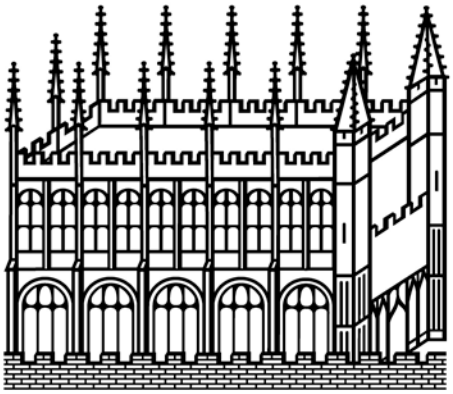


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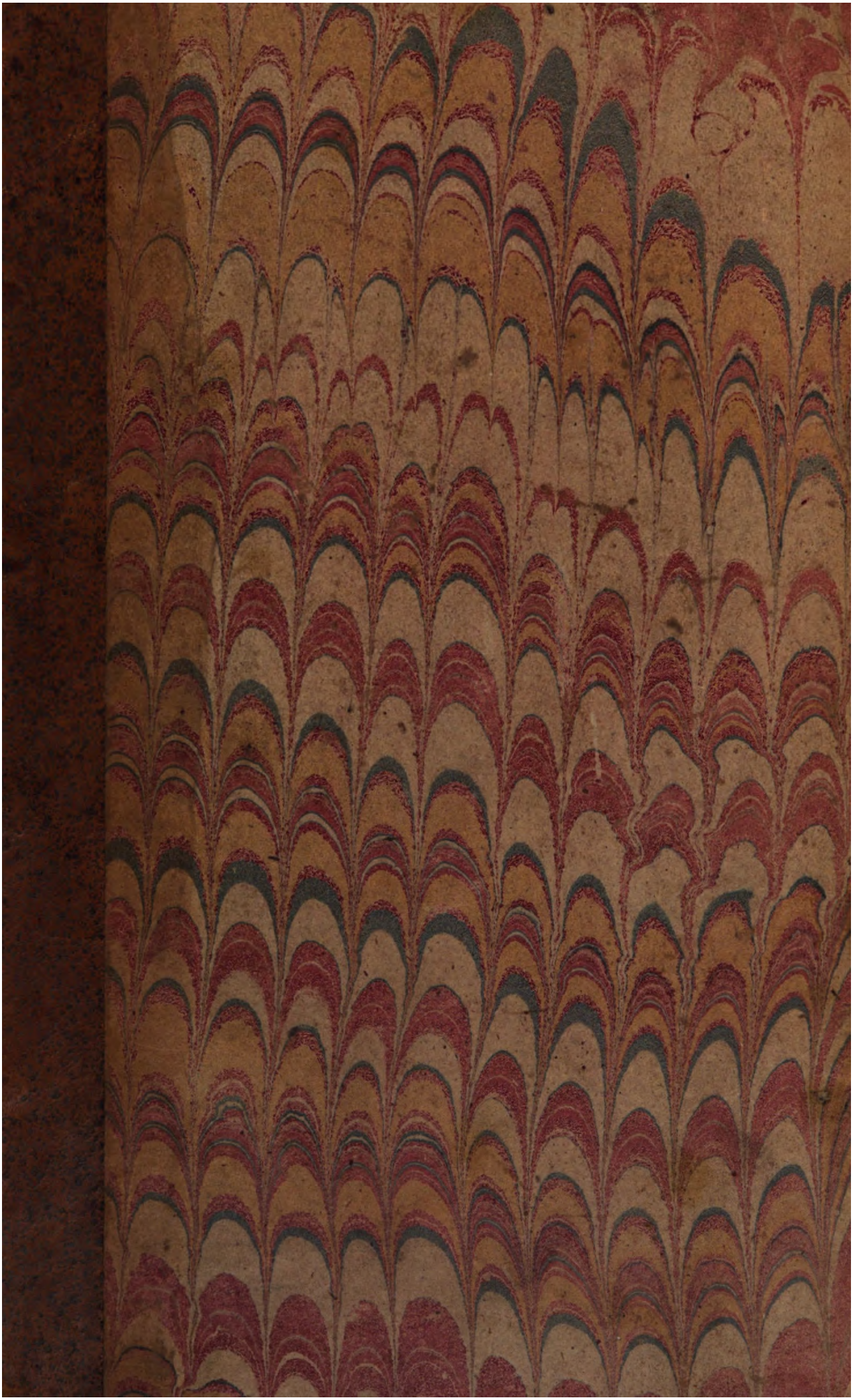
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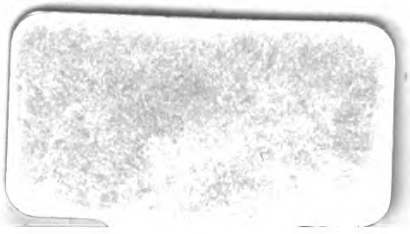
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P. L. A Wall M.D. Oxon 1789

MEDICAL COMMENTARIES,

FOR THE YEAR M,DCC,LXXXVIII.

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.S.Ed.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES FOR SCOTLAND,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH, AND MEMBER OF THE ROYAL SOCIETIES OF MEDICINE OF PARIS, COPENHAGEN, EDINBURGH, &c.

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

DECADE SECOND.

VOL. III.

EDINBURGH:

PRINTED FOR C. ELLIOT AND T. KAY, at Dr Cullen's Head, N° 332, opposite Somerset-Place, Strand, LONDON;

AND FOR C. ELLIOT, EDINBURGH.

M,DCC,LXXXIX.


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TO

ALEXANDER WOOD, Esq.

SURGEON in *Edinburgh;*

This Volume is dedicated,

As a teſtimony of high eſteem

For his well-known abilities in his profeſſion,

Of ſincere reſpect

For his character as a Man;

And of

Unfeigned gratitude, for many ſingular obligations

Which he has conferred upon

his moſt obedient ſervant,

ANDREW DUNCAN.

Avida eſt periculi virtus, et quo tendat, non quid paſſura ſit, cogitat.

SENECA.



PREFACE.

SOME ingenious friends, on whoſe approbation we put a high value, and from whoſe ſuggeſtions we ſhall always be happy to improve this work, were of opinion, that too large a proportion of our laſt volume was occupied with the analyſis of new books. In the preſent volume, this fault is not corrected. We truſt, however, that the profeſſed intention of our annual volume, that of exhibiting a conciſe view of uſeful improvements and important diſcoveries, will be ſome apology for our conduct. For every reader muſt be ſenſible, that a much greater proportion of theſe is to be collected from the tranſactions of public ſocieties, and the writings of individuals, than from the private communications of our correſpondents. Accordingly, in the Leipſic commentaries, from which the plan of our

work is chiefly borrowed, the analyſis of books occupies a ſtill larger proportion of each volume than in our publication; and we flatter ourſelves, that from not confining this ſection to a mere analyſis, but candidly offering our opinion, reſpecting the facts and doctrines which new books contain, thoſe even who are poſſeſſed of the original works, may ſtill peruſe our account of new books with pleaſure and advantage; while to thoſe who do not poſſeſs theſe works, this ſection of our publication muſt convey much uſeful information, which they could not otherwiſe obtain, without both conſiderable labour and expence. Theſe conſiderations will, we truſt, be a ſufficient apology for ſtill continuing our work on the former plan.

By theſe remarks, however, nothing is farther from our intention than to diſcourage ingenious correſpondents, from communicating to the public, through

through the channel of our annual volume, any intereſting obſervations which may occur to them. Theſe, whether we judge them proper for publication or not, ſhall always be received with gratitude; and when they do not appear, the author will be informed in private, of our reaſons for not giving them a place. Communications intended for this work, may, as formerly, be either tranſmitted directly to Dr Duncan at Edinburgh, or to the care of Meſſrs Elliot and Kay, bookſellers, oppoſite to Somerſet-place, Strand, London.

EDIN. Dec. 1. 1788.

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MEDICAL

MEDICAL COMMENTARIES,

FOR THE YEAR 1788.

VOL. III. DECADE II.

SECT. I.

Account of New Books.

I.

Diſſertatio Medica de Cortice Geoffrææ Surinamenſis. Auctore Nicolao Bondt, *M. D.* 8vo, Lugduni Batavorum.

THE author of this diſſertation ſets out with obſerving, that he is to treat of a remedy, poſſeſſing remarkable virtues, hitherto but little known, and not accurately deſcribed. He thinks it neceſſary, therefore, to begin with giving ſome account of its introduction

troduction for medical purpoſes. It is not, he obſerves, many years, ſince a ſpecies of the Geoffræa, or Cabbage-bark tree, growing in Jamaica, was firſt recommended as an anthelmintic remedy, in a letter from Mr Duguid to Dr Donald Monro, publiſhed in the Edinburgh Phyſical and Literary Eſſays. Some farther obſervations reſpecting it were ſoon after publiſhed, in theſe Commentaries, by Dr Monro, Mr Anderſon, and others; and a full account of the tree from whence this bark is obtained, was, not long after, given by Dr Wright in the Philoſophical Tranſactions. Dr Wright deſcribes it under the title of Geoffræa Jamaicenſis inermis; and this, Dr Bondt obſerves, was the only ſpecies at that time employed as a medicine, or known to phyſicians.

But a few years ago, ſome phyſicians became acquainted with another ſpecies growing in Surinam. Of the medical properties of this article, they were informed by Dr Van Stuyveſant, then practiſing medicine in that part of America, and who was the firſt European phyſician who exhibited it at that place. In the year 1770, among the patients under his

his care, he had a negro girl, ſubjected to violent convulſions, followed by blindneſs, laſting for ſome hours. Many ſymptoms concurred to indicate the preſence of worms as the cauſe of this affection. Upon the exhibition of the uſual anthelmintics, ſome worms were expelled, which tended to confirm the diagnoſis. But he found himſelf unable to accompliſh a cure, the convulſions daily returning with very great violence. A native American Indian, who was prince, prieſt, and phyſician of his tribe, happening to ſee this patient, confidently aſſerted that he could cure her with eaſe. The learned phyſician readily agreeing to a trial, the Indian immediately departed, and ſoon after returned with a potion which he had prepared. Of this he adminiſtered about three ounces to the patient. Violent convulſive motions ſoon ſucceeded; and, at the end of three hours, a large quantity of watery fluid was diſcharged by ſtool, and, together with it, eighty three worms convoluted into a ball. The day following he exhibited a ſimilar doſe, by which, without any convulſive motions, upwards of ſixty lumbrici were expelled: And, upon the

repetition of a third dose, the succeeding day, the cure was completed.

The learned physician, struck with the efficacy of this remedy, entertained a strong desire to be acquainted with it. And, by the interposition of Mr Nepveu, at that time governor of Surinam, a liberal encourager of the arts and sciences, the Indian, for a considerable pecuniary reward, agreed to discover his secret. Upon this, Dr Van Stuyvesant was carried to the woods by the Indian, who pointed out to him the tree furnishing the bark from which his potion was prepared. Of this bark, in its recent state, he formed a decoction, by boiling two ounces of it with thirty ounces of water, till two thirds only remained. From the colour, smell, and effects of this decoction, he was soon satisfied that the Indian had discovered the real bark to him.

The first who received this bark in Europe, was a learned apothecary at Utrecht, Mr Juliaans; a man justly celebrated for his knowledge, and elegant collection in the way of natural history. To him a portion of the bark was sent from Surinam by a relation, together

gether with ſome of the leaves, flowers, and fruit, both preſerved in ſpirits, and dried: And a preſent of the bark alone, has ſince that been annually repeated. As Mr Juliaans alone poſſeſſed this bark, he gave portions of it to different phyſicans by way of trial. The reſult of three trials was collected by his ſon, a very learned and worthy young phyſician, who intended to have publiſhed an account of them. But he was unfortunately ſnatched from the world by a premature death. After this event, the obſervations were put into the hands of Dr Voltelen, who communicated them to our author, together with an account of other trials made by himſelf. With all theſe, then, we are preſented in the treatiſe now before us.

Our author begins by giving a botanical deſcription of the Geoffræa Surinamenſis. This genus, to which the name of Geoffræa was firſt given by Mr Jacquin, in memory of the celebrated Geoffroy, belongs to the claſs of Diadelphia, and order of Decandria, in the ſyſtem of Linnæus. After copying from Linnæus the generic character given of it by that great botaniſt, he obſerves, that

it is eaſily diſtinguiſhed from its co-genera, as there is only one other genus belonging to the ſecond claſs of Diadelphia, which bears the drupa, or pulpy pericarpium. Linnæus has referred it to the natural order of the Papilionaceæ, and, in the opinion of our author, there is no natural order to which it can with greater juſtice be referred. To theſe, at leaſt, both the flower and leaves have a very exact reſemblance. From this order, however, it recedes conſiderably in its fruit, in which it much more nearly reſembles the Pomaceæ. For it bears a large fleſhy drupa, marked with a longitudinal furrow, and containing one hard ſtone. Beſides, there is ſome reaſon to think, that, by culture, like others of the Pomaceæ, its drupa may afford an eatable and grateful fruit. Dr Bondt, however, does not think this a ſufficient reaſon for removing it from the order of the Papilionaceæ, ſince it has ſo many very obvious marks of that order.

After theſe obſervations on the genus, Dr Bondt next proceeds to make ſome remarks on the different ſpecies of the Geoffræa. One only is mentioned by Linnæus, the Geoffræa

offræa Spinoſa. And of this, a very full and accurate deſcription is given by Mr Jacquin, in his *Hiſtoria Plantarum*. This deſcription Dr Bondt here inſerts, from the writings of that author.

Another ſpecies is very accurately deſcribed by Dr Wright, in the 67th volume of the Philoſophical Tranſactions, under the title of Geoffræa Jamaicenſis inermis, or Cabbage-bark tree. Of this, alſo, our author preſents us with a deſcription extracted from the work juſt mentioned.

A third ſpecies, which has not hitherto claimed the attention of any former botaniſt, our author deſcribes under the title of Geoffræa Surinamenſis. After giving a minute deſcription of the flowers, fruit, leaves, &c. all of which are illuſtrated by an accurate engraving, he points out, more particularly, thoſe characteriſtic marks which diſtinguiſh the Geoffræa Surinamenſis from the other ſpecies; and he concludes with giving the following abridged deſcription, which he thinks will ſufficiently ſerve to diſtinguiſh it.

