pupils.

2. In the curative operations, the chief ſurgeon ſhall determine what ſhall be entruſted to them; but theſe operations ſhall always be performed under his eyes. Such are, the opening of abſceſſes, the taking the dreſſings from great wounds, &c.

3. With reſpect to important operations, he ſhall, when practicable, cauſe the patients

to be tranſported, the one after the other, into the amphitheatre allotted for that purpoſe; and he ſhall perform the operations in preſence of the pupils, the moſt experienced of whom ſhall ſerve him as aſſiſtants; and if he ſhall think proper to truſt to them any important operation, they ſhall only operate under his eye.

SECTION III.

Of the particular Organization of the Hoſpitals allotted for teaching Clinical Medicine and Surgery; or, of the Second Mode of Clinical Inſtructions.

IN each medical college, there ſhall be an hoſpital allotted for teaching, publicly, Clinical medicine and Surgery. Both theſe ſhall be taught in regular courſes, by one or two profeſſors, who ſhall be, at the ſame time, the phyſicians and ſurgeons of the hoſpital *.

Nevertheleſs, nothing ſhall prevent the phyſicians and ſurgeons of the other hoſpitals, of every kind, to lecture alſo, if they chooſe it,

* See Note 17. page 329.

it, on the diſeaſes of the patients entruſted to their care. They ſhould even be expreſsly encouraged to do ſo, in order to excite emulation by competition, to afford an opportunity for the diſplay of abilities, and to multiply for the pupils, the means of inſtruction. The ſucceſs obtained in that character, will be an additional title towards obtaining profeſſorſhips. It is particularly deſirable, that the phyſicians entruſted with the charge of the Marine and Military hoſpitals, ſhould be engaged to fulfil theſe uſeful functions; and, for this purpoſe, it may be proper to give them ſome particular encouragement.

§ I. *Of the Mode of Teaching Clinical Medicine.*

THE profeſſors of Clinical medicine, ſhall undertake two different taſks. The one ſhall relate to the obſervations made at the bed-ſide of the patients of the hoſpital, which will be properly the Clinical courſe. The other ſhall conſiſt of regular and complete practical treatiſes on all the diſeaſes of the body, which will

form a complete courſe of the Practice of Medicine [14].

Thus, the phyſician ſhall give a clinical lecture in the morning, on ſome of the caſes which ſhall be ſeen in the courſe of the viſit of the preceding day; and he ſhall chooſe three days in the week, at leaſt, for delivering, at

[14] It muſt be allowed, that an hoſpital cannot furniſh materials for a complete courſe of medicine, even during the ſpace of two years. There are diſeaſes, which occur very rarely in ordinary hoſpitals. Beſides, the moſt common diſeaſes cannot, in hoſpitals, be offered to the view of the pupils, but in the order in which nature produces them. That order which exhibits diſeaſes, as they are connected with the weather and ſeaſons, muſt afford a great ſource of inſtruction: but as that inſtruction is dependent on the nature of circumſtances, it cannot poſſibly be complete.

The two courſes here propoſed, are therefore neceſſary. They ought to be undertaken by one profeſſor. They ſhould, in fact, be ſo much connected with each other, that the one may ſerve, as it were, as a commentary on the other, although they be arranged in a different order; and that the pupils accuſtomed, by the one, to diſtinguiſh and to value the laws of nature in what they have themſelves ſeen, may eaſily conceive the ſame circumſtances, in diſeaſes which may not have been ſubmitted to their view.

at another hour, the lectures of the complete courſe.

Both theſe courſes muſt neceſſarily be extended to the ſpace of two years; taking the Acute diſeaſes for the ſubject of the firſt year, and the Chronic, for that of the lectures of the ſecond. [15]

If there be two profeſſors in the ſame hoſpital, the year which ſhall be appropriated by the one, to the deſcription of Acute diſeaſes, ſhall be allotted by the other, to that of Chronic diſeaſes.

The Clinical lecture ſhall be given immediately after the morning public viſit, as has already been mentioned.

[15] The reaſon of this diviſion, is, that the acute diſeaſes, always more diſtinctly marked, and exhibiting, in the exertions of nature, a courſe more eaſily traced, will be more readily underſtood by the young pupils, than the chronic diſeaſes; the general nature of which, being more difficultly aſcertained, requires greater experience, and more extenſive views. There is alſo a reaſon for dedicating the courſe of a whole year to the acute diſeaſes; which is, that a complete knowledge of them cannot be obtained, but by the union of the diſeaſes which occur in the Spring and Autumn.

That lecture muſt not be delivered at the bed-ſide of the patients; but the profeſſor ſhall repair, after the viſit, to the room appropriated for that purpoſe. [16]

He ſhall have marked, during the viſit, the patients whom he ſhall have choſen as ſubjects of his lectures; and their numbers, accompanied by a note ſimilar to that which is attached to their bed-head, ſhall be written and ſuſpended in the lecturing-room.

The choice which he ſhall make of the ſubjects of the lectures, ſhall be regulated by the circum-

[16] It cannot be judged expedient, to deliver the clinical lecture entirely at the bed-ſide of the patient. The advantages which would reſult from that plan, will be derived from the manner in which the viſit is conducted. In fact, the reading of the remarks made on the preceding day; the examination of the patient; the deſcription of the principal ſymptoms which determine the nature of the diſeaſe, which ſhall be written in the report-book, under the direction of the phyſician; and the preſcriptions which are ordered, will have already formed a ſhort lecture at the bed-ſide of each patient. The inconvenience of a longer lecture, both to the patient who forms the ſubject of it, and to the ſervice of the hoſpital, which would thereby be retarded, are very obvious.

circumſtances which ſhall appear to him the moſt favourable to the inſtruction of pupils. [17]

That

[17] The neceſſity there is, that the profeſſor ſhould alſo be the phyſician of the hoſpital, will here be particularly underſtood. It is the only means to give him the power of chooſing according to his diſpoſition, and of changing, when he pleaſes, the ſubjects of his lectures, without occaſioning any confuſion in the hoſpital. In the beginning of the courſe, while his pupils have not yet much experience, he will undoubtedly ſeldom ſet aſide incipient diſeaſes, till they have arrived at their laſt ſtage: but it will be afterwards ſometimes uſeful to vary the views, in order to multiply the ſubjects of inſtruction, and to exhibit to the pupils, ſometimes diſeaſes ſimilar in their nature, but different in their ſeats; ſometimes thoſe ſimilar in their ſeats, but different in their nature; and ſometimes diſeaſes ſimilar in all reſpects, but varied by different habits of body, ages, profeſſions, and accidental cauſes; by which means, the diagnoſis will be diſplayed in its full extent, and in a perfect manner. He ought alſo to endeavour to improve his pupils, by comparing diſeaſes, ſimilar in their nature, but different in their degrees and accidental ſymptoms; and by exhibiting ſimilar accidents ſupervening diſeaſes of a different nature, and affording a prognoſis correſponding to the circumſtances under which they occur. He ſhould alſo endeavour to ſhew the different effects of the ſame cauſes on different perſons, by chooſing illuſtrations, particularly from the wards appropriated to artiſans. He could

That lecture may be regulated in the following manner:

The

could not accompliſh all this, if he had not the complete management of the hoſpital. If he propoſe to exhibit conſtantly to his pupils, the diſeaſes of the newly admitted patients, and to teach them to diſtinguiſh, in the dubious ſymptoms of an incipient diſeaſe, the character which it will afterwards aſſume: if he wiſh to make them obſerve the exertions of nature in thoſe caſes where ſhe may ſafely be truſted; to calculate the time which will be required to make them value her efforts; to teach them, by that, to diſtinguiſh in other diſeaſes what ſhe can do by herſelf, and what can be expected from the interference of the means of art; if it be neceſſary, to take proper opportunities to ſhew them an uncommon diſeaſe; in ſhort, when the pupils are ſomewhat advanced in inſtruction, if the profeſſor wiſh to ſubmit to their obſervation, diſeaſes which require long continued and complicated modes of treatment, for which all the efforts of art muſt be exerted, or on which he deſigns to make ſome particular trials of medicines, he could not accompliſh his views, if he had only a ſmall ward containing a few beds, into which he ſhould be obliged to tranſport his patients on whom he would wiſh to lecture.

But if, for all theſe purpoſes, it be neceſſary that he ſhould have the diſpoſal of the whole, or a great part of a large hoſpital: if he make it a rule to exhibit, from time to time, to his pupils, the general ſtate of the hoſ-

pital,

The lecture ſhall commence by the hiſtory of the patients announced as the ſubjects of the lecture, which ſhall be read by the pupil intruſted with the charge of the regiſters.

After that, the profeſſor ſhall begin and make what remarks he ſhall judge proper.

When the diſeaſes ſhall have terminated, either in a cure, or in death, the complete hiſtory of the diſeaſe ſhall be read by the pupil who ſhall have charge of the caſe-book. In the event of termination in death, the appearances on diſſection ſhall be detailed, and compared with the ſymptoms of the diſeaſe.

The profeſſor ſhall make his obſervations on theſe caſes, and ſhall frequently introduce the hiſtory of ſimilar caſes extracted from the beſt medical works.

If he ſhould think it proper to inſtruct his pupils by familiar means, he may appoint them ſucceſſively, and by turns, to collect the hiſtory

pital, that is to ſay, the ſtate of the diſeaſes which occur there; to make them compare this with the ſtate of the meteorological obſervations; and to ſhew them conſtantly, in the prevailing diſeaſes, the connection of the diſorders with the ſtate of the weather; it becomes more particularly neceſſary that he ſhould have the full command of the whole.

hiſtory and treatment of a certain number of patients, and may queſtion them on their caſes. [18] He will thus teach them to obſerve and to judge, by the moſt unerring and inſtructive method.

The profeſſor ſhall alſo have the liberty of chooſing the plan on which the lectures of the complete courſe of the Practice of Medicine ſhall be conducted. [19]

That

[18] This mode of familiar inſtruction, will appear particularly well adapted to the pupils of the clinical ſchools of the departments, who will be ſent to finiſh the courſe of their ſtudies in the hoſpitals annexed to the medical colleges.

[19] Whatever method he may adopt, it is to be wiſhed that he ſhall make the pupils acquainted with the principal works of the practitioners, both of thoſe who have written on particular claſſes of diſeaſes, and of thoſe who have deſcribed the diſeaſes of a ſingle organ, or function, or of one claſs of people.

Such are, the principal works on the Scurvy, on Dyſentery, on Intermittent and Slow Nervous fevers; thoſe of Bianchi and Morton on the diſeaſes of the Liver, and on Phthiſis; and thoſe of the phyſicians who have written on the diſeaſes of the Army, Navy, and of Priſons. This method, more conſiſtent with the courſe of clinical inſtruction, than that of noſologiſts, ought not, nevertheleſs, to prevent the

That courſe ſhall, like the clinical one, be divided into two parts; one of which, appropriated to Acute diſeaſes, ſhall occupy the ſpace of the firſt year; while the other, comprehending Chronic diſeaſes, ſhall be reſerved for the ſecond year.

At the end of the Vernal ſeſſion in the month of Auguſt, and at that of the Autumnal one in the month of January, that is, when the regiſters of caſes ſhall be cloſed, the profeſſor, in his clinical courſe, ſhall give one or two lectures on the prevailing diſeaſes of the preceding ſeaſon.

At the ſame time, he may dedicate ſome of the lectures of the complete courſe, for the purpoſe

the profeſſor from pointing out the beſt works on that latter ſubject, however far removed from perfection they may be; and, in treating of each diſeaſe, he ought to aſſign its proper place in the ſyſtem of Noſology.

It would be difficult to make the lecture of the complete courſe correſpond always with the clinical lecture; but the profeſſor ſhould take care, when an occaſion offers, to refer to the obſervations made in the hoſpital at the bedſide of the patient. Thus, the compariſon of facts which the pupils ſhall have witneſſed, will render them more ſenſible to the hiſtory of analagous diſeaſes, of which the hoſpital ſhall not have afforded any examples.

purpoſe of exhibiting to the pupils, a view of the Epidemic diſeaſes of different ſeaſons, beſt deſcribed by ancient and modern authors; and he will undoubtedly pay more particular attention to thoſe which ſhall be moſt analogous to the prevailing diſeaſes of the ſeaſon under conſideration. He ſhould alſo make ſome obſervations on Epidemics in general.

Both theſe courſes ſhall commence in the month of March, at the beginning of the Vernal ſeaſon; and at the end of the Autumnal one, both ſhall be concluded by a noſological recapitulation of what ſhall have been exhibited to the pupils during the courſe of the year. That recapitulation ſhall be made during the interval between January and March; and the remainder of the time may be conſidered as the vacation.

§ II. *Of the Mode of Teaching Clinical Surgery.*

The mode of teaching Clinical Surgery, ſhould be founded on the ſame principles as that of Clinical Medicine. But it requires an additional exertion, that of the hands.

As

As the teaching of Surgery cannot be properly ſeparated from that of Medicine, and as it is deſigned for all the ſtudents, although undertaken by a particular profeſſor, care muſt be taken to arrange the hours of viſiting and lecturing, in ſuch a manner, that they ſhall not interfere with thoſe of the profeſſor of Clinical Medicine of the ſame hoſpital.

In teaching Clinical Surgery, ſeveral diſtinct ſubjects muſt be attended to. *1ſt*, The internal treatment of Chirurgical diſeaſes. *2d*, The method of dreſſing Sores, and of applying Bandages. *3d*, The auxiliary or ſubordinate Chirurgical operations. *4th*, The Important operations. And, *5th*, The Delivery of Pregnant Women.

Clinical Surgery, like Clinical Medicine, ſhall be taught in two ways; in a Clinical courſe, and in a regular Complete courſe, (de Morbis Chirurgicis).

There ſhall alſo be particular inſtitutions for thoſe ſubjects which require the uſe of the hand.

The Clinical courſe of Surgery, ſhall relate principally to the internal treatment of Chirurgical

rurgical caſes, to the Important operations, and to Midwifery.

The mode of teaching the internal treatment of Chirurgical diſeaſes, [20] in the Clinical courſe, ſhall be conducted in the ſame manner as has been pointed out for teaching the treatment of internal diſeaſes.

The important operations ſhall be performed in preſence of the pupils, either in the wards of the hoſpital, or in the amphitheatre appropriated to that purpoſe.

Some

[20] It is to be wiſhed that all the pupils, even thoſe who mean to dedicate themſelves ſolely to the treatment of internal diſeaſes, ſhould begin, in the Chirurgical claſs, their Clinical ſtudies; they will there ſee the ſame ſymptoms as in internal diſeaſes, originating however from different cauſes.

It is equally neceſſary, that the ſame ſtudents dedicate a part of their attention to the theory and practice of dreſſing ſores, to the application of bandages, and to the auxiliary operations. It will not be difficult to demonſtrate the advantages of theſe acquiſitions to thoſe who have obſerved of how much importance it is, in the practice of the healing art, to ſeize the favourable moment of performing theſe operations, and how often the abſence of a ſurgeon has prevented this from being done.

Some of the operations which form the ſubjects of this courſe of inſtruction, may be appointed to be performed on certain days, or even at certain ſeaſons.

For theſe, the ſame regulation may be made which M. Deſault has adopted in the Hotel Dieu of Paris, which is, to allot for them certain days of the week. On the preceding day, the profeſſor ſhall explain, in a few words, the principles of the operation, to the pupils aſſembled for that purpoſe in the amphitheatre; he ſhall perform it before them on the dead ſubject, and ſhall demonſtrate to them the parts through which he ſhall have cut.

After the operation, he ſhall detail the different periods and cauſes for performing it, with the difficulties which may occur in operating, by explaining the reaſons for all his ſteps in the operation.

The operations which cannot be delayed, and for which, conſequently, no particular day can be fixed, ſhall be performed alſo in preſence of the pupils, either in the amphitheatre, or in the wards, when it cannot be avoided.

With reſpect to the Practice of Midwifery, the profeſſor ſhall deliver women in preſence of the pupils likewiſe; and, immediately after the delivery, or at any convenient hour, he ſhall explain the circumſtances of the operation, and the difficulties which may have occurred, either on the part of the mother, or child.

He ſhall take care to teach his pupils the progreſs of geſtation, by ſubmitting to their examination pregnant women, at all the different periods of pregnancy, whom he ſhall collect for that purpoſe.

As to the dreſſing of ſores, the application of bandages, and the auxiliary operations, the pupils will eaſily acquire a knowledge of the mode of performing them, under the direction of the principal pupil of the hoſpital. He ſhall firſt exerciſe them in the practice of theſe on the dead ſubject; and then he ſhall make them perform under his eyes, firſt the dreſſing of ſores, next the application of bandages, and afterwards that of the cautery, ſetons, and bliſters; and then the opening of abſceſſes, and the different modes of bleeding.

The

The lectures of the complete courſe of Chirurgical diſeaſes and operations, ſhall be delivered, either after the buſineſs of the morning, or in the afternoon.

The profeſſor ſhall explain the principles on which the treatment of Chirurgical diſeaſes, both before and after the ſeveral operations, ſhould be conducted; and he ſhall point out to the pupils the beſt works on that ſubject. He ſhall exhibit the different methods of operating; he ſhall perform the operations himſelf on the dead ſubject; and he ſhall aſcertain, as far as anatomy and experience can enable him to do, what methods are preferable.

He ſhall purſue the ſame plan with reſpect to Midwifery. At the end of each lecture, the pupils ſhall exerciſe themſelves in the practice of all the different operations on the dead ſubject, under his eyes, and under the direction of one of the principal aſſiſtants, who ſhall be entruſted with that charge.

The Elementary courſe of Surgery may be undoubtedly finiſhed within the ſpace of one year. But as every one who attaches himſelf to the practice of ſurgery ſhould neceſſarily poſſeſs great dexterity; and, as this can only

be acquired by much practice, it is incumbent on the pupils, after the firſt courſe, ſtill to remain in the hoſpital, for one or more years, to perfect themſelves by ſerving as aſſiſtants.

The profeſſor ſhall employ, for the care of the patients, thoſe ſtudents who have attended a complete courſe, in preference to others.

The chief ſurgeon will be able, after the ſecond year, to judge of the abilities of each pupil, and to aſcertain the nature of the duties in the hoſpital with which he may be entruſted.

In this manner, the hoſpitals will afford to the pupils every opportunity of inſtruction in the practice, both of medicine and ſurgery, which the ſchool of nature can furniſh; and therefore it is to be preſumed, that the young medical practitioners, even after having paſſed their trials, will ſtill continue to attend them, in order to improve themſelves, more and more, in the practice of their profeſſion. [21]

The

[21] Some have wiſhed, that each practiſing phyſician ſhould be accompanied in his viſits by a young phyſician, whom he ſhall undertake to inſtruct. But, beſides that ſeveral phyſicians would refuſe to ſubmit to ſo much trouble, the greateſt number of patients would not conſent

The provinces, the fleets, and the armies, will be furniſhed, from theſe inſtitutions, with phyſicians of abilities, who will be pointed out by the teſtimony of their preceptors, and the eſteem of their fellow ſtudents.

CHAP. V.

Of the Duties of Phyſicians in attending the Hoſpitals for the Poor, or the Workhouſes, and the Priſons.

THESE eſtabliſhments ought to be provided with every poſſible aſſiſtance reſpecting health. Humanity, as well as public ſafety, requires it. Impriſonment ſhould extend no farther than the loſs of liberty. Every thing more than the neceſſary precautions for ſecuring the perſon of the priſoner, is a violation of the rights of man. In the workhouſes and priſons, therefore, every individual ought to

ſent to admit perſons with whom they would be unacquainted, and who conſequently could not have acquired their confidence. This mode of inſtruction, cannot therefore become general. The mode of ſtudy which may be purſued in the Clinical ſchools, will compenſate for this in the moſt effectual manner.

be properly attended during this diſeaſe. It is well known, that from inattention to cleanlineſs, and proper care, and from many perſons being crowded together, or from the improper treatment of the ſick, priſons and charity workhouſes have often become the ſource of the moſt dangerous and obſtinate epidemics. In England, theſe fatal effects have been particularly felt; there, the moſt contagious diſeaſes have been communicated from the priſons to the fleets, in conſequence of the impreſs ſervice; from the bridewells to the armies, by means of recruits; to the country and villages, by the county ſeſſions; and to the colonies, by the tranſportation of criminals.

The precautions reſpecting the public ſalubrity, ought therefore, in ſuch places, to be particularly attended to.

The phyſicians ſhall be obliged to make out, twice or thrice a week, a liſt of the patients in the priſons and charity workhouſes, and a ſtate of the ſick wards which may be eſtabliſhed in them.

It is probable, that each department will have an hoſpital for the reception of beggars, or rather a workhouſe; for the name of hoſpital

pital for beggars, which ſtigmatizes always in the public opinion the perſons lodged in it, ought to be ſuppreſſed. Theſe workhouſes will depend on the directories of the departments.

With reſpect to priſons, it is not yet ſettled to what department of adminiſtration they ſhall belong. But they will certainly be under the ſuperintendence of the municipality.

One of the moſt eſſential objects of regard is, to provide the inhabitants of theſe places properly with linen, without which there can be no cleanlineſs.

The uſe of wine is equally indiſpenſable, in order to prevent putrid fevers, and the effects of bad air.

There ought alſo to be in ſuch houſes, large halls for the reception of the priſoners during the day, in order that the bed-rooms may be kept clean, and expoſed to the air in the day time.

Laſtly, The phyſicians who ſhall have the charge of attending theſe eſtabliſhments, ſhall, like thoſe of the hoſpitals, keep two regiſters, one of which ſhall contain medical obſervations, which they ſhall communicate to the ad-

miniſtrative bodies; and the reſult of which, at leaſt, ſhall be ſent to the Medical Academy, appointed to correſpond with the practitioners on every thing which regards the health of the people, and the improvement of medicine.

PART THIRD.

Of the Medical Police, or Regulations reſpecting the Practice of Medicine.

CHAP. I.

Of the Practice of Medicine, and of the Mode by which the Duties reſpecting public Salubrity, ſhall be adjudged to Phyſicians.

As every perſon ought to be at full liberty to truſt whom he chooſes, ſo every one ſhould be allowed to conſult whom he pleaſes reſpecting his health, in the ſame manner as with regard to every other neceſſary in life It will be ſufficient, if the law precludes any body from aſſuming the title of Phyſician, who has not received it from that power to whom the privilege of confirming degrees ſhall be entruſted.

In

In future, all thoſe whom the five Medical Colleges ſhall have pronounced qualified, ſhall be permitted to practiſe, and teach Medicine and Surgery, throughout the whole extent of the empire.

The apothecaries and midwives, legally paſſed, ſhall alſo be allowed to practiſe throughout the whole kingdom.

In order to be permitted to practiſe in a municipality, it will only be neceſſary for the practitioner to ſubmit to the examination of the municipal body, the certificates of his trials. That body, after having found them genuine, ſhall cauſe the name of the practitioner to be added to the liſt of phyſicians of the place, who ſhall be informed of this by letter.

From that date, the newly received phyſician ſhall be eligible to all the offices which can be conferred on the practitioners of the place which he inhabits.

There ſhall be no uſeleſs ceremony of adoption into any one of the colleges of medicine, becauſe theſe colleges ſhall have no juriſdiction over any of the phyſicians, who ſhall be all equal in rank.

The

The phyſicians, ſurgeons, and apothecaries, ſhall no longer conſtitute corporations, as each ought to practiſe his own particular profeſſion, under the ſole protection of the law.

Theſe practitioners ſhall merely be requeſted to meet together as often as poſſible, to converſe on every thing which regards the improvement of their profeſſion.

In the chief cities of the departments, they ſhall form a council of health; the meetings of which may be attended by every medical practitioner reſiding in the cantons of the juriſdiction, without any of them being obliged to be preſent on ſtated days.

The medical practitioners ſhall aſſemble, whenever they are deſired by the adminiſtrative bodies, to deliberate on public affairs, or to make different elections, as ſhall be afterwards mentioned.

The judges of the competitions for medical profeſſorſhips, the phyſicians who ought to be members of the committee of public inſtruction, already deſcribed under the name of Cenſors of the colleges, and the phyſicians and ſurgeons of the hoſpitals, ſhall be choſen by an electoral body, formed partly of a certain number

number of electors of the departments, and partly of phyſicians; the proportion of whom, ſhall be fixed by the National Aſſembly.

For this purpoſe, all the phyſicians, either of the juriſdiction of the college, or of the department, according to the nature of the ſubjects in queſtion, ſhall be requeſted to convene, on a ſtated day, to nominate from among themſelves, a ſufficient number of electors. [1]

The practitioners who ſhall hold any office which reſpects the public ſalubrity, (except thoſe of the hoſpitals), in the municipality, cantons, diſtricts, and departments, ſhall be nominated by ballot, by the different adminiſtrative bodies. The ſame regulation ſhall be obſerved, in the election of thoſe phyſicians who ſhall be appointed to inſpect the apothecaries ſhops, and the wholeſale warehouſes of drugs; of thoſe who ſhall be entruſted with the care of the poor, and the treatment of popular

[1] If it regard the election of the judges of a competition, all the phyſicians of the juriſdiction of the college, ſhall be convened. If it reſpect the choice of cenſors, or of phyſicians for hoſpitals, the practitioners of the department alone, ſhall be aſſembled. No one ſhall be forced to attend theſe meetings.

popular and epidemic diſeaſes; and of the midwives of the cantons.

The members of the courts of juſtice, ſhall alſo name, by ballot, thoſe practitioners who ſhall be appointed to make reports to them on judicial caſes, and who ſhall be entruſted, as coroners, with the duties of medical juriſprudence.

The reaſons which render it proper, that the phyſicians and ſurgeons of the hoſpitals ſhould be choſen by an electoral body, compoſed of a certain number of electors of the department, and of a certain number of phyſicians, are the following:

From principles of humanity, and for the purpoſe of accelerating the improvement of the medical art, it is abſolutely neceſſary, that the beſt informed phyſicians and ſurgeons ſhould have the charge of hoſpitals. It is in theſe, in fact, that a phyſician can employ himſelf moſt ſucceſsfully, in making obſervations. In the fourth chapter of the ſecond part, a mode of inſtruction for all the hoſpitals, has been pointed out; by means of which, every diſeaſe will be deſcribed, every caſe will be collected, and the influence of every ſeaſon

will

will be obſerved. It is obvious, that all theſe propoſed regulations will be uſeleſs, if the offices of phyſician or ſurgeon to the hoſpital, be poſſeſſed, not only by men of a ſuperficial education, or of indifferent abilities, but alſo, even by thoſe who have merely an ordinary degree of knowledge.

It has been thought neceſſary to propoſe remitting the power of electing theſe practitioners, to an electoral body, partly compoſed of phyſicians, in order to avoid thoſe inconveniences which ſo often originated from the improper choice of the managers of hoſpitals, according to the former ſyſtem of government, and which are to be very much dreaded.

Some members of the ſociety have wiſhed, perhaps properly, that the election of phyſicians of the hoſpitals, ſhould be made by means of a competition on the practice of medicine, [1] ſomewhat reſembling that which has been propoſed for the trial of ſtudents. [2] It muſt indeed

[1] This cuſtom is at preſent adopted, with reſpect to the ſurgeons who acquire ſubordinate offices in the hoſpitals. Why is it not alſo obſerved, in regard to the phyſicians and ſurgeons themſelves?

[2] On this occaſion, a competition merely practical, is alone meant, ſuch as the third examination of the ſtudents;

deed be allowed, that, to aſk a phyſician of character, to ſubmit to an examination, as if his experience were doubted, would have the air of calling in queſtion, what the public opinion has already decided; but it muſt alſo be allowed, that ſome of the practitioners, in ſuch ſituations, who have numerous patrons, and who poſſeſs the good wiſhes of reſpectable people, would either refuſe to ſubmit to ſuch competitions, or would fail, if they ſhould forget themſelves ſo far as to run the riſk of the trial. It cannot, therefore, appear aſtoniſhing, that ſo much anxiety is entertained, and ſo many precautions required, in the arrangement of a choice, which is almoſt always found to depend, even where the moſt honourable people are concerned, on a great number of circumſtances foreign to merit, and which is moſt frequently determined by prejudice, enthuſiaſm, a combination of connections, or the miſtaken zeal of friends.

CHAP.

dents; and which ſhould be made in the clinical ſchool; as has been fully explained, § VII. ſect. 1. chap. 2. part 1.

CHAP. II.

Of the Court Phyſicians.

If all the phyſicians and ſurgeons, whoſe names are inſerted in the court liſts, had been only, on a ſingle occaſion, called together, to perform in concert their duties, ſuch a collection of perſons, unknown to each other, and equally unknown to the princes, would have appeared ſo incongruous, that a reform would have been ſpontaneouſly made. The greateſt number of ſuch phyſicians and ſurgeons, have only purchaſed the privileges which they enjoy, for the purpoſe of ſkreening themſelves from the examination to which they muſt have otherwiſe ſubmitted, before they could have been allowed to practiſe in great cities.

But now, the expence of theſe offices ſhall be repaid; and, from this date, the princes will truſt thoſe who ſhall have inſpired them with the moſt confidence, either by their ſucceſs in practice, or by their writings.

It will be uſeful, that the ſame phyſicians ſhall attend the princes and their houſehold, who may have charge of the ordinary hoſpitals;

tals; and that they ſhall alſo continue the public practice of their profeſſion. By this means, they will retain the knowledge which they have acquired, and they will gain additional information; and hence, render themſelves more worthy of the confidence of the prince.

Van Swieten anſwered all the conſultations which were ſent him from abroad; he, for a long time, viſited all the patients who required his attendance; and he was, at the ſame time, phyſician to the whole imperial family at Vienna.

CHAP. III.

Of Medical Juriſprudence.

The obſervations on the manner of drawing up reports on judicial queſtions, and on the duties of a ſworn phyſician or ſurgeon, written by Paré, Guillemeau, Severin-Pineau, Deveaux, &c. require no recapitulation on this occaſion. It is only neceſſary to point out ſome circumſtances in medical juriſprudence, which ought to be reformed. In theſe details, the

the judicious views which M. Chauſſier, an able ſurgeon at Dijon, has exhibited in his Obſervations chirurgo-legales, will be chiefly purſued, as they have been deemed proper to be adopted.