Geoffræa Surinamenſis inermis, foliolis ovalibus obtuſis ſive retuſis, carina dipetala.

It is not yet determined whether this grows in other places beſides Surinam. Dr Bondt, however, thinks it probable, that it will at leaſt be found in other parts of Guinea. It is found chiefly in the woods, in ſandy and mountainous ſituations. It flowers and bears fruit twice in the year. The native Indians give it the name of Wewe; and in the Negro-Engliſh, it is called Blakke-cabbes, or Worm-houde.

Beſides theſe three ſpecies of Geoffræa, Dr Bondt mentions alſo a fourth, of which, however, when his treatiſe went to the preſs, he had never ſeen a ſpecimen; and he deſcribed it entirely upon the report of others. From the accounts he at firſt had, he concluded this to be merely a variety of the Geoffræa Jamaicenſis. But having afterwards obtained a ſpecimen of it, he informs us, in an appendix, that it is really a different ſpecies. This tree is called by the Indians Hereouré. Its anthelmintic power is much leſs conſiderable than the former; and he thinks that it ought to be particularly attended to, as the one bark may be fraudulently ſubſtituted for the other.

After

After thus giving, in the firſt chapter, a botanical deſcription of this article, he proceeds, in the ſecond, to preſent the reader with the external marks of the bark, the part which is uſed in medicine, and with its chemical analyſis.

The bark of the Geoffræa Surinamenſis is chiefly brought over in fragments of about a foot in length, and a few inches in breadth. It is of conſiderable thickneſs and weight; but the thickneſs varies according to the age of the tree, and according to its being taken from the branches or trunk. Its external ſurface is generally covered with lichens, from which it gets an aſh colour. But when theſe are removed, its colour is a reddiſh brown. Under this, is placed a very firm tenacious bark of an iron colour. When cut tranſverſely, it has a ſhining and variegated appearance. That part of the bark next the wood, is of a dark purple colour. And when reduced to powder, it reſembles light-coloured cinnamon. After being kept for ſome time, it is inodorous; but, when firſt taken from the tree, it is ſaid to have ſomewhat of a nauſeous ſmell. Upon long chewing,

ing, it gives out a ſlightly bitter and ſharp taſte. But the taſte is more conſiderable in bark taken from young, than from old trees, which is almoſt inſipid. It is alſo much ſtronger in the dark layer next the wood, than in the exterior ones.

After the Geoffræa Surinamenſis became celebrated in Holland, the Geoffræa Jamaicenſis, imported from England, was often ſold in place of it in the ſhops. This, however, Dr Bondt obſerves, is an article much more limited in the doſe, and more violent in its effects. And he therefore thinks it highly neceſſary to point out the external marks by which the one may be diſtinguiſhed from the other. Thoſe fragments of the Jamaica bark, which Dr Bondt has ſeen, are of a leſs ſize than the Surinam, and ſeem evidently to be taken from a tree of ſmaller diameter. It is leſs covered with lichens, is more compact, and more ponderous. When cut tranſverſely, it has a more ſhining appearance; and it differs conſiderably from the other in colour, nearly approaching to the variegated appearance of rhubarb. Its ſmell, particularly when rubbed, is much more conſiderable than

than that of the Surinam bark, and, upon chewing, it much ſooner gives out a bitter taſte. Theſe marks, he thinks, will ſerve readily to diſtinguiſh the Surinam from the Jamaica bark, and ſtill more from the Mezereon bark, which has ſometimes alſo been ſold in place of it.

In the way of chemical analyſis, Dr Bondt firſt tried this bark by what is called dry diſtillation. Sixteen ounces of the bark of the Geoffræa Surinamenſis, put into a glaſs retort, were expoſed in a ſand-bath to the heat of boiling water, for about the ſpace of a day. During this period, there came over a phlegm, almoſt colourleſs, and of the faint, nauſeous odour peculiar to the bark, but ſomewhat empyreumatic. It had a ſlightly acid taſte, but did not efferveſce with alkalies, nor change the colour of ſyrup of violets. It gave, however, a red colour, with the tincture of heliotropium. The quantity of this water which came over, weighed two ounces, five drams, and fifteen grains.

On the ſecond day, a higher degree of heat was applied, by which there came over a ſpirit to the amount of one ounce four drams,

drams, and thirty-five grains. This ſpirit was of a dark reddiſh brown colour. It had the ſmell of burnt wood, or ſmoked beef, and an acid empyreumatic taſte. It effervesced ſtrongly with alkaline ſalts, aſſuming a milky appearance, and having ſome drops of oil ſwimming on it; a mark that the ſpirit was not pure, but, as is uſually the caſe, ſomewhat impregnated with oil.

On the third day, the heat was gradually raiſed to the utmoſt height that the glaſs could bear: And, by this, there was brought over two ounces four drams and fifty grains of ſpirit and oil. The colour of this laſt ſpirit, was of a darker brown. It had a burnt ſmell, an acid and bitter taſte. But it effervesced little with alkaline lixivium, the acidity being much blunted by the oil with which it was mixed. The oil was of a dark, black, pitchy appearance, and a conſiderable part of it adhered both to the ſides of the retort and receiver. The greater part of this oil was more ponderous than the ſpirit; but a few drops ſwimmed on its ſurface. It had an empyreumatic ſmell; and, with the

leaſt

leaſt portion of ſpirit and oil, a conſiderable quantity of elaſtic vapour eſcaped.

In the retort there remained a black charcoal, retaining the figure of the fragments of bark. It was very friable, and weighed five ounces three drams and thirty grains. Thus, the whole products taken together, amounted to twelve ounces two drams and ten grains: So that of the ſixteen ounces put into the retort, there were loſt three ounces five drams and fifty grains; which was partly to be aſcribed to the thick oil adhering to the ſides of the veſſels, which could not be ſeparated, and partly to the elaſtic vapour, which was not confined by the luting. The charcoal, reduced to a powder, when tried with the magnet, ſhewed no marks of iron. It was afterwards treated by incineration and elixiviation. But the account of theſe trials our author reſerves to be afterwards mentioned.

To determine whether this bark contained any volatile matter, he next tried it in the way of humid diſtillation. To thirty-two ounces of it, fourteen pounds of water were added. After twenty-four hours of cold, and twelve of warm digeſtion, it was ſubjected to diſtillation

diſtillation by very gentle boiling; and this diſtillation was continued till ſeven pints were drawn off. The water thus obtained was almoſt limpid. It had, however, ſomething of a whitiſh caſt; but it ſeemed to be entirely free from oil. It had a peculiar nauſeous odour, pretty ſtrong, and ſimilar to that which the phlegm obtained by dry diſtillation emitted. The taſte was malkiſh, reſembling the ſmell. This whitiſh colour, ſmell and taſte, were moſt manifeſt at the beginning of the diſtillation, and gradually diminiſhed towards the end of it. This diſtilled water produced no change on the ſyrup of violets, or tincture of heliotropium; and it produced no precipitation, with a ſolution of corroſive ſublimate, or of ſilver. Nor did it occaſion any turbid appearance with lime-water. The liquor which remained in the ſtill had no ſmell, but had a bitter and aſtringent taſte. It had a reddiſh brown colour, but was pellucid; and it formed ink, on the addition of a ſolution of vitriol of iron. The bark ſubjected to diſtillation ſtill retained its figure, but was almoſt void of taſte.

The liquor which remained after the humid diſtillation, was ſtrained through paper, and evaporated

evaporated to the conſiſtence of thick honey; and it yielded two ounces ſix drams and twenty four grains of this watery extract. Under this evaporation, the ſmell diſcoverable in the diſtilled water was again obvious. This extract had a very black colour, a ſlight but peculiar ſmell, ſomewhat reſembling that of bitter almonds, and a very bitter ſharp taſte. When ſhaken with water it frothed much; and this froth had a light red colour. The water agitated with it, obtained a brown colour. The extract was found not to attract moiſture from the air, but to loſe its own moiſture, being gradually dried.

With the bark which had been ſubjected to the humid diſtillation, another decoction was formed, by boiling it with water for the ſpace of an hour. Four ounces, however, were previouſly taken away, to be employed in another experiment, afterwards to be mentioned. This ſecond decoction, though leſs ſtrongly ſaturated, had a reddiſh brown colour, a bitter ſubaſtringent taſte, and no ſmell. With a ſolution of the vitriol of iron, it alſo ſtruck a black colour; and, after ſtraining, this decoction alſo was inſpiſſated into an extract very

much

much reſembling the former. It was of a leſs dark colour, but had manifeſtly the ſmell of bitter almonds, and it weighed one ounce two drams and thirty-two grains. To determine, however, with greater exactneſs, the quantity of extract yielded by this bark, eight ounces were treated by four different coctions; at the end of the laſt of which, the decoction had ſo little colour or taſte, that farther treatment in this manner was thought unneceſſary. All theſe decoctions were mixed, and ſubjected to evaporation. During the evaporation, a pellicle frequently formed upon the ſurface, which was carefully removed and kept apart. After inſpiſſating to the conſiſtence of thick honey, the extract weighed one ounce two drams and thirty-ſix grains; and the pellicles kept ſeparate, weighed three drams four grains. The former was of a black, the latter of a brown colour. Both had the ſmell of bitter almonds, a very bitter taſte, and gave a brown colour to water.

For obtaining the reſinous part of this bark, eight ounces of it, cut very ſmall, were ſubjected to warm digeſtion for four days, with forty ounces of rectified ſpirit of wine. The

tincture

tincture, poured off and ſtrained through paper, was of a deep red colour, and very highly ſaturated. It had however no ſmell, but what it borrowed from the ſpirit of wine. Upon the ſame bark, thirty-two ounces of freſh ſpirit were poured. After warm digeſtion for the ſpace of a week, the filtrated tincture obtained from it, had an elegant red colour, but appeared to be leſs ſaturated than the former. A third quantity of ſpirit of wine, to the extent of ſixteen ounces, was then poured upon the bark. After warm digeſtion for four days, the tincture obtained was of a light red, or yellowiſh caſt; ſo that farther digeſtion ſeemed unneceſſary. All theſe tinctures were mixed and expoſed to gentle heat in a retort, that the greateſt part of the ſpirit might be abſtracted. The ſpirit obtained from them, differed in nothing from rectified ſpirit of wine. The remaining tincture was inſpiſſated by a gentle heat, till it obtained the conſiſtence of a thick ſyrup. Under this evaporation, reſinous particles evidently fell to the bottom. The liquid thus inſpiſſated, was put into eighteen pints of pure water, which became, upon this, of a milky hue,

and there took place a complete precipitation of the reſin. This was ſeparated from the liquor by filtration through paper; and, after being properly dried, it weighed one dram twenty-four grains.

The reſinous matter, thus obtained, was of a friable nature. It did not adhere to the fingers, but, when chewed, it ſtuck to the teeth. It was of a dark red colour, of a ſpirituous, reſinous ſmell, and bitteriſh taſte. Thrown upon a hot iron, it ſwelled, giving out a reſinous ſmell; and, from the action of flame, it burnt, leaving a ſpongy, black, friable charcoal.

As, in conſequence of digeſtion with ſpirits, the reſinous part chiefly was drawn off, Dr Bondt wanted to try whether any portion of watery extract ſtill remained in the bark. For this purpoſe, he boiled the bark which had been thrice digeſted with ſpirit of wine, in ſix pounds of water for half an hour. The decoction, when ſtrained, was of a red and lightly brown colour. A ſecond and third decoction were made; and, upon inſpiſſation, four drams fifty-five grains of extract were obtained,

obtained, which had the colour, taſte, ſmell, and other attributes of the former extracts.

Having thus found, that although ſpirit of wine removed a conſiderable quantity of the watery extract, yet ſome portion ſtill remained; he next endeavoured to determine, whether the water, in boiling, acted upon the reſin. He took, therefore, four ounces of the bark, which had been employed in forming the diſtilled water, and ſubjected it to warm digeſtion, with twelve ounces of rectified ſpirit of wine. At the end of four days, he obtained a ſaturated tincture, of a deep red colour. Another warm digeſtion, with eight ounces of rectified ſpirit, continued for three days, gave likewiſe a fully ſaturated tincture; but a third digeſtion, with other eight ounces, gave only a tincture of a light red colour. Theſe tinctures, treated in the manner already mentioned, yielded twenty-four grains of reſin, preciſely ſimilar to the former. It thus however appeared, that, with the watery extract, a conſiderable proportion of reſin was united.

The ſame concluſion was alſo drawn from another experiment. Four drams of watery extract were put into a phial, with four oun-

ces of rectified ſpirit of wine. Digeſtion was performed for near two weeks, partly warm, partly cold; the mixture, during that time, being frequently agitated. The tincture, after being ſtrained, had a light red colour, and manifeſtly bitter taſte; an evident proof that it contained real reſin. It ſeemed probable to Dr Bondt, that this reſin, united with the watery extract, conſtituted that pellicle which roſe to the ſurface. He therefore put three drams of this pellicle, which had been kept ſeparate, into four ounces of rectified ſpirit of wine, and digeſted for ſeveral days, partly cold, partly warm, frequently ſhaking the mixture. It was in part diſſolved, and gave a golden-coloured tincture, of a very bitter taſte. Much of it, however, was left undiſſolved, which was of a brown colour, and here and there of a ſhining appearance. This reſiduum had no colour: It adhered to the teeth on chewing: It was with difficulty diſſolved in water; and the greateſt part of it was inſoluble. It ſeemed, therefore, that this pellicle, riſing on the inſpiſſation of the decoction, conſiſted of reſinous matter, decompoſed by heat

and

and water, and afterwards neither ſoluble in water nor ſpirit of wine.