It is to be particularly recollected here, that medical and chirurgical juriſprudence are included among thoſe branches of the healing art, which ought to be taught in the medical colleges, and in the practical ſchools of the departments.

It muſt alſo be remembered, that, in the firſt chapter of this third part, it has been determined, that the phyſicians * to whom the exerciſe of medical juriſprudence is entruſted, ſhall be choſen by ballot, by the members of the courts of juſtice, which is better than to leave that choice to a ſingle judge. [1]

* There is no expreſſion in Engliſh, ſimilar to "Medecins de Barreau;" and hence the tranſlator has been obliged to uſe conſiderable circumlocution on this occaſion.

[1] Theſe places were formerly bought, and were rarely poſſeſſed by the beſt informed perſons of the profeſſion. The offices of ſworn phyſician and ſurgeon, ought therefore to be ſuppreſſed.

Theſe two points being ſettled, the following obſervations relate to the manner in which judicial reports ſhould be drawn out; on the neceſſity of not truſting that duty to a ſingle perſon; and on ſome other precautions, which it is not leſs requiſite to adopt.

It is very difficult to diſtinguiſh the truth amidſt the numerous falſehoods and exaggerations with which the accounts of thoſe broils and accidents, for which coroners are called in, are commonly charged. This forms one obſtacle to the faithful performance of this duty.

It is often no leſs difficult to determine, whether there be any connection between what preceded theſe broils or accidents, and what followed: which proves a ſecond obſtacle.

When the coroners have not a very accurate idea of the facts which they ought to relate; when, in their report, they confound doubts with poſitive aſſertions, and the conſequences with the cauſes, it is almoſt impoſſible that a judge can form a clear opinion of the affair on which he muſt decide.

It is therefore of importance, as M. Chauſſier recommends, that the coroners ſhould purſue one method, and adopt one conſtant form in all their reports.

1. Every thing which preceded their being called, and which is merely narrative, ſhould be firſt mentioned. They muſt be very conciſe and cautious in this part.

2. The deſcription of the real ſtate of the wounded perſon, or of the dead body, when they were called, ought to follow next: it is this part which properly conſtitutes the judicial report. What is ſeen externally, ſhould be firſt deſcribed; and then, what is obſerved internally. The ſtate of the head, neck, cheſt, belly, pelvis, and extremities, ſhould be ſucceſſively detailed, if neceſſary. Nothing but what is evident and undoubted, ſhould be mentioned. The effects of the poſition of the body, or of putrefaction, muſt be carefully diſtinguiſhed from thoſe which might have been produced by the cauſe which forms the ſubject of inveſtigation. On ſuch occaſions, any thing doubtful, is an inſurmountable obſtacle to the inveſtigation of truth; for it may be ſaid, that the judge is then reaſoned with, whereas, nothing ought to be laid before him, but what can illuſtrate the ſubject in queſtion. Every inveſtigation which does not tend to elucidate the point at iſſue, is uſeleſs, and conſequently ought to be rejected.

3. The conſequences or deductions, ſhould always be quite ſeparated from the relation of facts; for theſe concluſions are the work of the coroner, and he may be miſtaken in his reaſonings, while it is not to be preſumed that he can err in his relation of facts, which is all that is expected or wiſhed for from him.

The fifth ſection of the decree of the National Aſſembly, on the reformation of criminal juriſprudence, enacts expreſsly, that all judicial reports ſhall be drawn up in preſence of two witneſſes or aſſiſtants, who ſhall ſign them, otherwiſe they are to be conſidered null.

This law is applicable to the preſent ſubject. The coroner entruſted with making a judicial report, ſhall be always ſuperintended by two witneſſes; but, in matters of conſequence, it will probably be proper to add to theſe witneſſes, who are not profeſſional people, two others, choſen from among the phyſicians and ſurgeons. If this plan be adopted, each court of juſtice ſhall elect, by ballot, three coroners, one of whom ſhall be principally employed.

In important caſes, therefore, the report ſhall be drawn up in preſence of four witneſſes,

ſes, and ſigned by five perſons; for, too many precautions cannot be adopted, where the honour or life of the citizens is at ſtake.

The coroner thus ſuperintended, cannot refuſe to draw up his report on the very ſpot where he is called to examine; a circumſtance which is highly important for the truth of the report. This rule has been hitherto very ſeldom obſerved.

It ſhould alſo be required, that the report ſhould be lodged in the office of records of the place, within twenty-four hours.

Notwithſtanding theſe different precautions, it is not impoſſible, that, on ſome occaſions, an improper coroner may be choſen, whoſe report, founded on erroneous ideas, may be found contradictory to the principles of the art. For this reaſon, M. Chauſſier propoſes, that each report ſhould be verified by a board or committee, eſtabliſhed for that purpoſe in the chief places of the department. The object of this examination, ſhould be, to diſcover if there be any evident contradiction, either in the detail of facts, or in the concluſions deduced from them, which betrays the ignorance or prejudice of the coroner. But, may it not be apprehended, that there ſhall not be in all

towns of ſome departments, perſons, who are ſo well informed, that no objection can be ſtarted to their judgment? It is evident, that there is ſome reaſon for ſuch apprehenſion.

The verification of reports, would be much more certain, if the magiſtrates ſhould tranſmit them to the profeſſors of anatomy and clinical medicine and ſurgery, of one of the five colleges, who ought undoubtedly to be the beſt judges of that ſubject, ſince they ſhall have the charge of teaching medical juriſprudence. If, therefore, the verification of reports, which prudence ſeems to require, is thought neceſſary, the means now propoſed, are perhaps the only ones for that purpoſe, which can be conſidered as ſufficient in all caſes, and which, conſequently, ought to be preſcribed by law.

M. Chauſſier adds, that the judge ſhould order other coroners to examine the circumſtances at a ſecond viſit, if the reports be not paſſed by the commiſſioners appointed to verify them. But, as there muſt always be ſome delay in the verification of reports, the circumſtances of the caſe may be changed; and it will often happen, that a ſecond examination

is

is impoſſible. On ſuch occaſions, the judges will at leaſt avoid a ſource of much error, by learning, that they cannot confide in the report which has been preſented to them; and they will be acquainted with the character of the coroner, who, convicted of ignorance or diſhoneſty, will neceſſarily be for the future ſuſpected by them.

CHAP. IV.

Of Pharmacy; or, of the Sale and Preparation of Medicines.

SECTION I.

Of the Perſons to whom the Sale and Preparation of Medicines ought to be entruſted.

§ I. *Qualifications which ſhould be required in thoſe who Prepare and Sell Medicines.*

THOSE perſons who are entruſted with the ſale and preparation of medicines, ought to have a knowledge of natural hiſtory, materia medica, and chemiſtry. [1]

[1] The art of the apothecary, demands only a part of the knowledge required in a phyſician; and yet there is no

It is therefore neceſſary, that their abilities ſhould be aſcertained by legal proofs.

Theſe proofs ought to conſiſt in examinations on the following ſubjects: 1*ſt*, The knowledge of ſimple drugs, of their principal qualities, and of the alterations which may be made on them by different circumſtances: 2*dly*, The art of preſerving them unſpoiled: 3*dly*, Pharmaceutical chemiſtry: 4*thly*, The art of combining and mixing drugs, for the purpoſe of making compound medicines.

The examinators ſhall be phyſicians and apothecaries, in ſuch number as the National Aſſembly

no branch of knowledge of the apothecary, of which the phyſician is not obliged to be poſſeſſed. The inſtruments which the phyſician employs, owe, in part, their perfection to the apothecary. He performs in the hoſpitals ſeveral very important duties; and many perſons of that profeſſion, have rendered uſeful ſervices to medicine, by teaching, with ſucceſs, chemiſtry and pharmacy. Several phyſicians, celebrated for their knowledge in theſe two ſciences, have been educated at the ſchool of Rouelle. Although, therefore, pharmacy, having no connection with any thing which relates to the knowledge of the human body, ought not to be confounded with medicine; yet it ſhould remain connected to it by ſtrict ties, the exiſtence of which is of importance to the improvement of the healing art, and the intereſts of mankind.

Aſſembly may determine. The examinations and receptions, ſhall take place in preſence of the public officers, either in the five medical colleges, or in the practical ſchools of the departments; for it might appear too rigorous to ordain, that the apothecaries, like the phyſicians, ſhould only be paſſed by the medical colleges.

§ II. *Of the preſent State of the Public Police, reſpecting the Sale and Preparation of Medicines.*

In the preſent ſtate of affairs, many perſons ſell, and even prepare medicines, who have not undergone theſe trials.

The indigenous plants are collected, dried, preſerved, and ſold by herbariſts, very few of whom, even in Paris, have a ſufficient knowledge of botany. The roots of the Night-ſhade, have been known to occaſion the moſt alarming accidents, from having been ſold for thoſe of Burdock. A caſe of this kind was communicated to the Society of Medicine by M. Juſſieu. Many herbariſts do not even know the method of drying and preſerving plants; which is proved, by the condition in which

which they are often found in their poſſeſſion. They ſometimes ſuſpend them in the roofs of their apartments, from which they take them down to be ſold, entirely covered with duſt; at other times, they keep them in cellars, where they are in a ſtate of incipient putrefaction. They dry them in heaps; and the improper uſe of ſtoves changes their qualities ſtill more.

There are a very few careful herbariſts only, who can be exempted from theſe animadverſions.

The exotic ſimples are ſold by wholeſale in the warehouſes of merchants, or at fairs. They are there bought, not only by druggiſts, who ſell them to the apothecaries, but alſo by pedlars, who often buy, at a reduced price, the refuſe or adulterated portions of the drugs, in order to retail them in villages, at fairs, and through the country.

The wholeſale merchants or druggiſts, acquire, at leaſt, by experience, a knowledge of the exotic drugs: beſides, their ſtocks can be accurately examined. But this cannot be performed in the caſe of pedlars, who always eſcape from every kind of police.

The

The compound medicines are not prepared ſolely by the apothecaries; for ſeveral druggiſts and grocers alſo prepare theſe. Several merchants have extenſive manufactories for the compoſition of medicines: theſe are ſold at the great fairs, and eſpecially at that of Beaucaire; and many medicines of that kind are alſo imported from foreign countries.

A vaſt number of theſe preparations, made by people very different from reſpectable apothecaries, are very ill compoſed, are changed in quality, and are adulterated. It has been proved, that at the fair of Beaucaire, a mixture of honey and jallap has been ſold for Manna; the pulp of prunes for that of Tamarinds; and a mixture of honey and ſaffron, with a little brick duſt, for the Confectio de Hyacintho.

The mineral waters, another ſpecies of medicines very much employed, are ſold by patentees; while no reaſon can be alleged for excluding the apothecaries from ſelling theſe medicines; as it is eaſy to ſubject them to the ſame examinations with the proprietors of warehouſes at preſent eſtabliſhed, as will be afterwards pointed out.

It

It is unneceſſary to detail, minutely, the numerous abuſes which originate from this order of affairs. It is ſufficient to obſerve, that theſe dangerous abuſes affect chiefly the ordinary claſs of people, eſpecially thoſe of the country.

§ III. *Regulations to be eſtabliſhed for the Sale and Preparation of Medicines.*

IT is to be wiſhed, that the following regulations ſhould be eſtabliſhed as invariable laws:

1. That the charge of collecting, drying, preſerving, and ſelling medicinal herbs, ſhould be entruſted to apothecaries alone.

2. That the druggiſts ſhould ſell ſimple drugs only in wholeſale; and that their goods ſhould be ſubjected to the ſame examinations as thoſe of the apothecaries.

3. That pedlars ſhould be prohibited from ſelling any kind of medicine; and that the ſale of drugs ſhould be entruſted to merchants whoſe reſidence is fixed, and who may be ſubjected to regular inſpection.

4.

4. That every perſon ſhould be prohibited from preparing and ſelling all compound medicines, and every medicinal compoſition, except the apothecaries who ſhall have been legally tried and paſſed; and that the importation of every foreign medicinal preparation, which can be equally well made in France, be prohibited without any exception.

5. That all regular apothecaries ſhould be allowed to ſell mineral waters, on the ſingle condition, that they ſubmit them to the examinations which ſhall be required.

SECTION II.

Of the Mode of Examining Simple and Compound Medicines, in the Warehouſes of the Druggiſts, at the Fairs, and in the Shops of Apothecaries.

EVERY perſon dealing in medicines, either at fairs, in wholeſale warehouſes, or in laboratories, ought to be ſubject to an examination, by which it may be aſcertained, if the drugs meant for ſale be of a proper quality.

§ I.

§ I. *Of the Mode of Examining Drugs at Fairs.*

1. Before any drugs are expoſed to ſale at fairs, they muſt be ſubmitted to the examination of commiſſioners, appointed to cauſe thoſe which may be found of a bad quality to be thrown away or deſtroyed; and to allow only thoſe to be kept for ſale, which are neither counterfeited nor adulterated.

2. The commiſſioners ſhall conſiſt of two phyſicians, and two apothecaries, nominated by ballot by the adminiſtrative body, two members of whom ſhall accompany them in theſe different examinations.

3. The commiſſioners ſhall be changed, and new ones elected for each fair.

4. Theſe commiſſioners ſhall repair at the place where the fair is to be held, as long before the commencement of the fair, as that they may be enabled to examine the ſtate of the bales, caſes, boxes, &c. which contain the ſimple drugs intended for ſale.

5. The number of days during which that examination ſhall continue, muſt be fixed according to the extent of the fair. The merchants

chants ſhall be obliged to have all their packages ready before the examination, and arranged in ſuch a manner that they can be conveniently inſpected.

6. The goods which may arrive after this, ſhall not be expoſed to ſale, nor admitted within the boundary of the fair, till notice be ſent to the commiſſioners, and till they have examined them.

7. The ſpoiled and adulterated drugs, and all the compound medicines, ſhall be ſeized and deſtroyed. The commiſſioners ſhall keep ſpecimens of theſe, the identity of which ſhall be atteſted by the merchant. A fine ſhall be decreed for the adulteration of drugs.

8. On the day on which the fair commences, the commiſſioners ſhall attend early in the morning at the place where it is held, and ſhall make a general viſit, in order to aſcertain that the goods expoſed to ſale, are the ſame which were ſubmitted to their examination.

9. The ſale ſhall not begin till this review be finiſhed; and it ſhall be ſuperintended, during the whole continuance of the fair, by ſome members of the adminiſtrative body, one of whom,

whom, at leaſt, ſhall have accompanied the commiſſioners in their examinations.

§ II. *Of the Mode of Examining the Warehouſes of Druggiſts.*

1. The commiſſioners nominated, as already deſcribed, ſhall viſit, at indeterminate and unexpected times, the warehouſes of druggiſts.

2. The druggiſts ſhall be obliged to diſcover all the warehouſes, or places in which their drugs may be depoſited; and, after having ſubmitted them to an accurate inſpection, the commiſſioners ſhall receive from them a ſigned declaration, by which they ſhall certify, that the warehouſes and drugs ſubjected to examination, and deſcribed in the declaration, are all that they poſſeſs, and that they have concealed nothing from the inſpection of the commiſſioners.

3. The drugs found of a bad quality, ſhall be ſequeſtrated and put under the double ſeal of the merchant and the municipality; and the commiſſioners ſhall keep a ſpecimen of this to juſtify their judgement, in the event of any appeal againſt it. If no appeal be made, the

the drugs pronounced of a bad quality, ſhall be deſtroyed.

4. If any compounded medicines are found, they ſhall be ſeized and ſequeſtrated.

5. In caſes of intentional adulteration, and of falſe declaration, proper puniſhments ſhall be decreed.

§ III. *Of the Mode of Examining the Shops of Apothecaries in Towns.*

1. Commiſſioners, nominated by ballot by the adminiſtrative body, ſhall inſpect the ſhops of the apothecaries. Theſe commiſſioners ſhall conſiſt of two phyſicians, two apothecaries, and at leaſt one member of the municipality.

2. They ſhall be elected annually, and ſhall viſit the ſhops at indeterminate times.

3. They ſhall aſcertain the ſtate of the dried plants, of the ſimple and compound drugs, and that of the mineral waters, in the manner afterwards ſpecified.

4. The drugs which ſhall be found of a bad quality, ſhall be ſequeſtrated, with the precautions and ceremonies already mentioned. In caſes of evident fraud, proper puniſhments ſhall be decreed.

§ IV. *Of the Mode of Inſpecting the Shops of Apothecaries in the Country.*

1. No perſon ſhall be permitted to ſell ſimple or compound drugs in the country, unleſs he be legally authoriſed, and have had his name entered on the regiſters of the municipality in which he reſides, and on thoſe of the diſtrict in the juriſdiction to which that municipality ſhall belong.

2. The diſtrict ſhall annually nominate, by ballot, a phyſician and apothecary, who ſhall be appointed to inſpect, at indeterminate and unexpected times, the ſhops of the country apothecaries, in the ſame manner as has been preſcribed for the examination of the ſhops of apothecaries in towns.

It has been explained, in the ſecond chapter of the ſecond part of this Plan, in what manner the adminiſtrative bodies can procure, for the country apothecaries, genuine drugs at prime coſt.

§ V. *Of the Mode of Examining Mineral Waters.*

THE preſervation of mineral waters, depends, in the firſt place, on the attentions beſtowed in taking them from the ſpring.

It

It depends alſo on the cleanlineſs of the veſſels in which they are contained, and on the manner in which theſe veſſels are corked.

Theſe attentions muſt vary according to the nature of the minerals.

The phyſicians eſtabliſhed at the places where the mineral ſprings are ſituated, ſhall be requeſted to ſtate the precautions which, experience has taught them, ſhould be obſerved in the preſervation of each kind of mineral water.

Theſe precautions, aſcertained in a diſtinct manner, ſhall be deſcribed in a regulation which ſhall be publiſhed.

The water for exportation, ſhall be drawn at a certain hour of the morning, and during a determinate ſpace of time.

On theſe occaſions, the phyſician appointed to inſpect the ſpring, and a municipal officer, ſhall attend; and ſhall take care that all the neceſſary precautions be exactly obſerved. They ſhall ſeal the bottles, and ſhall give a certificate of the whole, which ſhall be added to the parcel exported.

It is particularly neceſſary, to take care that theſe waters be neither counterfeited nor adulterated, in the places where they are ſold.

1. All the mineral waters, before they ſhall be delivered to the merchants to whom they are directed, in the places where they are ſold, ſhall be received into an office, kept by one or more clerks nominated by the municipality.

2. Two phyſicians and one municipal officer, choſen annually by ballot, ſhall be appointed to inſpect this office.

3. The arrival of every parcel ſhall be immediately announced to them by the clerk.

4. They ſhall, on this notice, attend at the office, where they ſhall aſcertain the validity of every certificate which ſhall atteſt the contents of the parcel.

5. They ſhall examine the ſtate of the waters; and ſhall aſcertain the correſpondence of the parcels with the invoice, and with the certificates given when the water was drawn.

6. They ſhall inſpect the ſeals affixed at the ſprings; and ſhall, by means of a particular ſeal depoſited in their hands, ſupply any of the bottles, where the former ſeal may be broken or rubbed off.

7. They ſhall give a certificate, dated and ſigned by them, deſcribing the contents of each parcel. There ſhall be two ſuch certificates.

cates. One of them ſhall be given to the apothecary to whom the parcel is addreſſed, and the other ſhall be contained in a particular regiſter, which ſhall remain in the office.

8. The commiſſioners, in their viſits to the ſhops of the apothecaries, ſhall examine the ſtate of the mineral waters; and ſhall cauſe the letters of invoice, and the certificates of examination, to be ſhewn them.

SECTION III.

Of the Mode of preparing the moſt important Medicines in great quantities, and of the public Laboratories.

§ I. *Of the public Preparation of the moſt important Medicines.*

EACH apothecary ought to have the liberty of preparing all ſorts of medicines: but, beſides this, it will be proper to cauſe the moſt uſeful medicines, and thoſe which may be kept for a long time without becoming changed, to be prepared publicly in great

quantities, as is done at London, and in reſpect to Theriaca at Paris.

The preparation of medicines in this manner, ſhould be made, according to uniform operations, in the capital, and in ſome of the great cities where medical colleges ſhall be eſtabliſhed.

It ſhould be preceded by the examination of the ſimple drugs which ought to enter into the compoſition of the medicines.

It ſhould be performed by choſen apothecaries, and ſhould take place under the inſpection of phyſicians appointed by the adminiſtrative body, and of the profeſſors of chemiſtry and the practice of medicine, and in preſence of ſeveral members of the municipality.

This kind of authenticity, beſtowed for ſo long a time on the preparation of Theriaca, ought to be extended with more reaſon to that of Tartar emetic, Kermes mineral, and the other preparations of Antimony, Iron, and Mercury; to that of the moſt important ſimple drugs, as the Cinchona; and to the operations for the purification of Opium, and its various preparations. Theſe medicines would have the advantage of being conſtantly the ſame,

and

and of never varying in their effects, but in conſequence of the habits and ſituations of the patients.

§ II. *Of the Great Public Laboratories.*

THE moſt neceſſary and beſt choſen medicines, and ſimple drugs, ſhall be kept in great public laboratories.

From theſe laboratories, the adminiſtrative bodies of the departments can procure the medicines at prime coſt, in order to diſtribute them through the cantons, and to make them ſerve for the relief of the indigent ſick in the country, as has been mentioned in the ſecond chapter of the ſecond part of this Plan.

If any apothecaries ſhould prefer ſupplying themſelves from theſe great laboratories, with the medicines prepared in the manner mentioned, to the trouble of preparing them themſelves, they may be allowed them at a price below that of the regulated rates. The profits of the ſale of medicines, of which a regular account ſhall be given in to the adminiſtrative body, may be applied towards the relief of the indigent ſick.

SECTION IV.

Of the Improvement of the Diſpenſatory.

IT is neceſſary that there ſhould be a diſpenſatory, which ſhall contain a table of the preparations which ought to be kept in apothecaries ſhops; the receipts of the preſcriptions which phyſicians may order; and a liſt of the principal drugs, which are or may be uſed. The phyſicians of London and of Edinburgh, have made ſeveral alterations in their diſpenſatories, which the preſent ſtate of medical and chemical knowledge appeared to them to require. In France, a ſimilar reform ought to be undertaken.

In order to accompliſh this, it will be neceſſary to collect, and to digeſt, the information and obſervations of the beſt informed medical practitioners and chemiſts.

Two or three profeſſors may be choſen in each college of the kingdom, who ſhall unite in this duty.

Theſe phyſicians ſhall be nominated by ballot, either by the college, or by the electoral body of the college.

They

They ſhall publiſh a liſt of ſubjects, on which all the phyſicians of the kingdom ſhall be requeſted to make known their obſervations. They ſhall then arrange the diſpenſatory ; on which the five colleges, and the medical academy, ſhall be further conſulted. When it is completely arranged and finally ſettled, it ſhall be publiſhed throughout the whole extent of the kingdom.

Experience will determine at what periods new editions of the diſpenſatory ſhould be undertaken.

SECTION V.

Of the Price of Medicines.

It may be conſidered as a great abuſe, that the price of ſimple and compound drugs, ſhould be, in ſome degree, arbitrary. As all the medicines ought to be of a good quality, they ſhould only differ in price, in conſequence of the expences incurred in their carriage, and in their preparation. Nevertheleſs, different circum-

circumſtances may occaſion their price to be varied in different years.

It will be therefore neceſſary, that, in each department, there ſhould be annually made out a liſt of rates; by which, all the expences being included, the ſimple drugs may be fixed at a price which ſhall afford the merchant a reaſonable profit.

Theſe rates ſhall be founded on the price at which the ſimple drugs may be ſold at the fairs, and on the expences of carriage.

Information on this ſubject ſhall be obtained from reputable merchants, who ſhall be required to verify it by their accompt-books.

Theſe rates ſhall be aſcertained by an equal number of phyſicians and apothecaries, nominated by ballot by the department; ſome members of whom ſhall attend that committee; to which ſome druggiſts ſhall alſo be admitted, who ſhall be allowed to offer remarks.

In the ſame liſt of rates, the price of compounded medicines, as well as of ſimple drugs, ſhall be fixed.

The price of theſe medicines, ſhall be determined according to that of the ſubſtances which

which enter into their compoſition, and according to the expence of preparation, and the loſs which may be neceſſarily ſuſtained by damage.

The price of mineral waters, ſhall alſo be included in theſe rates; and ſhall be fixed according to the expences incurred in drawing them from the ſprings, and to that of their carriage, and agreeably to the requiſite compenſation for accidental damages.

Theſe rates ſhall be publiſhed, and ſent to the phyſicians of the departments, and to the apothecaries, who ſhall be required to keep them in their ſhops, that they may be conſulted when neceſſary.

A ſimilar regulation is obſerved in ſeveral cities of Germany, and particularly at Berlin and Frankfort.

SECTION VI.

Of the Sale of Poiſonous Subſtances.

There is another object which requires much attention.

This

This is the dangerous abuſe of allowing the ſame merchant to ſell thoſe poiſonous ſubſtances uſed in manufactures, ſuch as Arſenic, Orpiment, Realgar, &c. and alimentary ſubſtances, ſuch as Butter, Cheeſe, &c. which are often weighed in the ſame ſcales, handled by the ſame hands, and placed on the ſame tables. Although the accidents in conſequence of this practice, are rare, they are not the leſs worthy of attention.

It may therefore be ordained, that the poiſonous ſubſtances ſhall never be kept in the ſame warehouſes, nor ſold in the ſame ſhops with the alimentary ſubſtances which form a part of grocery. Perhaps it may even be neceſſary, that theſe ſubſtances ſhould conſtitute a ſeparate branch of commerce; and that every merchant ſhould be prohibited from ſelling them to any perſons but well known artiſts, or people who can be truſted.

It is equally important, to renew the prohibitions againſt wine merchants having their reſervoirs lined with lead, or uſing any leaden veſſels to contain wine or acids. All copper veſſels ſhould alſo be prohibited, in which it might be neceſſary to keep, for a length of time,

time, any alimentary ſubſtances. Theſe prohibitions have been made; decrees exiſt on theſe ſubjects, paſſed at the requeſt of the officers of health: it is only neceſſary to put them in force.

The ſame rigour ſhould be conſidered as indiſpenſable, with regard to thoſe poiſonous ſubſtances which are uſed for the deſtruction of vermin. Arſenic, too often employed for this purpoſe, ought to be prohibited. There are ſome ſubſtances leſs dangerous to man, and equally fatal to theſe animals, ſuch as the Nux vomica, which are ſufficient for performing the ſame effects; and which ought to remove every pretext for uſing ſuch dangerous ſubſtances as Arſenic, and its various preparations.

SECTION V.

Of Secret Remedies.

It appears probable, that the examination of ſecret remedies, can only be advantageouſly entruſted to a permanent company, who, more zealous in a ſubject eſſentially connected with the public good, and influenced by more conſtant

conſtant and uniform principles than any temporary company could be, can alone accompliſh the intention of this regulation, which is the deſtruction of Empiriciſm.

If ſeveral commiſſioners were appointed to examine new remedies, a great variety of opinions would be the conſequence; ſo that a remedy allowed in one department, might be prohibited in another.

If the National Aſſembly entruſt that examination to one ſingle company, two precautions ſeem neceſſary, in order to counteract the influence, both of prejudice and of profeſſional zeal.

1. It is propoſed, that the directory of the department, in the juriſdiction of which that company may be, ſhall nominate from among the phyſicians who do not reſide in it, a number of commiſſioners, proportioned to that appointed by the company, to attend to the proofs along with them; to be witneſſes of the effects of the medicine; and to eſtabliſh theſe by reports, to which they ſhall each affix their ſignatures. Theſe reports being then tranſcribed, a copy of them ſhall be tranſmitted to the company, and another ſhall remain

in

in the archives of the directory of the department.

Theſe latter commiſſioners ſhall have no knowledge of the receipt of the medicine, which ſhall only be entruſted to thoſe nominated by the company.

2. It appears equitable, that the inventor of the remedy ſhall have a liſt of the members of that company tranſmitted to him, with power to reject a certain number from the trials of his medicine, in a proportion to be ſettled by the National Aſſembly.

The following addreſs, preſented to the National Aſſembly on the 19th September 1790, by the Society of Medicine, on the ſubject of Secret Remedies, for which the inventors requeſt permits, licences, or patents; and the plan of a regulation, at the end of that addreſs; will exhibit the views of the Society on that part of medical police.

" *An Addreſs to the National Aſſembly, on the Examination of Secret Remedies.*

" The Society of Medicine, was appointed by letters patent of the king, in the month of Auguſt

Auguſt 1778; and, by an order dated the 26th May 1780, to examine the ſecret medicines, offered as new inventions, for which the proprietors requeſt letters-patent, grants from the crown, or permits.

" The Society has always thought it incumbent on it, to exert the moſt active vigilance, and the moſt rigorous ſtrictneſs, in the performance of duties which have for their object, the care of the health and life of the citizens, in order to oppoſe the deſigns of the avaricious, or the dangerous illuſions of ignorance.

" In conſequence of this, the Society has always made it a rule, to conſider thoſe remedies only as meriting its approbation, which comprehend the double advantage of being perfectly new, and of poſſeſſing, at leaſt in ſome reſpects, a decided ſuperiority over all the medicines of the ſame kind.

" This rule has been religiouſly obſerved; and accordingly, for theſe fourteen years during which it has been eſtabliſhed, the Society has only given its approbation to four medicines; two of which, only, were new; the other two being remedies formerly approved of, and generally employed.

" The

"The experience of fourteen years, has taught the Society ſeveral facts, which it conſiders incumbent on it to lay before the National Aſſembly. Theſe facts certainly deſerve the attention of the Aſſembly, as they regard the intereſts of mankind.

"1. Nothing is more dangerous than ſecrecy in matters relating to remedies. The moſt uſeful medicine often becomes dangerous, merely from the circumſtance of its being involved in myſtery. This myſtery excites the enthuſiaſm, and cheriſhes the credulity of the people. It occaſions uncertainty in the diſcrimination of the circumſtances favourable for employing it, and inaccuracy in its application; for, if uſed, the practitioner has recourſe to a remedy, with the nature of which he is unacquainted. The Society has, in its records, innumerable proofs of the unfortunate conſequences, and, it will not ſcruple to declare, of the poiſonous effects, occaſioned by remedies, the ſucceſs of which, in ſome caſes, had been atteſted by reputable phyſicians, and by citizens of all ranks.

"2. As long as the dangerous privilege of keeping their compoſition a ſecret, is grant-

ed to the inventors of a few uſeful remedies, a great number of other people, jealous of the ſame advantages, but dreading the ſtrictneſs of the ſame trials, will appear in all parts. The Society has ſeen, with regret, notwithſtanding its endeavours, a great number of ſecret remedies exempted from their examination, approven, without being known, by the perſons who have ſanctioned their uſe, and, nevertheleſs, countenanced by plauſible patronage. The few ſucceſsful caſes which have contributed to render theſe medicines celebrated, cannot be mentioned; for humanity has paid too dearly for theſe, by the ſacrifice of a multitude of victims.

" The compoſition of ſome uſeful remedies, therefore, being kept a ſecret, affords an obſtacle to the deſtruction of quackery; an evil, which hitherto, like many others, has been principally injurious to the poor, and eſpecially to the poor of the country.

" If it had been neceſſary that the Society ſhould have pointed out fully thoſe evils of empiriciſm, it might have called on the teſtimony of ſeveral members of the National Aſſembly, who, being nearer the inhabitants of the

the country than the members of the Society, muſt have been, while exerting their attentions in their favour, witneſſes of thoſe misfortunes.

" The wiſh of the Society therefore is, that, for the future, no patent or licence may be granted, by which the compoſition of an uſeful remedy can be kept ſecret; and that every new remedy, ſuperior in efficacy to thoſe of the ſame kind already known, may be bought by the Nation, and immediately afterwards publiſhed, in order that profeſſional men may uſe it in the caſes where it ſhall be proper, and under the modifications which circumſtances may require, and not blindly on the faith of a patent.

" In this manner, Louis XIV. bought, and made public, the remedy of the prior of Cabrieres for herniæ, and the powder of the Chartreux; and alſo, in the ſame manner, the Britiſh Parliament bought, and made public, Stevens's medicine.

" The price to be paid for permiſſion to publiſh the compoſition of any medicine, ought to be determined by the conſideration of its utility and ſuperiority, and from the number

of caſes in which it may be uſed; for it is by theſe two principles only, that the legal profit which it would have produced, had the property remained with the inventor, can be calculated.

" The National Aſſembly may be aſſured, that the ſmall number of new medicines which ſhall be deemed worthy of this diſtinction, can never form an object of conſiderable expence; a circumſtance which is proved by the hiſtory of medicine.

" It does not belong to the Society, but to the Legiſlators of France, to examine the right which one man may have to property, the concealment of which, regards the welfare of mankind; and to determine, under what circumſtances, the intereſt of an individual ought to be ſacrificed to that of the public.

" It is ſufficient for the Society to obſerve, that, if the National Aſſembly adopt theſe views, it will have deſtroyed, in addition to many others, one of the innumerable evils which originate from the avarice and credulity of mankind.

" The Society, therefore, requeſts permiſſion to ſubmit to the Aſſembly, a plan of regulations

gulations relative to that ſubject; wherein it has endeavoured to unite every thing which, in the examination of new remedies, may obviate errors, and prevent abuſes."

Plan of Regulations for the Examination of New Remedies.

I. No remedy ſhall be examined, unleſs at the deſire of Government, or of the adminiſtrative bodies.

II. Three commiſſioners, at leaſt, ſhall be nominated to give in a report; by which it ſhall be determined, if the remedy offered for examination, ought to be ſubjected to the trials neceſſary for aſcertaining its efficacy.

III. No judgment ſhall be pronounced on any medicine, unleſs the commiſſioners appointed to examine it, ſhall be made acquainted with its compoſition; which, however, they ſhall be obliged to keep ſecret.

IV. No remedy ſhall be ſubjected to trial, unleſs it be new; and it ſhall be conſidered as new, if it be compoſed either of new ſubſtan-

ces, or of ſubſtances in which the inventor ſhall have diſcovered new qualities; or if, by a new manner of combining or exhibiting them, they acquire powers, or an efficacy, hitherto unknown. The commiſſioners ſhall be particularly attentive to diſcover, whether the remedy offered as new, be not preſcribed in ſome pharmacopœia.

V. When a remedy ſhall be ſubjected to trial, the importance of the ſubject will determine, whether additional commiſſioners ought to be conjoined with thoſe already appointed, in order to obſerve, along with them, the effects of the medicine. The remedy ſhall be prepared by the commiſſioners themſelves; and they ſhall only uſe that preparation in their trials.

VI. The report of the experiments ſhall be drawn up in preſence of all the commiſſioners, and ſhall be ſigned by them all.

VII. No remedy ſhall be judged worthy of being bought, unleſs it is aſcertained by a ſufficient number of proofs, that it is ſuperior to the other medicines of the ſame nature hitherto known.

VIII.

VIII. In their report, the commiſſioners ſhall exhibit the reſult of their experiments; and if they judge the medicine worthy of purchaſe, they ſhall determine the title under which it ought to be announced; they ſhall fix the doſes beyond which it would be dangerous to employ it, and the caſes where it may be uſeful or hurtful; in order that theſe circumſtances may be mentioned in the deciſion which ſhall be formed on it, and in the advertiſements by which it ſhall be made public.

IX. If the judgment of the commiſſioners be in favour of the medicine, its value ſhall be determined, according to the report of the commiſſioners, by the degree and extent of its utility.

X. The day after the judgment, the compoſition of the remedy ſhall be made public, and ſent to the directories of the departments.

XI. No medicines ſhall, for the future, be kept ſecret; and the inventors of any ſecret remedies, ſhall not be allowed to adverti ſe or ſell them, under any pretence, or under any denomination whatever.

XII. The ſame regulations and prohibitions ſhall be in force, reſpecting foreign ſecret medicines.

XIII. The remedies which have been approven at different times, which have ſtill remained ſecret, and for which, their inventors have obtained patents, ſhall be reported, examined, and tried anew: they ſhall be ſubjected to the regulations above mentioned; and if there be cauſe for it, their compoſition ſhall be made public, agreeably to the terms of theſe regulations.

XIV. All patents or licences contrary to theſe regulations, ſhall be null and void.

XV. With reſpect to coſmetic preparations which may affect the health, the ſale ſhall be prohibited, until the phyſicians, conſulted on that ſubject by the directories of the departments, ſhall have declared, that theſe preparations contain nothing injurious to health.

XVI. The various medicines allotted for the treatment of external diſeaſes, for deſtroying deformities of the ſkin, and for curing diſeaſes of the eyes, teeth, and mouth, ſhall not be included under the title of Simple Coſmetics.

CHAP. VI.

On an Important Addition which ought to be made in the Bills of Mortality.

SINCE the regiſters of births, marriages, and deaths, have been well kept, much uſeful information on the population, and on the proportions of life, both of mankind in general, and of different ages in particular, has been derived from their examination; and, from the compariſon of theſe reſults, with the local circumſtances of which, they are in part the effects, true ideas of the ſalubrity of different climates are acquired.

But the tables of mortality in France, are ſtill very imperfect. In England, Holland, and Geneva,[1] they have, in a particular column, the names of the diſeaſes of which the deceaſed

[1] The plan of thoſe of Geneva, is remarkably ſimple. Thoſe which are publiſhed at Deventer in Holland, are alſo digeſted according to the beſt principles. In England and Geneva, there are ſurgeons in each quarter, who take cognizance of the cauſes of death.

ed have died.[2] It is unneceſſary to detail, at full length, the numerous advantages reſulting from a ſimilar arrangement. By this addition, the bills of mortality ſhew to what diſeaſes the inhabitants of each canton are moſt liable; they exhibit, for example, the proportion of thoſe who are deſtroyed by phthiſis pulmonalis, or the ſmall pox; the number of women who die in childbed; the infirmities which prove fatal to old people; the exact number of thoſe carried off by epidemics; and that of thoſe who die ſuddenly. Theſe circumſtances, and many more, may afford, both to the adminiſtration and to practitioners of medicine, very valuable articles of information; of which, it is much to be wiſhed, that France may no longer be deprived.

The National Aſſembly, by decreeing that the cauſes of death ſhall be inſerted in the bills of mortality, will add another good office to the many for which the State is already indebted to it.

It

[2] In Holland, in order to render this operation more eaſy, diſeaſes have been arranged under a certain number of claſſes to which the various cauſes of death may be referred, on which information may be given by the relation of the deceaſed.

It may, perhaps, be objected, that there are a certain number of diſeaſes regarded as diſgraceful, which the relations of the deceaſed will never diſcloſe, ſuch as, venereal and epileptic complaints. But the greateſt number of theſe diſeaſes, before they occaſion death, degenerate into other complaints which are not concealed; and the proportion of thoſe who die of theſe very complaints, to that of thoſe who are cut off by diſorders of another nature, is not ſo conſiderable as to affect the calculations which may be made on the bills of mortality. Beſides, even although ſome general concluſions may be rendered uncertain by that ſource of error, there are others which will not be in the ſmalleſt degree injured. It will, for example, always be known what number of perſons die of the meaſles, of intermittent fevers, of ſcurvy, &c.; and the advantages which that knowledge alone may produce, are ſufficient to induce the National Aſſembly to regulate that important ſubject.

PART

PART FOURTH.

Of Veterinary Medicine.

CHAP. I.

Of Veterinary Medicine in General.

VETERINARY Medicine, although attended to by the antients, has been too long neglected by the moderns. This preſent century has the honour of having re-eſtabliſhed this branch of medicine, which is worthy, in every reſpect, of the attention of legiſlators, and of the ſtudy of philoſophers. It may be added, that no good reaſon can be alleged for conſidering the healing art as applied to animals, diſtinct from that applied to man. The ſame general principles are applicable; and therefore, to underſtand in what reſpects theſe two parts of the ſame ſcience reſemble each other, and in what they differ, they ought certainly to be united.

The veterinary ſchools eſtabliſhed at Charenton, are almoſt as much at a diſtance, as if they were at the corner of a remote province.

vince. No phyſician or ſurgeon is engaged in what is carried on there; and no correſpondence is kept up between the profeſſors of theſe ſchools, and thoſe by whom the healing art, as applied to man, is taught.

Theſe ſchools ought therefore to be tranſferred to Paris; [1] and they will then afford an object of emulation to a great number of perſons. They ſhould be eſtabliſhed in the vicinity of the medical ſchools; or, what will be better, they ſhould form a part of theſe. Phyſicians and ſurgeons will then viſit them in crowds; they will attend the courſes; they will make both ſtudies advance in union. The profeſſors of both branches of inſtruction, will communicate to each other their projects and labours;

[1] The inveſtigations on comparative anatomy, which will be made in Paris, if the veterinary ſchool is tranſported there, ought not to be dreaded. *1ſt*, Becauſe theſe occupations do not occaſion nearly ſo fetid effluvia, as thoſe which ariſe daily from the numerous diſſecting rooms eſtabliſhed in the capital, for teaching the anatomy of the human body. *2dly*, Becauſe experience has proved, that no bad conſequence whatever reſults from inveſtigating the anatomy of animals in large well-aired rooms. And, *3dly*, Becauſe it is eaſy and not expenſive, to renew frequently the ſubjects of that branch of anatomy; and the offals may be ſent away daily.

labours; and their knowledge will be increaſed from that reciprocal intelligence. By this means, the phyſiology of animals will be very much improved; the young men will become accuſtomed to extend their ideas; and all the branches of medicine, mutually illuſtrating each other, will be brought to perfection at the ſame time. This is the only means by which the veterinary ſcience can be made to flouriſh; can be diffuſed, and can be rendered really uſeful; by multiplying the number of thoſe who ſtudy and practiſe it, and by obtaining for it all the attention from the departments, which it merits.

Perhaps it may be neceſſary, that beſides theſe veterinary ſchools, which, it is propoſed, ſhall be tranſported from Charenton to Paris; ſchools of the ſame kind ſhould be annexed to ſome of the other medical colleges already mentioned. But it will be particularly neceſſary, that practical veterinary ſchools ſhould be eſtabliſhed in the middle of thoſe provinces where a great number of uſeful domeſtic animals [1] are reared, as in Normandie, Le Morvan,

[1] It appears to the Society, that theſe moveable practical ſchools, as they may be ſtyled, ſince they ſhould be tranſported

van, Auvergne, &c. Theſe ſchools ſhould be taught by a ſmall number of men well acquainted with the healing art as it is applicable to animals, who ſhould take charge of the pupils named by the departments, to whom they might impart the principles of art, by conducting them to diſeaſed animals.

CHAP. II.

Plan for Teaching Veterinary Medicine.

VETERINARY medicine ſhould be taught, by being divided into five great departments, each of which ſhall be entruſted to one profeſſor.

SECTION I.

Courſe of Lectures on the Anatomy of Beaſts.

THE horſe, the ox, the ſheep, and the dog, ſhall form the chief ſubjects of theſe demonſtrations:

tranſported to thoſe places where epidemic and other diſeaſes of cattle prevail, will be well ſituated in the neighbourhood of Rouen, Clermont, Dijon, Poitiers, or of Limoges and Auch.

ſtrations: their bones, particularly thoſe of their extremities, their ligaments, their articulations, which are attacked with a great number of diſeaſes; their muſcles, eſpecially thoſe of their ſhoulders and extremities; their viſcera, their external glands, their principal nerves, and their blood veſſels, ſhall be deſcribed.

It will be unneceſſary to demonſtrate minutely to the pupils, the ſtructure of thoſe organs, ſuch as the Cerebrum and Cerebellum, the functions of which are not perfectly known, and ſeldom form the ſeat of the diſeaſes on which they are conſulted. The profeſſors ſhould confine their deſcriptions to the ſtructure of thoſe parts on which they will be obliged to operate. If this rule be not ſtrictly obſerved, much precious time will be loſt; the pupils will receive ſuperficial inſtructions, from which they can derive little profit; and, inſtead of uſeful practitioners, dangerous diſputants will alone be formed.

It muſt therefore be remembered, that the true deſign of public utility cannot be accompliſhed, if the profeſſors ſhew much attention to the theoretical parts of the art; for empirical

practice

practice is almoſt only neceſſary for the treatment of the diſeaſes of animals. For this reaſon, their phyſiology ſhould only be taught in ſo far as it is eſſentially connected with the principles on which their diſeaſes ſhould be treated: when its applications to theſe are obvious, the profeſſors may point them out. If an oppoſite plan be adopted, they will ceaſe to addreſs themſelves to their pupils.

The pupils will be, in an eſpecial manner, improved by familiar inſtructions. Elementary books ſhould be publiſhed for their improvement, as the directors of the ſchool at Alfort have already done with ſucceſs. They ought particularly to be inſtructed, by engaging their attention with numerous demonſtrations, by putting queſtions to them, and by making them frequently repeat their leſſons, either among themſelves, or under the eyes of the principal of the ſchool.

A profeſſor, who ſhould be the aſſiſtant of the profeſſor of Anatomy, were it only to ſhew the connection between theſe two ſciences, ſhall be entruſted with the charge of teaching the anatomy of animals. The two beſt informed pupils ſhall act as diſſectors to him:

theſe offices ſhall form one of the rewards decreed for their love of the art.

SECTION II.

Courſe of Lectures on the Knowledge of the external Figure of Animals.

THE ſtudy of the external figure of animals, ſhall comprehend that of the beauties and defects of the moſt important domeſtic animals. The rules which ought to be followed in the choice of theſe animals, with reſpect to the uſes for which they are allotted, ſhall be pointed out; and the manner of breeding them for the purpoſe of theſe uſes, ſhall be explained. The natural proportions of the animal, its motions, and the relation between the different parts during growth, ought to be carefully examined. In order to inſtruct the pupils as effectually as poſſible, they ſhould be conducted to the fairs and markets of the neighbouring places, where they ſhould be made to apply the rules which ſhall have been explained to them.

This courſe ſhall be concluded by two important branches of inſtruction. The one ſhall

ſhall comprehend the Hygieine, that is, the deſcription of the mode of nouriſhing animals, and of the domeſtic attentions, eſpecially reſpecting cleanlineſs, which they require. The other ſhall include the multiplication of the race of animals, or the ſcience of the ſtud.

A ſingle profeſſor ſhall be charged with this important courſe; ſeveral branches of which, have never formed the ſubject of regular ſtudy. It will be difficult to find a profeſſor of this kind. He cannot be the aſſiſtant of any of thoſe who teach the healing art as applied to man; becauſe his duties require a diſtinct ſpecies of knowledge, which is connected, in a very diſtant degree only, with the Hygieine applicable to man.

SECTION III.

Courſe of Lectures on the Inſtitutions of the Veterinary Art.

THIS courſe ſhall comprehend every thing relating to Materia Medica, Botany, Chemiſtry, and Pharmacy, together with ſome general views of Pathology, with which the ſtudents of the

Veterinary art ought to be acquainted. It is neceſſary to make a judicious choice of the eſſential parts of thoſe ſciences which can illuſtrate the Veterinary art, and not to exceed theſe.

The medicines, in particular, ought to be very ſimple; and no part of the Materia Medica ſhould be leſs expenſive.

The profeſſor charged with this courſe, may be the aſſiſtant of the profeſſor of the Inſtitutions of Medicine.

SECTION IV.

Courſe of Lectures on the Practice of Veterinary Medicine and Surgery.

The lectures of this courſe ſhall include the treatment of external and internal diſeaſes, and the mode of performing operations, and of applying bandages; and ſhall alſo comprehend the illuſtration of the practice in Veterinary hoſpitals.

The profeſſor ſhall be occupied every hour of the day in the diſcharge of theſe duties; for the performance of which he will require an aſſiſtant.

SECTION

SECTION V.

Courſe of Lectures on Farriery.

THIS courſe ſhall be divided into two parts; one of which ſhall relate to the theory and practice of the Forge, and the other to the theory and practice of Shoeing animals.

The art of ſhoeing ſhall be practiſed on the horſe, the aſs, the mule, and ſometimes alſo on the ox.

For this courſe, a profeſſor and aſſiſtant will be neceſſary.

Theſe two departments of the Veterinary art, can only be well demonſtrated and underſtood, by being treated as in the ſhops of farriers. In general, it will require at leaſt a year to learn the dexterity and ſteadineſs, which are the eſſential qualifications of a good operator in Farriery.

Reflections.

THE courſes of lectures on Anatomy, and on the Chirurgical operations, may be given during Winter; and thoſe on the Inſtitutions,

and the external figure of animals, during the Summer. It will be neceſſary to take care, in particular, that the pupils ſhall paſs the greateſt part of their time at the forge, and in the Veterinary hoſpitals, where various offices ſhall be beſtowed on them, according to their induſtry and abilities.

It will eſpecially be conſidered as a very honourable diſtinction, to be ſent to ſuperintend the treatment of an epidemic diſeaſe among cattle.

This branch of the healing art requires more particular attention; as thoſe who form the ſubjects of its practice, mute during their ſufferings, preſent, from that circumſtance, difficulties to the practitioner, which, in the treatment of human diſeaſes, do not occur.

By means of the propoſed inſtructions, four years will be ſufficient to conſtitute a well informed Veterinary practitioner.

The profeſſorſhips in the Veterinary ſchools, ſhall be adjudged by competition. Theſe competitions, and the examinations of the pupils, ſhall be regulated by the ſame principles which have been eſtabliſhed for the medical colleges;

colleges; the plan of which has been already deſcribed.

The Veterinary practitioners, and all thoſe who ſhall cultivate that ſcience, ſhall be invited to communicate their obſervations to the academical body, which ought to be entruſted with the charge of a general correſpondence, on every department of the healing art.

PART FIFTH.

Of the Manner of advancing the Progreſs of Medicine by the Labours of an Academy.

CHAP. I.

Of the Labours of a Medical Academy in general, and of the Advantages which may be derived from it.

It is not enough to adopt proper meaſures for inſtituting ſufficient opportunities for medical ſtudy; it is neceſſary alſo to provide for the improvement of the ſcience of medicine: for, by teaching, it is exhibited ſuch as it is;

but, for advancing its progreſs, ſomething more is required.

When the hiſtory of the healing art, from the moſt remote antiquity, to the preſent time, is conſidered, it will be readily allowed, that experience has formed the moſt valuable part of the ſcience; and that it can only be rendered more perfect by new facts.

Theſe might be eaſily acquired, if, by fixing the attention of medical practitioners on every thing which can contribute to improve their art, and if, by multiplying the number of places to which they may aſpire, and that of honours which they may obtain, they were provided with means by which they may readily arrange, improve to advantage, and publiſh, the remarkable facts which they ſhall have collected. After having properly organized the hoſpitals, and after having diffuſed well informed medical practitioners over the whole country, it only remains neceſſary to eſtabliſh ſuch connections between thoſe of the profeſſion, as ſhall render the fruits of the obſervations of each individual common to all; and if the correſpondence by which this can be effected, have a centre, from which the rays of

ſcience

ſcience which are ſcattered, may be reflected in an united ſtate, this object will be accompliſhed, and every thing will have been done for the improvement of medicine, which can be expected from an enlightened Government.

It belongs to ſocieties or academies, to carry on this correſpondence with the members of the profeſſion; to excite a ſpirit of emulation among them; to induce them to preſerve the reſults of their daily practice; to collect their obſervations; and to publiſh them for the benefit of the world. It is alſo the duty of ſocieties, to take advantage even of accidental cures, and to tranſmit to poſterity, a numerous ſeries of facts, which would otherwiſe have remained for ever buried in oblivion.

The medical practitioners of Breſlau, Copenhagen, and Berlin, are the firſt who united themſelves, in order to publiſh their works in common. The practitioners diſtributed through the provinces and cantons of Sweden, have alſo a centre of correſpondence in the vicinity of that of the adminiſtration. And for a long time before a medical ſociety was inſtituted in France, notwithſtanding the wiſhes for ſuch an eſtabliſhment, formed by Chirac, Fontenelle, d'Alembert,

d'Alembert, and Bordeu, ſimilar ſocieties which have ſerved as a model for that of Paris, were eſtabliſhed at Barcelona, Madrid, Edinburgh, and London; and the celebrity which theſe latter have acquired by their works, is well known.

In order to exhibit the advantages of ſuch an inſtitution, it will be ſufficient to enumerate the duties with which a medical ſociety or academy ought to be charged.

The tranſactions of a medical academy, ſhould reſpect the following ſubjects:

(1.) To correſpond with the beſt informed domeſtic and foreign medical practitioners; to collect what each ſhall have obſerved moſt worthy of attention in cities, in the country, and in hoſpitals; which form the great fields for inſtruction in the healing art.

(2.) To ſubject to the moſt ſcrupulous trials, the new remedies, the virtues of which ſhall have been extolled; and to multiply the obſervations, experiments, and trials, which may render medical knowledge more accurate, and more extenſively uſeful.

(3.) To digeſt a plan of projected inveſtigations, every part of which ſhall be well concerted,

certed, and every different branch of which, may be propoſed ſucceſſively by the academy to its members, in ſuch a manner, that each may be furniſhed with a ſubject of particular attention.

(4.) To preſent to young practitioners a table of the diſeaſes peculiar to each canton, and of the remedies which are beſt adapted to them. Theſe important ſubjects of information, will be furniſhed by means of well written eſſays on the medical topography of the different cantons, diſtricts, and departments.

(5.) To collect carefully, the deſcriptions of the different endemic and epidemic diſeaſes, and of the epidemic diſorders of cattle; and to publiſh an account of theſe, according to the order of the ſeaſons.

(6.) To add to theſe, meteorological obſervations, made with inſtruments which may be compared with each other, and at determinate diſtances; ſo that, from the union of theſe two ſubjects, there may reſult what the modern phyſicians ſtyle a medical year, (*annus medicus*) in its full extent.

(7.)

(7.) To publiſh in collections, the arrangement of which ſhall include all the departments of medicine, the different obſervations and eſſays which the ſociety ſhall have collected, and the diſſertations of thoſe to whom prizes ſhall have been adjudged.

(8.) To anſwer all the requiſitions relative to the public ſalubrity, by uſeful advices and inſtructions; and to ſend, on important occaſions, ſome of its members to thoſe places where their preſence may be deemed neceſſary.

(9.) To combat with vigour that ſpirit of ſyſtem which invariably leads to error; and thus to oppoſe all the changes which a fertile imagination, and its numerous chimeras, might occaſion in the healing art.

(10.) To invite the phyſicians, ſurgeons, and apothecaries of towns, to unite themſelves into a committee or council, in order to work in concert, for the improvement of the art; [x] to preſerve its true principles; to ſupport its dignity; and to connect itſelf with theſe ſocieties, by an uninterrupted correſpondence.

(11.)

[x] With theſe views, the practitioners of Aix have already formed themſelves into a medical ſociety.

(11.) To form thus, out of all the citizens of the empire, who love, and who cultivate the healing art, one great body, animated in every part with the ſame zeal, and conſtantly governed by the principles of the public welfare, of reaſon, and of equality.

The Commiſſioners of the Society of Medicine will not aver, that their ſociety has fulfilled all the articles above ſpecified: But they can with truth obſerve;——

That the correſpondence of the Society of Medicine is very extenſive; that every thing which relates to the improvment of the healing art in foreign countries, is ſpeedily communicated to it; that it has formed numerous connections with the colleges and academical bodies or ſocieties, which are occupied in a manner analogous to it; that all the medical practitioners, charged with the treatment of popular diſeaſes, and the greateſt number of thoſe entruſted with the care of hoſpitals, are inſerted in the liſt of the Society, and maintain with it an active correſpondence; and that, ſpeedily informed of every attack on the health of the public, it can make known, without delay,

delay, the meaſures neceſſary to be taken to obviate it.

That, ſince the inſtitution of the Society, it has publiſhed the analyſes of ſeveral ſubſtances, which had not hitherto been examined with attention, ſuch as ſeveral kinds of quinquina, and various mineral waters; and that it has publiſhed a very inſtructive method, at full length, by the aſſiſtance of which, theſe different analyſes may be repeated every where, according to uniform principles, the reſults of which may be compared with each other.

That the Society has been ſucceſſively employed, in pointing out the treatment of fevers of every kind; as, of intermittents of a favourable or malignant nature; of exanthematous, and of ſlow nervous fevers; of the diſeaſes of artiſans; of thoſe of armies; of thoſe of puerperal women; of thoſe of new-born infants, and of children; of the different kinds of inflammatory diſeaſes; of chronic diſorders, ſuch as the ſcurvy and dropſy; of the phthiſis, and of the different changes of which the fluids of the human body are ſuſceptible.

That

That the Society has not neglected the application of natural philoſophy to the healing art, as is proved by its reſearches on the uſe of eudiometers in medicine, and on the compariſon of meteorological obſervations, which it collects in much greater quantity than any academy of medicine before it ever did; and that, to render the reſults of theſe obſervations more certain, it has laid down a plan for them, which has been tranſmitted to all its correſponding members.

That all its publications from the year 1776, to the public meeting of the 31ſt of Auguſt 1790, form a chain of works, which have been ſucceſſively offered to the examination of profeſſional people.

That the Society annually diſtributes prizes to the authors of the beſt eſſays tranſmitted to it, on the treatment of the epidemic diſeaſes of men and of cattle; and that it has already publiſhed diſſertations on theſe ſubjects, which may ſerve as a model for ſimilar works.

That it has collected more than two hundred eſſays on the medical topography of the kingdom; and that, in the year 1789, it publiſhed

bliſhed a table of theſe, in which it marked the cantons, a deſcription of which was yet wanting.

That the Society has already publiſhed nine volumes in quarto, without any expence to Government; and part of which has been already tranſlated in foreign countries.

That there has not happened, for theſe fourteen years, any event prejudicial to the health of the public, in which it has not evinced a great zeal; and that, independent of the volumes already mentioned, it has publiſhed and diſtributed a great number of inſtructive eſſays, and of obſervations or advices, on various important ſubjects: On the tetanus; on the leproſy, or red diſeaſe of Caienne; on the hydrophobia, which has been a particular object of its inveſtigation, with the mode of treatment as far as it has been aſcertained; on medical electricity, which was unknown in France, with its true effects, and the mode of exhibiting it, which was made known by one of its members; on the medical properties of the magnet; on the catarrh of the year 1776; on the epidemic dyſentery of the 1779; on the miliary fever of Bas-Languedoc of 1782;

on

on the epidemic diſeaſes of the 1785; on the diſeaſes of wheat, and chiefly on the caries with which it was attacked in the ſame year, and on the means to prevent the propagation of it; on the cold of the winters 1788 and 1789; on the ſubſiſtence of cattle during that latter ſeaſon; on the treatment of maniacs; on that of venereal complaints in the country; on that of the puerperal fever, that of the itch, and of various cutaneous eruptions; on the mephitical exhalations of the moſt noxious common ſewers, and on the way in which they kill animals; on the dangers of the exhalations of marſhes; on the inconveniences which ariſe from burying in churches, and eſpecially in thoſe of the iſland of Malta; on the removal of dead bodies from the church and churchyard of the Saints-Innocens, the moſt conſiderable and moſt remarkable of all ſimilar operations ever undertaken; and on the nyctalopia, a diſeaſe to which the ſoldiers of certain garriſons are peculiarly liable.

That the members of the Society of Medicine have repaired a great many times to places where epidemic diſeaſes prevailed among men and cattle, both within the juriſdiction

of the ancient royalty of Paris, a circumſtance which has happened four times even during the laſt ſeaſon, at the requeſt of the intermedial commiſſion, and in the moſt remote places, as l'Artois, le Boulonnois, in the vicinity of the city of Eu, at Breſt, at Dinan, where one of the members, M. Jeanroi, was ſeized with the epidemic which he had treated with as much zeal as ſucceſs, and had nearly become a ſacrifice to it; at l'Orient, to treat the fevers of the jails there; and alſo at Sologne, where M. l'Abbe Teſſier was in as much danger as M. Jeanroi had been: and on all theſe occaſions, the members of the Society, content with the trifling ſalaries which they receive, ſolicited no recompence for ſuch laborious ſervices, by which they were expoſed to ſo many dangers.

That the Society of Medicine being the decided enemy of all empiriciſm, has conſtantly oppoſed, vigorouſly, its progreſs; that for theſe fourteen years, it has approved of no more than four remedies, two of which only are new; and that it has rejected more than eight hundred, as can be proved by its records, and more eſpecially by three printed liſts, which

which it has publiſhed from the year 1778 to the year 1782; and that all the trials and analyſes of theſe medicines were executed gratis.