Dr Bondt next wiſhed to determine, whether that earth, detected in many vegetables by the celebrated Scheele, and termed the earth of rhubarb, exiſted in this vegetable; and by one of the proceſſes deſcribed by Scheele, he obtained earth, in the proportion of ten grains to an ounce of the bark. This earth was of a white colour. It neither effervesced with pure nitrous acid, nor was diſſolved by it. It burnt on red-hot iron with a blue flame; and what remained after this burning, effervesced ſtrongly with the nitrous acid, and was completely diſſolved in it: Thus, it had the various properties of the earth of rhubarb. By other trials alſo he diſcovered, that this bark contained the real earth of rhubarb, that is, a ſelenite, formed of calcareous earth and the acid of ſorrel.

He next proceeded to examine the charcoal left on the dry diſtillation. This was put into an earthen pot, and kindled by a ſmall ſpark of fire. It retained the fire, which was gradually propagated through the whole, and reduced it to whitiſh-coloured aſhes. Theſe

aſhes were farther calcined in a hot crucible; and, after calcination, he had ſix drams forty-three grains of grayiſh-coloured aſhes, with which were intermixed ſome braſs-coloured particles. When tried by the magnet, ſome moleculæ of iron, but a few only, were diſcovered. Upon the elixiviation of theſe aſhes with a ſufficient quantity of water, a lixivium of an alkaline taſte was obtained, which by evaporation yielded a cryſtalline ſalt. This ſalt, from different trials, appeared to be a vitriolated tartar, united with a proportion of the ſal febrifugus.

The remaining liquor, incapable of farther cryſtallization, was inſpiſſated, and yielded forty three grains of a ſalt, evidently of an alkaline taſte, which proved to be real fixed alkali.

He next examined the earth left after the elixiviation of the aſhes. Portions of this earth, inſoluble in water, were put into the vitriolic, the nitrous, and the acetous acid. With the two former, there took place a ſtrong effervescence; but with the acetous, it was hardly viſible. Farther trials ſhewed,

that

that theſe aſhes conſiſted of a calcareous earth, and a ſmall proportion of iron.

From all theſe experiments, Dr Bondt draws the following concluſions.

1. That there are in the bark of the Geoffræa Surinamenſis, ſome particles, volatile in the heat of warm water; but that a ſmall portion only of this volatile principle exiſts in the dried bark.

2. That a conſiderable quantity of watery extract exiſts in this bark; but that, for extracting it, long and repeated coction is neceſſary.

3. That this bark is alſo rich in a reſinous, or ſpirituous extract; but that a conſiderable proportion of this reſin is decompoſed by water and heat; and that, therefore, in preparing the decoction and extract, it is beſt to employ gentle boiling and evaporation.

4. That a double modification of vegetable acid exiſts in this bark, the acidum lignorum, and the acidum acetoſellæ.

5. That an empyreumatic oil may be obtained from this bark by dry diſtillation, as well as from moſt other vegetables; but that it yields alſo another oil, which ſwims on wa-

ter; obtained, however, to a very ſmall extent only.

6. That the fixed reſiduum remaining after diſtillation, contains the ſame ſalts with moſt other vegetables, a neutral and an alkaline, but in much leſs quantity than other vegetables.

And, laſtly, That a conſiderable quantity of calcareous earth, with ſome particles of iron, conſtitute the baſis of this bark.

In the third chapter, Dr Bondt treats of the medical properties of the Geoffræa Surinamenſis. And he begins by relating the obſervations made by different practitioners of eminence, who have had an opportunity of trying it. The firſt he relates, are ſome obſervations made by the celebrated Dr Voltelen of Leyden. From the trials he has made, Dr Voltelen is of opinion, that there is hardly any remedy equal to it, and none ſuperior to it, in killing and expelling worms. Under the uſe of this remedy, it is wonderful how great a quantity of viſcid pituita is expelled, both upwards and downwards. By this it often happens, that, contrary to expectation, diſeaſes, ſuppoſed to ariſe from worms,

worms, without any diſcharge of them, are ſucceſsfuly removed. It exerts alſo a ſingular ſtimulus on the urinary organs, often exciting a very copious flow of urine. Beſides this, it for the moſt part gently moves the belly, and ſometimes alſo excites vomiting.

From theſe obvious operations he concluded that the uſe of this remedy might with advantage be extended to various chronical affections where there were no worms. Nor was his expectation diſappointed. For he tried it with the happieſt effects in diſeaſes ariſing from collections of viſcid mucus in the ſtomach, inertia of the fluids, laxity of the ſolids, and the like; as in caſes of anaſarca, chloroſis, humid aſthma, and mucous cough.

He admits, however, that it cannot be repreſented as always operating without inconvenience. For, beſides nauſea and vomiting, it ſometimes creates very great anxiety, particularly if it be given in large doſes, or with a bound belly, not moved by its operation. He thinks that adults are more apt to be affected than children, and that theſe inconveniences leſs frequently ariſe from the firſt, than from after exhibitions of it. He adds, however,

however, that he never ſaw it ultimately productive of any bad effect; and that the inconveniences ariſing from it are even eaſily obviated, by the aid of a carminative, of a gentle laxative, or of a demulcent. In proof of theſe obſervations, from many caſes in which he has had an opportunity of employing it, he here ſelects twelve, from which its action and properties are, he thinks, clearly demonſtrated.

The *firſt* is the caſe of a man in the thirtieth year of his age, who, for more than three years, had been miſerably afflicted with ſevere gripes, returning at ſhort intervals. They were moſt diſtreſſing to him when hungry, and were ſometimes relieved by mucous ſtools. Sickneſs in the morning, an unpleaſing feeling of inanition, and of creeping in the abdomen, which was removed after dinner; together with a frequent itchy feeling in the noſe, and dilatation of the pupils of the eye, gave a ſuſpicion of worms. But the moſt celebrated anthelmintics, as well as a variety of other remedies, preſcribed by different phyſicians, were tried in vain. Recourſe was then had to a trial of the Geoffræa. Two

ounces

ounces of it were formed into a decoction, with two pounds of water, boiled till one half was exhauſted: and one third part of this decoction was directed to be taken every morning, for three days ſucceſſively. The firſt day it had hardly any other viſible effect, than the diſcharge of a large quantity of mucus. The ſecond day, it excited conſtant vomiting and anxiety. And, on the third day, a perpetual nauſea took place, till three large worms, of the lumbricous kind, were diſcharged alive. After this, his pains became much more tolerable, and not ſo conſtant. At the end of two weeks, the ſame remedy was again preſcribed. It occaſioned much uneaſineſs, but neither opened his belly, nor expelled worms. On this account, he was directed to take, on the fourth day, a doſe of the powder of jallap, with ſweet mercury. This produced the diſcharge of much pituita, and of two dead worms. After this, he continued for ſome weeks free from any inconvenience. But his former uneaſineſs then returned. He could not, however, at firſt be prevailed upon to repeat the ſame remedy. But, upon his pains increaſing to a great

a great degree of ſeverity, he himſelf requeſted it. It was then preſcribed for him, according to the following formula.

℞ Cort. Geoffr. Surin. unc. duas.
Aq. Pluv. libras duas.
Coque ad dimidium, tum infunde per ſemihoram, vaſe clauſo, Rad. Rhei elect. drachmas duas colat. adde.
Liq. Anod. Hoffm. drachmam unam cum ſemiſſe.

This decoction was taken as before, and he now bore the remedy much better. It had the effect of opening his belly; and two large worms were again diſcharged, with ſeveral ſmaller ones. Since that time, he has enjoyed uninterrupted health, although many months have ſince elapſed.

In the *ſecond* and *third* caſes, the extract was employed to the extent of fifteen, twenty, and twenty four grains, with the deſired effect.

The *fourth* caſe, is that of a girl in the twelfth year of her age, who from infancy had been frequently diſtreſſed with worms, inſomuch that, when ſhe was ſcarce four months old, and although ſhe had,

till

till that time, been fed only on her mother's milk, ſhe diſcharged a worm of the teres kind. Many anthelmintics had been uſed, from which, in the beginning, both teretes and aſcarides were expelled. But afterwards, as if loſing their effect from habit, no more were diſcharged, although ſhe ſtill continued to be diſtreſſed with ſymptoms from worms; and her body was daily emaciated, but her belly ſwelled. A decoction was preſcribed for her, amounting to ſix ounces, formed from ſix drams of the Cortex Geoffrææ, with the addition of an ounce of the Syrup. Cort. Aurant. This was directed to be taken during the courſe of three mornings. Both the firſt doſes brought away many hard ſcyballa. The third opened the belly, occaſioning a great diſcharge of mucus, and of ſome aſcarides: but no nauſea, or any other inconvenience, was produced from the medicine. On the fourth day, Dr Voltelen adviſed a glyſter, formed by boiling an ounce of the Geoffræa bark in a ſufficient quantity of water, ſo as to leave ſix ounces of the ſtrained liquor, to which there was added an ounce of honey. By this, a whole globe of aſcarides

des was diſcharged; upon which the patient became much more chearful, although not free from all her ſymptoms.

After an interval of a few days, the ſame remedy was again repeated. But the third part of the decoction, taken at ſeven in the morning, in two hours after excited nauſea and vomiting; ſo that, till five in the evening, ſhe diſcharged whatever was taken, with a vaſt quantity of viſcid mucus. It had the effect of moving her belly thrice, with the diſcharge of many aſcarides. In conſequence of this, ſhe took no more of the decoction: but her ſymptoms from worms entirely diſappeared; and the uſe of bitters, with chalybeates, afterwards reſtored her to perfect health: and ſhe has ſince continued free from any inconvenience.

The *fifth* caſe is that of a youth in the thirteenth year of his age, of a cachectic habit, who had been afflicted with a chronic inflammation, firſt of the right, and then of the left eye. This obſtinately reſiſted the moſt efficacious remedies. Being ſuſpected to ariſe from a depraved ſtate of the fluids, depurantia and corrigentia of various kinds were exhibited, not neglecting antimonials and mercurials: but

neither

neither from theſe, nor from iſſues, was any good effect obtained.

A ſuſpicion of worms ariſing, a trial was made of the Geoffræa. The decoction was exhibited for three mornings ſucceſſively, with a mixture of the ſyrup of ſenna. The conſequence was, that his belly was a little opened, with the diſcharge of a large quantity, both of lumbrici and aſcarides, involved in very viſcid mucus. After this, his ophthalmia was, as if miraculouſly, removed.

In the *ſixth* caſe, a woman in the fortieth year of her age, was freed from a great variety of anomalous ſymptoms, upon the diſcharge of a number of aſcarides, after the uſe of the extract of the Geoffræa bark, to the extent of twelve grains.

The *ſeventh* caſe related, is that of a ſedentary man in the forty-ſixth year of his age, who had been long diſtreſſed with a mucous chronic cough, want of appetite, coſtiveneſs, weakneſs, and, at times, ſlight fever. He had already tried different remedies, without benefit. Emetics, indeed, were exhibited, and gave ſome relief, but did not produce a cure. In this caſe, Dr Voltelen directed

directed the Cortex Geoffrææ, in the following form:

℞ Extracti Corticis Geoffrææ drachmam unam.
Succi Liquorit. inſpiſſ. drachmas tres.
Ol. Still. Fœnic. guttas octo, f. pil. gr. iii. quarum ter de die tres capiendæ.

This remedy, continued for ſome time, produced no inconvenience, but ſlight nauſea. It rendered his expectoration much more free: It kept his belly open: It produced a copious diſcharge of urine, with a thick mucous ſediment; and at length entirely removed his cough. Afterwards, to the uſe of the pills was ſubjoined wine, medicated with the roots of helenium and angelica, fennel ſeeds and myrrh, which reſtored him to due health and vigour.

The *eighth* caſe, is that of a young man in the ſixteenth year of his age, affected with an aſthma, at firſt dry, but afterwards with mucous ſpitting. After premiſing an emetic, Dr Voltelen ordered for him the decoction of the Geoffræa bark, diluted with peppermint water, and the addition of a little manna. Of this he took a ſpoonful every two or three hours.

hours. By continuing this medicine for ſome days, his reſpiration was much mended, and his belly kept open, with a large diſcharge of mucus; but as he nauſeated the decoction, it was exhibited under the form of tincture, ſixty drops being taken thrice a day, and the doſe gradually increaſed. By this he was entirely relieved from his diſeaſe; and often afterwards, upon a threatening of his aſthma, by the uſe of the tincture he happily prevented it.

The *ninth* caſe, is that of a boy in the ſixth year of his age, of a very delicate habit. He had for ſome years enjoyed tolerable health, but at length became pale and emaciated, although his appetite was rather voracious. After this he became moroſe, ſorrowful, and ſedentary; and he had no deſire either for moving about, or for amuſement. His belly then began to ſwell, and acquired a remarkable hardneſs. Many of the glands of his neck were alſo ſwelled, while his limbs were extenuated and withered. His breathing was difficult, his appetite ſometimes voracious, ſometimes bad; his belly looſe, his urine thin, crude, and milky. Theſe complaints Dr

Voltelen aſcribed to improper diet and delicate management; and he thinks they might perhaps have been removed, by a due continuation of the remedies uſually employed in ſuch caſes: but as the patient could not be made to comply with this, it was neceſſary to think of ſome efficacious remedy, which could be given under a ſmall form. Three grains of the extract of the Geoffræa bark, mixed with ſugar, were exhibited daily, in a little wine. This medicine was both taken and borne with eaſe. His belly, in the beginning, was ſomewhat moved, with a large diſcharge of mucus, and the expulſion of ſeveral whole lumbrici, and many fragments of others. As, however, he began to loathe the extract, the reſin of the Geoffræa was ſubſtituted to it, eight grains of which, divided into two doſes, were taken daily. Under the uſe of this medicine, the ſwelling of his belly gradually diminiſhed, and his other ſymptoms diſappeared. He was at length reſtored to perfect health and ſtrength; which, however, Dr Voltelen thinks, was in part to be attributed to the uſe of the tinctura Martis.

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The *tenth* caſe related by Dr Voltelen, is that of a lady, in the 27th year of her age, who had been for a long time ſubjected to an obſtinate irregular intermittent, producing a deficiency of the menſtrual diſcharge, ſwelling of the belly, and a variety of other ſymptoms. After clearing the alimentary canal by a ſaline potion, containing a ſmall quantity of emetic tartar, Dr Voltelen reſolved to try the Geoffræa; and, for this purpoſe, had recourſe to the following preſcription:

℞ Extr. Cort. Geoffr. drachmam unam.
Aq. Still. Menth. uncias octo.
Syr. quinq. Rad. Aper. unciam unam et ſem.
Spt. Nitri dulc. drachmas iii.
M. et ſumat omni trihorio coculear.