That it has re-eſtabliſhed the police in the adminiſtration of the mineral waters of the kingdom; that it has digeſted particular regulations for maintaining good order in the management of theſe; and that it has every year collected obſervations calculated to prove the the effect of theſe waters in the treatment of diſeaſes.

That, in ſhort, the Society cannot avoid believing, that it has done ſome good, and that the public is not diſſatisfied with its labours; for, on one hand, the adminiſtrators frequently requeſt its advice, while citizens, zealous for the public welfare, found prizes for its diſpoſal; and, on the other hand, the French medical practitioners, who are moſt eſteemed for great experience and for abilities, enrich it by their obſervations, work according to the ſpirit of its publications, and conſider it an honour to belong to it.

This ſhort view, preſents to the conſideration of the National Aſſembly, the efforts

which the Society of Medicine has made to render itſelf uſeful. The commiſſioners of that Society, are very far from wiſhing to exaggerate the ſervices which it has rendered; they think that, by the new diviſion of the kingdom, it will be more eaſy for it to diſtribute its aſſiſtance; that as the directories will pay more attention to the diſtreſſes of the people, the Society will contribute more uniformly and conſtantly to their relief; that by examining carefully its regulations, and by endeavouring, by a new arrangement of them, to render them worthy of the free conſtitution by which France is governed, there will reſult ſeveral advantages, which the Society cannot haſten too much to enjoy: they hope that, after the honourable adoption which it is expected it will receive, it will no longer experience thoſe obſtacles by which its efforts have been ſo often interrupted; for the members of the Society are well aware, that their inveſtigations would have been executed, both in a more complete and more expeditious manner, if thoſe who have perſecuted them with ſo much malevolence, had adopted the more uſeful and noble principle, of aiding them with

their

their advice, and of ſeconding, by their vigilance, the ſucceſs of their undertakings.

On the whole, the commiſſioners have ſuppoſed, *1ſt*, That it would be productive of much utility, if the phyſicians, ſurgeons, and apothecaries of towns, eſpecially of the chief cities of the departments, were to form themſelves into ſocieties, both for the purpoſe of affording aſſiſtance to the people, and of contributing, as much as in their power, to the improvement of the healing art: *2dly*, That the medical practitioners of the country be invited to adopt the ſame views: *3dly*, That it would be proper that the whole medical correſpondence ſhould have, for a centre, an academical body placed in the capital, in the vicinity of the great powers by which the State is governed.

1. It will be ſufficient, to prove the utility of this plan, to obſerve, that all the medical academies or ſocieties inſtituted in Europe, have been placed in great cities, and that their correſpondence has nowhere been found to be leſſened, by the eſtabliſhments of the ſame kind diffuſed over the different parts of the ſame empire.

2. Experience has proved, that academies have infinitely greater ſucceſs in Paris than in the provinces; the reaſon of which undoubtedly is, that, in the capital, there are a number of men of genius, to be met with nowhere elſe.

3. It has been more than once found, that it is very neceſſary that the Academy of Medicine ſhould be placed near to the Academy of Sciences; to be, as it were, always a witneſs of its inveſtigations; to be animated by the ſame ſpirit, and to purſue the ſame route, in order to obtain new concluſions.

4. With reſpect to adminiſtration, it is ſurely proper, that all the principal demands, all the important inveſtigations, and all the great events relating to the public ſalubrity, ſhould be written on the ſame records; and that this intereſting collection ſhould be within reach of the legiſlative and executive powers, to be conſulted when neceſſary.

5. If it were propoſed that the Society or Academy of Medicine, ſhould be eſtabliſhed in the middle of one of the colleges, it might be anſwered, that the profeſſors, being few in number, and having duties to fulfil every day

and

and every moment, it would be burthening them too much, to require that they ſhould form the active part of an academy, to which they may eaſily belong as members, without being neceſſarily obliged to direct its undertakings. It might alſo be obſerved, that the object of colleges and of academies, is very different; that the profeſſors ought to poſſeſs the complete knowledge of the ſcience which they teach, but that they have no charge of its improvement; that the members of the academies, on the contrary, are entruſted with that charge, and their employment ſhould conſiſt in ſearching after new facts; that, ſetting off from the ſame point, they direct their views to very different objects; for the former, charged with the inſtruction of youth, and tracing the art to its origin, turn from the preſent to the paſt, while the latter regard conſtantly the future; that thus, the colleges and academies ought to complete the circle of human life, but not to be confounded together; for their object is ſeparate.

Induced by theſe motives, the commiſſioners conclude, that the Academy of Medicine ought to remain diſtinct from every college;

that there ſhould be only one principal Academy, as only one Academy of Sciences will be adopted by the Nation; and that both theſe ought to be placed in Paris.

CHAP. II.

Principles of the Regulations projected for the Meetings and Tranſactions of the Academy or Society of Medicine.

THE principles here propoſed, are conformable to thoſe of a plan of regulations, which the Society of Medicine preſented to the National Aſſembly, on the 19th of December 1790, agreeably to a decree of the 20th Auguſt preceding.

The functions attributed to the Academy of Medicine, ſhall be the following, viz. [1]

I. It ſhall hold a correſpondence on every thing which regards the improvement of the healing

[1] It was not thought neceſſary to detail, on this occaſion, the police or internal management of an Academy of Medicine. Theſe are deſcribed in the plan referred to.

healing art, both with the councils of health, with the profeſſors of the practical ſchools of the departments, and with the moſt celebrated domeſtic and foreign phyſicians and ſurgeons, eſpecially with thoſe who are entruſted with the charge of treating the diſeaſes of the people in hoſpitals and in the country. It ſhall publiſh the hiſtory of epidemic diſeaſes. It ſhall return anſwers, without delay, to all the queſtions on public ſalubrity, which ſhall be propoſed to it by the adminiſtrative bodies. It ſhall ſend, when required, commiſſioners to thoſe places where their preſence may be judged uſeful. It ſhall examine new remedies, and mineral waters, when conſulted on theſe objects by the Adminiſtration. It ſhall publiſh yearly its views on the ſubjects, which ſhall appear to it to merit, in a particular manner, the attention of medical practitioners; and alſo the obſervations and eſſays which it ſhall have collected and approved.

II. The Academy or Society of Medicine, ſhall conſiſt of two great claſſes of members; one of which ſhall include the reſident, and the other the non-reſident members. Into the former claſs, ſhall be admitted phyſicians, ſurgeons,

ſurgeons, and thoſe apothecaries and philoſophers, who are intimately acquainted with the Veterinary art, and with the ſciences connected with Medicine. Theſe different members ſhall all enjoy the ſame privileges; and their names ſhall be inſerted on the liſt according to the order of their admiſſion into the Academy. The claſs of non-reſident members ſhall be divided into two orders, comprehending the domeſtic and foreign members.

III. Among the number of phyſicians, ſurgeons, apothecaries, or philoſophers, who ſhall have ſent eſſays or obſervations, the Academy ſhall diſtinguiſh thoſe who may have ſhewn the greateſt zeal and care to afford it information on every thing which relates to its undertakings; and ſhall elect them correſpondent members.

IV. The office-bearers of the Academy ſhall conſiſt of a director, and vice director, who ſhall be renewed annually, and a ſecretary and treaſurer. The director ſhall preſide in the academy; he ſhall regulate the deliberations, and the order in which the paper ſhall be read; and he ſhall nominate the committees,

tees, except on important occaſions, when they ſhall be elected by ballot.

V. In order to make its inveſtigations more particularly known, and to announce and diſtribute its prizes, the Academy of Medicine ſhall hold annually two public meetings, at which the ſecretary ſhall read the eulogiums of thoſe members who ſhall have died during the year. Other members ſhall read eſſays, which ſhall be adapted as much as poſſible to the capacities of the majority of the audience.

VI. The ſubjects which the Academy of Medicine, ſhall conſider as ſuſceptible of diſcuſſion or inveſtigation, ſhall be remitted to committees, who ſhall give in a report, in writing, of the different ſubjects which have been entruſted to their examination. One of theſe committees ſhall be appropriated to objects of public ſalubrity; a ſecond ſhall arrange every thing relative to the prizes; and a third ſhall take cognizance of the works which the Academy ſhall publiſh.

VII. A majority of votes of the reſident members ſhall be neceſſary in the election of the office-bearers, and of the members of the Academy.

Academy. In other elections, the majority of thoſe preſent ſhall be ſufficient.

VIII. Among the inveſtigations, eſſays, and experiments, which the Academy of Medicine ſhall judge conducive to improve the moſt eſſential, and the leaſt underſtood parts of the healing art, it ſhall point out thoſe which ſhall appear of the greateſt importance, and for which it ſhall require particular aſſiſtance; and it ſhall ſubmit to the National Aſſembly the plan of that aſſiſtance: If the Aſſembly order it, that plan ſhall be immediately put in execution; and an accurate account of it ſhall be rendered to the Aſſembly, in writing, in the following year. In the mean time, the Society ſhall preſent another plan for new reſearches, forming an uninterrupted courſe of obſervations and experiments, which ſhall be made public, in order that the committees or councils of health, and all the practitioners of medicine in general, may give their advice on the ſubject, and may unite their endeavours to thoſe of the members of the Academy, to accelerate the improvement of the healing art.

IX.

IX. The reſearches and obſervations which ſhall be undertaken for the improvement of the art, ſhall be made particularly in the hoſpitals accommodated for teaching Clinical Medicine, where there will be expert profeſſors, attentive obſervers, and numerous pupils, ready to execute every thing which ſhall be preſcribed to them. If the experiments are ſucceſsful, the profeſſors of the Practical or Clinical ſchools of the departments, and the phyſicians of the great hoſpitals, ſhall be informed of them. Theſe experiments, repeated by them with the greateſt precautions, and all at the ſame time, will confirm or overturn the original expectations. Every thing which the profeſſors of the Clinical ſchools, and the phyſicians of the hoſpitals, ſhall have firſt obſerved, ſhall be in like manner communicated to the Academy; and in this way, a correſpondence on practical ſubjects will be eſtabliſhed, from which the greateſt advantages for the advancement of medicine will reſult.

X. The Academy ſhall publiſh volumes or collections of its tranſactions, which ſhall be divided into two parts; the firſt of which ſhall contain the hiſtory of its tranſactions; and the

ſecond,

ſecond, the eſſays which it ſhall collect and approve.

The principal ſubjects of theſe volumes ſhall be, 1. The accounts of public meetings. 2. The announcement and diſtribution of prizes. 3. The hiſtorical eulogiums of deceaſed members. 4. The meteorological obſervations. 5. Medical topography. 6. The deſcription of endemic and epidemic diſeaſes, and of the epidemics of cattle. 7. Obſervations on the practice of phyſic, and on chirurgical diſeaſes. 8. Anatomical remarks. 9. Inveſtigations on the ſeat of diſeaſes. 10. Medical Chemiſtry. 11. The examination of new medicines. 12. The analyſis and properties of mineral and medicinal waters. 13. Botany, and the natural hiſtory of the ſubſtances which ſerve for aliment or medicine. 14. Obſervations on general philoſophy applicable to medicine.

XI. Among the eſſays and obſervations which the Academy ſhall collect, ſome may be publiſhed in whole, others in an abridged ſtate; and it will be neceſſary to keep ſome to be united to inveſtigations on the ſame ſubject. The meteorological obſervations, topographical eſſays, deſcriptions of epidemic diſeaſes,

eaſes, and thoſe of the prevailing diſeaſes of the year, ſhall be kept for that purpoſe. The obſervations on the practice of phyſic, contraſted with analagous facts, will, by this means, acquire a new value. The ſecretary of the Academy of Medicine, ſhall therefore preſerve carefully theſe different papers, the titles of which ſhall be entered on the regiſter, whenever they are received. After a certain time, and at ſtated terms, the committes named by the Academy, ſhall examine the general repoſitory of correſpondence; they ſhall divide the obſervations and eſſays into ſeveral parts, each of which ſhall be remitted to one of the members, who ſhall be charged to make out a connected work on the principal ſubject of theſe eſſays and obſervations, while, at the ſame time, he ſhall do juſtice to each of the authors; to exhibit the preſent ſtate of the ſcience; and to point out what ſtill remains to be done on the part, with the examination of which he was entruſted.

XII. The Academy of Medicine ſhall procure all the works, both national and foreign, which ſhall be publiſhed on medicine; and a particular and minute account ſhall be given

at

at its meetings, of thoſe which contain the obſervations and eſſays moſt conducive to accelerate the progreſs of the healing art.

Principles of the Plan contained in this Work.

I. MEDICINE and ſurgery ſhall, in future, be taught in the ſame ſchools. The medical and chirurgical ſtudents ſhall be ſubjected to the ſame trials. The practitioners of medicine and ſurgery, ſhall enjoy the ſame privileges; and ſhall all be denominated phyſicians.

II. Medicine and ſurgery ſhall be taught by public profeſſors, and by private teachers, and in the various hoſpitals of the kingdom, which ſhall be properly regulated for that purpoſe.

III. Complete courſes of lectures on the healing art, ſhall be delivered in colleges, where all the departments of the profeſſion ſhall be conſigned to ten profeſſors.

IV. Six of theſe profeſſors ſhall teach the preliminary, and direct theoretical ſciences; and four ſhall undertake to explain the practice

tice of medicine and ſurgery, in an hoſpital ſubſervient to that purpoſe. None of theſe public profeſſors ſhall be allowed to teach privately.

V. The profeſſors ſhall, in future, lecture in the French language, in order that the means of inſtruction may be more acceſſible than they have hitherto been.

VI. The ſix profeſſors of the theoretical ſciences, ſhall receive from the State equal ſalaries. But as the four profeſſors of the practice of phyſic and ſurgery, muſt neceſſarily ſpend a great part of each day in the clinical ſchool, they ſhall have double the ſum as ſalaries, which the other profeſſors enjoy.

VII. The pupils ſhall pay fees to the profeſſors whoſe lectures they attend. Proper meaſures ſhall be adopted, that the total of that expenditure, during the whole time of their ſtudies, ſhall not exceed the ſum of 500 livres for each ſtudent.

VIII. The pupils who ſhall not be in a condition to pay, ſhall be preſented, and have their expences defrayed, by the departments; and ſhall be permitted to attend the claſſes gratis.

IX. Each college ſhall be compoſed of ten profeſſors and a ſecretary.

X. The profeſſors ſhall elect from among themſelves, a preſident, who ſhall be renewed every ſix months [1]; and the rank which each profeſſor ſhall hold next to him, ſhall be aſcertained by his ſeniority in the profeſſorſhip.

XI. Every thing which relates to the management of the claſſes, ſhall be regulated by the profeſſors: they ſhall, however, exerciſe no power out of the college, either over the other medical practitioners, or over the ſtudents, who ought to be governed by the public police.

XII. There ſhall be formed in the vicinity of the directories of the departments, within the juriſdiction of which the college ſhall be eſtabliſhed, a committee or council, charged with the inſpection of every thing which relates to public teaching; into which, there ſhall always be admitted a ſufficient number of phyſicians, elected from among thoſe of the juriſdiction of the college. [2] That committee ſhall

[1] Or every year.

[2] Theſe are the phyſicians who have been formerly deſcribed under the title of cenſors of the colleges, which they will, in fact, have the charge of inſpecting, along

ſhall take care, that the laws and regulations ſhall be obſerved. It ſhall ſee, that the profeſſors are aſſiduous; it ſhall attend, when neceſſary, to the complaints of the ſtudents; and ſhall, at the concluſion of its duty, render a public account of the commiſſion with which it ſhall have been charged.

XIII. The phyſicians who ſhall be members of the committee of public inſtruction, ſhall be choſen by an electoral body, formed of the electors of the deparments, in the juriſdiction of which the medical college ſhall be eſtabliſhed, and of a certain number of phyſicians, [3] elected from among thoſe of the juriſdiction of the college, who ſhall be convened every ſecond year for that purpoſe.

along with the other members of that committee. The committee of the National Aſſembly, appointed to ſuperintend the concerns of the poor, has, in like manner, propoſed, to place in the vicinity of the departments, an agency, or committee, charged to judge of the aſſiſtance which ſhould be afforded to the poor of towns and of the country.

[3] It is impoſſible to be more particular, till the principles by which inſtruction in general ſhall be regulated, be aſcertained by the National Aſſembly.

XIV. There ſhall be five medical colleges in the kingdom; of which, one ſhall be eſtabliſhed at Paris, one at Montpellier, one at Bourdeaux, a fourth at Nantes, or at Rennes, and the fifth at Straſbourg, or at Nancy, Dijon, or Beſançon.

XV. The eighty-three departments ſhall be divided in ſuch a manner, as to form circles for each of the colleges, nearly equal in extent, which will ſerve to aſcertain the mode of convening the phyſicians in certain caſes of election; and ſhall not otherwiſe be binding, either with reſpect to the ſtudies, or the conferring of degrees.

XVI. All the profeſſors ſhall be choſen by a competition.

XVII. There ſhall be five examinators or judges of the competition; two of whom ſhall always be choſen from among the profeſſors of the college, and three from among the phyſicians of its juriſdiction.

XVIII. The five judges ſhall be choſen by the electoral body mentioned, No. XIII.

XIX. The preſident of the department, three members of the directory, and, at leaſt, three members of the committee of public inſtruction,

ſtruction, [1] ſhall attend the meetings and buſineſs of the competitions, and ſhall ſign the minutes of them.

XX. The queſtions and anſwers ſhall, like the lectures and demonſtrations, be in the French language; and ſhall always be propoſed, and received, in public.

XXI. The examination in the competition, ſhall conſiſt of written queſtions, to which the competitors ſhall anſwer *viva voce*.

XXII. Theſe queſtions ſhall be contrived in ſuch a manner, as to comprehend the whole extent of the ſcience which ſhall form the ſubject of examination. Each competitor ſhall anſwer twelve queſtions.

XXIII. When all the competitors ſhall have anſwered the queſtions, the choice ſhall be decided by three ballots. The firſt ſhall be that of the three judges; the ſecond, that of the ſtudents who have paſſed with approbation the two firſt examinations; and the third, that of the competitors themſelves. The majority of ſuffrages of the ſtudents ſhall be reckoned one vote; that of the competitors ſhall have

[1] Theſe are denominated, in page 228, &c. cenſors of the college.

the ſame value; and theſe two votes ſhall be balanced with thoſe of the five judges.

XXIV. The competitor, in whoſe favour there ſhall be the greateſt number of votes, ſhall be proclaimed profeſſor; and his name ſhall be preſented to the King, from whom he ſhall receive a commiſſion.

XXV. Every profeſſor may be replaced, after having exerciſed his functions for twelve years.

XXVI. Conſequently, when that period has elapſed, five judges ſhall be choſen by the electoral body, (XIII.); and the ſtudents, who ſhall have paſſed with approbation the two firſt examinations, ſhall be aſſembled.

XXVII. The five judges and the ſtudents, ſhall vote by ſeparate ballots, to determine if there ought to be a new competition. In balancing the votes, the majority of thoſe of the ſtudents ſhall be reckoned one; and the profeſſor ſhall continue to perform the functions of his chair, if two thirds of the votes do not concur for a new competition.

XXVIII. There ſhall be no regulations reſpecting the order or duration of ſtudy, for theſe cannot be fixed by any rule which is applicable

plicable to every ſtudent; and therefore, can only be ſuggeſted by way of advice.

XXIX. The ſtudents ſhall not therefore be obliged, either to attend the different profeſſors, or to produce certificates of ſtudy. In whatever place, or in whatever ſchools they may have ſtudied, they ſhall be equally admitted to examination; for on ſuch occaſions, nothing ought to be conſidered but knowledge.

XXX. The examinations of ſtudents ſhall always be carried on in public, and after having been announced by advertiſements written in the French language.

XXXI. The examinations ſhall always be gratis; and the profeſſors ſhall not be allowed, under any pretext whatever, any fees for their trouble on ſuch occaſions.

XXXII. In every medical college, at the concluſion of the courſes for the year, three examinations in ſucceſſion, ſhall be appointed. The two firſt ſhall reſpect the theory of medicine, and the third the practice of phyſic.

XXXIII. The examination on the practice of phyſic, ſhall be held in the hoſpital in which the clinical ſchool is eſtabliſhed; and it alone

ſhall continue, at leaſt, as long as the two firſt examinations put together.

XXXIV. Theſe examinations ſhall be carried on in the French language, and ſhall be confined to the eſſential and fundamental principles of the healing art. The queſtions ſhall be diſpoſed in ſuch a manner, as to comprehend the principal departments of the ſcience on which the ſtudents ought to be examined. The anſwers to theſe queſtions, ſhall be made chiefly in writing.

XXXV. The profeſſors ſhall proceed without delay, in preſence of one of the members of the directory of the department, and of three members of the committee of public inſtruction, to the examination of the written anſwers returned by the ſtudents. The judgement of the profeſſors ſhall be alſo in writing, and ſhall contain the reaſons for the deciſion: it ſhall be read in public; and after that judgment, the ſtudents ſhall be paſſed or remitted to a ſubſequent examination.

XXXVI. The ſtudents may require from the preſident of the college, an atteſted copy of their anſwers, and of the judgment of the examinators.

XXXVII.

XXXVII. The writing which ſhall conſtitute the degree of Doctor of Medicine, ſhall be couched in the moſt ſimple ſtyle; and ſhall be in the ſame form for every candidate. [1]

XXXVIII. Each candidate ſhall take the civic oath, before he can be proclaimed phyſician.

XXXIX. At the end of the examinations, the profeſſors ſhall note down on the regiſters of the college, the names of thoſe ſtudents who ſhall have anſwered beſt; and the various employments of the laboratories, of the library, of the botanic garden, and of the clinical wards, ſhall be diſtributed among them, in proportion to their induſtry, and to the branches of knowledge, to which they may have principally attached themſelves.

XL. As one of the principal advantages of a reform in the medical department ought to be,

[1] The regulations of the college of Munſter, which are of a very late date, eſtabliſh a contrary practice. The phyſicians there, are diſtributed into ſeveral orders; to each of which, a peculiar form of degree is appropriated. The commiſſioners of the Society of Medicine have thought, that it is of great conſequence to avoid ſuch claſſifications, which become the ſources of rivalſhips and animoſities, for which the public too often ſuffers.

be, to diſtribute proper aſſiſtance to the inhabitants of the country, each department ſhall be authoriſed to eſtabliſh, in one of the hoſpitals the beſt organized within its juriſdiction, a practical ſchool, where the phyſicians appropriated to that purpoſe, ſhall be particularly educated.

XLI. The phyſician, ſurgeon, and apothecary of that hoſpital, ſhall be able to teach, in that practical ſchool, the true fundamental principles of the healing art.

XLII. The beſt informed medical practitioners ſhall be appointed to form elementary treatiſes on the different branches of the ſcience of Medicine, which ſhall be chiefly deſigned for rendering the mode of teaching them more uniform and more eaſy.

XLIII. There ſhall be eſtabliſhed in all the hoſpitals organized for publicly teaching medicine, burſaries, or gratuitous places; into which, both the medical ſtudents [1] educated at the expence of the departments, and thoſe whoſe parents can maintain them there, by paying a moderate board, ſhall be admitted. Theſe

[1] It muſt be here remembered, that Medicine and Surgery are in future inſeparable.

Theſe pupils ſhall be inſtructed, lodged, and boarded, in thoſe hoſpitals, and they ſhall there perform all the uſeful duties about the perſons of the patients.

XLIV. When the ſtudies of theſe pupils are ſufficiently well advanced, they ſhall repair to one of the medical colleges, either to complete their education by means of burſaries or gratuitous places, inſtituted in the clinical ſchools of the college, if they ſhall have merited theſe, or to undergo the examinations preſcribed by law, and to be there paſſed as phyſicians.

XLV. The indigent ſick, both in the cities and in the country, ſhall receive, in their own houſes, the aſſiſtance of the Adminiſtration as much as poſſible; and the phyſicians appointed to attend them, ſhall be placed in the cantons for the country, in the quarters which ſhall be formed by circles for the towns, and in the chief cities of the diſtrict and the department.

XLVI. The phyſicians of the cantons and of the quarters, ſhall practiſe every branch of medicine and of ſurgery. They ſhall take charge of the treatment of epidemic and popu-

lar

lar diſeaſes. They ſhall practiſe midwifery, and ſhall inoculate. They ſhall ſuperintend the management of foundling children at nurſe. They ſhall have remitted to them by the adminiſtrative bodies, a liſt of the indigent ſick, whom they ought to viſit gratis. They ſhall inregiſter their obſervations, and ſhall hold a correſpondence on the different ſubjects of their attention, according to the nature of the caſe, with the phyſicians of the diſtrict, or with the councils of health of the departments, or with the academy of medicine.

XLVII. In each city of every diſtrict, a phyſician ſhall be always in readineſs to repair to any part where his preſence may be judged uſeful, whether his advice be aſked by the phyſicians of the cantons, or he be required by the directory, for ſome object of public ſalubrity.

XLVIII. The phyſicians of the city where the department ſhall be ſituated, ſhall form a council of health, which ſhall meet whenever it ſhall be convened by the directory, to determine on the aſſiſtance neceſſary in caſes of epidemics, or on any other ſubject relating to the health of the people. The municipalities

of

of great cities, may alſo eſtabliſh ſimilar councils or committees, for the objects of public ſalubrity.

XLIX. In difficult caſes, the cantons and diſtricts ſhall demand aſſiſtance from the councils of health of the department, the members of which ſhall repair, when required, to the places where their preſence may be deemed uſeful; and all of theſe may apply to the academy of medicine.

L. The medicines appropriated for the uſe of the indigent ſick, ſhall be kept and ſent in boxes, the appearance of which ſhall be well known; and the Procureur-Syndic ſhall furniſh theſe, in proportion as they are required.

LI. In every clinical or practical ſchool, both of the colleges and of the departments, one of the profeſſors, well acquainted with the art of midwifery, ſhall be particularly appointed to teach the practice of that art to midwives, who ſhall not be allowed to practiſe, unleſs they have ſubmitted to a public examination before the profeſſors of theſe ſchools. When paſſed, they may exerciſe their profeſſion throughout the whole extent of the kingdom.

LII.

LII. A catalogue of all the regular and reſident midwives in the different cantons and diſtricts, [1] ſhall be made out. They ſhall be provided with a liſt of the poor women whom they ſhall attend gratis; and they ſhall be paid, from the public fund, a certain ſum for each delivery.

LIII. The hoſpitals of the kingdom in which there ſhall be no eſtabliſhed clinical ſchool, ſhall, nevertheleſs, be arranged in ſuch a manner, as to afford to the ſtudents, every poſſible

[1] The Society of Medicine, having deſired to know the ſtate of midwives in France, requeſted, in the year 1786, the miniſter to engage Meſſieurs the Intendants of the provinces, to furniſh it with all the neceſſary information on that important ſubject. That this undertaking might be executed in an uniform manner, tables, conſiſting of four columns, were printed. Theſe were required to contain, in the firſt column, the place of reſidence of the midwives; in the ſecond, their names and ages; in the third, the ſchools where they were taught; and in the fourth, obſervations on the manner in which they performed their functions.

From the examination of all theſe tables which have been tranſmitted to the Society, with the anſwers of the Intendants,

ble opportunity of acquiring inſtruction by obſervation. Conſequently, the regulation of the wards, the viſits of the phyſicians, and the diſtribution of the pupils, ſhall be diſpoſed according to theſe views. In this manner, every thing which ſhall be done for the relief of mankind, will be made to advance the progreſs of the healing art.

LIV. Beſides the ordinary hoſpitals, particular ones ſhall be appropriated for the reception of perſons affected with contagious diſeaſes; for that of pregnant and lying-in women; for the practice of inoculation, and for the treatment of lunatics. There ſhall alſo be hoſpitals in the vicinity of the moſt powerful mineral waters.

LV. There ſhall alſo be particular hoſpitals in the ſea-port towns and garriſoned cities, for the reception of ſailors and ſoldiers; and in theſe, practical ſchools ſhall be eſtabliſhed.

LVI.

Intendants, it appears, 1*ſt*, That ſeveral extenſive cantons are not ſupplied with midwives; and, 2*dly*, that the greateſt number of thoſe who practiſe midwifery, have not ſtudied the art regularly; that they have only learned it from the midwives of the neighbourhood, and that they practiſe it without judgment.

LVI. The phyſicians, ſurgeons, and apothecaries of hoſpitals, ſhall be admitted into the council of adminiſtration of theſe inſtitutions, and ſhall have the privilege of voting there.

LVII. In future, no perſon ſhall be permitted to aſſume the title, nor to perform the functions of phyſician, unleſs he ſhall have been paſſed by one of the five medical colleges.

LVIII. All thoſe who are paſſed by the five colleges, ſhall have the privilege of practiſing and teaching medicine and ſurgery throughout the whole kingdom.

LIX. In order to be permitted to practiſe in any municipality, it will be ſufficient to preſent the degree of Doctor, to be examined by the municipal body; who, after having aſcertained its validity, ſhall inſert the name of him to whom it belongs, in the catalogue of the phyſicians of the place.

LX. The functions relating to public ſalubrity, ſhall be conferred on phyſicians, in the two following ways:

1ſt, Thoſe who ought to be appointed to examine medical ſubſtances, to attend the indigent ſick, and to treat popular and epidemic diſeaſes,

eaſes; thoſe who ought to practiſe in hoſpitals where no clinical ſchool is eſtabliſhed, and thoſe who ſhall make reports on judicial caſes, ſhall be nominated by ballot, by the members of the bodies to whom the right of regulating theſe different objects may belong.

2*dly*, The phyſicians and ſurgeons of the hoſpitals where ſchools for the practice of medicine ſhall have been eſtabliſhed by the departments, ſhall be choſen by an electoral body, formed of a certain number of electors of the department, and of a certain number of phyſicians elected from among thoſe within its juriſdiction, who ſhall be aſſembled for that purpoſe.

LXI. There ſhall, in future, be no intermediate office in hoſpitals, between that of the phyſicians and ſurgeons, and that of the pupils; and as the mode of appointing them ought to be the ſame for all, the place of *Gagnant Maitriſe* ſhall be aboliſhed.

LXII. The phyſicians and ſurgeons of hoſpitals, ſhall, after having had charge of them for 12 years, ſubmit to a new election; but they may be continued in office. No one can

be elected to these places, unless he obtain the majority of votes.

LXIII. The art of pharmacy shall be taught in the five medical colleges, and in the practical schools of the departments; and the examination of the pupils who shall have studied it, [1] shall take place, either in one of the five colleges, and shall be made by the professors, to whom a number of apothecaries, to be afterwards determined, shall be conjoined for that purpose; or in the practical schools of the departments, where apothecaries shall be, in the same manner, conjoined to the professors of these schools. These apothecaries shall be chosen by ballot, by the directories of the departments, in the jurisdiction of which the examination shall be held.

LXIV. The method to be observed in these examinations, both with respect to the questions and the task which the pupils must perform, shall be the same as that prescribed for the

[1] It is particularly by attending apothecaries shops, that these pupils can be instructed. But as knowledge ought to be the sole title which should be carried to an examination, it was not thought expedient to prescribe to them, either the mode or time of apprenticeship or study.

the ſtudents of medicine, agreeably to regulations on that ſubject, which ſhall be made out on the ſame principles.

LXV. The apothecaries who ſhall be legally paſſed, ſhall have the privilege of exerciſing their profeſſion throughout the whole kingdom.

LXVI. The phyſicians, ſurgeons, and apothecaries, ſhall no longer form corporations, as every individual ought to practiſe his profeſſion under the ſole protection of the laws.

LXVII. The ſale and preparation of medicines, both ſimple and compound, and the ſale of mineral waters, ſhall be entruſted excluſively, with the precautions ſuggeſted in the particular regulations on theſe ſubjects, to the legal apothecaries. But it is underſtood, that this ſhall not affect the rights of the proprietors of mineral ſprings, nor the ſale of mixed ſubſtances, which are not purely pharmaceutic; and for which, particular regulations ſhall be enacted.

LXVIII. The ſimple drugs, nevertheleſs, which form articles of commerce, ſhall continue to be ſold at fairs, and in wholeſale by the merchants, on condition that they ſhall

ſubmit to have their drugs properly examined, that their ſtate and quality may be aſcertained.

LXIX. The drugs expoſed to ſale at fairs, ſhall be examined before the fairs begin, by commiſſioners appointed for that purpoſe. Commiſſioners ſhall alſo be nominated, to inſpect the warehouſes of drug merchants, and the ſhops of apothecaries, both in the towns and in the country.

LXX. The adminiſtrative bodies ſhall adopt meaſures for having the moſt efficacious medical ſubſtances prepared publicly in great laboratories, in thoſe cities where the medical colleges are eſtabliſhed. Theſe, as well as the beſt choſen ſimple drugs, ſhall be kept in thoſe laboratories, to ſerve chiefly for the uſe of hoſpitals, and of the indigent ſick who inhabit the towns and the country.

LXXI. The poiſonous ſubſtances employed in manufactures, ſhall not, for the future, be ſold in the ſame ſhops with alimentary ſubſtances, or thoſe ſubſervient to the different uſes of the kitchen. Proper regulations, ſtrictly enforced, ſhall be adopted on that ſubject, as on every thing which relates to ſubſtances injurious

jurious to health, and to the neceſſary precautions reſpecting eatables.

LXXII. The ſale of ſecret remedies, ſhall, in future, be prohibited; conſequently, every privilege contrary to this regulation, ſhall be ſuppreſſed and aboliſhed.

LXXIII. There ſhall only be, within the whole kingdom, a ſingle medical body entruſted with the charge of examining ſecret remedies.

LXXIV. When a new remedy ſhall be offered to the public, notice of it ſhall be ſent to the medical body whom the National Aſſembly ſhall particularly appoint to the charge of examining ſuch medicines. That body ſhall elect commiſſioners to whom the compoſition of the remedy ſhall be communicated, and who ſhall be deſired to return a report on its efficacy. But the proprietor of the new remedy ſhall be preſented with a liſt of the members of that company, and may reject one third from the examination of his medicine.

LXXV. The commiſſioners ſhall, in the firſt place, determine whether the remedy in queſtion, ought to be admitted to the trials neceſſary to aſcertain the properties attributed

to it. If the medicine be admitted to trial, a number of new commiſſioners, equal to that of the firſt nominated by ballot by the directory of the department, within the juriſdiction of which, the body charged to undertake the examination ſhall be placed, ſhall be conjoined with them, in order to make the experiments, and ſign the report on the ſubject. The firſt commiſſioners ſhall alone be acquainted with the compoſition of the medicine; and, to avoid all fraud, the remedy ſubjected to trial, ſhall be prepared by them.

LXXVI. If both the former and latter commiſſioners decide, that the remedy in queſtion is new, and is ſuperior to the medicines of the ſame kind already known, and hitherto employed, it ſhall be purchaſed at the expence of the State. Its compoſition ſhall be immediately afterwards publiſhed, and ſent to the directories of the departments.

LXXVII. Veterinary medicine ſhall be taught in ſchools annexed to the medical colleges, in order that the profeſſors and ſtudents of both, may have a correſpondence with each other, may be mutually improved, and may concur

concur in advancing the progreſs of the healing art.

LXXVIII. Beſides the veterinary ſchools annexed to the medical colleges, practical veterinary ſchools ſhall be eſtabliſhed in the counties which abound moſt in cattle, where the pupils, under the ſuperintendence of men well informed in that branch of the healing art, may learn to practiſe on animals entruſted to their care.

LXXIX. With a view to eſtabliſh uſeful connections between all perſons who cultivate the healing art, both in France and in foreign countries, and eſpecially between the profeſſional men who are charged with the functions regarding the people; and in order to derive advantage from their labours, by collecting the obſervations which each individual ſhall have made, there ſhall be inſtituted in the capital, an academical body, which ſhall form the centre of that correſpondence; to whom, in caſes of difficulty, the requiſitions relative to public ſalubrity ſhall be addreſſed. This academical body, for the purpoſe of contributing in an effectual manner towards the advancement of

the healing art, ſhall admit, as members, perſons who are well acquainted with any of the different departments of that art.

LXXX. The offices of ſworn phyſician and ſurgeon, ſhall, in future, be ſuppreſſed.

LXXXI. At the renewal of each court of juſtice, the members of the court ſhall nominate by ballot, three phyſicians or coroners, who ſhall be appointed to make reports in judicial caſes. The firſt of theſe phyſicians who ſhall be nominated, ſhall have the principal charge.

LXXXII. In every examination or viſit, the coroner ſhall be accompanied by two aſſiſtants or reſpectable witneſſes. On important occaſions, the two other coroners ſhall be conjoined to theſe aſſiſtants. The report ſhall always be drawn up on the ſpot, ſigned both by the coroners and witneſſes, and ſhall be depoſited, within twenty-four hours, with the recorder of the court by whom the coroners ſhall have been appointed.

LXXXIII. A general form ſhall be eſtabliſhed for theſe reports, in order that the ſubjects may not be confounded together in them.

LXXXIV.

LXXXIV. Whenever the judge ſhall have any doubts on theſe reports, and at all times in important caſes, a copy of them ſhall be ſent to the profeſſors of anatomy, and of clinical medicine and ſurgery, within the juriſdiction of which the affair in queſtion ſhall have happened, in order that theſe reports may be verified by them. Their deciſion ſhall be written at the end of the reports, and ſhall be immediately tranſmitted to the judge.

LXXXV. A courſe of lectures on medical juriſprudence, ſhall be delivered every year in each medical college.

LXXXVI. In future, the cauſes of death, ſuch as they ſhall be reported by the relations of the deceaſed, ſhall be inſerted in the bills of mortality. The phyſicians of the quarters in the cities, and thoſe of the cantons in the country, ſhall take care that as few errors as poſſible be committed in theſe regiſters.

SECT. II.

Medical Obſervations.

I.

Hiſtory of a Caſe, in which there took place a remarkable Slowneſs of the Pulſe. Communicated to Dr Duncan, by Dr Thomas Spens, *Phyſician in Edinburgh.*

ON the 16th of May 1792, about 9 o'clock in the evening, I was ſent for to ſee T. R., a man in the 54th year of his age, a common labouring mechanic. After having heard from him, ſome account of his complaints, I was much ſurpriſed, upon examining the ſtate of his pulſe, to find, that it beat only

only twenty-four ſtrokes in a minute. Theſe ſtrokes, however, as far as I could judge, were at perfectly equal intervals, and of the natural ſtrength of the pulſe of a man in good health.

He informed me, that, about 3 o'clock in the afternoon, he had been ſuddenly taken ill while ſtanding on the ſtreet; that he had fallen to the ground ſenſeleſs; and that, according to the accounts given him, by thoſe who were preſent, he had continued in that ſtate for about five minutes. His face was ſlightly cut, in two different places, by the fall; but his head did not ſeem to be in any way materially injured. From the time of this firſt attack, till I ſaw him, he had been affected with three other fits, nearly of a ſimilar nature. Theſe, however, were attended with ſome convulſive motions of his limbs, and with ſcreaming during the fit. When I ſaw him, he was ſomewhat drowſy, but perfectly recollected and diſtinct, and his voice was as ſtrong as when he enjoyed a ſtate of perfect health; nor had he, at that time, any other complaint.

He

He imputed theſe attacks, to his having been intoxicated the night before, with ſtrong ale and whiſky; and to his having drank in the forenoon, when very thirſty, a large quantity of cold water. In the morning, he had two natural ſtools; but, beſides being uncommonly thirſty during the former part of the day, he was frequently affected with ſickneſs at ſtomach, and had vomited up his dinner ſoon after it was taken.

Upon viſiting him, in the morning of the 17th, I found that he had been attacked with ſeveral fits during the night, which were of conſiderably longer duration, and more violent than the former ones: he was attacked with one of them, while drinking ſome infuſion of camomile to aſſiſt vomiting. Upon examining his pulſe, I found that it beat only twenty-three ſtrokes in the minute; nor was any change produced upon it, by his drinking a tea-cupful of wine, and a glaſsful of whiſky, which I directed for him; and, an hour after, I found it in preciſely the ſame ſtate as before. He was now directed to take ſome ſpirit of Hartſhorn; but, by miſtake, it was given him very little diluted, and produced much uneaſi-

neſs

neſs in his throat and mouth. From this cauſe, I found him in great diſtreſs at one o'clock; but it ſeemed to have produced no change on the ſtate of his pulſe, which at this time beat twenty-four ſtrokes in a minute, and was of the ſame ſtrength and regularity as before. Waſhing his mouth with vinegar and water, gave him almoſt immediate relief; and, at nine in the evening, I found that he had continued free from any return of fits or of faintneſs, ſince five in the morning. At this time I gave him thirty drops of the Spiritus Ammoniæ aromaticus, in about two ounces of water, which he found very agreeable. But he had hardly ſwallowed it, when he felt himſelf faint, and cried out that one of his fits was coming on: but, upon taking a tea-cupful of wine, which I directed for him, this uneaſineſs went off. His pulſe ſtill continued in the ſame ſtate as before. During the courſe of the day, he had frequently ſat up in bed, without feeling any uneaſy faintneſs, or threatening of fit.

When I viſited him in the morning of the 18th, I was informed that he had ſlept a good deal during the night, but had been frequent-

ly

ly faint. He had, however, ate an egg and ſome bread at breakfaſt. He had no headach, vertigo, or pain in any part of his body; but his pulſe beat only twenty-ſix ſtrokes in the minute. About mid-day, he got up and put on his clothes. He had a natural ſtool, and afterwards walked out to his work-ſhop. Upon his return, finding himſelf very well, and inclined to eat, he ſat down to dinner: but, upon taking ſome broth, he almoſt inſtantly felt faint, and had the ſame moſt diſtreſſing ſenſation as if one of his former fits were coming on. The ſame circumſtances took place twice afterwards, on his attempting to ſwallow ſomething ſolid. About eight in the evening, wiſhing again to try what would be the effect of ſwallowing, while I was preſent, he took a bit of newly toaſted bread. But he had no ſooner ſmelt it, than he felt ſome of the ſenſations of a beginning fit; and, as ſoon as he had taſted it, he almoſt inſtantly cried out, and fell back ſenſeleſs, with ſmart convulſions of all his muſcles. He apparently recovered, however, in a few ſeconds; but hardly any pulſe could be felt for a good many ſeconds.

On

On the morning of the 19th, I learnt that he had been very faint almoſt the whole night, and that he had been attacked with frequent fits, attended with violent convulſions; and every thing he attempted to take, ſeemed to have had the effect of inducing a fit. He now felt, at their commencement, a violent pain which darted through his head; but when free from the fit, he was perfectly recollected and diſtinct. When I numbered his pulſe, I found that it beat only ten ſtrokes in the minute, though it ſtill continued equally ſtrong and regular as before. I ordered him to take a glaſsful of whiſky, after which he remained for an hour pretty quiet and eaſy; and his pulſe roſe again to twenty-four ſtrokes in the minute. But at three in the afternoon, I found that his pulſe was only nine in the minute; and it was neither ſo ſtrong, nor ſo regular as before. He was now in great diſtreſs from conſtant ſickneſs and faintneſs; but perfectly ſenſible and recollected. At ſeven in the evening, I found his pulſe ſtill nine in the minute, but much weaker. He continued ſenſible, but was unable to ſpeak. He was not, however, affected with any more returns of the convulſions. During the whole of the following

following night, the people who attended him, obſerved that he never moved his right hand or leg; and he expired on the 20th, about nine in the morning.

During the continuance of this patient's diſeaſe, recourſe was had, on different occaſions, to trials of cordials, ſtimulants, and opiates. But none of them ſeemed to produce any obvious change on the ſtate of his complaints.

The day after his death, the body was opened by Mr Fyfe, and, upon the moſt careful examination, no morbid appearance, of any conſequence, could be diſcovered, either in the thorax or abdomen. Upon examining the head, about two ounces of a watery fluid were found in the ventricles of the brain; and a gelatinous appearance was obſervable in ſome parts of the pia mater. But nothing of this kind could be diſcovered about the thalami nervorum opticorum, as is often obſerved in caſes of hydrocephalus. A ſmall oſſification was diſcovered on the back part of the dura mater; but no other morbid appearance could be detected.

What may have been the ſtate of this patient's pulſe prior to the attack on the

the 16th, I know not. But I was informed by Mr Latta, ſurgeon in Edinburgh, who had attended him when he laboured under a fever about two years before, that, during the courſe of that diſeaſe, his pulſe was often above 120 in the minute; and that when the fever left him, it returned to the natural ſtandard of between 60 and 70 in the minute.

How far the different ſymptoms, which occurred in this caſe, particularly the ſlowneſs of the pulſe, were to be attributed to the effuſion of water in the ventricles of the brain, may perhaps be a queſtion. A ſlow pulſe, at leaſt at a particular period of the diſeaſe, is well known to be one of the moſt remarkable ſymptoms in hydrocephalus; and the water found in the ventricles of the brain, was the only cauſe detected on diſſection, to which this ſymptom could be attributed. If, however, we ſuppoſe water in the ventricles of the brain to have been here the ſole cauſe of diſeaſe, we muſt of neceſſity conclude, that hydrocephalus may not only exiſt, but even prove fatal, though the greater part of thoſe ſymptoms, which are commonly conſidered as marking that affection, be totally abſent.

II.

Account of the Effects derived from the uſe of the Terra ponderoſa muriata, in a caſe of Scrophula, by —— ——— of Aberdeen.

DECEMBER 2d, 1790. An unmarried woman, aged 23, about twenty months ago, began to be affected with a tumour on the poſterior part of the left carpus, attended with much pain. It gradually increaſed in ſize for about eleven months from its commencement, when it began to diſcharge ſome ſanious matter, the pain ſtill continuing violent, accompanied with ſickneſs and other febrile ſymptoms. Since that period, ſucceſſive tumours have made their appearance; and there are at preſent ſix ulcerated tumours ſurrounding the carpus; the one that firſt appeared being alone cicatriſed. They yield an ill-conditioned purulent diſcharge, reſembling the ſerum of milk mixed with many ſmall pieces of its coagulum. She found advantage from drinking

drinking the mineral waters of Pananich laſt Summer; but was ſtill in great diſtreſs when ſhe came to Aberdeen about four weeks ago; the pain being particularly ſevere in the night-time.

In this ſituation, ſhe applied to me for medical advice. I ordered her an opiate every night, an anodyne lotion for the ulcers, the uſe of the Peruvian bark, and a chalybeate, under the form of pills. Theſe medicines relieved her from the ſeverity of the pain, and procured her reſt during the night. It is proper to remark, that the menſes have been all along extremely irregular with this patient; that when they did appear, ſhe ſays the tumours increaſed in ſize, with much additional pain. But ſhe has not experienced that evacuation at all, ſince the month of February laſt. Three years ago ſhe was affected with much diſtortion of the ſpine, about the middle of the dorſal vertebræ, from which ſhe received complete relief in the Royal Infirmary at this place, by means of cauſtic iſſues.

Having procured, by means of Dr Duncan of Edinburgh, a genuine preparation of the Terra ponderoſa muriata, I reſolved to give a

fair trial to its medical virtues in the caſe of this patient. There is at preſent no conſiderable ſwelling of the integuments, excepting in the very ſeat of the tumours; but the bones of the carpus are evidently enlarged.

I began the uſe of the muriated Barytes, in the following form:

℞. Aq. Menth. Pip. unc. iv.
Syr. Simp. unc. i.
Solut. Terr. pond. muriat. gt. x.
M. cap. ſemunciam ter de die.

Dec. 6. She takes the mixture without any inconvenience. One of the ulcers has diſcharged copiouſly. The matter was at firſt bloody; but at preſent it is moderately good pus.

Repet. Miſt. cum addit. gt. v. ſolut. Terr. ponderoſ.

Dec. 11. She continues her mixture, and is ſenſible of an increaſed diſcharge of urine. Repet. cum gt. xx. ſolut. et cap. ſemunc. ter de die.

Dec. 17. Continues the mixture without any inconvenience. Several of the ſmall orifices diſcharge thin ſerous matter, with ſome pus. The diſeaſed wriſt meaſures eight inches

and

and an half in circumference; the ſound one meaſures ſix inches and a quarter. ℞. Solut. Terr. ponderoſ. muriat. gt. xxvi. Aq. Menth. pip. unc. vi. M. cap. ut antea.

1791, Jan. 4. She has continued to uſe her mixture regularly ſince laſt report. Her appetite is improved; the flow of urine is evidently increaſed; and ſhe has had, of late, a gentle diaphoreſis during the night. The menſes appeared on Wedneſday laſt. The ſwelling of the carpus is diminiſhed; the ulcers yield ſome matter occaſionally, but not very well conditioned. Repet. Miſt. cum Solut. Terr. ponderoſ. gt. xxxvi.

Jan. 16. The ulcers diſcharge a ſanious matter. Repet. Miſt. cum gt. xl.

Jan. 26. The ſores are much as at laſt report. She ſweats every night in bed; but does not feel in the leaſt weakened by it. Repet. Miſt. cum Solut. Terr. ponderoſ. gt. xlv. et foveat part. affect. cum Solut. quotid.

Feb. 4. Since the ſores began to be bathed with the ſolution, a ſmall portion of the integuments has been excoriated. The granulations underneath look pretty healthy. The ſores continue to diſcharge matter of a pretty

good conſiſtence. Since Saturday laſt, being about the period of menſtruation, ſhe has been affected occaſionally with headach and nauſea. Cont. Miſt. u. a. Belly coſtive. Cap. hor. 7ma veſp. Pil. Aloet. gr. x. Fov. part. Solut. 2da quaq. die.

Feb. 14. Since laſt report, the patient has not attended as uſual to receive her medicines. On inquiry, I found that ſhe had been confined at home, and for the moſt part to bed. She has been affected with all the train of ſymptoms attending irregular menſtruation; and the diſtortion of her ſpine has again begun to appear.

For theſe complaints ſhe was recommended to the Diſpenſary; and was ſoon after admitted as a patient into the Royal Infirmary here. After a long trial, her complaints remained without much amendment; and, early in the Summer, ſhe was directed to go to the country, where ſhe had been accuſtomed to reſide. I have lately had occaſion to inquire after her, and find, that within two months after leaving this place, her complicated diſorders proved fatal.

Although

Although the above caſe has had an unfavourable termination, yet, in my opinion, it throws light, in ſome meaſure, on the virtues of the Terra ponderoſa muriata. The hiſtory of the caſe evidently ſhews, that this medicine may be eaſily exhibited in moderate doſes, and theſe gradually increaſed to ſome conſiderable extent. That it operates as a ſtimulus to the urinary ſyſtem, appears from the reports of December 11. and January 4. It diſcovered its tonic effects, by increaſing the power of the muſcular fibres of the ſtomach; and of conſequence improving the appetite for food. It alſo ſtimulated the lymphatic ſyſtem, and produced gentle diaphoreſis during the night, by increaſing the action of the veſſels ſituated on the ſurface of the body. The veſſels of the uterus likewiſe had been rouſed to action; for about the beginning of January, the menſes appeared after an interval of eleven months. The diſcharge from the ulcers of the carpus, appeared to have become rather of a more bland conſiſtence, by the uſe of this medicine. Upon the whole, had the caſe of this patient been purely ſcrophula, affecting the glands or other ſoft parts, I ſhould have been very ſan-

guine in my hope, of producing a cure. But the enlargement of the bones of the carpus, and of the dorſal vertebræ, both perhaps depending on the ſame cauſe, joined to that numerous train of diſorders that follow ſuppreſſion of the menſes, rendered the circumſtances of this patient particularly unfavourable.

III.

III.

The Hiſtory of three Caſes of Phthiſis Pulmonalis, treated by Cuprum Vitriolatum, and Conium Maculatum; two of which terminated favourably. *By* James M. Adair, *M. D. formerly Phyſician at Northallerton, now at Edinburgh.*

MR G. D. of Northallerton, aged 19, born of ſcrophulous parents, of whoſe family ſeveral had died of Phthiſis; tall, of a ſallow complexion, and black hair, conſulted me in July 1790. He complained of ſhort, frequent cough, with ſcanty purulent expectoration; pain of the right ſide, about the ſeventh rib; laborious breathing; and copious night ſweats. His appetite was bad; and he was conſiderably emaciated, and very weak. His pulſe was quick and ſoft; and, towards evening, he was evidently affected with hectic fever, which remitted on the appearance of the ſweat, about three o'clock in the morning.

His

His tongue was preternaturally red; and the white of his eyes, and his teeth, had a bluiſh pearly caſt. The ſtate of his bowels was various; but he was, moſt frequently, coſtive. In ſhort, he had every ſymptom of genuine ſcrophulous phthiſis.

Theſe complaints had begun about two years before, and had gradually increaſed till the time he conſulted me. It was the opinion of his friends, and of Mr Dent, a very reſpectable ſurgeon, who attended him, that he could not live many weeks.

I began, by directing the uſe of a diet, conſiſting chiefly of milk, with plainly dreſſed freſh meat for dinner; and indulged him in a little mild ale, and a glaſs of wine. The following medicines were preſcribed:

℞. Vitriol. cærul. gr. x. Solut. ex
Aq. tepid. unc. v. adde
Spt. Vitriol. ten. gtt. x. Fiat Julepum Emeticum.

Sign.

Let the patient drink about a pint of warm water, and ſwallow, immediately afterwards, half an ounce of the emetic julap, which will almoſt inſtantly produce gentle vomiting.

This

This is to be taken, for the preſent, every other evening, at 8 o'clock; and, after ten days ſhall have elapſed, every morning. Should half an ounce not excite vomiting, an ounce may be taken.

℞. Pulv. folior. cicut. recens ſiccat. dr. ii.
Mucilag. Gum-Arab. ſpiſſ. q. s. ut fiat maſſa in pilulas xxx. dividenda.

Let one pill be taken every morning and evening; and let the doſe be gradually increaſed, by the addition of one pill every fourth day. If vertigo ſupervene, let the patient lie in bed till it ſubſides.

A bliſter was alſo applied to the pained part, and a laxative mixture directed to be occaſionally uſed.

He continued for ſome weeks to uſe theſe means, without much apparent benefit; except that his appetite and ſtrength were ſomewhat improved, and that the ſweating did not appear on the night when the vitriolic emetic was taken; an effect which, in other caſes alſo, I have pretty uniformly obſerved to take place. His cough, and difficulty of breathing, however, rather increaſed; and, for ſome days, we were in almoſt hourly expectation of his

his death. The medicines were occaſionally intermitted, as the ſymptoms ſeemed to require.

From about the beginning of September, however, he gradually grew better. His cough was eaſier, his expectoration more free, and of a healthier appearance. His hectic fever and night ſweats left him; his ſtrength and fleſh returned; and, before the middle of October, he had perfectly regained his former health, which he has ever ſince continued to enjoy, having grown conſiderably robuſt.

Mrs M., aged about 26, of a ſanguine temperament, very fair, with thin ſkin and blue eyes, the mother of ſeveral children, conſulted me in Spring 1791. She had been for ſome months affected with ſhort cough; with ſcanty expectoration, of a doubtful nature; pain of the left ſide; night ſweats; conſiderable loſs of appetite, fleſh and ſtrength; amenorrhœa, pulſe weak, but not very quick; bowels generally coſtive. She had taken ſeveral medicines without relief.

As ſhe ſeemed to labour under incipient phthiſis, a milk diet, and the ſame medicines which

which had been ordered for Mr D., were preſcribed for her. She was, by much intreaty, prevailed on, to allow a bliſter to be applied to the pained part.

Under the uſe of theſe remedies, her appetite and ſtrength daily improved; her cough, pain, and ſweats, left her, and ſhe recovered rapidly.

Some months after, ſhe had a ſlight relapſe, from imprudent expoſure to cold and moiſture, which was ſoon removed, by returning to the uſe of the medicines.

Elizabeth Sedgwick, a poor woman, aged 26, mother of three children, conſulted me about the ſame time with Mr D. She complained of ſevere cough, with copious purulent expectoration, occaſionally ſtreaked with blood; conſiderable pain of the left ſide of the thorax; hectic fever; and night ſweats, alternating with diarrhœa. Her pulſe was extremely quick and weak; her appetite gone; her ſtrength diminiſhed; and ſhe was much emaciated. The tongue was florid; the teeth and eyes pearly. She was ſuckling a poor weakly child

child of fifteen months old. She had been affected in this way for above ſix months.

I inſiſted ſtrenuouſly, that ſhe ſhould wean the child, which however, ſhe did not do; probably, becauſe ſhe could not afford to feed it otherwiſe. Judging that the poor diet ſhe had hitherto uſed, might have conſiderable ſhare in aggravating her complaints, I ordered her to drink a glaſs of port wine occaſionally; and to uſe animal broths, meat, milk, and other food of eaſy digeſtion, and conſiderable nutritive powers; with which ſhe was ſupplied, by the charity of families in the town.

At the ſame time, I directed the uſe of the hemlock pills, and of the ſolutio cupri vitriolati, in the uſual way, interpoſing the opiates or acids, as the diarrhœa or night ſweats ſeemed to require. She continued to uſe theſe remedies irregularly during ſeveral months, with conſiderable relief. She was evidently ſtronger, and leſs emaciated. Her cough and ſpitting were better, and the night ſweats were nearly removed. In ſhort, her health was amended when I left the place in September 1791; but I had not ſanguine hopes of her ultimate recovery, eſpecially as there was no probability

probability that ſhe would perſiſt in the uſe of the medicines, of which ſhe had been long heartily tired.

As I have, by accident, loſt the regiſter of caſes which contained thoſe of the three patients here mentioned, I am under the neceſſity of deſcribing their complaints from memory; conſequently, with leſs accuracy than I could wiſh. This, however, I can vouch for, that no circumſtance of importance has been added or omitted.

The moſt remarkable circumſtance attending the uſe of the blue vitriol, is the eaſe and expedition with which it operates, and the narrow limits within which its effects may be confined. I have frequently given from one to four tea-ſpoonfuls of it in the day, as a tonic laxative, in phthiſical caſes, while I was preſcribing it in larger doſes, as an emetic. I prefer adminiſtering it with this view, in the evening, from its tendency to check the night-ſweats; but have, not unfrequently, given it two or three times in twenty-four hours, when the dyſpnœa was particularly urgent.

I have, ſometimes, uſed the extractum, or ſuccus ſpiſſatus cicutæ, inſtead of the powder of

of the leaves; but I am rather inclined to prefer the latter.

I generally preſcribe the tinctura opii ammoniata, when the patient complains of want of ſleep; and, frequently uſe an electuary, compoſed of conſerva roſarum, nitre, and a ſmall proportion of muriatic acid, or ſal oxalidis acetoſellæ, ſo as to render it pleaſantly acidulous, with a view to relieve the hectic heat and ſweats.

I have, ſometimes, employed ſetons inſtead of bliſters; and my father's experience has led him to give them a preference. I have at preſent under my care, a caſe of phthiſis pulmonalis, the hiſtory and reſult of which I ſhall, probably, communicate at ſome future time; in which, the uſe of a ſeton has been decidedly beneficial.

I think it right to mention, what your readers will doubtleſs anticipate, that I have been conſulted in many phthiſical caſes, in which this plan has not proved ſucceſsful. I think, however, I may ſafely ſay, that it has always prolonged life, and often rendered it more comfortable.

IV.

IV.