This produced ſlight nauſea, and a large diſcharge of turbid urine, but without moving her belly. A portion of manna, therefore, was added to the mixture, in place of the ſyrup; and by this means, her fever firſt aſſumed the form of a regular tertian, and then entirely diſappeared; and the whole habit was much altered for the better. As, however, her appetite was not reſtored, her belly was

ſtill ſwelled, and the menſes did not return, ſhe was directed to take two of the following pills, every ſecond hour:

℞ Extr. Cort. Geoffr. drachmam unam.
—— Rad. Gent. drach. duas et ſem.
Maſ. Pil. Ruf. drach. ſem.
Ol. Still. Menth. guttas octo, f. maſ. pil. gr. trium.

After theſe were for ſome time continued, this obſtinate diſeaſe was completely overcome; her menſes flowed freely, and her ſtrength was completely reſtored.

The *eleventh* caſe, is that of a girl, twelve years of age, who had for ſome time laboured under various affections of digeſtion. Theſe were followed by violent ſpaſmodic agitations, particularly of her limbs, with a total abolition of ſenſe. As worms, or impurity in the alimentary canal, were ſuſpected, recourſe was had to different evacuants and anthelmintics, but without effect; for neither worms were diſcovered, nor were the ſpaſms mitigated. Recourſe was then had to the decoction of the Cortex Geoffrææ. The firſt portion, after remaining only a ſhort time in the ſtomach, was almoſt entirely rejected. The ſecond and third

third moved the belly ſeveral times, without any uneaſineſs, and with a large diſcharge of mucus: and, on the fourth day, when a little infuſion of rhubarb was alſo given, there was a copious diſcharge of pituita. After this, her ſpaſmodic affections were much more rare, and much ſlighter. It ſeemed therefore proper to repeat the medicine. From the firſt doſe, there was, as formerly, great anxiety, nauſea, and vomiting, and a large diſcharge of mucus, both upwards and downwards. Two other portions of the decoction, afterwards taken, gave little inconvenience, being followed only by ſome mucous ſtools. No worms were obſerved, either on this or the former exhibition of the medicine: But the convulſive motions entirely left her; and, by the aid of ſome ſtomachic bitters, ſhe was reſtored to perfect health, which ſhe has enjoyed ever ſince.

The *twelfth* caſe related by Dr Voltelen, is that of a man forty years of age, who, after having long enjoyed good health, began to complain about three years before, in conſequence, probably, of being addicted to the uſe of wine. His chief complaints were laſſi-

tude, a ſenſe of weight at the ſtomach, anorexia, and headach. Upon theſe ſupervened ſpaſmodic affections, terminating, at laſt, in real epileptic acceſſions. Various kinds of remedies, preſcribed by different phyſicians, and among others anthelmintics, were tried in vain; nor could the cauſe of his diſeaſe be diſcovered. In this ſituation, it was thought proper to try the Geoffræa. A ſtrong decoction, twelve ounces in quantity, formed from three ounces of the bark, was directed. On the firſt day, it excited ſlight vomiting; and, both on this and the following days, it moved the belly conſiderably, and copiouſly evacuated a denſe and viſcid mucus. For ſeveral days after this, the paroxyſms were retarded. Eight days afterwards, the ſame remedy was repeated, with no leſs ſucceſs; a very large diſcharge of mucus taking place, both upwards and downwards. After this, he was no more affected with the paroxyſms, although no veſtige of worms could be detected.

The next obſervations which Dr Bondt mentions, are thoſe of the deceaſed Dr Julianns; of which mention was made at the beginning of his diſſertation. An account is here

here given of ſeven caſes, treated by Dr Juliaans himſelf, in which the Cortex Geoffrææ was employed with ſucceſs. All theſe were worm caſes; and in ſome of them lumbrici, in others aſcarides, were diſcharged, after powerful anthelmintics had been tried in vain.

Dr Bondt next relates three caſes, treated by a learned phyſician, Dr de Mann, and communicated by him to Dr Juliaans, among whoſe papers they were found. In all theſe three, various ſymptoms, ariſing from worms of the lumbricous kind, were ſucceſsfully removed, by means of the Cortex Geoffrææ. Dr de Mann concludes with obſerving, that the Geoffræa is a moſt excellent remedy, for the diſcharge of pituita from the alimentary canal; and he ſuſpects, that upon this property its power of expelling worms chiefly depends, the nidus and ſeat of which is well known to be principally in this viſcid mucus.

An account is next given of ſome trials made by Dr Rumpell, alſo found among the manuſcripts of Dr Juliaans. Dr Rumpell likewiſe bears teſtimony to the excellent effects which he derived from the uſe of the Geoffræa, not only in worm caſes, but alſo in other

diſeaſes. He alſo obſerved from it the ſame copious diſcharge of pituita. In ſome caſes, he employed it without effect; particularly with thoſe patients who could not bear this remedy on account of the exceſſive anxiety which aroſe from it. This, he remarked, chiefly occurred in thoſe who were of a firm habit; whilſt looſe and pituitous habits, and infants, bore this remedy much more eaſily.

Dr Bondt next adds a letter concerning the Geoffræa bark, written to Dr Voltelen by Dr Veirac, a learned phyſician at Rotterdam. He exhibited the Geoffræa, ſometimes under the form of decoction, ſometimes of tincture, rarely of extract; and on one occaſion externally, under the form of powder. From upwards of fifty different caſes in which he tried it, he draws the following concluſions:

1. That this bark, excepting in the caſe of the lumbricus latus, or tænia, ſeemed to him to be the moſt certain, ſafe, and convenient anthelmintic he had ever tried.

2. That the Geoffræa bark was manifeſtly uſeful in ſome pituitous diſeaſes, particularly in the humid, habitual, and periodic aſthma;

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in catarrhal coughs, and in the convulſive coughs of infants.

3. That he had tried this bark in many hydropic caſes, both of the anaſarcous and aſcitic kind; but that, in theſe, it was often employed in vain: ſometimes the advantage reſulting from it was doubtful; but, in ſome caſes, when conjoined as an adjuvant with other remedies, it was often attended with the beſt conſequences.

4. That he had tried this remedy with three maniacal patients, both by itſelf, and in conjunction with the moſt powerful ſpecifics, but without deriving any advantage from it.

5. That he had uſed it in a variety of cutaneous affections, both by itſelf and in conjunction with other remedies; but with no other effect than if the Geoffræa had not been employed.

6. That manifeſt advantage ſeemed to be derived from it, when conjoined with the Peruvian bark, in laxity of the inteſtines, with a mucous diatheſis of the fluids, which is often the conſequence of long continued vernal and autumnal intermittents; for in theſe caſes, the

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Cortex Geoffrææ ſeemed to him to increaſe the tonic power of the Peruvian bark.

7. And *laſtly*, Founding, indeed, only on one obſervation, he conjectures, that, uſed both externally and internally with the Peruvian bark, it is uſeful in the ſpontaneous gangrenes occurring to old people, and that it may be recommended in other gangrenes.

Two caſes are next related, communicated to Dr Voltelen by Doctor du Pui. In the *firſt* of theſe, a caſe of epilepſy, worms were diſcharged, from the uſe of the Geoffræa, but without curing the diſeaſe. In the *ſecond*, a caſe of obſtinate, convulſive, ſpaſmodic affections, after the diſcharge of a number of worms, which had before reſiſted the moſt powerful anthelmintics, the diſeaſe was completely removed.

After theſe follow five caſes, communicated to Dr Voltelen by Dr Ermerins, phyſician at Middleburgh. All of theſe were worm caſes, of the lumbricous kind, in which the Geoffræa was uniformly employed with ſucceſs.

There is afterwards a caſe related by Dr Croll, in which the Geoffræa was employed with ſucceſs

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in the expulſion of lumbrici. Next are added ſome obſervations, communicated by the learned Profeſſor Ooſterdyk, in which it ſeemed to be attended with ſome benefit in a caſe of tænia; but, in the end, it was found inadequate to produce a cure. And, laſt of all, a caſe communicated by Dr Peereboom of Amſterdam, in which it was uſed with remarkable benefit in the expulſion of lumbrici.

From theſe different obſervations, communicated by eminent phyſicians, Dr Bondt draws ſeveral corollaries.

1. He thinks that the obſervations mentioned, clearly prove, that the primary power of the Cortex Geoffrææ Surinamenſis, is that of an anthelmintic, for which purpoſe it is ſolely uſed among the Indians of Surinam. This power it poſſeſſes in ſo great a degree, that he is even doubtful, whether, in worm caſes, it be ever employed without effect. This, however, he conſiders as principally applicable to the teretes and aſcarides: For its power againſt the tænia is at leaſt more doubtful, although he conſiders it as entitled to future trials againſt that worm alſo.

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2. He concludes that this bark poſſeſſes a remarkable faculty of cutting, diſſolving, and removing viſcid and tenacious mucus and pituita.

3. He conſiders the power which this medicine poſſeſſes, of evacuating upwards and downwards, as deſerving attention. From this power, by irregularly irritating the fibres of the alimentary canal, it often produces very great uneaſineſs. Theſe effects are chiefly obſerved, if the belly be not moved by the uſe of this remedy. The uneaſineſs thus taking place, then, is to be avoided by moderating the doſe, by exhibiting the remedy in priſes, or by conjoining it with ſome gentle purgative or carminative.

4. Another circumſtance which he conſiders as deſerving notice, is the ſtimulus which this remedy often exerts upon the urinary organs, producing a great diſcharge of urine, and, in ſome inſtances, a teneſmus veſicæ. He thinks that it deſerves a place among the diuretic and hydragoge medicines.

5. The antiſpaſmodic power which this remedy ſeems to poſſeſs, in convulſive motions, epilepſies, and coughs of different kinds,

kinds, likewiſe, in the opinion of our author, deſerves attention. He thinks, however, that this principally depends on its power of expelling worms, or mucus; although he thinks it not improbable that it may alſo have ſome influence, by gently affecting the nerves, and inducing nauſea.

6. The expectorant power which it often ſhews, he aſcribes to its effect of cutting mucus, and exciting nauſea; though this alſo may, he thinks, be aided by its gently ſtimulating the nerves.

7. On the ſame principle, he accounts for that ſtrengthening power which it ſometimes ſeems to exert in laxity of the inteſtines, ſpontaneous gangrenes of old people, and ſome ſimilar affections. That it may poſſeſs ſome ſtrengthening power, is, he thinks, to be preſumed from its bitterneſs and aſtringency. But he imagines that its effects in this way are rather to be aſcribed to the diſcharge of mucus; as, by this means, other tonic remedies have a better opportunity of acting; and it has chiefly been in conjunction with theſe, that this bark has been ſucceſsful as a tonic.

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Dr Bondt next treats of the form and doſe under which the Cortex Geoffrææ is exhibited. This bark, he obſerves, is given under various forms. The form under which it is chiefly given, and which is alone uſed in Surinam, is that of decoction: And this form, he thinks, is the moſt efficacious, particularly if it be given with the view of expelling lumbrici. In forming the decoction, two ounces of the Surinam bark are boiled with twenty four ounces of common water, to the conſumption of one half. Of this decoction, one third part, or four ounces, are taken for three ſucceſſive mornings: And on the fourth day, ſome purgative medicine is exhibited, unleſs the belly has been moved by the uſe of the decoction. The decoction, however, is by different practitioners varied in ſtrength, and by the addition of different articles, for the ſake of taſte. The decoction has not only been taken by the mouth, but alſo in the way of injection, and with the beſt ſucceſs againſt aſcarides.

But if the decoction be either diſagreeable to patients, from the taſte, or if a ſmaller form be requiſite, recourſe may be had to the

the extract, fifteen grains being given for three ſucceſſive mornings, and a purgative ſuperadded on the fourth day. The extract may be exhibited either under the form of pills or bolus, or diſſolved in any diſtilled water. The form of extract is the beſt remedy in chronic diſeaſes, for removing pituita, whether it be exhibited alone, or given with bitter gums and ſoap.

The reſin of the Geoffræa, mixed with ſugar, furniſhes a very convenient remedy for children; and, with the view of removing infractions of the belly and glands, it may be given to them from three to eight grains; to adults, to the extent of a ſcruple. With the ſame intention, the ſpirituous tincture may be employed; which is prepared by adding one ounce of the Geoffræa to eight ounces of ſpirit. The doſe is to be gradually increaſed from fifty to one hundred drops.

This medicine is rarely exhibited under the form of powder: Yet there are a few obſervations confirming the uſe of it taken in this way. But Dr Bondt thinks that it will be leſs efficacious under this, than other forms,

forms, on account of the great hardneſs of the bark, which requires very long protracted boiling, for extracting its virtues. This bark has alſo been given under the form of vinous infuſion, with advantage; and Dr Bondt thinks, that its active powers may alſo be extracted by vinegar.

With regard to the mode of exhibition, it is alſo to be obſerved, that in Surinam, when it is employed for the expulſion of lumbrici, attention is always paid to the phaſes of the moon: And it is exhibited only at the times of new and full moon. But thoſe phyſicians who have preſcribed it in Europe, agree in teſtifying, that attention to this circumſtance may with ſafety be neglected; ſince, at whatever time they exhibited it, it was ſtill attended with the effect of expelling the lumbrici.

The Geoffræa may be combined with other remedies, either to prevent the inconveniences to be dreaded from it, or to aid the action of the medicine, and direct it to a certain end. Gentle purgatives added to it, by directing its influence towards the lower belly, have a remarkable influence in removing

ing anxiety, nauſea, and vomiting, and at the ſame time aid the expulſion of worms. Aromatics, carminatives, and antiſpaſmodics, anticipate thoſe nervous affections, which it might otherwiſe induce; and demulcents diminiſh its ſtimulant power on the urinary organs. There are ſome additions which have been ſuppoſed to increaſe its activity. Thus, the root of Valerian has been thought to augment its anthelmintic power, greater benefit having, in ſome caſes, been obſerved to reſult from both in conjunction, than from either ſeparately. Its ſtrengthening power is evidently increaſed by the Peruvian bark; and, in conſequence of its union with ſquills and hellebore, it accompliſhes whatever can be expected from the beſt deobſtruent diuretic; beſides which it operates alſo as a purgative.