Hiſtory of a Caſe terminating favourably, in which an extra-uterine Fœtus was diſcharged, at an opening in the Abdomen, near the Umbilicus. Communicated to Dr Duncan, in a letter from Dr Colin Maclarty, *of Jamaica.*

A Healthy, good looking negro woman, named Juliet, about 22 years of age, the property of George Mawate, Eſq. was ſeized with the uſual ſymptoms of approaching labour, on the 1ſt of Auguſt 1790, when the common time of geſtation had expired. But, from the lingering, unproductive ſtate in which ſhe remained for ſeveral days, the midwife and attendants grew impatient, and requeſted to have medical advice. Accordingly, my partner, Dr John Macklaſhan, was called in on the 5th; and, on examining the parts, was a good deal ſurpriſed, to find

none of thoſe changes which generally precede parturition. In this ſituation, the poor woman was directed to be kept quiet: due attention was paid to the bowels, and an opiate was preſcribed. I ſaw her the day following, along with Dr John and Dr Charles Macklaſhan, and found her much in the ſame condition: there was then, no alteration in the vagina, nor dilatation of the os internum. The tumour of the abdomen remained high above the pelvis, and had never in the leaſt ſubſided. From theſe, and other appearances, we immediately began to ſuſpect an extra-uterine conception; and a little farther obſervation, perfectly confirmed us in our conjecture. One circumſtance, however, occurred, which ſeemed to militate againſt the idea we had formed; and which I am at a loſs to explain, in a manner ſatisfactory to myſelf. A conſiderable diſcharge of pale-coloured blood from the vagina took place, and continued more or leſs for eight or ten days, and then gradually diſappeared. Now, whether this extraordinary action of the uterus could be conſidered as having any connection with the general laws of the animal œconomy, which, at this period, would,

would, in an impregnated ſtate, have peculiarly affected this organ, I will not take upon me to determine; but will leave the fact to thoſe more capable of judging. During part of Auguſt, the whole of September, October, and November, there was no apparent change. The poor creature was all this time in a ſtate of extreme anxiety, eagerly looking up for relief from thoſe who were no leſs ſolicitous to give her every aſſiſtance in their power; yet, as it was the unanimous opinion of all the medical gentlemen who had ſeen her, that no operation ſhould be attempted, prudence, as as well as humanity, pointed out the propriety of patiently watching the event.

In the beginning of December, a circumſcribed prominence began to form in the umbilical region, without creating much pain or uneaſineſs. This ſwelling increaſed for ſome weeks; and the teguments, unequal to the reſiſtance, at laſt gave way to a partial expulſion of a full-grown fœtus. The lower extremities and breech, came out at the orifice; and higher up, towards the ſtomach, the right arm, as far as the ſhoulder, was protruded at another opening, leaving an intermediate ſeptum

of two and a half, or three inches of the muſcles undivided. In this ſituation, it was the opinion of ſeveral gentlemen of acknowlegded abilities in the profeſſion, that, as nature had done ſo much, they would truſt a little farther to her operations. At this time, I had juſt recovered from a fever; and, on the information of Dr Arthur Broughton, took the earlieſt opportunity of ſeeing this extraordinary caſe, which I found exactly as deſcribed by him, and as already ſtated. From this period, I was often with her; and perceiving no immediate probability of a ſeparation of the part which ſeemed principally to confine the fœtus, I was induced to make an inciſion, and to divide it. I then graſped the body, and endeavoured to extract the head; but, as it lay deeper, and was more impacted in the viſcera than I could have expected, and finding my efforts, though gentle, likely to detach the body at the vertebræ of the neck, I had recourſe to the forceps; with the aſſiſtance of which I readily ſecured, and extracted it. A vaſt quantity of moſt offenſive putrid ſanies followed, but no veſtige of placenta; from which, I was led to conclude, that it muſt have been melted down into this corrupt

corrupt ſanies. A broad flannel roller was now wrapped, with a moderate degree of tightneſs, ſeveral times round the body, and nothing applied to the part but the mildeſt dreſſing, with a compreſs of ſoft old linen over it. An opiate was then ordered, and I left her.

This was on the 25th of December; and when I viſited her on the 26th, I found ſhe had reſted tolerably well during the night, but complained of pain in her bowels, attended with diarrhœa. This complaint, ariſing, I preſume, from acrid abſorption, was now rendered particularly formidable, from the very emaciated ſtate to which ſhe was already reduced. By the aid of the bark, however, with a light decoction of cortex Simaroubæ, wine, and generous diet, which her maſter liberally ſupplied, I have the pleaſure to inform you, that, on the 10th of January, ſhe was ſo far recovered, as to be able to ſit up, walk about the room, and to amuſe herſelf.

Since that period, ſhe has perfectly recovered her ſtrength, and looks ſtout and healthy; but as yet, (February 19th), has had no return of the catamenia.

Such has been the favourable termination of this uncommon caſe; and, I am ſorry to

add, in the midſt of ſo much good fortune, her domeſtic tranquillity is in danger of interruption; for ſo dreadful an impreſſion has her late ſufferings, and helpleſs proſpect, left in her mind, that ſhe ſeems determined never more to hazard a like event. But, as the negro who is her huſband, ſtill remains remarkably attentive to her, I am inclined to think, her reſolution will not be permanent. Should it happen, and any conſequences follow, worthy your notice, I ſhall be happy to tranſmit them.

" Stimuli naturæ certe ſufficiunt, et terror
" morborum nunquam adhuc maturam virgi-
" nem ab ara Veneris abegit, et nunquam abi-
" gere potent."

V.

V.

Extract of a Letter from Mr Richard Hughes, *Surgeon at Stafford, to Dr Fowler, Phyſician in York. Giving an account of a Strangulated Hernia, ſpeedily cured by the application of Æther.*

"I HOPE the following caſe will be acceptable. You are at liberty to make what uſe of it you pleaſe. Perhaps, it might be thought worthy of a place in the Edinburgh Medical Commentaries. And, as you are well acquainted with Dr Duncan, as well as with me, I know of no one I ſhould ſo much wiſh to communicate it to him, as yourſelf.

"I own to you, I had ſo little hope of ſucceeding, that I did not go to apply the æther myſelf, but left it to my ſon. Mr Cauſer, a ſurgeon of Stourbridge, who was, at that time, paying him a viſit, was preſent at the application of the medicine."

ON the 19th of July ult., I was called to viſit ——— Pickerill, a debtor in the county jail. He was in moſt excruciating torture, occaſioned by a ſtrangulated hernia, attended with inceſſant vomiting.

Bleeding largely, calomel and opium, warm fomentations, tobacco glyſters, and, after theſe, cold applications, &c. were uſed, without any advantage.

Every attempt, however gentle, to reduce it, increaſed the pain and vomiting. A violent rigor had alſo come on: and nothing ſeemed likely to give a chance for life, but the operation. In this ſituation, he had now been twelve hours, without the leaſt abatement of ſymptoms.

It occurred to me, that æther, by the quickneſs of its evaporation, produces a greater degree of cold, than any thing we are acquainted with in a liquid ſtate. I determined to try its effects. I ordered my ſon to take two or three ounces of æther, and pour it on the ſcrotum, and parts adjacent, by a little at a time.

It, almoſt inſtantly, produced a corrugation of the ſcrotum, attended with a great de-

gree

gree of coldneſs of the parts to the touch; but a conſiderable ſmarting and heat, to the feeling of the patient. By the continuance of this application, with a little gentle preſſure at intervals, the parts gradually retracted; and, in half an hour, were quite reduced. He became perfectly eaſy; and is now in a good ſtate of health.

RICHARD HUGHES.

VI.

VI.

Hiſtory of a ſingular Tumour on the Neck. By Mr Samuel Lockhart, *Surgeon, now in the ſervice of the Honourable Eaſt India Company.*

ON the 11th of April 1789, I committed to writing, the following caſe of John Anderſon, a diſbanded ſoldier, in the 60th year of his age.

About 30 years ago, there appeared on the right ſide of the neck, a tumour about the ſize of a walnut, after receiving a kick from a horſe when in the army. For the following ten years after the accident, its increaſe was very imperceptible; and he found very little inconvenience from it. But, after this, it began to grow larger; ſo that, at the end of the next ten years, it had got to the ſize of the fiſt. It now became

became very inconvenient to him, from its ſize; for he never had any very acute pain in it.

Being viſibly increaſing, he became very anxious to have it removed. He therefore applied for a conſultation of the medical gentlemen; firſt at London, then in Ireland, and, laſt of all, at Edinburgh. But, in all of theſe places, he was told it would be a very dangerous operation, on account of its ſituation with reſpect to the large veſſels and nerves of the neck.

He was now, from the ſize of the tumour, forced to quit the ſervice. Ever ſince, it has been very ſenſibly increaſing, though ſlowly. But, within theſe laſt ſix years of his life, it has grown more rapidly; and, at preſent, is of a moſt enormous ſize; extending from the clavicle, up to his ear, and ſtretching a conſiderable way over to the left ſide of the neck, both before and behind.

At firſt, the ſkin was ſtretched equally and ſmoothly throughout the tumour. But, within the laſt mentioned period, it has become very irregular; and there are ſeveral very large riſings and depreſſions on its ſurface.

It

It has now become ſo inconvenient and troubleſome to him, as to render reſpiration and deglutition difficult. And the motion of his under-jaw is very obſcure. He cannot articulate plainly.

He was naturally a thin man, but very active; and enjoyed a very good ſtate of health, previous to the accident; but, ſince which, he has been a good deal troubled with dyſpeptic complaints. His ſleep has, ſome time paſt, been a good deal impaired. He is much emaciated; and his voice is very feeble. Said, he rather heard with difficulty in the right ear.

Within theſe eight days, the tumour has ulcerated on the back part, the edges of which appear gangrenous; and there are ſeveral black ſpots on that ſide of the tumour. The diſcharge from the ulcer is very fetid, copious, and of a dark colour.

On the 6th of April, a violent hæmorrhagy broke out from the ulcer, to the amount of a pound or two; but was ſtopped by the application of cloths dipped in cold water and vinegar. The hæmorrhagy recurred again on the 7th, to a ſtill greater quantity; and was ſtopped, as in the former.

No

No more hæmorrhagy occurred, until early in the morning of the 10th, when every thing was tried in vain to ſtop it. And he died about 7 o'clock the ſame morning.

He had another tumour, of the ſize of an egg, ſtretched over the coronal ſuture, of the atheromatous kind.

He had uſed a variety of remedies without benefit, the compoſition of which he did not know.

Dissection. On cutting the teguments over the tumour, they were found preternaturally thickened in ſeveral places. And immediately beneath, we found the Platiſma myoides in the ſame ſtate.

On laying open the tumour, we found it principally compoſed of fat; which, in ſeveral places, was hardened. And, diſperſed amongſt the fat, we found ſeveral pretty large cyſts, containing a very fetid matter, of the conſiſtence and colour of lintſeed-oil.

On examining the root of the tumour, we found it adhering by a cellular ſubſtance to the trunk of the carotid artery, the whole way; the muſcles ſo preſſed away, as to turn the face towards the left ſhoulder.

The

The trachea was puſhed over to the left ſide.

The right ſide of the under-jaw was ſo twiſted, that the flat ſide of it turned towards the tumour, and the teeth lay horizontally in the mouth. Both ſalivary and lymphatic glands were found perfectly ſound.

Nothing elſe occurred on diſſection.

We obſerved, on the ſurface of the tumour, ſome very beautiful ramifications of veins, in a varicoſe ſtate.

The tumour weighed thirty pounds.

VII.

VII.

Account of a remarkable enlargement of the Spleen. Communicated to Dr Duncan by Mr James Elliot, *Surgeon's Mate, 23d Regiment.*

A MAN, aged 26, of a relaxed habit of body, and middle ſize, was admitted into the Houſe of Induſtry of this city, (Dublin), ſeemingly labouring under an aſcites; which, as he ſaid, had been gradually coming on for ſome years, but had increaſed rapidly for theſe ſome months paſt.

On examination, the abdominal ſwelling was found very conſiderable; of a ſmooth, uniform, ſhining appearance. However, as a conſiderable degree of hardneſs was felt all over the left ſide, without any perceivable fluctuation, it was conſidered as a complicated caſe;

caſe; and the operation of tapping was declined.

About a fortnight previous to admiſſion, violent pains about the region of the ſtomach ſupervened, with nauſea, and vomiting at times. To theſe, difficult reſpiration, and ſlight palpitatio cordis, ſucceeded.

He remained in the houſe for three weeks, with little trouble from the above complaints, when he was ſeized with the uſual febrile ſymptoms; which continuing to increaſe, he was removed to the Fever ward; and, in a few days, died.

On diſſection, the ſpleen was found of an enormous ſize, reaching from the diaphragm, (which it had in ſome degree puſhed upwards), to the cavity of the os ilium. Its breadth nearly occupied the left ſide; having puſhed the inteſtines, and other viſcera, wholly to the right, which occaſioned the uniform external appearance.

The inteſtines were conſiderably inflated; and the ſtomach was wedged, in a perpendicular direction, between them and the ſpleen.

The left kidney was nearly in its natural ſituation, but conſiderably flattened.

The

The other viſcera were of their natural colour, ſize, &c. but very much puſhed from their natural ſituation.

The ſpleen, when taken from the body, was found to weigh eleven pounds thirteen ounces. Its texture, figure, and bluiſh colour, were little, if at all, changed. The dimenſions were, in length, fourteen inches and a half; in breadth, eight and a half. In thickneſs, at the ſuperior and middle part, was four inches and a half; and at the inferior part, four and a quarter.

Little or no water was found. Nor did any other remarkable appearance preſent itſelf.

It appears, that the above patient felt little inconvenience from the gradual growth of the ſpleen, till it had acquired ſuch a ſize as to impede the organs of digeſtion; which occaſioned the pains, nauſea, and vomiting. And the difficult reſpiration, with palpitatio cordis, were moſt probably produced by the interruption given to the action of the lungs and heart.

That enlargements of this viſcus frequently take place, is undoubted: but I do not re-

collect of having ever heard of ſuch a caſe as the above. I believe, Morgagni, in his elaborate work, de Cauſis et Sedibus Morborum, has related a diſſection, where the ſpleen weighed eight pounds three ounces. From theſe, and the frequent *luſus naturæ* which the ſpleen exhibits, beſides the little injury done to animals by its exciſion, may we not conclude, that its uſe is of little importance to the animal œconomy?

The above patient was under the care of Dr Burrowes; and was opened in the preſence of ſeveral medical ſtudents.

The ſpleen is yet in the above gentleman's poſſeſſion.

I have been thus circumſtantial, as it appears to be an extraordinary occurrence.

VIII.

VIII.

An Account of the Epidemic Catarrh of the latter end of the year 1789, *as it appeared in Jamaica. By Mr* John Lindſay, *Surgeon. Communicated in a letter to Dr Monro.*

SIR,

ALTHOUGH the epidemic catarrh has been often well deſcribed, and has been long known to be the moſt widely ſpreading epidemic we are acquainted with, yet, as you may, perhaps, have had but few deſcriptions of it from the Torrid Zone, eſpecially from Jamaica, and among another ſpecies, too, of the human race, (namely Negroes), I have taken the liberty of troubling you with a ſhort account of this diſeaſe, as it appeared here in the latter end of the year 1789. But, as it is generally deſirable, and may be uſeful, to have ſome idea of the nature of the place where an epidemic diſeaſe takes place, I ſhall give, firſt,

a ſhort account of the ſituation in which I ſaw this diſeaſe; and, then, a few obſervations on the weather, and the prevailing diſeaſes previous to, and accompanying this catarrh.

The diſtrict in which I ſaw this complaint, and to which, alone, I confine this account of it, is in the pariſh of Weſtmoreland. It is about 50 or 60 miles in circuit; contains about 5,500 negro ſlaves; 200 whites; and a very conſiderable number of free people of colour. In this diſtrict, there is a great variety of both ſituation and climate. Some live on the ſea-ſhore, in the neighbourhood of low woody ſwamps, ponds, and moraſſes; others, where the ſhore is bold, rocky, dry, and riſes ſoon into high and woody hills. Some of the eſtates are ſituated on low grounds, at but ſmall diſtances from the ſea, ſurrounded with ponds and ſwampy woods; others on the banks of a river, navigable for boats and lighters, eight or ten miles from its mouth, and meandering through a very large tract of uncultivated moraſs. Many are finely ſituated, from 5 to 10 miles diſtant from the ſea, on beautiful, dry, declining hills, clear of wood,

and

and in the neighbourhood of high and woody mountains: ſome again, in low ſituations, ſurrounded, or almoſt buried, among lofty mountains, deeply clothed in their native impenetrable woods, where they are always ſubject to a damp and chilly air; except during the ſun's meridian ſplendour, and where there always falls a great proportion of rain. Others are placed almoſt among the tops of the mountains, at a diſtance from, and far above the level of the ſea, nearly ſurrounded with hills and deep valleys; full of woods and inacceſſible rocks, where the air is in general tolerably cool, comfortable and healthy; and where there is a large proportion of rain. And, laſtly, there are ſome in one of the moſt open, large, and beautiful plains in Jamaica; where the land is well cultivated, and where the weather is warm, dry, and regular.

I, next, take notice of the ſtate of the weather, for a few months preceding this diſeaſe.

In the month of July, there were only ſix days wholly dry; the 5th, 17th, 20th, 26th, 27th, and 28th. There were four days on which there was a great deal of rain, and very

heavy thunder and lightning; viz. the 1ſt, 15th, 23d, and 29th. On all the other days there was leſs or more rain in the afternoons.

It may be obſerved, that the forenoons in this part of the iſland are almoſt always dry, the rains commonly falling from about noon, till 3 or 4 o'clock in the afternoon; or, though much ſeldomer, in the evening. I have not called thoſe days rainy, on which there fell only mild or ſlight ſhowers.

The mercury in Farenheit's thermometer, in a ſmall well-aired room, and fully expoſed to every change of the atmoſphere, varied from 77 to 72 in the morning, at ſun-riſe; from 90 to 82, between 1 and 2 o'clock in the afternoon; and from 86 to 76, about 9 o'clock at night: the above being always the times of obſervation.

There was not ſo much rain in this month as uſual; this being, commonly, a very wet month. The breezes were generally light and changeable; and, although the mercury was not uncommonly high, the weather was hot and ſultry, eſpecially during the night; and

every

every body complaining of heat, uneaſineſs, and want of ſleep.

From the beginning of the month, till about the 20th, pneumonic complaints were very frequent and ſevere, much more ſo than is common at this ſeaſon; and ſeveral, eſpecially of the old and weakly, were carried off. There were many coughs, with little fever; and more inflammatory ſore-throats than ordinary. Complaints of the bowels, attended with diarrhœa, and often with the diſcharge of worms, were alſo very common; but theſe were aſcribed to eating of green maize, (Indian corn), and many other green vegetables which this ſeaſon brings in. There were alſo ſome rheumatic complaints this month.

In Auguſt, the dry days were, the 7th, 8th, 9th, 10th, 12th, 20th, 27th, 28th, 29th, and 31ſt. The rainy, the 1ſt, 2d, 11th, 18th, and 19th. The other days were very various: either calm, cloſe, and ſultry; or gloomy, with irregular ſqually ſhowers, when but little rain fell.

The mercury varied in the morning, from 77 to 73; at noon, from 90 to 80; and at night, from 80 to 76.

This month much drier than uſual.

The pneumonic fever of laſt month continued; but more mild, and with leſs inflammation. Several whites were attacked, pretty ſeverely, with the remitting fever of the climate. Rheumatic complaints continued. The complaints of the bowels increaſed; and ſome fell into the true dyſentery, by which a few of the weakly were carried off.

The dry days in September, were, the 1ſt, 4th, 9th, 10th, 22d, 23d, and 24th. The rainy were, the 7th, 8th, and 17th.

The weather was, in general, gloomy and changeable, with more thunder and lightning than is common this month.

The mercury, in the morning, varied from 77 to 74. At noon, from 90 to 80; and at night, from 82 to 77.

The pneumonic fever ſtill continued; and ſeveral who were weakly, died. A few remitting fevers among the whites; and the complaints in the bowels continued, but not ſo numerous. There ſeemed to be more ſuppurating tumours than common; but, upon the whole, this month could not be called unhealthy.

In

In October, the following days were dry; viz. the 1ſt, 2d, 3d, 8th, 13th, 29th, 30th, and 31ſt. The 10th, 14th, 17th, 20th, 21ſt, 26th, and 27th, were rainy. The weather was very changeable: ſometimes clear, calm, and ſultry; ſometimes calm and gloomy; and ſometimes irregular ſqually ſhowers. But it was much drier than uſual, till the 20th and 21ſt, when there was a prodigious fall of rain, with dreadful thunder and lightning. The latter end of the month was moderate and variable.

The mercury varied in the morning, from 76 to 74. At noon, from 90 to 82; and at night, from 81 to 78.

Fevers continued; but the inflammatory ſymptoms not ſo high as they have been for ſome time paſt.

A few died in the beginning of this month, who had been ill in the laſt.

Many of the fevers now put on a mild intermitting form, and readily yielded to the Peruvian bark.

About the 16th, there appeared among the whites and mulattoes, particularly in children, eryſipelatous inflammations in the throat, now

and

and then attended with ſlight ſpecks and ulceration. And about the 20th, we were viſited with the *Epidemic Catarrh*.

In November, there were only one or two ſlight ſhowers till the 15th. On that day, and following night, there were frequent drizzling ſhowers, with ſqually north wind. From the 17th to the 21ſt, the wind blew from the north and north-eaſt, with uncommon ſeverity, both day and night. People of all ages and colours, were complaining of cold, and muffling themſelves up in the cloſeſt manner they could. On the 26th, there fell a heavy rain; and there was ſome rain on the nights of the 27th and 28th: the reſt of the month was dry, with northerly wind.

The catarrh raged all this month with great violence: being, therefore, very ſeldom at home, my thermometrical obſervations were much interrupted. What I made, amount to this: The mercury varied in the morning from 74 to 72; at noon, from 86 to 80; and at night, from 76 to 74.

On the 21ſt of this month, there were two ſmall ſhocks of an earthquake felt in ſeveral parts of the iſland; and an unuſual brightneſs

in

in the northern ſky in the evening; ſuggeſting to ſome, the idea of the *Aurora borealis*, and to others, that of a luminous reflection from ſome very great, but diſtant fire.

The weather, in December, was variable in the beginning, with ſeveral mild ſhowers, accompanied with thunder, which is uncommon at this ſeaſon. The latter end of the month, was, in general, dry, with a light northerly breeze, with now and then ſmall ſhowers.

The mercury varied in the morning from 75 to 66; at noon, from 84 to 76; and, at night, from 77 to 74.

The epidemic, after having viſited ſucceſſively, leſs or more, every eſtate and ſettlement, from the windward or eaſterly parts of the diſtrict, to the leeward or weſterly parts of it, diſappeared about the middle of this month, leaving many in a ſtate of great weakneſs and debility. But the pneumonic complaints did not ceaſe with the catarrh. There followed many caſes of peripneumony of an exquiſite form; ſeveral of which proved fatal; and they continued leſs or more for two months after.

After

After theſe preliminary obſervations, I ſhall next give an account of the diſeaſe.

This catarrh, or Influenza, as it was moſt generally called, appeared in this diſtrict, firſt upon an eſtate at a diſtance from the ſea, almoſt ſurrounded with woody mountains, and ſubject to frequent rains. It affected ſome negroes firſt and moſt ſeverely, who had but a ſhort time before been brought from a pleaſant, dry ſituation on the ſea-ſhore in a neighbouring pariſh. It ſeized great numbers of all ages, colours, and ſexes. Indeed, few eſcaped more or leſs of it. The form was moſt diſtinct in the young and healthy; and the ordinary ſymptoms were as follow:

The patient generally complained, firſt, of ſome chillineſs and cold ſhiverings, laſſitude, and general ſoreneſs all over him, as if he had been bruiſed; with an unuſual ſenſibility to the coldneſs of the air. At the ſame time, there was a fulneſs of the face, eſpecially about the eyes, which were full, had a dull appearance, were watery and conſiderably inflamed, and felt a prickling ſcalding ſenſation, as if the tears had been burning hot. There was a dull heavy pain in the forehead, and

over

over the eyes; a diſcharge of thin, clear, hot fluid from the eyes and noſtrils; and the appearance of the whole countenance was often ſo much like that at the beginning of the meaſles, that many at firſt were doubtful, and looking often for the eruption. There was always leſs or more inflammation in the fauces, and generally ſome enlargement of the amygdalæ. Swallowing was not difficult; but there was a ſharp pricking ſoreneſs in the throat, which felt as if it were raw, and had a number of ſharp briſtles, or hairs, applied to it. This tenderneſs of the fauces and throat, irritated by the thin, hot, ſharp mucus plentifully ſecreted there, made the cough very frequent, painful, and diſtreſſing. There was commonly ſome ſtraitneſs, very often pain in the cheſt, with leſs or more difficulty of inſpiration. This laſt was ſometimes great.

Sometimes there was a conſiderable fever from the beginning; but often this was hardly perceptible, except towards the evening.

When the patient was ſtrong, the pulſe was generally ſtrong and full, ſeldom frequent, and often more ſoft and open than hard. Sometimes it was not different from natural;

but,

but, in the weak and elderly, it was often ſmall, weak, and oppreſſed, eſpecially when the lungs were loaded with viſcid mucus.

Blood taken at this time was ſometimes dark-coloured and denſe, eſpecially in the young and athletic; but it was often more florid and ſoft, than a firſt ſight of the ſymptoms might have led to expect.

The ſkin was commonly ſoft and moiſt, and the heat little different from the natural ſtate. Theſe were the general appearances of the firſt attack.

On, or after the third day, the firſt ſymptoms commonly abated. The cough became more free, and leſs teazing; and the patient brought up, with conſiderable eaſe, a copious diſcharge of mucus from the lungs, the beſt white, and of a whitiſh colour, of an uniform and pretty thick conſiſtence, ſometimes ſtreaked with blood. This gradually changed into a clear mild mucus, eaſily brought up; and, with the cough, ſometimes went away in a few days, but oftener continued from a week to ten or twelve days. This was the ordinary and mildeſt form of the diſeaſe. There were many, indeed, who had the complaint ſo ſlightly,

ly, that they neither left their employment, nor applied for medicine.

Great numbers, in a very ſhort time, were attacked with this diſeaſe, which much alarmed almoſt every body; and the doctor's advice was eagerly applied for. Dr Drummond, an eminent and experienced phyſician, who has the chief medical practice of this diſtrict, ſatisfied them with regard to the nature of the diſeaſe, and the plan proper for the treatment of it.

It is well known that this diſeaſe, in its ordinary and mild ſtate, is ſeldom very dangerous; and, in many caſes, a mild and rather ſpare diet, reſt, avoiding expoſure to the air, and promoting a gentle ſweat or ſoft ſkin for a few days, is ſufficient for carrying it off.

When remedies were neceſſary, bleeding, leſs or more, in the beginning, when the patient was young and ſtout, gave relief; and it was, in many caſes, neceſſary to repeat it. After bleeding, a mild purgative, if the belly was not already open, was given. A ſmall portion of an antimonial, uſually emetic tartar, was generally combined with the purgative. This commonly promoted the determination to the

the ſkin; eſpecially if a few drops of Laudanum were given after its operation: and if the antimonial made them puke once or twice, it was an advantage. A gentle ſweat was then kept up, by avoiding expoſure to the air as much as poſſible, and drinking mild tepid diluents, ſuch as barley-water, weak broths, gruel, &c.

Although the patients were forbid expoſing themſelves to any ſtream or current of air, they were not deſired to have their apartments overheated with fire, or their bodies overloaded with clothes.

If conſiderable pain in any part of the cheſt, with difficulty of reſpiration, took place, bliſters to the part affected were very uſeful, and always had recourſe to. In ſuch caſes, alſo, bleeding was repeated, according to the ſtrength of the patient. A free and copious expectoration generally ſoon came on, and, continuing for a few days, put an end to the diſeaſe.

This was the moſt common mode of treating this complaint; but, in many inſtances, it was not only more violent, but extremely dangerous.

In

In ſeveral of the young, ſtout and healthy, moſt of the ſymptoms and danger of the true peripneumonia were brought on, and required the moſt diligent attention, and uſe of the moſt efficacious remedies in that diſeaſe; eſpecially thoſe of early and free bleeding, and inducing and promoting a free and copious expectoration.

It was not unfrequently obſerved, however, that although many bore, and abſolutely required free and repeated bleedings; yet there were ſeveral inſtances, in which, though the ſymptoms were violent and alarming, bleeding could not ſafely be carried ſo far as the ſeverity of the ſymptoms, and the ſtrength of the patient might, at firſt ſight, have given room to expect. The blood, in theſe caſes, during the firſt days, was nothing, or but little, different from a healthy ſtate. Afterwards, it became more denſe, viſcid, and frequently buffy; eſpecially about the end of the firſt week, or height of the diſeaſe. In theſe caſes, the treatment was much the ſame as in the true peripneumonia; ſuch as, free and early bleeding, opening the bowels and ſkin, by the ſame medicines as in the common and milder

forms of the complaint, encouraging perſpiration by diluents, &c.

When the force of the arterial ſyſtem was abated by bleeding and unloading the bowels, antiphlogiſtic and diaphoretic medicines were freely uſed: ſuch as, Nitre, combined with Crude Sal Ammoniac, with Camphire, or with a portion of Dover's powder, and ſometimes with an antimonial, as circumſtances ſeemed to require; and theſe were aſſiſted by mild diluting tepid drinks. By theſe means, a free diaphoreſis was generally brought on; and, if accompanied with an eaſy expectoration, every thing went on well.

But in ſome caſes there occurred ſevere and obſtinate pains in ſome part of the cheſt, which were but little relieved by the firſt bleeding, purging, application of bliſters, &c. In theſe caſes, the fever increaſed after the 3d and 4th day; reſpiration became very difficult, and the cough violent and diſtreſſing, with no ſputum, or only a little, brought up with much exertion and fatigue. The uſe of the lancet was, in ſuch caſes, carried as far as could be ventured on. No period of the diſeaſe deterred from having recourſe to it, when difficult

ficult breathing, fixed pain in any part of the cheſt, hot and dry ſkin, difficult expectoration, and the drying of bliſters ſoon after they were removed, combined to require it. And although the ſtrength and general habit of the patient ſeemed to forbid the uſe of the lancet in the latter end of the ſecond week of the diſeaſe; yet, even then, under the ſymptoms now mentioned, a few ounces of blood taken, was followed by the beſt effects.

When bleeding had been carried as far as could be ventured on, bliſters were then applied freely, and were of great ſervice. But while the ſkin continued hot and dry, the pulſe frequent and ſharp, the breathing and expectoration difficult; bliſters, then, often dry ſoon after they are taken off; and a repetition of them, in this caſe, is not only uſeleſs, but I have frequently ſeen them increaſe the heat and other ſymptoms of obſtinacy, and conſequently the danger of the diſeaſe.

In a few caſes, where the patient was young and ſtrong, and where the lancet had been very freely uſed in the beginning of the complaint, the diſeaſe went off by reſolution, although the ſymptoms had been pretty ſevere.