In the laſt ſection of this work, Dr Bondt conſiders the difference between the Geoffræa bark of Surinam and Jamaica. That there is a material difference between theſe, appears, he thinks, from comparing the account given of the latter by Dr Wright, with that which has now been delivered. Patients bear a much leſs doſe of the Geoffræa Jamaicenſis,

than of this: for the decoction of it can be taken, even by adults, to the extent only of a few ſpoonfuls; the extract to the extent only of three or four grains, and the powder to thirty.

In enumerating the effects of the Geoffræa Jamaicenſis, one circumſtance, in which it differs remarkably from the Surinam bark, is its narcotic power. This power, if it exiſts at all in the Surinam bark, is at leaſt very weak. Beſides this, Dr Wright remarks, that, during the uſe of the Jamaica bark, it is neceſſary, with the utmoſt caution, to avoid drinking cold water, as it produces not only naufea and vomiting, but even fever and delirium. But ſuch an effect is never obſerved from the Surinam bark. Nor does the Surinam bark produce thoſe violent cathartic effects which Dr Wright experienced from the Jamaica bark: for he tells us, that thirty or forty grains of it produced, in this way, nearly the ſame effect as would have ariſen from an equal quantity of jallap; and that even five grains of the extract both ſickened and purged a robuſt man. And Dr Bondt concludes with obſerving, that the Geoffræa Surinamenſis is ne-

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ver productive of deliterious effects, which, it is ſaid, have ſometimes reſulted from the imprudent uſe of the Geoffræa Jamaicenſis.

How far this remedy will, in the hands of others, be productive of all thoſe good effects which are alleged to reſult from it by Dr Bondt, muſt be determined by future experience. But if theſe be fully confirmed, it will be a very valuable addition to the Materia Medica. And we may at leaſt add, that its preſent character is not reſted on the opinion of a ſingle obſerver, but ſupported by the concurring teſtimony of ſeveral able and candid practitioners.

II.

Obſervations on Deafneſs, from affections of the Euſtachian Tube. *By* James Sims, *M. D. Preſident of the Medical Society of London.* Vide *Memoirs of the Medical Society of London, Vol. I.* 8vo, London.

AFTER a few remarks on the diſcovery of the Fallopian tube, in which Dr Sims gives it as his opinion that it was known to Hippocrates; he obſerves, that although many uſes have been pointed out, yet, that one of the principal purpoſes for which it is intended, has hitherto eſcaped notice. From ſeveral circumſtances, he is inclined to think, that it conveys the ſound of our own voice to the organ of hearing; in the ſame manner as the meatus auditorius externus conveys to it all other ſounds whatever. Thus, he conſiders it as the principal regulator of our own voice.

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This ingenious conjecture, which our author has formed from a variety of facts, and which differs from the opinions of the moſt eminent modern phyſiologiſts, particularly thoſe of Dr Monro and Dr Haller, he employs to illuſtrate important practical remarks, in the ſubſequent part of his paper.

Whatever may be the principal uſe of the Æſculapian tube, it is, he obſerves, at preſent, an almoſt univerſally received opinion, that deafneſs enſues, when the Euſtachian tube is obſtructed, as well as when the meatus auditorius is ſtopped. Theſe two ſpecies being almoſt the only curable ones, and differing eſſentially in their treatment, it becomes of great importance to find out the marks by which we may diſtinguiſh them: and the intention of the paper before us, is to point out the ſymptoms, diſtinguiſhing that ſpecies of deafneſs which depends on the Euſtachian tube, and the means by which it is to be removed. Before preſenting the reader with any general deductions, Dr Sims gives an hiſtorical account of his obſervations on this ſubject, from the time that it firſt claimed his particular attention.

In Summer 1773, he was deſired to viſit a young gentleman in Fenchurch-Street; who, after expoſure to cold, had been ſeized with deafneſs about three weeks before. His diſorder was at firſt attended with ſome febrile ſymptoms, and inflammation about the tonſils; for which, recourſe was had to blood-letting. He was affected alſo with ſome other ſymptoms, which ſoon yielded to proper remedies; but the deafneſs proving more obſtinate, Dr Sims was called. On the morning, however, before his firſt viſit, this patient was perfectly reſtored to hearing, by a violent fit of ſneezing, during which he was ſenſible of a loud crack referred to his ears.

He next relates a caſe ſtill more remarkable, communicated to him by a young gentleman, who had ſtudied medicine at Edinburgh, and who was himſelf the ſubject of it. Having embarked at Greenock for Ireland, in April 1770, in a ſmall veſſel, in which there were a great number of paſſengers, he ſuffered many inconveniences, during a very tedious voyage; and, in particular, he was often violently heated, and afterwards much expoſed to cold, from being obliged to aſſiſt

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in towing the veſſel with the long-boat. The conſequence of this was, a violent rheumatic affection; and, about eight or ten days after his arrival in Ireland, he was ſeized with an inflammation in the tonſils, which almoſt threatened ſtrangulation. Nothing could be ſwallowed but the thinneſt diluting liquors; and the leaſt motion of the glotis was attended with ſuch torture, that its effect was felt at even the remoteſt member of the body. On the fourth day, however, it ſubſided much; but immediately after it abated, he perceived his hearing beginning to decreaſe, with a great noiſe in his ears. This continued for about three weeks, till it brought him to ſuch a ſituation that he could not hear common converſation. When he was ſpoke to in a louder voice, he loſt the half of what was ſaid, from the impreſſion of the firſt ſound remaining ſo long upon his ears, as to render the following ones indiſtinct. In this diſagreeable ſituation he continued a whole year; during which time he tried a variety of practices, by the advice of ſeveral eminent phyſicians, but without receiving the leaſt advantage. But ſoon after, chance threw in his

way a perſon whoſe daughter had ſuffered under a like calamity, and whoſe hearing had been luckily reſtored, in a very ſimple and unexpected manner. Her noſe happening to be ſtopped by a cold, which hindered the paſſage of air through that organ, to rid herſelf of this inconvenience, ſhe made a violent effort to emit breath, having previouſly cloſed her mouth and noſe with her hand; but, in place of procuring a paſſage for the air into her noſe, the air found its way into her ears, occaſioning a crack like a piſtol. The conſequence was, a reſtoration of hearing.

This experiment was attended with ſo little trouble, that he made a trial in the ſame manner: but, after many attempts, it proved unſucceſsful, till he made ſome alteration in his method. Inſtead of filling his mouth with air, he kept his lips cloſely preſſed to his gums and teeth. This made the air exert its force upon the internal parts. The firſt trial in this way, ſucceeded with one ear; and, after ſeveral trials, the ſame ſucceſs attended him with the other.

For three days after, in place of being ſubjected to his former deafneſs, he was obliged

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to avoid all company, on account of the diſagreeable impreſſion which every ſound made upon his ears. Immediately after the Euſtachian tubes were by this means opened, he could diſtinctly hear a whiſper, from even a diſtant part of the room, as was found by frequent trials; and he has ever ſince fully enjoyed the faculty of hearing.

The relation of this cure ſtruck our author's attention ſo much, that he directed all his deaf patients to make ſimilar efforts. The conſequence was, that he failed in many inſtances, the diſeaſe not being ſituated in the Euſtachian tubes. But, even from theſe indiſcriminate trials, one good reſulted: He was enabled, in a conſiderable degree, to point out the characteriſtic differences between this and other kinds of deafneſs. Among the inſtances in which he failed, two are here related, as being attended with ſome ſingularity.

An unmarried lady, who had formerly been deaf for ſome weeks, and had been ſuddenly relieved from it, was ſeized a ſecond time with deafneſs, which continued increaſing upon her for a conſiderable time. After her diſeaſe had been of ſome months ſtanding, Dr Sims ſaw her,

her, and recommended the method already deſcribed, but without effect. She had afterwards recourſe to an auriſt, who directed the application of a bliſter behind the ear: but, ſome weeks after this, ſhe was, as had before been the caſe, inſtantly relieved, by a ſudden noiſe in her ears. This he conſiders as a ſtrong proof, that the ſeat of her complaint was in the Euſtachian tube; and that the cure he preſcribed had failed, from her never having uſed it with ſufficient force.

The *ſecond* caſe he mentions, is that of a young lady, who had been deaf to a conſiderable degree for upwards of two years. Dr Sims recommended the method above mentioned: and the conſequence was, that ſhe appeared at firſt perfectly cured; but her complaint has ſince repeatedly returned. She is, however, always conſiderably relieved, by a repetition of the method recommended to her.

After giving an account of theſe particular caſes, Dr Sims next proceeds to make ſome general remarks on the diſeaſe, drawn from his obſervations. The cauſe he has moſt frequently obſerved to induce this ſpecies of deafneſs,

neſs, is the catching of cold, as it is commonly called in this country. This, he thinks, acts by inflaming and ſwelling the ſoft mucous membrane which lines that part of the tube next the fauces. The ſecretion from theſe glands becoming viſcid, may likewiſe, he thinks, block up the tube, and thus occaſion deafneſs; as is obſerved in many fevers, and after their termination. It may alſo, he tells us, ariſe from a polypus, from a ſwelling of the palate, from repeated inflammation of the tonſils, from aphthæ, from an eroſion of the muſcles of the tube; and, finally, from inflammation, producing a coheſion between its ſides. His obſervations led him to think, that women are more liable to deafneſs than men, and to this ſpecies in particular. But on this ſubject he does not pretend to ſpeak with certainty.

He next remarks, that there ſeems to be a conſiderable concert between the two ears, perhaps as great as between the eyes. Thus, upon one ear being ſtopt with a finger, the hearing of the other is rendered very dull and confuſed. Sanious and purulent diſcharges frequently appear from both at the ſame time; and one ear is ſeldom affected, without the other ſuffering

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in the end. Theſe facts, which are obvious with reſpect to the external ears, he thinks are equally true with reſpect to the Euſtachian tubes.

He next proceeds to point out thoſe marks by which deafneſs is known to proceed from the Euſtachian tube; and he points out the following, as being the principal particulars: *1ſt*, Its being preceded by ſome of thoſe cauſes which have been already mentioned. *2dly*, On making an effort to expire, and at ſame time retaining the breath, by ſtopping the mouth and noſe, no preſſure is felt on the tympani of both ears. *3dly*, The ſound of the deaf perſon's voice appearing different from what it did before, and alſo from the ſound of any other perſon's. *4thly*, There ſeems always to be a noiſe heard by the perſon, as if in their own ears. This ſometimes reſembles the ſound of a tea-kettle before it boils; at others, it is a roaring like water; like high wind blowing through trees, or even like thunder. *5thly*, Thoſe who are deaf from this cauſe, hear better in a carriage, or in any conſiderable noiſe, than at other times. *6thly*, When one tube is obſtructed,

ſtructed, the hearing is much more impaired in proportion, than when the external meatus of only one ear is ſtopt.

On theſe marks, reſpecting the import of which he offers particular obſervations, he is diſpoſed chiefly to reſt the diagnoſis. But he allows that there are caſes where it is a difficult matter to decide: And in many caſes, both the Euſtachian tube, and the internal meatus are affected; a circumſtance taking place alſo in diſeaſes of moſt other parts of the body, where places in continuity become frequently affected.

After theſe obſervations on the cauſes and diagnoſis of this ſpecies of deafneſs, Dr Sims next proceeds to treat of the method of cure. Its being curable, or not, depends, he obſerves, on the cauſe from which the obſtruction of the tube ariſes. Where it is owing to any glutinous matter ſtopping the paſſage, to a ſimple ſwelling of the membrane which lines it, or to a tumour in the neighbourhood, it is often within the reach of medical art. It is, therefore, to theſe cauſes, that his obſervations principally refer.

When

When the Euſtachian tube is ſlightly infarcted with mucous matter, the moſt ſimple way in which it can be freed from it, is, he tells us, by the action of ſwallowing. This he thinks produces its effect, by putting the anterior cartilaginous and membranaceous part of the tube in motion. Gaping, yawing, and gargling, have all been known to cure it, and probably act in a ſimilar manner. And it may alſo often be removed by any thing which forces a current of air into the tube. In the action of bawling, or ſpeaking very loud, the air is forced out of the thorax with impetuoſity; and though part of it finds a vent through the mouth and noſe, yet ſome of it will paſs into any cavity admitting of dilatation, which is the caſe of the tympanum. Coughing has a ſimilar, and more powerful effect; ſneezing ſtill a greater: And theſe, accordingly, have been known to remove this affection. Two other efforts by which it may alſo be removed, are vomiting, and the retention of the breath for a conſiderable time, by which we are obliged convulſively to expel it.

When

When a ſwelling of the membrane which lines the inſide of the tube, cauſes this deafneſs, it may at the ſame time give riſe to the former cauſe, by thickening the mucus ſecreted there, as is often ſeen in the inflammations of glandular parts. Whatever, therefore, aſtringes this membrane, or the parts in continuity with it, may, he obſerves, be of ſervice. In this way, gargles, he thinks, may have a good effect; and unloading the veſſels of this membrane, is evidently a natural and efficacious mode of cure: Hence the benefit of cupping, bliſters, or iſſues in the neighbourhood, or even of general depletion by purgatives. Under this head, he alſo arranges the advantages of wearing a flannel cap, or other warm covering of the head, during the night. As the effect of applications is never confined to the parts alone which they touch, ſyringing the external ear may alſo, he thinks, be of ſervice. Beſides injections into the ear, he mentions alſo injections into the tube itſelf, either from the mouth or noſe. But although the latter be at leaſt certainly practicable, and has ſometimes ſucceeded, as appears from an ingenious paper of Mr Wathem's,

them's, in the forty-ninth volume of the Philoſophical Tranſactions, yet he conſiders it as being liable to ſeveral objections. The liquid may fall into the trachea, and raiſe a troubleſome cough; the moſt ſkilful operator can never be certain that he has introduced the point of the ſyringe into the orifice of the tube; and even when this is done, unleſs it can be preſſed on ſo far as to be firmly wedged into the narrow part of it, the fluid will all return by its ſide into the noſe or mouth, exerting little or no force on the obſtruction. And our author farther tells us, that, from converſing with Mr Wathem himſelf upon the ſubject, he finds that he is not nearly ſo ſanguine in his hopes of cure from it as he was originally.