But this was ſeldom; and expectoration was chiefly truſted to. To promote this, mild tepid diluents, as obſerved above, bland mucilaginous decoctions, ſuch as that of Lintſeed ſweetened with ſugar, or the extract of Liquorice, acidulated with lemon juice, were uſed as common drink. The decoction of the radix ſenekæ, joined with crude ſal ammoniac, were uſed where the ſymptoms of inflammation prevailed; and with gum ammoniac, or ſome of the warm gums, and oxymel of ſquills, when the bronchiæ were loaded with viſcid mucus, the exertion of the lungs weak, and all ſymptoms of inflammation abſent. When any tendency to purging was obſerved, it was relieved by the paregoric elixir, or a ſmall quantity of laudanum. Along with theſe, other pectorals were often uſed with advantage, viz. decoctions of the wild Liquorice (Abrus precatorius Lin.), with Pear tree leaves (Laurus Perſea), and the young leaves of the Plum tree (Spondias Myrobalanus), were uſed with advantage. I was informed alſo, that the infuſion and light decoction of the Colt's-foot, (Piper peltatum), had been very uſeful; and the decoctions of ſeveral others of this genus might have

have been uſed, as mild diaphoretics and expectorants, with conſiderable advantage. Alſo the Sweet-broom weed (Scoparia dulcis), and the Polygala paniculata, with many others, might have been employed for this intention.

When the febrile ſymptoms were gone, and the patient rather weak, the expectorants were aſſiſted by hartſhorn, &c.; and a very liberal uſe of wine was, in many caſes, neceſſary.

In one or two, the diſeaſe was protracted upwards of three weeks. In one, in particular, who had caught a little cold when recovering from the firſt attack of the complaint, the ſymptoms began afreſh, and ſevere, in the form of an acute pleuriſy; which, after being relieved by bleeding, bliſtering, &c. commenced in a few days again, the pain invading a different part of the cheſt. In this manner, ſhe ſuffered repeated attacks: the inflammatory ſymptoms appearing ſucceſſively in every part of the breaſt; generally attended with a copious diſcharge from the lungs; thin and gleety when the ſymptoms were ſevere; more of a purulent form, when they abated a little; and often mixed with blood. This patient, although every poſſible attention and

care was paid to her, fell a ſacrifice to having imprudently expoſed herſelf a little too ſoon to the night air. Another, who ſuffered much in the ſame manner, was ſaved with the utmoſt difficulty; and was long in recovering even a moderate ſtate of health.

In ſome inſtances, the diſcharge from the lungs was uncommonly large, and continued for ſeven or eight weeks, endangering life by extreme debility. In a few caſes, the miſerable patients, deſpairing of life, gave themſelves wholly up, refuſing every kind of nouriſhment and aſſiſtance, from either the Doctors, their friends, or companions; and it was with the greateſt difficulty, and the utmoſt exertion of patience, diligence, and humane induſtry, in their worthy maſters or managers, that their lives were at laſt ſaved.

In ſuch caſes, a light and nouriſhing diet, with wine to ſupport the patient, was indiſpenſably neceſſary; and a pretty free uſe of the Peruvian bark was of great ſervice, in gradually reſtraining the diſcharge from the lungs, and recovering the ſtrength. An anodyne at night when the cough was troubleſome, and

no

no ſymptom of inflammation, or oppreſſion of the lungs, preſent, was very neceſſary.

Notwithſtanding the violence of the ſymptoms, and the length of time for which the lungs were ſometimes affected, I do not recollect an inſtance of the phthiſis pulmonalis taking place in conſequence of this complaint.

In ſome inſtances, this Influenza commenced with dulneſs and languor, with a ſluggiſh and weak pulſe; ſkin cold, tongue moiſt and clean; and, in ſhort, with ſcarcely a febrile ſymptom. This ſtate ſometimes continued one or two days, the patient not knowing what to do with himſelf.

When the nature of the epidemic was known, recourſe was immediately had to the warm bath, and tepid diaphoretic drinks, to bring on the diſeaſe in its proper form; otherwiſe the patient ran a riſk of life, from a torpor of the vis vitæ, and ſtagnation of the blood in the lungs. I knew two or three inſtances, where young, healthy, ſtout, and well-diſpoſed negroes, after complaining for two days in the above manner, fell ſuddenly down at their employment, as if they had been ſtruck with apoplexy; and if immediate

relief had not been afforded them, they would, to all appearance, ſoon have expired, ſuffocated by a ſtagnation of the blood in their lungs. In ſuch caſes, the patient was immediately freely bled; then ſome warm ſangree, or toddy, with ſome ſpirits of hartſhorn, was given, and repeated till he was a little recovered. Soon after this, he generally fell into a ſleep and profuſe ſweat. This was diligently kept up; and the patients generally did well.—Such caſes were alarming, always dangerous, and required a great deal of attention. In one negro, however, who died, and who had been affected ſomewhat in this manner, on being opened, the greateſt part of the lungs was as compact and firm as a liver; and a ſmall portion, cut out, and put in water, ſank immediately to the bottom.

A want of the exertion of the vis vitæ in the lungs, was generally predominant in thoſe who were weak and elderly. In theſe, the febrile ſymptoms were often ſo very trifling, as to be ſcarcely worth noticing; and their danger aroſe from the infarction of the bronchia with viſcid, ſubpuriform mucus. In ſuch caſes, the diſeaſe having taken ſo much the form

form of the *Peripneumonia Notha*, vomiting gently, if the patient could bear it, bliſters, and warm gently ſtimulant expectorants, with the other remedies recommended in that complaint, were directed. Several, however, fell victims to the catarrh in this form.

In a few caſes of negroes, and thoſe apparently ſtout, but who had been much addicted to debauchery and hard drinking, the epidemic, along with its characteriſtic ſymptoms, induced a putrid diatheſis; and particularly if any affection of the liver chanced to be preſent. The craſſamentum of the blood in theſe caſes was grumous, looſe at bottom, covered with a yellowiſh jelly inſtead of a buffy coat, and the ſerum turbid, of a reddiſh yellow colour. The patient was reſtleſs, anxious, and dejected; reſpiration oppreſſed, and the ſputum of a dark green, or bilious colour, often mixed with a dark thin ſanies. The eyes, and roots of the nails, grew yellow, (a bilious tinge does not become generally conſpicuous on a negro's ſkin), and great quantities of offenſive bile were paſſed, both by vomit and ſtool.

Theſe caſes were but few. The ſymptoms readily pointed out the remedies. But, I am

ſorry

ſorry to ſay, when the firſt were ſevere, the latter, however diligently they were employed, were at laſt ineffectual.

Theſe were the chief appearances which this epidemic catarrh put on in the diſtrict above mentioned. It was ſometimes, however, accompanied with the ſymptoms of other diſorders.

Sometimes the inflammation of the throat aroſe to a conſiderable degree of the *Cynanche Tonſillaris*. But this was eaſily relieved by the remedies commonly employed in that complaint.

Little ulcerations, now and then, appeared in the mouths and fauces of children, and gave a good deal of the appearance of *Cynanche Maligna*: but they were ſeldom attended with the typhoid fever, which generally accompanies this diſeaſe; and they yielded readily to detergent gargles. Thoſe who were weakly, and ſeveral of the whites and mulattoes, required the aſſiſtance of the Peruvian bark and wine. I have heard, however, that the Cynanche Maligna, in ſome parts of the iſland, was not only frequent, but often fatal, during this epidemic.

Upon

Upon one of the eſtates, number of the negroes were ve epidemic catarrh, a young mai book-keepers, who had a great d in a conſtant attendance on the ſic denly ſeized with ſevere pain acroſs accompanied with ſuch a weight and ..me of ſpaſmodic ſtricture, as almoſt deprived him of breathing. He fell down almoſt ſenſeleſs; and, probably, would have fallen a victim to this attack, if he had not ſoon been relieved. The Doctor, fortunately, being at hand, he was freely bled, and ſome warm cordials given immediately, along with ſome hartſhorn and laudanum. He recovered a good deal; but continued low and languid. He was taken in the ſame manner next day, when I happened to be in the houſe; and the circulation was ſoon ſo far arreſted, that his face, lips, and nails, began to be of a livid purple, the ſkin cool, and the pulſe feeble. He was immediately bled, and rouſed with wine and hartſhorn. By theſe, with warm frictions, he recovered; but continued very weak. He had, all this time, but little or no fever; nor did the other ſymptoms of the epidemic, manifeſt themſelves

themſelves in this caſe. This young man recovered ſlowly after this: continued weak; and, at laſt, became ſubject to the attack of his complaint, repeated on any occaſion of fatigue, particularly walking. In ſhort, this complaint appeared, at length, to be nearly allied to that deſcribed under the title of Angina Pectoris. And, after being recommended to the uſe of bark, with ſnake root, and ſome ſteel bitters infuſed in wine, he was adviſed to change his preſent fatiguing employment for one more eaſy, and confined within doors. Since he has made this change, I have not heard of his being afflicted with the complaint.

It ſeems probable to me, that the firſt attack of this diſeaſe, was brought on by the influence of the catarrhal infection. But it is, perhaps, no leſs poſſible, that the loſs of blood, which appeared neceſſary for the immediate preſervation of life, joined to ſome prediſpoſition in the conſtitution, might have given room for the complaint afterwards, to put on the form of Angina Pectoris.

I ſaw one caſe, reſembling the Cynanche Parotidea; and heard of one child dying of the Cynanche Trachealis.

Towards

Towards the end of this epidemic, the fever often took the form of an Intermittent; and whenever the intermiſſions were diſtinctly marked, notwithſtanding the forbidding appearances from the affections of the cheſt, it readily yielded to the bark: at the ſame time, ſuch medicines were uſed, as the other ſymptoms required. The bark, however, was to be uſed entirely with the view of putting a ſtop to the fever in one or two paroxyſms; for if a ſufficient quantity was not briſkly taken, ſo as to have this effect, this medicine, continued longer, was not only uſeleſs, but hurtful.

On ſome eſtates, this catarrh was very ſevere, and affected great numbers. On others, it was very mild; and, on a few, it was hardly perceivable. What this was chiefly owing to, was not very evident; but it was obſerved, in general, that this diſorder was moſt ſevere and fatal, on thoſe eſtates which were in the neighbourhood of large ponds. This, poſſibly, may be imputed to a cuſtom very common among negroes, of throwing themſelves into the firſt cold water they meet with, when they are heated by exerciſe, &c. And it

was

was ſtill more remarkable, where any deaths happened; and, undoubtedly, aroſe from another cuſtom, but too prevalent among negroes; which is, employing the whole night at their funerals, in riotous and noiſy ſinging, dancing, drinking, &c.; and, then, either ſleeping drunk in the open air, or plunging themſelves into the water, to cool and refreſh themſelves for more exerciſe.

Theſe, Sir, are all the obſervations I have made on the epidemic catarrh. They tend to ſhew, that the appearance of this diſeaſe is much the ſame in every climate, and among every race of men. And you will form ſome idea of its mortality here, from knowing, that, among 5,500 ſlaves, 200 whites, and a large proportion of free people of colour, it proved fatal to 13 or 14: and the greateſt part of theſe were old, in whom, the diſeaſe took the form of the peripneumonia notha.

Whether the epidemic catarrh, ariſes chiefly from the influence of ſome particular condition or ſtate of the atmoſphere, or from contagion communicated from one body to another, may admit of ſome uncertainty and diſpute; but, it is probable, both may have ſome ſhare in it.

it. A particular condition of the atmoſphere, may have the effect of diſpoſing the human body to be more readily affected in one particular manner, than any other; and in whatever way the ſyſtem is once affected, contagion from other bodies, may contribute to heighten the ſymptoms of the diſeaſe, and render it more dangerous.

Peripneumonies continued frequent and violent, for two or three months after the epidemic catarrh; and, in the Summer, the hooping-cough became frequent, and often ſevere.

SECT. III.

MEDICAL NEWS.

ALTHOUGH, from different circumſtances, the progreſs made in building the New College at Edinburgh, during the courſe of laſt Summer, has not been ſo conſiderable as might have been expected, yet, the work has been carried on to ſome extent without interruption. And, in addition to the teaching-rooms, which were occupied laſt Winter Seſſion by different profeſſors, the various apartments intended for the Anatomical claſs, are now completed. On the laſt Wedneſday of October 1792, the ſtated day for the commencement

mencement of the Medical claſſes at Edinburgh for the Winter-Seſſion, Dr Monro began his courſe of lectures in the excellent new Anatomical Theatre. On this occaſion, he addreſſed a very numerous audience, in an elegant and animated exordium.

He ſuppoſed, that the feelings of all, on firſt entering the place, would nearly correſpond.

That, while they paid juſt tribute to the memory of the architect, whoſe genius planned the great and elegant work, of which this theatre made a part; they muſt be ſenſible how much was due to thoſe perſons, not leſs diſtinguiſhed by their real patriotiſm, than by their rank in life; and particularly, how much was owing to the preſent very worthy and liberal-minded Chief Magiſtrate *, and to his colleagues, who laid the foundation of this work, and placed the execution of it in ſuch hands.

The elegance and extent of the deſign, the readineſs with which a moſt reſpectable liſt of liberal ſubſcribers had promoted the execution of it, the countenance of thoſe who ho-

* Thomas Elder, Eſq. of Forneth.

noured the meeting with their preſence, and, above all, the bounty of the King, he obſerved, afforded to the ſtudents of this Univerſity, a moſt convincing, and, indeed, moſt flattering proof, of the eſtimation in which theſe ſciences they were about to ſtudy, were held by the moſt intelligent and enlightened part of the community; and how much therefore, they were encouraged and called upon, to employ their utmoſt attention and induſtry, in acquiring proper knowledge of them.

But the ardour for information and improvement in their particular profeſſion, which has ſo long animated and diſtinguiſhed the ſtudents of Medicine in this Univerſity, rendered it, he thought, unneceſſary, and indeed improper, for him to dwell with them upon the ſubject; and, at the ſame time, encouraged him to promiſe, in their name, with as little heſitation as in his own, that they ſhall, by their diligence, and every exertion in their power, repay the large debt they were fully ſenſible they owed to the munificence of the King, who had ever ſhewn himſelf the Patron of Science, and to the liberality of the Public.

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In the memoirs of the Academy of Sciences, in 1781, M. Lavoiſier publiſhed thoſe experiments, by which he demonſtrated, that charcoal of wood, combined with reſpirable air, compoſed fixed air, or carbonic acid. The proof by analyſis, however, was required, to render the demonſtration of the compoſition of this elaſtic fluid complete.

This has now been ſupplied by the ingenuity of Dr George Pearſon of London, who has communicated to the Royal Society, a paper which has been publiſhed in the laſt volume of the Philoſophical Tranſactions, containing an account of ſome experiments, in which he obtained charcoal and reſpirable air, by decompoſing ſeveral ſaline bodies which contained carbonic acid; particularly, the mild foſſile alkali. The agent he employed in this operation, was phoſphorus; which being introduced into a glaſs tube, along with the mild foſſile alkali, and heated to a red heat, robbed the carbonic acid of its oxygen, and was ſublimed in the form of phoſphoric acid into the upper part of the tube, while the lower part of the tube contained a

black or grey maſs, from which charcoal was ſeparated, by ſolution and filtration.

When quick-lime was treated in the ſame manner, a roſe-coloured powder was found at the bottom of the tube, conſiſting of phoſphorus and lime, which readily decompoſes even cold water. The inflammable air riſing in bubbles, carries with it a portion of the phoſphorus, while the reſpirable air unites with the reſt of the phoſphur of lime, to form phoſphoric ſelenite.

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The attention of medical philoſophers, has of late been much engaged about ſome new and ſingular experiments on the nerves; from which, it is alleged, that intereſting diſcoveries have been made, reſpecting the nature of the nervous fluid. For theſe experiments, we are indebted to Dr Louis Galvani of Bologna, and Dr Euſebius Valli of Piſa. A pretty full account of them, drawn up by theſe gentlemen themſelves, is publiſhed in the Journal de Phyſique of Paris, for July 1792, under the following titles:

Lettre

Lettre d'un ami au Comte Proſper Balbo, contenant un précis des experiences de Louis Galvani de l'Academie de Bologne, ſur l'action de l'Electricité dans les mouvemens muſculaires. Inſeré dans la Bibliotheque de Turin, de l'année 1792. Mars, Vol. I. p. 261. And

Deux lettres de M. Euſébe Valli, Docteur en Medecine en l'Univerſité de Piſe, ſur l'Electricité animale.

Of theſe papers, we intend to preſent our readers with a full account in our next volume. And it is not improbable, we may then alſo be able to lay before them, the reſult of ſome ſimilar experiments, tending either to corroborate or invalidate the doctrine of the Italian Philoſophers. At preſent, we ſhall only obſerve, that the grand concluſion drawn from their experiments, is, that animal motion depends on the electric fluid; or, at leaſt, on what may be called animal electricity. This they have concluded, from finding that the effluvium conveyed by the nerves on which motion depends, may be conducted, like the electric fluid, by metallic matter. For a muſcle being cut, and the parts ſeparated, motions excited in one part, produce a correſpondent

motion in the other, when a ſubſtance that is a conductor of the electric fluid is interpoſed between them; but no ſuch motion is produced, when a non-conductor is interpoſed.

Many of the experiments made by Galvani and Valli, have been repeated by ſome diſtinguiſhed anatomiſts, both at London and Edinburgh; particularly by Dr Monro, at the latter of theſe places, who has exhibited ſome of them publicly in his Anatomical Theatre. Philoſophers are by no means agreed, with regard to the concluſions which are to be drawn from them. But it is on all hands admitted, that they exhibit very wonderful phænomena. Much, however, yet remains to be aſcertained: but, from the induſtry and ability of thoſe engaged in this purſuit, we hope we may be able to communicate to our readers, ſome important information reſpecting it in a future volume.

We ſhall, however, at preſent, lay before our readers, the following ſhort account of ſome very intereſting experiments made on this ſubject, by Dr Edward Aſh, who at preſent enjoys one of the Radcliffe travelling fellowſhips from the Univerſity of Oxford;

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and communicated by him, in a letter to his friend Dr James B. M. Adair, junior, phyſician in Edinburgh, dated at Vienna, October 30th 1792.

" The animal being faſtened down to the table, two or three of the ſuperficial muſcles were removed, till ſome of the larger nerves, the crural, for example, were brought into view; the crural nerve was freed from its connection with the fleſh, &c. for about an inch, and a plate of tin foil of the ſame length, and one fourth, or half an inch, broad, introduced between the nerves and the fleſh, in ſuch a manner, that the whole of the diſſected nerve reſted on the metallic plate.

" In this ſituation, the moment pieces of gold, ſilver, braſs, and other metals are merely brought into contact with the nerve, the muſcles of the leg are contracted and convulſed with great violence, as if from an electric ſpark. If the metallic body be kept for ſome time in contact with the nerve, a continued ſucceſſion of contractions manifeſt themſelves in the muſcles, till the power of that part of the nerve which was touched, appear exhauſted;

hauſted; and it is neceſſary to apply to another portion of the prepared nerve, to produce the effect. The different metals I employed, which were gold, ſilver, braſs, and iron, had very different effects in producing the convulſions; gold and ſilver acting very powerfully, braſs in a weaker degree, and iron exciting the weakeſt operation, and ſometimes hardly acting at all.

"When the nerve was not prepared, by being brought into contact with the plate of tin foil, the different metallic bodies did not produce any perceptible effect.

"Such were the phænomena when the nerve was touched by conducting bodies. On the other hand, non-conductors, as glaſs, ſealing wax, and ſome other electrics *per ſe*, which I tried, produced, when applied to the nerve in the ſame manner, no effect whatever.

"The pieces of gold, &c. when inſulated, produced the ſame contractions, on being applied to the nerve, as when connected with conducting bodies.

"When a thin plate of glaſs, or ſealing-wax, was placed under the nerves, inſtead of the

the tin foil, the contact of the piece of gold produced not the leaſt contraction or change in the muſcles.

" The crural nerve was cut through the middle; the end which remained unconnected with the brain, placed upon the tin foil, and touched by conducting and non-conducting bodies, ſhewed the ſame phænomena as when entire.

" The moment the tin-foil is removed from the nerve, either when cut or entire, the metallic bodies excite no contractions; but inſtantly, on the tin-foil being reſtored, exert their power with great violence. I have tried theſe alternate operations near twenty times.

" Not only when the whole length of the diſſected nerve is placed on the tin foil, is the approach of the piece of gold or ſilver able to produce convulſions; but when the nerve is divided, and the cut end merely brought into contact with a piece of tin foil ſharpened to a fine point, the piece of gold applied to the nerve, at, or near the place of contact, excites vivid contractions of the muſcles, though the reſt of the nerve did not appear to acquire, by this means, the power of being acted on

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by the gold. This ſlight contact muſt, perhaps, be conſidered as a partial coating of that part of the nerve which is touched by the tin foil. The ſame contractions are produced, when thin ſlips of metal, almoſt of the fineneſs of hairs, have their points brought into contact with the ſide of the crural nerve, merely diſſected from the fleſh, without being divided. But the coating, with large pieces of tin foil, ſeems neceſſary to the production of ſtrong and vivid contractions. Inſtead of placing tin foil under the whole length of the diſſected nerve, I placed a ſmall ſlip in contact with a portion of the nerve, only about one eighth of an inch long: the nerve, which before produced the contractions of the muſcles when touched by it in any part of its length, now produced that effect, only when touched in the portion which reſted on the ſlip of tin foil; and the other parts remained totally inactive.

"The nerve being prepared, by being brought over a ſmall ſlip of tin foil at one end, a piece of gold was brought in contact with the other end of the nerve, without producing any contraction or change: but when,

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in this ſtate, a communication was made between the piece of gold and the tin foil, by a metallic body touching both at the ſame time; at that moment, the moſt vivid contractions of all the muſcles of the leg followed; and the effects produced by this method, ſeemed, in many caſes, more ſtriking and conſtant, than from any other manner of making the experiments.

" Sealing-wax, and the non-conducting bodies, when uſed to form a communication between the gold and tin foil, never produced the leaſt ſymptom of contraction.

" I placed the whole length of the diſſected crural nerve of the right ſide, on a piece of tin foil, and covered the whole of the naked muſcles of the left thigh, with a metallic plate: in this ſituation, the moment a communication was made between the metallic coverings of the oppoſite thigh, by means of a metallic wire, all the muſcles belonging to the right crural nerve, ſuffered ſtrong convulſions: whether the nerve reſted wholly on tin foil, or was placed only on a thin ſlip of that ſubſtance, the effects regularly followed.

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"I repeated the experiments in the ſame manner, after having cut away the whole crural nerve on the left ſide. In the inſtant that a crooked wire, connected by one end with the metallic plate covering the muſcles, came in contact with the tin foil on which the right crural nerve was placed, vivid contractions of the muſcles of the right leg took place; and when one end of the wire was connected with the tin foil, and the other afterwards brought into contact with the plate lying on the muſcles, preciſely the ſame effects happened.

"Having placed a piece of gold on the muſcles of one thigh, I lifted up the diſſected nerve of the other on a metallic wire, ſo that, for at leaſt an inch of its length, it did not touch the muſcles. The nerve being in this poſition, I touched with the wire, the piece of gold itſelf, or elſe long ſlips of tin foil connected with it; and very violent contractions always appeared. When the wire was made to touch the muſcular fleſh, without its being covered by ſome metal, no effect was produced; nor did any take place when it touched the gold, without being in contact with the muſcles. When the communication between

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the gold and the muſcles was made by a metallic body, though at ſome diſtance, the effect was as ſtrong as when the gold itſelf was touched; while ſealing-wax and non-conductors between the gold and muſcles, fully prevented the contractions from taking place.

" I made the medium of communication between the wire ſupporting the nerve, or the tin foil (for it is indifferent which) on the one ſide, and the gold which touched the muſcles on the other, to conſiſt of a metallic chain ſome yards long; and the contractions in this caſe were as ſtrongly marked, when the end of the chain was brought into contact with the gold, as when the wire itſelf was made to touch it.

" I interrupted the continuity of the metallic chain, by interpoſing a piece of ſealing wax; and the contractions ceaſed to appear: and the ſame effect was produced, when the chain was divided, and the ends kept at the ſmalleſt diſtance from each other: the moment they were reunited, the effects appeared as before.

" When I placed a wire under each crural nerve, no contractions followed when the ends of the wires were brought together; but when both

both nerves were furniſhed with tin foil, the contact of the wires produced vivid convulſions on both ſides.

" It ſeemed, in general, when the nerve was divided, and the cut end of the nerve next the brain was treated as in the other experiments, that a general uneaſy ſenſation, which appeared to affect all the muſcles of the body, was produced; but this effect very often failed.

" The whole of the experiments I have related, I made with frogs and other cold-blooded anlmals. Profeſſor Blumenbach informs me, that they do not ſucceed with white-blooded animals.

" I never found that pitch balls, gold leaf, fine threads, or any other light bodies, connected in any manner whatever with the metals, manifeſted the ſlighteſt appearances of attraction or repulſion."

In the preſent very limited ſtate of our knowledge reſpecting theſe electrico-nervous phænomena, if the expreſſion be allowed, it would be highly improper to draw any theoretical concluſion from them. We ſhall therefore only remark, that they ſeem, in ſome circumſtances,

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to agree with, and in others, to differ materially from, the phænomena uſually occurring in electricity.

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Much uſe has of late been made of the rectified oil of tar in different priſons and hoſpitals, with a view of counteracting the influence of contagion. This oil has particularly been prepared and introduced by Mr Edmund Saunders of Plymouth: And from a ſhort account of it, which he has ſubjoined to an addreſs to the owners of ſhips in particular, and in general to all who have intereſt in preſerving timber under water, it is repreſented as the moſt powerful and cheapeſt antiſeptic ever yet tried.

The method which Mr Saunders recommends for uſing the tar oil, is, with a painting bruſh, to ſpread it on pieces of boards or paper, put under the beds of the ſick, and occaſionally repeated in ſmall quantities. He obſerves, that Mr Cowdry, agent for the Mill-priſon at Plymouth, and who had under his care the priſoners of war, has often ſaid, that he believed the uſe of this oil had ſaved the lives

lives of hundreds: and further, that there was ſcarce a bug, louſe, or flea, to be found in the priſon; for that the oil of tar had deſtroyed them all.

The rectified oil of tar has alſo, we are informed, been extenſively uſed at London, particularly in Newgate. The method, we are told, of uſing it in Newgate, is this. Every morning, as ſoon as the different wards are cleaned, the wardſman of each, gets from the turnkey, about half a pint of the oil of tar and vinegar mixed, to ſprinkle the ward. This is done with the view of purifying the air, and of preventing diſeaſe. But in the hoſpital it is uſed much more freely, according to the number of the ſick, the nature of their complaints, and the prevalent effluvia.

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During the courſe of the preſent year 1792, ſeveral dogs have been obſerved affected with canine madneſs, in different parts of Britain, particularly in Scotland. The conſequence has been, that ſome melancholy inſtances of Rabies Canina, have appeared among the human ſpecies. One in particular, which occurred

curred at Glaſgow, and another at Edinburgh, were ſeen by many different practitioners in theſe cities.

The patient at Glaſgow was a girl in the eighth year of her age. She was bit on the 21ſt of March 1792, by a butcher's dog ſuſpected to be mad, and killed as a mad dog very ſoon after the accident. The parents, ſuſpicious of the conſequences, carried the child to Mr John Scruton ſurgeon, who, by way of prevention, cut out the whole of the wounded part as completely as he could, and afterwards ſupported a diſcharge from the wound thus made, for ſome length of time. He alſo put the child upon a mercurial courſe, and, by the uſe of calomel, ſupported a gentle ſalivation for a week or two. But notwithſtanding theſe precautions, on the 27th of April, hydrophobia and other ſymptoms of Rabies Contagioſa appeared; and ſhe died on the 29th of that month, the fortieth day from that on which ſhe had been bit.

The patient who died of Rabies at Edinburgh, was a woman in the 74th year of her age. She was bit on the 3d of July, and continued free from any ſymptom of the diſeaſe,

till the 13th of September. She then became affected with ſevere pain ariſing from the cicatrix of the ſore, and ſtretching up her arm. This was ſucceeded by ſhivering, followed by heat, thirſt, nauſea, and other febrile ſymptoms. On the evening of the 14th, ſhe firſt perceived unuſual difficulty, both in articulating and ſwallowing. Theſe ſymptoms increaſing with all the other attendants of Rabies, ſhe was carried to the Royal Infirmary about ſeven in the evening on the 15th. There, recourſe was had to the uſe of Opium, Æther, Camphor, and other powerful antiſpaſmodics. But they did not ſeem to be productive of any good effect; and ſhe died on the 17th about two o'clock in the afternoon, on the 77th day after the bite.

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A NEW remedy has lately been introduced into the practice of medicine, on ſuch authority as may juſtly entitle it to an attentive conſideration. Dr William Roxburgh, Fellow of the Royal College of Phyſicians of Edinburgh, an able phyſician and eminent botaniſt, at preſent in the ſervice of the Honourable

able Eaſt-India Company, and ſtationed at Samulcottah, in inveſtigating the vegetables of that country, has diſcovered a bark, which he finds to be of equal efficacy with the Peruvian bark, in combating fevers of different kinds, particularly intermittents. Dr Roxburgh has tranſmitted to ſeveral correſpondents in Britain, an accurate drawing and deſcription of the tree which produces this bark. He refers it to the genus of Swietenia, to which the mahogany belongs; and he has diſtinguiſhed it by the ſpecific name of Swietenia febrifuga, from its medical properties.

Dr Roxburgh has alſo tranſmitted to the Eaſt-India Company, a ſufficient quantity of the bark, for affording an opportunity of trying it in Europe. The directors have ordered parcels of this bark to be ſent to the Royal Colleges of Phyſicians of London and Edinburgh, with a requeſt that they will have the goodneſs to make trial of its effects, and to communicate to the Company their opinion of its virtues. Although many other places afford a much better opportunity for making a trial of a remedy againſt intermittent fevers, than either London or Edinburgh, yet, in

both, caſes are not rare, by which the virtues of an article of this kind may be determined. We hope, therefore, in a future number, to be able to give ſome farther information to our readers reſpecting this article. At preſent, we may only obſerve, that if it ſhall really be found to poſſeſs theſe virtues which Dr Roxburgh alleges, the diſcovery muſt be of very great importance to Britain; but ſtill more to the Britiſh ſettlements in India, where Peruvian bark is very ſcarce, and to be had only at an exorbitant price.