Dr Sims is of opinion, that all the other modes of cure mentioned, fall much ſhort, in point of efficacy, of that of forcing air into the tubes by expiration. And he concludes this paper, by giving ſuch directions as he has found to be uſeful in the proſecution of it. He recommends perſeverance in repeating the efforts: for, as in other inſtances, the reduction of hernias, and the like, a number

of

of efforts will ſometimes ſucceed, any one of which, ſingly, would be of no ſervice. Conſiderable force is requiſite; and he directs the force to be increaſed, till the air be found to ruſh againſt the membrana tympani, and even to give pain. In caſes where one ear only is originally affected, he directs the other to be ſtopt externally with wax, or ſome other ſoft adheſive ſubſtance, while the efforts are employed, that their violence may not rupture the tympanum of that ear in which the tube is free, or at leaſt give it conſiderable unneceſſary pain. Where the deafneſs has been of long ſtanding, if the firſt efforts do not ſucceed, he recommends the having recourſe to bliſters, for emptying the veſſels of the tube, after which the efforts are renewed at times with ſuperior efficacy.

Of the practice thus recommended by Dr Sims, we muſt acknowledge, that, for our own part, we have no experience. But to us it appears no leſs rational than ſimple: And the facility with which it may be put in practice, is a ſtrong inducement to a fair trial. With a very moderate degree of cau-

tion, it can never be attended with any inconvenience. And if it prove ſucceſsful in any inſtances, it may be juſtly conſidered as an improvement of no ſlight importance in the practice of medicine.

III.

III.

Caſe of a Retention of Urine from external violence, cured by puncturing the Bladder through the Rectum. *By* William Norris, *F. M. S. Surgeon to the Charter-houſe and General Diſpenſary.* Vide *Memoirs of the Medical Society of London, Vol. I.* 8vo, London.

ALthough the operation of puncturing the bladder through the rectum cannot be conſidered as new, yet it has been but rarely performed in this country. There is, however, little doubt that it may often be the means of ſaving the life of an individual, where other modes of abſtracting the water are employed without effect. In the firſt volume of theſe Commentaries, we publiſhed a caſe communicated to us by Dr Manget of Geneva, in which it was directed, and performed with unlookt-for ſucceſs. In the

inſtance before us, there can be no doubt that it was the means of immediately relieving a patient from ſymptoms the moſt diſtreſsful and alarming; although, at the ſame time, the author, with very great candour, gives it as his opinion, that a more ſimple mode of operation might perhaps have been employed with ſucceſs.

The caſe here related by Mr Norris, is that of a man in the thirty-ſixth year of his age, who, in conſequence of a fall from a ſcaffold about ſix or ſeven feet high, received a very ſevere blow on his breech and perinæum, from the ridge of a houſe below him. The conſequence of this blow, was an immediate inclination to make water; but, notwithſtanding his utmoſt endeavours, he could not paſs a ſingle drop; and, in a very ſhort time, the perinæum and ſcrotum became ſwelled, black, and painful. Recourſe was ſoon had to blood-letting, to ſome purging medicines, and to fomentation of the parts; but without any good effect. The day after the accident, appearances were nearly the ſame: and an attempt was made to introduce a catheter into the bladder, with a view of abſtracting

ſtracting the water; but it could not be accompliſhed. Mr Slater, the ſurgeon who firſt attended him, juſtly alarmed at the ſituation of his patient, requeſted that Mr Norris would viſit him, which he accordingly did on the morning of the ſecond day after the accident. At that time, the ſcrotum was diſtended to the ſize of a child's head; the cellular membrane of the penis was loaded in a remarkable degree; and both, together with the perinæum, were as black as ink. The abdomen was tenſe, and extremely tender to the touch; and the blackneſs extended up, on each ſide, though in a ſlighter degree, as far as the ribs. The præputium was ſo much diſtended with extravaſated blood, that it was not without great difficulty, and long endeavours, Mr Norris could even get a ſight of the orifice of the urethra.

In attempting to paſs the catheter, the inſtrument met with no obſtruction till it came to the anterior part of the proſtate gland; but there it ſeemed to get into a kind of pouch, and out of the direction of the urethra. Trials with bougies of different ſizes were not more ſucceſsful: All of them ſtopped at the

ſame part of his urethra, oppoſite to that of his perinæum, on which he had fallen. In this ſituation, the parts were ordered to be fomented, a purgative to be taken by the mouth, and ſixty drops of thebaic tincture, in a little warm water, to be injected into the rectum. Next day, attempts were made by other ſurgeons, whoſe aſſiſtance was requeſted, to introduce the catheter, but with no better effect. It was then the opinion of all the ſurgeons, that the beſt plan which could be followed, was, to puncture the bladder through the rectum. For this purpoſe, the patient was placed on a table, in the ſituation of one who was to be cut for the ſtone; and the bladder was punctured from the rectum, as high up as Mr Norris could reach with his firſt and ſecond fingers, by a curved trochar: About three pints of urine came away, and the man was inſtantly relieved. After this, a deep inciſion was made into each ſide of the ſcrotum, from which a large quantity of extravaſated blood was diſcharged, together with ſome air. Emphyſema, and a ſmall gangrene, had taken place on one ſide. The parts were then rolled up in a piece of doubled linen,

linen, and orders were given that the man ſhould live very low. The next day he was tolerably eaſy: the tenſion of the abdomen had in a great meaſure gone off, but it was ſtill very tender on being preſſed: and Mr Norris was of opinion, although the patient himſelf afterwards thought otherwiſe, that urine came through the wounds in the ſcrotum, as well as through the puncture.

On the third day after the operation, he began to paſs ſome of his urine in the natural way; and each ſucceeding day, he was able to retain a greater quantity, and more paſſed through the urethra. At the end of a week, a large ſlough was thrown off from the ſcrotum, and the wounds began to heal: and, at the end of three weeks from the operation, he was quite well, following his buſineſs.

Mr Norris thinks, that the inability to diſcharge urine, in this caſe, may have proceeded, in part, from the extravaſated blood mechanically preſſing againſt the ſides of the urethra; but he thinks that it was ſtill more owing to a breach made in the urethra, through which the urine paſſed into the cellular membrane of the ſcrotum, and neighbour-

ing parts. This he ſuppoſes, becauſe the tumour in the perinæum and ſcrotum became very conſiderable immediately after the accident, and the patient made ſtrong endeavours to diſcharge urine; becauſe, in the different attempts to introduce the catheter and bougie, little force had been employed; becauſe, both on the day of the operation, and afterwards, urine was obſerved to come from the wounds in the ſcrotum; becauſe the bladder contained only about three pints of urine, though the patient had made no water from Thurſday till Sunday, though, in the mean time, he had drank freely of barley-water; and becauſe, during that period, the patient had ſeveral times a ſtrong idea of the urine paſſing when he ſtrained to make water, and could only be convinced of the contrary by examining the end of his penis.

From theſe circumſtances, Mr Norris is perſuaded, that he had, at different times, voided his urine into the cellular membrane; and from this he infers, that the inciſions into the ſcrotum alone might have been ſufficient.

After the perforation of the bladder, the canula

canula was left in the wound, covered by a compreſs, and ſecured by a proper bandage: but the patient having occaſion to go to ſtool in the courſe of the night, it was forced out by his efforts, and by the paſſage of the fœces. Mr Norris thought it unneceſſary to attempt replacing it in the morning; for he concluded, that ſo long as the urethra continued obſtructed, the contraction of the bladder would force the urine through the opening, ſo as effectually to prevent its cloſing; and he even thinks, that the canula might always be removed with advantage, immediately after the operation.

When the operation of puncturing the bladder through the rectum becomes neceſſary, Mr Norris obſerves, that the operator will find very conſiderable advantage from introducing two fingers into the rectum, in place of one, as has commonly been recommended; for the canula may be very conveniently paſſed between them, and kept in a proper direction, without giving any pain, while, with the other hand, the ſtilet may be introduced; which he thinks ſhould never be done, till the upper end of the canula has been placed exactly

actly againſt the ſpot where the opening is intended to be made. For the hint of introducing two fingers in place of one, Mr Norris acknowledges that he is indebted to Mr Watſon of the Weſtminſter Hoſpital, one of the gentlemen who aſſiſted at the conſultations reſpecting this caſe.

IV.

IV.

Some Remarks on the Effects of the Lignum Quaſſiæ Amaræ. *By* J. C. Lettſom, *M. D.* &c. Vide *Memoirs of the Medical Society of London, Vol. I.* 8vo, London.

DR LETTSOM introduces this paper by giving ſome account of the diſcovery of the medical properties of the Quaſſia, and of the origin of its name. A ſlave of the name of Quaſſi, in the province of Surinam, was the firſt, he tells us, who applied the roots of this tree to medical purpoſes; and from him it has derived the appellation by which it has been ſince diſtinguiſhed. By the ſucceſsful exhibition of this vegetable in fevers, he ſoon, we are told, acquired ſuch reputation, as to draw the attention of thoſe around him, and, among others, that of Mr Dahlberg, counſellor of the province. By his endeavours the tree was aſcertained, and ſpecimens

ſpecimens of it ſent to Sir Charles Linnæus, by whom an account of it was introduced into his public lectures on the Materia Medica. At firſt it was ſuppoſed that this tree was almoſt peculiar to Surinam: but farther enquiries have now ſhown, that it is alſo indigenous in ſeveral of the Weſt India iſlands, particularly the Caribbean. There it was for ſome time employed in making ſugar hogſheads, till it was found that it imparted a bitter taſte to the ſugar applied to it, often to the depth of an inch.

To this ſhort account of its name, and introduction for medical purpoſes, Dr Lettſom has ſubjoined a particular deſcription of it, copied from the Amœnitates Academicæ of Linnæus, in whoſe ſyſtem it has the name of Quaſſia Amara. Of the Linnæan deſcription he has ſubjoined a tranſlation, for the benefit of the Engliſh reader, and of thoſe unacquainted with the language of botany. Still farther to aid in diſtinguiſhing this plant, the deſcription is accompanied with a very accurate and elegant engraving. What is known by the name of Quaſſia wood, is the deſcending trunk, or root, of the tree mentioned; which,

which, however, is not eaſily diſtinguiſhed from moſt other woods, by any particular mark. It is commonly about the thickneſs of a man's arm, and of a whitiſh colour; but when it is expoſed for ſome time to the air, it aſſumes a yellowiſh hue. The medulla, or pith, adheres to the alburnum; nor can it by any means be ſeparated from it. The bark is thin, of a gray colour; the ſurface uneven, rough, and ſometimes chapped or cracked. Hence, from its external appearance alſo, it is with difficulty diſtinguiſhed from other woods.

Hitherto the Quaſſia has not been much employed for medical purpoſes in Europe. It has, however, been uſed in fevers of the putrid kind, in aſthma from miſplaced gout, and in cholic: but from its ſenſible qualities, particularly from its bitter taſte, it has been conſidered, in general, as a tonic and ſtomachic medicine.

Dr Lettſom informs us, that within the ſpace of a few years, he had tried the Quaſſia in ſeveral hundred inſtances; and with the reſult of the obſervations which he has made, we

we are preſented, in the paper now before us.

He tells us, that in caſes of weakened tone of the ſtomach, and of a relaxed nervous habit, Quaſſia proves highly beneficial. In debility ſucceeding febrile diſeaſes, he conſiders the Peruvian bark, as in general more tonic and ſalutary than any other vegetable hitherto known. But in hyſterical atony, to which the female ſex is ſo prone, the Quaſſia, he thinks, affords more vigour and relief to the ſyſtem than any other, eſpecially when united with the vitriolum album, and ſtill more when aided by ſome abſorbents. He recommends the following formula, as being one which he has, in general, found to agree with ſuch conſtitutions.

℞ Lign. Quaſſiæ Raſ. ſemidrachmam.
Aquæ Fontanæ ebullient. uncias ſex.
Stet in digeſtione per horulam et cola.
℞ Hujus colaturæ ſecunciam.
Vitriol. Alb. a grſs. ad gr. duo vel quatuor.
Tinctur. Cardamom. drachmam unam.
Teſt. Oſtreor. pp. ſcrupulum unum.
Fiat hauſtus ter de die ſumendus.

It

It would, Dr Lettſom obſerves, be tedious to enumerate the number of inſtances of nervous debility and hyſteria, which he has ſeen relieved by this medicine. But he is induced, from the ſingularity of its circumſtances, to give a ſhort detail of one caſe, of what he calls Epileptico-hyſteria. The ſubject of it was a lady, in the 20th year of her age, who had been the mother of four children. Without any obvious cauſe, ſhe became liable to languor, and great nervous debility. In proceſs of time ſhe became more ſeriouſly affected, being attacked with paroxyſms, in which the ſenſes were even ſuſpended for a few moments. Without any cauſe of uneaſineſs, ſhe would often ſink away in her chair, or fall down, with ſtruggling, and other ſlight ſymptoms of epilepſy. When Dr Lettſom was conſulted, theſe attacks were ſeldom abſent a whole day, and ſometimes affected her two or three times in the day.

This lady had been under the care of an eminent phyſician, who preſcribed Peruvian bark, camphor, muſk, caſtor, and chalybeates, without effect. Dr Lettſom directed ſome laxative pills, to open her belly, and had recourſe

courſe to the Quaſſia draught, mentioned above. He did not expect any immediate effect from it, but imagined that it would excite the tone of the ſtomach, and, by thus gradually ſtrengthening the habit, remove that peculiar ſpecies of nervous atony to which ſhe was ſubjected. But, beyond his expectation, after the firſt uſe of the medicine, ſhe had no return of fit.

Beſides employing the Quaſſia in caſes of hyſteria, Dr Lettſom recommends it alſo very ſtrongly in thoſe ſtomachic ailments, or dyſpeptic affections, as they are now commonly called, which are the conſequences of hard drinking. The miſeries entailed by this unguarded indulgence, differ ſo much, Dr Lettſom tells us, in their progreſs and violence, and even the ſymptoms vary ſo much, as to admit, he thinks, of obvious diſtinctions: and he accordingly deſcribes, at conſiderable length, three different modifications of this affection. We readily admit, that all the ſymptoms he has enumerated, do take place in dyſpepſia. But, in our opinion, there is no juſt foundation for thoſe diſtinctions which he has here attempted to eſtabliſh; as the ſymptoms

ſymptoms mentioned under any of the modifications he has deſcribed, ſeldom occur, without being alſo attended, during ſome part of the progreſs of the diſeaſe, even with the leading ſymptoms mentioned under the others. And although we readily admit all the evils he has mentioned to reſult from the abuſe of ſpirits; yet we cannot ſee any good reaſon for entirely interdicting theſe, any more than wine and malt-liquor, from the abuſe of which alſo, there cannot be a doubt, that ſtomach complaints, even of the worſt kind, will alſo ariſe. Our author, however, ſtrenuouſly argues for a total prohibition of the uſe of ſpirits, though taken either in the moſt moderate quantities, or in the moſt diluted ſtate. It is, he ſays, from the moſt decided conviction of injury, that he would guard every perſon from beginning with even a little drop of the faſcinating poiſon, which, once admitted, is ſeldom, if ever, afterwards overcome. He is equally an enemy to brandy, to rum, and to gin. They are all, ſays he, poiſons, and are nearly alike deliterious. Hence he admits the moderate uſe of wine or beer, but not one drop of ſpirit.

But, whether the obſervations which Dr Lettſom has made, with reſpect to the cauſes of dyſpepſia and its different modifications, be well founded or not, what he has ſaid upon this ſubject but little affects the importance of his obſervations reſpecting the uſe of Quaſſia, as a remedy for reſtoring the tone of the ſtomach, and improving its digeſtive powers. He recommends it as being a medicine, which, in theſe affections, he has found of great uſe. He directs, in theſe complaints, an ounce and a half of the infuſion formerly mentioned, to be taken in conjunction with three drams of the beaume de vie; and, where the latter article is not to be had, he propoſes the following ſubſtitute, which is, he obſerves, ſo ſimilar to it, both in its taſte, colour, and operation, that the difference between the two is not eaſily diſcernible:

℞ Extract. Glycyrrh. ſemunciam.
Salis Tartari drachmas duas.
Aloes Soccotr.
Gummi Myrrhæ,
Croci Anglicani, utriuſque drachmam.
Coque ex Aquæ Fontanæ lb. i. ad uncias duodecem,

duodecem, et colaturæ adde

Tinct. Stomach. uncias quatuor. M.

Beſides inſtances of dyſpepſia, ſtrictly ſo called, theſe remedies are alſo recommended in the affections of the ſtomach which occur in hypochondriaſis, chloroſis, leucorrhœa, and amenorrhœa. But in theſe affections, eſpecially when the fluid diſcharged by vomiting is of an acid taſte, he adviſes that it ſhould be combined with ſome abſorbent and laxative medicine. When the fluid thrown up is of a ſweet taſte, he recommends the addition of tar-water; and, in inſtances of leucorrhœa, a few grains of the flores martiales may, he tells us, be added to the Quaſſia, with advantage.

In all ſtomach ailments, Dr Lettſom obſerves, that peculiar attention ſhould ever be had to the quantity of the food taken at once; and while care is beſtowed, that the ſtomach be not overloaded with the quantity of food, it ſhould never be vitiated with variety; for, unleſs attention be paid to this, remedies will be employed in vain.

In caſes of habitual diarrhœa, and particularly

cularly with thoſe who are frequently, for a few days, coſtive, and then, perhaps, for as many, violently purged, he recommends the Quaſſia as a moſt efficacious remedy, when combined with ſome abſorbent, either with or without opium. When the diarrhœa ariſes from bilious acrimony, he premiſes to the Quaſſia an emetic of ipecacuan, and gives, at proper intervals, rhubarb as a laxative.

While, however, Dr Lettſom thus extols the Quaſſia in theſe complaints, he differs much from Linnæus, Buchoz, and others, who have repreſented it as poſſeſſing febrifuge qualities, even ſuperior to the Peruvian bark. He indeed allows, that, in ſome particular ſeaſons, and eſpecially about Midſummer 1785, he met with ſeveral inſtances of low, remittent, and nervous fevers, in which the Peruvian bark uniformly aggravated the ſymptoms, though given in intermiſſions the moſt favourable to its ſucceſs; and to which, Quaſſia and ſnake-root were afterwards advantageouſly ſubſtituted. But he contends, that in putrid fevers, and in low nervous fevers, attended with ſymptoms of putreſcency, the

Peruvian

Peruvian bark has a decided ſuperiority. But, notwithſtanding this, if the Quaſſia be found to ſupport the character which Dr Lettſom has given of it, the advantages derived from it in the practice of medicine, will be neither few nor inconſiderable.

V.

An Account of two Perſons having a Bronchocele, wherein the uſe of Burnt Sponge appeared to have a very conſiderable Effect. By Timothy Lane, *F. R. S.*

THE firſt caſe here related, is that of a young lady in the ſeventeenth year of her age. She applied to Mr Lane, in January 1764, for a Bronchocele, which ſhe had perceived growing for about twelve months. Mr Lane had, at firſt, recourſe to a powder, conſiſting of millepedes, and the mercurius alcalizatus, and to a ſolution of ſoluble tartar. Theſe medicines were continued for about three weeks, without any apparent benefit. Mr Lane was then informed, that, in ſimilar caſes, a lozenge of burnt ſponge, placed under the tongue at night, when going to bed, and remaining there till it gradually diſſolved, had been of uſe. To this remedy he reſolved to have recourſe. To a dram

of

of burnt ſponge, he added as much ſyrup as was neceſſary to give it the proper conſiſtence, and divided this quantity into ſix lozenges. Theſe had not been continued for a month, before the tumour gradually diſappeared; and, at the diſtance of twelve years afterwards, when Mr Lane had an opportunity of ſeeing her, he found that there never had been even the ſlighteſt return of her former complaint.

Soon after this, two other patients labouring under bronchocele, applied to Mr Lane. To theſe, alſo, he directed the lozenges, but without effect: Nor were they more benefited by any other remedies which he employed. But he afterwards recommended them to a young lady in the fifteenth year of her age, having a bronchocele, where the tumour was on the right ſide of the neck only. To her, alſo, the lozenges of burnt ſponge were directed. When ſhe firſt began the uſe of them, ſhe found them troubleſome, as it was unuſual for her to keep any thing in her mouth in that way. But in a ſhort time ſhe felt no inconvenience from them, and went even to ſleep before they

were diſſolved. After ſhe had uſed the lozenges for about three weeks, ſhe complained of headach. As Mr Lane ſuppoſed this to ariſe from coſtiveneſs, he directed ſome infuſion of ſenna, which relieved her. In the ſpace of a month, the tumour began to decreaſe; and, by the time ſhe had continued the lozenges for four months, it was entirely gone, although it had been of two years ſtanding before ſhe began the uſe of them. Since their uſe, ſhe has had no return of her complaint.

In the former caſe, ſince different remedies were employed, Mr Lane obſerves, that it may perhaps be a matter of ſome doubt, whether the cure was to be attributed to the ſponge. But in this caſe, as no other remedy was taken, he thinks there can be little doubt of its efficacy. From the facts which are here collected, it appears, that the ſponge, employed in this manner, is not always ſucceſsful. But in a diſeaſe ſo obſtinate, it is of no ſmall importance to be acquainted with a remedy which will ſometimes ſucceed.

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In a former volume of theſe Commentaries, the employment of burnt ſponges, in a different manner, for the cure of bronchocele, is recommended as uſed by Dr Bate of Coventry; and our readers will find a full account of his mode of giving it, in Mr Wilmer's Caſes in Surgery. It is probable, that as little of the efficacy of this article depends on its being uſed at night only, and taken in a very gradual manner, as is directed in Mr Lane's mode of exhibiting it, as on its being employed in the wane of the moon, the time preſcribed for uſing it in that of Dr Bate. But if further experience ſhall demonſtrate, that a good effect does reſult from its employment, it will probably alſo aſcertain the beſt mode of exhibiting it. And the facts here related, ſhould at leaſt induce practitioners to future trials, by which its efficacy will either be confirmed, or the fallacy refuted.

VI.

VI.

Of the Efficacy of the Hyoſciamus, or Henbane, in certain caſes of Inſanity. By A. Fothergill, *M. D. F. R. S. &c. of Bath.* Vide *Memoirs of the Medical Society of London, Vol. I.* 8vo, London.

IN the paper now before us, Dr Fothergill gives an accurate account of a particular caſe, in which the extract of the hyoſciamus was uſed with unexpected and uncommon ſucceſs, in removing a maniacal affection. A man in the fifty-third year of his age, of a corpulent habit, and ſwarthy complexion, deſtined to a ſedentary occupation, having met with misfortunes, devoted himſelf to grief and ſolitude. His mind being filled with diſtreſsful and gloomy apprehenſions concerning a future ſtate, he fancied that he was haunted by ghoſts and ſpectres, and conſidered himſelf as an object of Divine vengeance.

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He became penſive, timorous, and ſuſpicious; ſometimes ſullen and moroſe, threatening violence to himſelf and others; till at length, the diſeaſe having terminated in a ſettled and confirmed melancholy, confinement became abſolutely neceſſary.

At the lunar periods, the ſymptoms generally increaſed, but not conſtantly. During his lucid intervals, he would ſometimes converſe rationally, complaining of ſevere cramp about the region of the ſtomach, attended with obſtinate watching, inquietude, flatulency, and conſtipation. None of his anceſtors had been known to be affected with inſanity.

After trying various remedies, particularly antimonial emetics, cathartics of ſoluble tartar, venæſection, and diaphoretics, with camphor and opium, the pain of his ſtomach was ſomewhat relieved; but his maniacal affection remained unabated. This induced Dr Fothergill to think of trying ſome powerful medicine of the narcotic claſs; and, with this intention, he had recourſe to the hyoſciamus.

This

This he employed under the form of extract, prepared in the following manner. The plant being in full vigour, a quantity of the expreſſed juice was expoſed, in a flat earthen veſſel, to the ſolar rays. The ſun being very powerful, ſoon evaporated the aqueous part, and reduced the remainder to the conſiſtence of an extract, ſuitable to the form of pills. He ordered a pill, compoſed of five grains of this extract, to be adminiſtered every morning and evening. It agreed well with the patient, but produced no ſenſible effect, excepting that of a ſlight diuretic. The week following, the extract was directed to be increaſed to the quantity of fifteen grains in the day. But Dr Fothergill found it neceſſary to interpoſe occaſionally a doſe of aloetic pills, to prevent coſtiveneſs. This coſtiveneſs, however, we are inclined to think, muſt have been more the effect of his diſeaſe, than of the remedy. For while opium is univerſally allowed to have a tendency to bind the belly, as far as we can judge from our own obſervation, the hyoſciamus has a tendency to open it.

The

The extract continued to operate as a diuretic; and, during its use, considerable changes took place in the state of his affection. His nights became more composed; and he no longer started on hearing the door opened, or attempted to conceal himself when a stranger approached. His medicine was gradually increased, till he reached thirty grains in the day. It then began to occasion slight giddiness, and a propensity to sleep; but the symptoms of melancholy abated. He rested better, and began to converse with composure. The extract was still farther increased. But when he arrived at forty grains, the giddiness and soporific disposition were so much augmented, as denoted an over-dose. This rendered it necessary to descend to thirty grains, which quantity he bore without inconvenience, and all the symptoms became more favourable. His timidity, and apprehensions of evil spirits, entirely forsook him; and he began to assume a more chearful and serene aspect.

After he had taken the extract for about six weeks, he appeared to be perfectly restored. It was, however, continued for a fort-

night

night longer, when he returned to his buſineſs. Dr Fothergill had, a conſiderable time afterwards, the ſatisfaction to hear that he continued to enjoy perfect health, without any ſymptom of relapſe.

From this ſucceſs, Dr Fothergill naturally conceived a favourable idea of the powers of the hyoſciamus. He ſoon after gave it in a caſe of puerperal mania, and with ſimilar advantages. With that patient, the maniacal ſymptoms were wont to come on, in a ſhort time after delivery. But in a few weeks they yielded to this remedy, and that repeatedly, after two ſucceeding deliveries.

Theſe caſes may juſtly be conſidered as affording no inconſiderable additional confirmation of the utility of this article in inſtances of inſania. And there can be little doubt, that this article may, with great advantage, be much more extenſively employed for medical purpoſes, than is at preſent the caſe among the practitioners in Britain. It may not only be conſidered as an uſeful ſubſtitute for opium; but, in many caſes, it produces the ſame ſalutary effects, with much leſs inconvenience to the patient. Dr Fothergill, however,

however, candidly acknowledges, that in certain maniacal affections, though given in full doſes, it has entirely failed. But indeed he obſerves, that he has never been fortunate enough to ſee a real hereditary mania, a circumſtance too often induſtriouſly concealed even from the phyſician, perfectly cured, either by this or any other medicine.

With reſpect to the extract of hyoſciamus, he adviſes, that for its ſucceſsful employment, either in this or in other diſeaſes, it ſhould be prepared freſh every ſeaſon, and carefully preſerved in a cloſe veſſel: for otherwiſe, it ſoon, he thinks, loſes its efficacy. That this extract ſuffers from keeping, we are far from denying. But from repeated experince, we can aſſert, that, when duly prepared, and kept with any tolerable degree of attention, its active powers are little impaired, at the end of even ſeveral years from the time of its preparation.

VII.

VII.

Remarkable Effects of Cantharides in paralytic Affections. *By* J. Vaughan, *M. D. and Phyſician to the Leiceſter Infirmary.* Vide *Memoirs of the Medical Society of London, Vol. I.* 8vo, London.