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The fruit of a tree ſuppoſed to be a Bank-ſea, has been lately imported from the South-Sea iſlands. It has a kernel of the conſiſtence of hard butter, and more oily than the almond; with a very ſtrong thick ſhell, of the ſize of a very large walnut; and has nearly the figure and colour of a walnut ſhell. This fruit, if it can be had in ſufficient quantity, muſt be a very nutritious and ſalutary kind of food.

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At the annual meeting of the Medical Society of Paris, held on the 28th of Auguſt 1792, for the diſtribution of prizes, honorary rewards were conferred on ſeveral competitors.

1. In Auguſt 1790, the following queſtion, a prize of ſix hundred livres, had been propoſed.

Determiner, d'apres les decouvertes chymiques modernes, et par des experiences exactes, quelle eſt la nature des alterations que la ſang éprouve dans les maladies inflammatoires, dans les maladies febriles putrides, et dans le ſcorbut.

No memoir preſented to the Society was judged to be of ſufficient merit to entitle it to the prize. Honourable mention, however, was made of a memoir which had for its epigraph, "Non ideo analyſes ſanguinis utilitate "ſua deſtituuntur, dum ſapienter noverimus "ſpes noſtras recidere, neque plura docere "quam a natura diſcimus." Meſſrs Parmentier and Déyeux, members of the College of Pharmacy, authors of this memoir, were each

rewarded with a gold medal, of the value of an hundred livres. The Society, however, again propoſes the ſame queſtion, for a prize of ſix hundred livres, to be determined at their annual meeting in Auguſt 1794.—Memoirs on this ſubject muſt be tranſmitted to Mr Vicq d'Azyr, perpetual ſecretary, on or before the 1ſt of December 1793.

2. In Auguſt 1791, the Society had propoſed the following queſtion, a prize of ſix hundred livres.

Indiquer les moyens les plus efficaces de traiter les malades, dont l'eſprit eſt devenu aliéné, avant l'age de vieilleſſe.

Though no memoir, preſented upon this ſubject, was thought worthy of the prize, yet the Society beſtowed a medal, of the value of one hundred livres, on M. Pinel, M. D. reſident in Paris, author of a memoir on this ſubject, which had for its epigraph, "Gerere ſe pro cujuſque natura neceſſarium;" and which contained many valuable obſervations on the treatment of different ſpecies of mania.

3. The queſtions reſpecting the different kinds of milk; and the ſigns of venereal infection

fection in new-born infants, which we have mentioned in former volumes, are alſo referred to a future year. Memoirs competing for theſe prizes, muſt be tranſmitted to M. Vicq d'Azyr, on or before the 1ſt of December 1793.

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In the Third Volume of the Memoirs of the Medical Society of London, we have an account of the diſtribution of the following prize medals.

The Fothergillian medal for 1790, was preſented to Dr Robert Willan of Ely place, for the beſt diſſertation on cutaneous diſeaſes.

A ſilver medal, for the ſame year, was preſented to Mr John Haighton, ſurgeon, for his paper on original deafneſs, and other ingenious communications.

And another ſilver medal was adjudged to Dr Caleb Hilber Parry of Bath, for his memoir on the removal of certain diſeaſes of the head, by compreſſion on the carotid artery.

The following medals were diſtributed for the year 1791.

The Fothergillian medal to Dr John Coakley Lettſom, for the beſt diſſertation in anſwer to the queſtion, "What are the principal diſeaſes of great towns, and what are the beſt methods of preventing or curing the ſame."

The ſilver medal for the beſt eſſay or eſſays, written by a Fellow, was adjudged to Mr James Ware, ſurgeon, for three valuable diſſertations on Diſeaſes of the Eye.

The other ſilver medal to Mr Charles Kite, ſurgeon at Graveſend, for his ingenious memoir on Submerſion.

No ſatisfactory anſwer having been given to the queſtion on Mineral Poiſons, which originally ſtood as the ſubject of the prize diſſertation for 1792, it ſtands over till next year.

The ſilver medals for 1792, were adjudged,

1. To Mr William Turnbull, ſurgeon, for his diſſertation on extra-uterine Geſtation, and other ingenious papers.

2. To Mr John Shadwell of Brentwood, for his paper on the internal and external uſe of oil in Hydrophobia.

The ſubjects propoſed for the Fothergillian medals, for the years 1793, 4, 5, and 6, are the queſtions

queſtions reſpecting the effects of Mineral, Vegetable, Animal, and Aerial poiſons, mentioned in our laſt volume.

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THOMAS KEATE, Eſq. ſurgeon to Chelſea hoſpital, and to the Queen and Prince of Wales, has been elected ſurgeon to St George's hoſpital, in the room of Charles Hawkins, Eſq. who has reſigned.

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THE new Weſtminiſter Lying-in hoſpital, in conſequence of the death of Dr Leake, has had a new arrangement made in it, with reſpect to the medical officers, who have been elected as follows:

George Pearſon, M. D. F. R. S., conſulting Phyſician.

James Ford, M. D. } Phyſicians, Men-mid-
Robert Bland, M D. } wives extraordinary.

Thomas Bradley, M. D. Phyſician in Ordinary.

Lewis

Lewis Poignand, M. D.
Andrew Thynne, M. D. } Phyſicians, Men-midwives in Ordinary.

——— Lewis,
James Lynn, } Surgeons.

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DR CLARKE has been elected phyſician to the Aſylum for female orphans, in the room of Dr Douglas, who has reſigned.

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THE Truſtees of Columbia college, in the State of New York, in North America, have lately conſtituted a Faculty of Medicine under their authority, by the ſtyle of "The Dean and Faculty of Medicine in Columbia College, in New York;" and have made the following appointments:

Samuel Bard, M. D. Dean.
Mr Richard Bayley, Profeſſor of Anatomy.
Samuel Nichol, M. D. Profeſſor of the Practice of Phyſic.
Jo. R. B. Rodgers, M. D. Midwifery.
Mr W. P. Smith, Materia Medica.

Sam.

Sam. Latham Mitchell, M. D. Chemiſtry.
R. S. Kiſſam, M. D. Botany.
W. Hammerſley, M. D. Inſtitutes of Medicine.
Mr W. Poſt, Surgery.

We are likewiſe informed, that, to render this inſtitution more complete, the Legiſlature of New York, have very liberally endowed the New York hoſpital, an elegant building, conſtructed on a plan ſuggeſted by the late Dr Fothergill, Sir John Pringle, and ſome other of the moſt eminent medical characters; but which, for want of funds, had heretofore been unoccupied. To this hoſpital, ſeveral members of the Faculty have been appointed phyſicians and ſurgeons; and it is their intention, to elect from their number two Clinical lecturers: ſo that a regular ſyſtem of medical inſtruction is now eſtabliſhed in that city.

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A VETERINARY College has lately been eſtabliſhed in London, for the reformation and improvement of Farriery, and the treatment of

of the diſeaſes of cattle in general. This inſtitution is ſupported by ſubſcription: and, from the numerous and reſpectable liſt of ſubſcribers, at the head of whom is his Royal Highneſs the Prince of Wales, there is every reaſon for believing, that a ſubject which has been too long neglected in this country, will, at length, receive the encouragement and attention which it deſerves. According to the preſent regulations, it is under the management of a preſident, twelve vice-preſidents, and twenty-four directors. Mr Viat de St Bel, a foreigner, who has particularly attended to this ſubject, is appointed profeſſor. In conducting the ſtudies, regular courſes of lectures are to be given, and an Infirmary eſtabliſhed for the reception of diſeaſed animals. And we apprehend there can be little doubt, that the inſtitution will anſwer many uſeful purpoſes.

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Some years ago, Mr James Clarke of Edinburgh, Farrier to his Majeſty for Scotland, who has deſervedly obtained great credit for ſeveral judicious publications on differ-

ent

ent ſubjects in farriery, publiſhed propoſals for eſtabliſhing a ſimilar Veterinary ſchool and hoſpital in Edinburgh. And although his plan has not yet met with ſuch encouragement, as to put it in his power to carry it into execution, yet he has by no means deſerted his intention. And from the countenance and protection he has received from the Duke of Buccleugh, and ſeveral other illuſtrious and patriotic characters, there is reaſon to hope, that, at Edinburgh alſo, this very intereſting ſubject will, at length, meet with the attention it deſerves.

* * * *

Dr Alexander Hamilton, Profeſſor of Midwifery, ſome months ago, publiſhed propoſals for the eſtabliſhment of a General Lying-in Hoſpital in this city; in conſequence of which, a conſiderable ſum has been already ſubſcribed for that charitable purpoſe.

The principles of Dr Hamilton's plan, are, *1ſt*, That the management of the hoſpital ſhall be veſted in thirteen directors, and a treaſurer, to be choſen annually by the ſubſcribers: *2dly*, That the patients ſhall be divided into

two

two claſſes, the married, and unmarried women: 3*dly*, That the latter ſhall be lodged in apartments entirely ſeparated from the former, and ſhall be attended by midwives alone, except when aſſiſtance of the phyſicians of the charity ſhall be found neceſſary: And, 4*thly*, That the phyſicians ſhall attend in the hoſpital at a certain hour on certain days of the week, for the purpoſe of giving gratis advice on the diſeaſes of women and children.

The directors of the preſent year, have purchaſed a houſe and area, placed in a ſituation admirably well adapted to the purpoſes of the inſtitution; and they expect to open it for the reception of patients, about the beginning of November next.

Caſe lectures on the chronic diſeaſes of women and children, will be regularly given at the hoſpital.

The General Lying-in Hoſpital, it is therefore hoped, will not only be of important uſe to the wives of the indigent citizens, &c. but will alſo be a very valuable addition to the inſtitutions for public inſtruction, eſtabliſhed at this Univerſity.

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Dr Clarke of London is, we are informed,

ed, preparing for the preſs a work, from which, much is expected in the medical department of Midwifery.

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Dr James Hamilton, junior, of Edinburgh, ſon to Dr Alexander Hamilton profeſſor of Midwifery, has been for ſome time engaged, in preparing for publication, a tranſlation of the admirable work of Morgagni on the Seats and Cauſes of Diſeaſes. This tranſlation is to appear under what may juſtly be reckoned an improved plan. It has long been regreted, that the original of Morgagni contains ſo much extraneous matter, and is written in ſo diffuſe a ſtyle, that few medical practitioners can find leiſure to beſtow upon it an attentive peruſal. Dr Hamilton propoſes to new-arrange the whole; to detail only the caſes which Morgagni or Valſalva witneſſed; to reject all collateral evidence; to prefix to each order, a ſhort view of the hiſtory, ſeats, and cauſes of the included diſeaſes; and to add to every important caſe, a few remarks. By adopting this plan, there is, we think, reaſon to hope, that he ſhall be enabled to render this very valuable work more generally

generally intereſting, and, conſequently, more extenſively uſeful, than it has been in its original ſtate. As conſiderable progreſs has, we are told, been already made in this work, it may probably be ſoon put to the preſs.

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Dr THOMAS TROTTER, now phyſician in Newcaſtle, who, at the time of his graduation in September 1788, publiſhed an inaugural diſſertation, "de Ebrietate, ejuſque effectibus "in corpus humanum," is now employed in the farther inveſtigation of that ſubject, which was recommended to his attention by the Royal Humane Society of London, who honoured him with their thanks for the ingenuity and novelty with which he had already treated it. Dr Cullen alſo expreſſed a ſtrong deſire to ſee it continued by his pupil.

From the author's extenſive obſervation in different climates, many intereſting facts will probably be brought to light in this publication. As, however, it will be ſome time before the work be ready for publication, the author, we are informed, will think himſelf much indebted to any medical gentleman, who will favour him

with

with any original fact upon the ſubject, addreſſed to him at Newcaſtle. What will be peculiarly acceptable, are, Caſes of intoxication attended with uncommon ſymptoms; Diſeaſes which originate from habits of ebriety; Obſervations on the beſt mode of treatment during a paroxyſm that threatens ſudden death; and Accounts of the appearances diſcovered on the diſſection of thoſe who have died from drunkenneſs.

* * * *

Dr PERCIVAL of Mancheſter, is at preſent engaged in preparing for publication, a work on medical juriſprudence, which will probably appear during the courſe of next Spring. It will conſiſt of ſix ſections. The firſt will treat of profeſſional conduct relative to hoſpitals or other public charities; the ſecond, of profeſſional conduct in private or general practice; the third, of the conduct of phyſicians towards apothecaries; the fourth, of the knowledge of law requiſite for phyſicians or ſurgeons; the fifth, of the attentions due from the faculty to the means of preſerving publick health; and the ſixth, of the demeanour and manners, and

of the literary, philoſophical, political, moral and religious character, of phyſicians. To this work will be added an Appendix, containing, 1*mo*, An addreſs to the Governors, the Faculty, and the Clergy, of the Infirmary at Liverpool, on their reſpective hoſpital duties, being the ſubſtance of an anniverſary ſermon, preached before the Mayor and Corporation of Liverpool, in May 1791, by the Reverend Thomas B. Percival, LL. B. of St John's College, Cambridge, Chaplain to the Marquis of Waterford, &c. 2*do*, Notes and Illuſtrations appertaining to medical juriſprudence.

* * * *

Dr THOMAS FOWLER, formerly phyſician at Stafford, now at York, who is already well known to the medical world by different publications, particularly by two ſmall treatiſes, entitled, Medical Reports, the one on the effects of Tobacco in the cure of Dropſies, the other on the effects of Arſenic in the cure of Agues and remitting Fevers, has been of late employed in preparing for the preſs, another treatiſe on a ſimilar plan, entitled, Medical Reports

ports of the effects of Phlebotomy, Sudorifics, and Bliſters, in the treatment of Acute and Chronic Rheumatiſm. When we conſider, that in this, as well as his former publications, Dr Fowler has adopted the Verulamian plan for the improvement of medicine, there can be little doubt, that his work, the fruit of experience and of accurate obſervation, will convey to the public much uſeful information.

* * * *

Dr Joſeph Fox of London, Dr James M'Donnell of Belfaſt, and Dr James Hamilton of Edinburgh, ſon to the Profeſſor of Midwifery, have, ſince the publication of our laſt volume, been elected Fellows of the Royal College of Phyſicians of Edinburgh; and Dr James Barter Makittrick Adair, has been admitted a Licentiate of the College. Meſſrs James Clark and Walter Harkneſs, have been admitted members of the Royal College of Surgeons.

Sir George Baker, Bart. Phyſician to their Majeſties, has been elected one of the Ten honorary members of the Royal College of Phyſicians in Edinburgh, a vacancy in that

number having taken place, by the death of the late John, Earl of Bute.

* * * *

During the year 1792, Sir Joſeph Banks, Bart., Preſident of the Royal Society of London; Dr Kemp, Profeſſor of Mathematics in Columbia College, New-York; Dr William Saunders, Phyſician, London; Dr Maxwell Garthſhore, Phyſician, London; Dr John Stark Robertſon, Phyſician, Bath; Dr Alexander Hunter, Phyſician, York; Dr Alexander Johnſon, Phyſician, London; Theophilus Houlbrooke, Eſq., and George Robertſon, Eſq., have been admitted non-reſident members of the Royal Society of Edinburgh: and Dr John Rotheram, Dr Andrew Coventry, and William Hall, Eſq., have been admitted reſident members.

* * * *

The Royal College of Phyſicians of London, have, during the courſe of the year 1792, been deprived, by death, of the following members: Sir Noah Thomas, Dr Robert

Robert Knox, Dr William Pitcairn, Dr John Monro, and Dr John Leake. And the Royal College of Surgeons of Edinburgh, have loſt Dr Robert Walker, Mr William Inglis, and Mr James Rae.

* * * *

In our laſt volume, we mentioned the death of Profeſſor Michaelis of Gottingen. But we committed a miſtake in ſuppoſing him to be the author of the treatiſe de Angina polypoſa. That work is the production of his ſon, who is ſtill alive, and is now Profeſſor of Phyſick at Marburg.

State

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State of the Thermometer, Barometer, and Rain, during the year 1791, according to obſervations made about a mile from the city of Edinburgh.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Med. Deg.	Higheſt. Inches.	Loweſt. Inches.	Medium. Inches.	Inches & Decimals.
Jan.	47	31	37	29.82	28.20	28.99	2.250
Feb.	52	26	38	30.26	28.90	29.50	2.245
Mar.	59	25	40	30.35	28.65	29.90	0.710
Apr.	59	33	41	30.05	28.85	29.70	2.895
May	73	42	46	30.22	28.92	29.99	1.885
June	76	40	54	30.12	29.10	29.78	2.527
July	77	45	53	30.20	29.03	29.75	1.385
Aug.	72	45	53	30.32	29.30	29.85	3.315
Sep.	77	40	49	30.25	29.10	30.00	1.365
Oct.	62	33	43	30.41	28.40	29.74	3.960
Nov.	55	31	45	30.02	28.50	29.53	3.320
Dec.	43	20	37	30.25	28.64	29.61	1.115
Whole Year.	77	20	45	30.41	28.20	29.69	26.972

State

* * * *

State of the Thermometer, Barometer, and Rain, during the year 1791, according to obſervations made at the apartments of the Royal Society of London.

Month.	Thermometer.			Barometer.			Rain.
	High. Deg.	Low. Deg.	Med. Deg.	Higheſt Inches.	Loweſt Inches.	Medium Inches.	Inches & Decimals.
Jan.	53	31	42	30.58	28.18	29.56	1.957
Feb.	52	30	41	30.48	29.16	29.94	0.873
Mar.	55	31	44	30.67	28.90	30.20	0.716
April	64	41	51	30.11	29.08	29.77	1.460
May	67	39	53	30.37	29.53	30.02	0.794
June	80	47	61	30.22	29.39	29.93	0.332
July	78	32	62	30.24	29.44	29.89	2.194
Aug.	78	50	64	30.52	29.65	30.06	0.824
Sept.	77	43	59	30.33	29.52	30.09	0.482
Oct.	62	34	48	30.46	28.89	29.69	2.027
Nov.	52	25	43	30.28	28.76	29.68	2.527
Dec.	48	21	36	30.38	28.90	29.64	1.124
Whole Year.	80	21	50	30.67	28.18	29.87	15.310

To the London regiſter, which is extracted from the Philoſophical Tranſactions, we find the following note added:

" On conſulting other regiſters kept in and near London, it appears, that the quantity of rain collected in the rain-gauge of the Royal Society, is remarkably deficient. Experiments are now making, to determine the cauſe of this deficiency, and, if poſſible, its amount. In the mean time, it was thought right to appriſe the public of the fact, that no reliance may be placed on that part of the Meteorological Journal, till farther information be obtained."

SECT.

SECT. IV.

List of New Books.

PHARMACOPOEIA Collegii Regii medicorum Edinburgenſis. Editio octava. 8vo, Edinburgi, 1792.

De Fœtu Humano Diſſertatio anatomico-phyſiologica. Auctore Onuphrio Agneſe Scaſſi Genuenſi, Phil. et Med. Doct. Reg. Soc. Med. Ed. Memb. 8vo, Edinburgi.

A ſyſtem of Surgery. By Benjamin Bell, member of the Royal Colleges of Surgeons of Ireland and Edinburgh, one of the Surgeons

to the Royal Infirmary, and Fellow of the Royal Society of Edinburgh. A new edition. 6 vols. 8vo, Edinburgh.

A treatiſe on the management of female complaints, and of children in early infancy. By Alexander Hamilton, M. D. Profeſſor of Medicine in the Univerſity, and Fellow of the Royal College of Phyſicians and of the Royal Society of Edinburgh. 8vo, Edinburgh.

The Animal kingdom, or Zoological ſyſtem of the celebrated Sir Charles Linnæus; Claſs Firſt, Mammalia; being a tranſlation of that part of the Syſtema naturæ, as lately publiſhed, with great improvements, by Profeſſor Gmelin of Gottingen, together with numerous additions from more recent zoological writers, and illuſtrated with copper-plates. By Robert Kerr, F. R. & A. SS. E. &c. 4to, Edinburgh.

An inquiry into the nature, cauſe, and cure of the gout, and of ſome of the diſeaſes with which it is connected. By John Gardiner, M. D. Fellow of the Royal College of Phyſicians and of the Royal Society, Edinburgh, &c. 8vo, Edinburgh.

An

An inquiry into the remote cauſe of urinary gravel. By Alexander Philip Wilſon, M. D. Soc. Med. Ed. Soc. 8vo, Edinburgh.

A treatiſe on the Gonorrhœa virulenta, and Lues Venerea. By Benjamin Bell, Member of the Royal Colleges of Surgeons of Ireland and Edinburgh, &c. 2 vols. 8vo, Edinburgh.

Letters to Dr William Oſborn, Teacher and Practitioner of Midwifery in London, on certain doctrines contained in his eſſays on the Practice of Midwifery, from Alexander Hamilton, M. D. F. R. S. Ed. Profeſſor of Midwifery in the Univerſity, and Fellow of the Royal College of Phyſicians, Edinburgh. 8vo, Edinburgh.

Philoſophical Tranſactions of the Royal Society of London for the year 1792. 4to, London.

Obſervations on the Scurvy, with a review of the opinions lately advanced on that diſeaſe; and a new theory, defended on the approved method of cure, and the induction of pneumatic chemiſtry. 2d edition. 8vo, London.

Memoirs

Memoirs of the Medical Society of London, inſtituted in the year 1773. Vol. III. 8vo, London.

Eſſays on the Practice of Midwifery, in natural and difficult labours. By William Oſborn, M. D, 8vo, London.

A treatiſe on the Hydrocele, with the radical cure. By J. Earle. 8vo, London.

An inquiry into the cauſes which produce, and the means of preventing, diſeaſes among Britiſh officers in the Weſt Indies; containing obſervations, &c. By John Bell, M. D. 8vo, London.

An eſſay on the vitality of the blood. By James Corrie, M. D. 8vo, London.

An eſſay on vital ſuſpenſion; being an attempt to inveſtigate, and to aſcertain, thoſe diſeaſes in which the principles of life are apparently extinguiſhed. By a Medical Practitioner. 8vo, London.

The Medical Spectator, to be continued weekly. 8vo, London.

A treatiſe on the diagnoſis and prognoſis of diſeaſes. Part I. By P. P. Price. 8vo, London.

A ſhort inquiry into the merits of a new-diſcovered fact, of a relative nature, in the venereal

venereal poiſon, &c. By Thomas Ogle, junior, ſurgeon extraordinary to his Royal Highneſs the Prince of Wales. 8vo, London.

Medical advice to the inhabitants of warm climates. By R. Thomas. 8vo, London.

A treatiſe on the fevers of Jamaica; with ſome obſervations on the unremitting fevers of America. By R. Jackſon, M. D. 8vo, London.

An eſſay on the injurious cuſtom of mothers not ſuckling their own children. By B. Lane. 8vo, London.

The utility of medical electricity, illuſtrated in a ſeries of caſes and practical obſervations. By Francis Lowndes. 8vo, London.

A treatiſe on the diſeaſe commonly called Angina Pectoris. By William Butter, M. D. 8vo, London.

A treatiſe on Air, containing new experiments and thoughts on combuſtion; being a full inveſtigation of M. Lavoiſier's ſyſtem. By R. Bewley, M. D. 8vo, London.

An expoſition of the principles of Anatomy and Phyſiology; containing the Prælectiones Anatomicæ of Ferdinand Leber, tranſlated from

from the original, publiſhed in Latin at Vienna. By Walter Vaughan, M. D. 8vo, London.

Caſe of extra-uterine conception, with plates. By H. Krohn, M. D. 8vo, London.

The deſcriptions and characters of the different diſeaſes of the human body; being the firſt volume of the Franklinean Improvement of Medicine. By George Edwards, M. D. 4to, London.

Select evidences of a ſucceſsful method of treating fever and dyſentery in Bengal. By J. P. Wade, M. D. 8vo, London.

A letter to the patentee, concerning the medical properties of the fleecy hoſiery. By Dr Buchan. 8vo, London.

A complete treatiſe on the origin, theory, and cure of the Lues Venerea, and obſtructions in the urethra, illuſtrated by a great variety of caſes; being a courſe of twenty-three lectures read in Dean-Street, Soho, in the years 1790 and 1791. By Jeſſe Foote, ſurgeon. 4to, London.

An eſſay upon ſingle viſion with two eyes. By C. Wells, M. D. 8vo, London.

Synopſis

Synopſis of Britiſh birds. By J. Walcot, Eſq. 2 vols. 4to, London.

Medical hiſtories and reflections. By John Ferrier, M. D. 8vo, London.

A practical eſſay on diſeaſes of the viſcera, particularly thoſe of the ſtomach and bowels, the liver, ſpleen, urinary paſſages, &c. By John Leake, M. D. Member of the Royal College of Phyſicians, and Phyſician to the London Lying-in Hoſpital. 8vo, London.

The importance and method of cultivating and curing Rhubarb. By Sir William Fordyce, M. D. 8vo, London.

The Botanic Garden. Part I. Containing the œconomy of vegetation. A poem; with philoſophic notes, and plates. 4to, London.

An analyſis of the new London pharmacopœia, explaining the nature, principles, qualities, uſes, and doſes of the various preparations and compoſitions therein contained, and particularly calculated for the uſe of junior ſtudents. By Ro. White, M. D. 8vo, London.

An eſſay on the ſwelling of the lower extremities in lying-in women. By Charles Brandon Trye, ſurgeon. 8vo, Plymouth.

An

An account of the efficacy of the aqua mephitica alkalina, or ſolution of fixed alkaline ſalt, ſaturated with fixible air, in calculous diſorders, and other complaints of the urinary paſſages. By W. Falconer, F. R. S. 8vo, London.

A compendious ſyſtem of the theory and practice of modern ſurgery, arranged in a new manner, and a new noſological and ſyſtematic method, different from any attempted in ſurgery, in the form of a dialogue. By Hugh Monro, ſurgeon. 8vo, London.

Eſſais ſur les moyens de former de bons medicins, ſur les obligations reciproques des medecins, et de la ſocieté; partie d'un projet d'education nationale relative à cette profeſſion. Par J. J. Menuret, Docteur en Medecine, &c. &c. 8vo, Paris.

Monographie, pour ſervir à l'hiſtoire naturelle et botanique de la famille des plantes etoilées: Oeuvrage couronné dans la Seance publique de l'Academie Royale des Sciences, Arts, et Belles Lettres de Lyon, le 7 Decembre, 1790. Par M. Willemet, Demonſtrateur royale de Chimie et de Botanique au College

College de la Faculté de Medecine de Nancy, &c. 8vo, Straſbourg.

Hiſtoire abregée de la Lithotomie. Par M. Saucerotte, Maitre en Chirurgie gradué, Aſſocié de l'Academie Royale de Chirurgie de Paris, &c. 8vo, Nanci.

Journal de Chirurgie. Par M. Deſault, Chirurgien en Chef de l'Hotel Dieu de Paris. Tom. I. & II. 8vo, Paris.

Verhanderling over den Waaren Aart der Kinder-pokjes; *i. e.* An eſſay on the nature and cure of the Small-pox. By the late Imam Jacob Van den Boſch, M. D. and member of ſeveral academies. 8vo, Rotterdam.

J. A. Entwürf einer praktiſchen Arzneymittellehre, &c.; *i. e.* J. Arnemann's ſketch of a practical hiſtory of the Materia Medica. Vol. I. On internal remedies. 8vo, Gottingen.

Mediciniſche Fragmente und Erinnerungen, &c.; *i. e.* Medical fragments and memorandums, &c. By M. A. Weikard. 8vo, Frankfort.

Beytrag zur Kenntniſs des Pemphigus, &c.; *i. e.* Eſſay on Pemphigus. By J. E.

Wichmann, Phyſician in ordinary to the Elector of Hanover. 4to.

Beſchouwende en Werkende, &c.; *i. e.* Chemiſtry, theoretical, practical, pharmaceutic, &c. By M. P. G. Kaſtelyn, apothecary and chemiſt at Amſterdam. 3 vols. Tom. 1. & 2. 8vo, Amſterdam.

Herm. Joſ. Brunninghauſen, uber den Bruch des Schenkelbeinhalſes; *i. e.* On the fracture of the neck of the os femoris in general, and particularly on a new method of curing it, without lameneſs enſuing. By H. J. Brunninghauſen. 8vo, Wurtzburg.

S. T. Sommering Von Baue des Menſlichen Korpers, &c.; *i. e.* S. T. Sommering on the ſtructure of the human body. Vol. I. Oſteology. II. Syndeſmology. III. Myology. V. Neurology. 8vo, Frankfort.

Syſtematiſchen Grundriſs der allgemeinen Experimental Chemie; *i. e.* A general ſyſtem of experimental chemiſtry. By Dr Sigiſm. Fred. Hermbſtadt. 3 vols. 8vo, Berlin.

De morbis quibuſdam commentarii. Auctore Clifton. Wintringham, Baronetto, M. D. Tom. II. 8vo, Londini.

J. E.

J. E. Gilibert, Med. Prof. Adverſaria medico-practica. Pars I. 8vo, Lyons.

Reliquiæ Rudbeckianæ, ſive Camporum Elyſiorum, &c. Cura J. E. Smith. Folio, Londini.

Praxis medica ſyſtematice expoſita, &c. The practice of Medicine, ſyſtematically exhibited, and illuſtrated by ſelect caſes from the Journal of Frederic's Hoſpital. By Fred. L. Bang, M. D. 8vo, Copenhagen.

Diſpenſatorium Fuldenſe Tripartitum, &c. The Fulda Diſpenſatory, in three parts, adapted to the practice of the country, and the genius of modern times. By Francis Ant. Schlereth, Ph. & M. D. Archiater to the Prince Biſhop of Fulda, &c. 8vo, Francofurti.

Bernhardi Albini, M. D. &c. Cauſæ et ſigna morborum. Vol. I. 8vo, Dant. & Straſb.

Tabula plantarum fungoſarum, &c. Auct. Jacobo Paulet, M. D. 4to, Par. & Straſb.

Delectus opuſculorum medicorum antehac in Germaniæ diverſis Academiis editorum, quæ, &c. Collegit Joh. Pet. Frank, &c. Vol. II. & III. 8vo, Lipſiæ.

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