DR VAUGHAN very juſtly obſerves, that, while paralytic affections are very common, they are frequently not to be overcome by the utmoſt efforts of art. Hence, any remedy, which promiſes to be uſeful in ſo dreadful a malady, will be received both with candour and thankfulneſs by the medical world. The remedy which Dr Vaughan here recommends, is cantharides, taken in ſubſtance. Many caſes of this diſeaſe have, he tells us, occurred to him, in which he has employed this remedy internally, both with ſafety and advantage. And to recommend it to the attention of others, he here

here preſents us with one of the moſt important of many caſes which have come under his cognizance.

A luſty and healthy young man, in the twenty-firſt year of his age, being violently heated, threw himſelf on the ground, and fell faſt aſleep. At the end of ſome hours, he was found utterly incapable of voluntary motion, ſenſeleſs, with great coldneſs of the limbs, and of the ſurface of the body. He was deprived of the power of ſpeech, and his water flowed involuntarily. In this ſtate, his friends applied to an apothecary for aſſiſtance, who bled him, gave him a purge, and applied a bliſter to his back. After the operation of theſe medicines, Dr Vaughan found him with a very conſiderable degree of ſtupor, a frequent, unequal reſpiration, and a very ſmall and feeble pulſe.

On the 28th of March, as he had not had a ſtool for ſome days, a warm ſtimulating clyſter, with a proportion of ſacred tincture, and tincture of jallap, was immediately adminiſtered. The whole head was covered with a bliſter, as was alſo the ſacrum: And a volatile lineament, with more than the uſual

quantity of cauſtic volatile alkali, was applied to the pubis, to the ſpine, and to the lower extremities. A bolus, conſiſting of a ſcruple of volatile ſalt, and as much of the cardiac electuary, with a grain of cantharides in powder, was ordered to be taken once every ſix hours, and to be waſhed down with a ſtrong infuſion of valerian, horſe-radiſh, muſtard ſeed, and canella alba. This plan was continued for three ſucceſſive days, without producing any viſible effect.

On the 31ſt of March, the volatile ſalt, and cordial electuary, were each increaſed to the quantity of half a dram, and the grain of cantharides was added as before. But, inſtead of being given only once in ſix hours, it was ordered to be repeated every three hours, with the infuſion as before directed.

On the 4th of April, as no material change had taken place in his diſeaſe, ten grains more of the volatile ſalt, and a ſecond grain of cantharides were added to each bolus; and this doſe was directed to be repeated every three or four hours, until ſome manifeſt effect was produced. This plan was purſued

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till the 6th of April. But, on the evening of that day, he became very reſtleſs. He was able to toſs himſelf about; and, although he could not articulate any words, yet he made a great noiſe, expreſſive of much pain, frequently applying his hand to the region of the pubis, as if that were the part more particularly aggrieved. The bliſter was now removed from his head, and the part waſhed clean. A poultice of bread and milk, with ſome oil, was applied to the bliſtered part of the ſacrum, and his medicines were omitted. In place of theſe, he was directed to drink freely of barley-water, with gum-arabic. In three day after this, all theſe painful ſymptoms were entirely removed: He was become quite ſenſible: He could retain his water: And the day following, he could ſtand, when ſupported by two people. But his countenance betrayed ſtrong marks of the injury the brain had ſuſtained, and beſpoke a degree of fatuity.

On the 9th of April, he was directed to take once every eight hours, a bolus with a ſcruple of guaiacum, as much volatile ſalt, and and one grain of cantharides, drinking with

it an infuſion of valerian. A ſeton was made in his neck, and ſtimulating plaſters were applied to the ſoles of his feet. He continued in this courſe till the 21ſt of April, mending every day. He felt no inconvenience from the cantharides taken to this quantity: he ſlept well; ate his food with appetite; and his bowels did their office with regularity. His intellectual faculties, however, were much impaired. He had forgotten how to walk, and he had even his letters to learn again. Nothing which had paſſed from the time of his firſt ſeizure, had left the ſmalleſt impreſſion on his mind.

But, in proportion as he gained ſtrength, his mental faculties were reſtored. He could ſoon walk with the aid of a ſtick: but his limbs were feeble; and he ſtill continued to drag them after him: and he had for ſome time little uſe of his left hand and arm. It was however obſervable, that he gained ſomething every day. By the 4th of May, he was able to walk tolerably well; but the weakneſs of the left hand and arm ſtill continued, though not to ſo great a degree. He was now ordered an aromatic electuary

with

with ſteel, and a warm decoction of Peruvian bark, to which was joined the daily uſe of the cold bath. During the uſe of theſe remedies, his progreſs to recovery continued; and, by the 12th of May, nothing remained of his diſeaſe, excepting a trifling weakneſs in his left hand. He ſoon after recovered the entire uſe of this organ alſo, and had no longer occaſion for any medical aſſiſtance.

Although we muſt own that we cannot altogether adopt Dr Vaughan's opinion, in conſidering this caſe as a decided example of the benefit to be reaped from the cantharides in palſy; yet it at leaſt ſerves to ſhew, that in certain ſituations, and with ſome habits, this article may be taken to a very conſiderable extent with impunity: And, when taken in conjunction with the experience Dr Vaughan has had of the benefit of cantharides in other caſes of paralyſis, it ſhould at leaſt lead to further trials of their employment in that affection, when it obſtinately reſiſts other modes of cure. Of the practice here recommended, we have ourſelves no experience. We have indeed ſeen cantharides, even in

ſubſtance, taken internally, both in diabetic caſes, and likewiſe with the view of increaſing the quantity of urine in dropſical affections. But in ſome of theſe inſtances, where it was taken to a much leſs quantity than in this caſe, and where it had no influence either as augmenting or diminiſhing the diſcharge of urine, it induced, probably from its action on the neck of the bladder, ſuch violent ſtrangurious affections, as to give very great diſtreſs to the patient: And, as ſimilar effects may take place in paralytic caſes, without being in any degree advantageous to the patient, it ſhould always be employed with great caution. When inconvenience ariſes from its ſtimulating too much, Dr Vaughan directs the immediate ſuſpenſion of its uſe: And he tells us, that by this means, and allowing at the ſame time the free uſe of milk and water as a diluent, any troubleſome ſymptoms it occaſions are ſoon removed.

Dr Vaughan obſerves, in a note, that the doſe of volatile ſalt which he gave in this caſe, two ſcruples, viz. every three hours, may ſeem to be rather large: But he mentions another caſe,

caſe, in which he employed it to the extent of half an ounce, diſſolved in half a pint of water-gruel, taken faſting. This doſe was, he tells us, continued for three weeks, without producing any effect, either good or bad. The patient only obſerved, that it heated the fauces, and warmed the ſtomach, for a ſhort time after it was taken. To determine whether it had produced any change in the common maſs of fluids, he ordered ſome blood to be drawn from the arm. The blood was of a more florid colour than uſual; but its texture was not in the leaſt broken. On the contrary, after it had been allowed to ſtand for many hours, he thought that it yielded leſs ſerum than common, and that the craſſamentum was rather firmer than ordinary. This fact may be conſidered as a ſtrong evidence, that it has not all thoſe effects upon the circulating maſs, which ſome are diſpoſed to imagine.

VIII.

Obſervations on the Diſeaſes of the Army in Jamaica, and on the beſt Means of preſerving the Health of Europeans in Hot Climates. By John Hunter, *M. D. F. R. S. and Phyſician to the Army.* 8vo, London.

THE treatiſe now before us, is the reſult of obſervations made by the ingenious and intelligent author, while he had the care of the military hoſpitals in Jamaica; and it contains many important remarks, both with reſpect to the prevention and cure of thoſe diſeaſes which are moſt frequent in warm climates.

After ſome introductory obſervations, reſpecting the ſituation, climate and produce of the iſland of Jamaica, Dr Hunter treats of the cauſes of ſickneſs and mortality among Europeans and ſoldiers in that iſland. The diſorders, he obſerves, that prove chiefly fatal

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to them, are of two kinds, fevers and fluxes. And between theſe diſeaſes there ſeems to be an intimate connexion; for they are frequently combined, often interchange with each other; and it rarely happens that the one is epidemic without the other. Hence, he thinks they probably depend upon the ſame cauſe, differently modified; and he concurs in opinion with moſt other accurate obſervers, in thinking that they ariſe from noxious exhalations from wet, low, and marſhy grounds. Three circumſtances, in his opinion, conjoin in producing theſe exhalations; heat, moiſture, and decayed vegetable or animal matter.

That heat alone, although very great, will not produce theſe diſeaſes, is, in his opinion, proved, by thoſe living on ſhip-board remaining free from fevers, and from the healthineſs of dry ſandy ſpots in Jamaica, where the heat is even uncommonly great; as Fort-Auguſta, Port-Royal, and others. That ſimple moiſture is equally harmleſs, he thinks proved by the healthy ſtate of the two places juſt mentioned, which are nearly ſurrounded with water; while dead vegetable and animal matters do not, he affirms, ſend forth noxious vapours,

vapours, unleſs in a ſtate of corruption, for which a certain degree both of heat and moiſture are neceſſary, as appears from comparing warm with cold climates, and wet with dry ſituations.

But, beſides the combined influence of theſe circumſtances, pernicious effects, he thinks, alſo ariſe from exceſs in the uſe of rum, fatigue, hard labour, bad or ſcanty diet, long faſting, and diſtreſs of mind of all kinds. And he farther remarks, that thoſe who are juſt arrived from cool and healthy climates, are particularly ſubject to fevers. This, he thinks, is principally to be aſcribed to the human body acquiring a power of reſiſting noxious cauſes; of which the ſtrongeſt proof was afforded, in the caſe of thoſe negroes who were ſent along with the troops againſt Fort St Juan, of whom ſcarcely any died, although few of the ſoldiers ſurvived the expedition. He concludes this ſubject with obſerving, that the life of a woman is at leaſt twice as good as that of a man; which he aſcribes to their keeping much within doors, and uſing no violent exertions in the open air.

After

After thus briefly ſtating the cauſes of diſeaſe, Dr Hunter next mentions the precautions to be uſed in ſending troops to warm climates. The troops to be ſent, ſhould, he obſerves, conſiſt of well-diſciplined, and not newly raiſed men. They ſhould be embarked at ſuch a time, that they may arrive at their deſtination at the cooleſt and moſt healthy ſeaſon. They ſhould be embarked on board roomy tranſports; and the utmoſt attention ought to be paid to cleanlineſs. When they arrive at the place of their deſtination, they ſhould be quartered in barracks, erected in healthy ſituations; and elevated grounds are more uniformly healthy than others. A certain number of negroes ſhould be allowed to each regiment, to do hard work when neceſſary, in the heat of the day; for they do not ſuffer from it, although it would prove fatal to Europeans. The ſoldiers ſhould be ſupplied by proviſions from government, and ſhould not be allowed, on any pretence whatever, to diſpoſe of their proviſions. They ſhould be frequently out at exerciſe; but this ſhould be in the mornings, and continued only for a ſhort time.

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Dr Hunter next gives an account of the number of men annually loſt by ſeveral regiments in Jamaica, and of the various degrees of healthineſs in different quarters. From this account, the average number of ſick, during three years and an half, gives one third of the army unfit for ſervice, at the time of the greateſt ſickneſs, and one eighth at the time of the leaſt. The average number of deaths annually, is, upon the whole, nearly one fourth, and of diſcharged men about one eighth; which, together, make the loſs three eighths of the whole. With reſpect to ſituation, the deaths prove, that Kingſton and Up-Park are both bad quarters; that Rock-Fort, which is ſituated near ſwampy ground, is ſtill worſe; that Spaniſhtown is better than Kingſton, though much inferior to Fort-Auguſta or Stoney-hill, which could not be reckoned unhealthy quarters in any part of the world. Situations ſimilar to theſe, may, he thinks, be found in all parts of Jamaica, and in moſt of the other Weſt India iſlands. Such ſituations are of two kinds: dry ſand-banks, ſurrounded either wholly or in part by the ſea, and out of the reach of noxious winds,

winds, blowing from ſwamps or marſhes; or elevated ſituations on the mountains. He concludes with obſerving, that the intereſt of Government, the ſafety of our Weſt India poſſeſſions, and the calls of humanity, are all equally concerned in providing quarters for the troops in healthy ſituations; and he farther adds, that ſuch ſituations are, in general, favourably circumſtanced for the defence of the country.

After theſe general obſervations, Dr Hunter next proceeds to treat of particular diſeaſes; and, firſt, of thoſe fevers which prevail in Jamaica. Theſe, he obſerves, are either of the remittent or intermittent kind; but the remittent are both the moſt frequent and the moſt fatal. He ſets out with giving a very minute and diſtinct account of the ſymptoms occurring in this fever; which, however, while it does not admit of an analyſis, does not differ eſſentially from the deſcriptions given by others. He obſerves, that when this fever is ſevere, a ſymptom often occurs which has given a name to the diſeaſe, as if it were a diſtinct one, being from thence called the Yellow Fever. This he conſiders as ariſing from the

the addition of jaundice to the other ſymptoms of fever. It is firſt obſerved in the eyes; next, it tinges the neck and ſhoulders, and afterwards the whole body. The urine is of a very deep colour, and ſtains linen yellow, like that of a perſon in the jaundice. There appeared, he tells us, no reaſon for ſuſpecting a diſſolution of the blood to be the cauſe of the yellowneſs; for it happened frequently, when no marks of diſſolution were to be found: and when theſe were preſent, yellowneſs of the ſkin, in many caſes, did not occur. This yellowneſs of the ſkin appears frequently towards the end of the firſt fit, though more commonly after the ſecond or third. If the patient ſhould ſurvive a third or fourth fit, he remains almoſt totally deprived of ſtrength, and frequently has an attack of dyſentery, proving fatal to him. This fever, however, ſometimes appears in ſo ſlight a way, that unleſs it be diſturbed by ſome irregularity or anxiety, it is hardly perceptible. To ſuch ſlight febrile ſymptoms, there are ſometimes ſuperadded ſmall painful tumours in the ſkin, called cat-boils. Theſe appear to be ſmall carbuncles, and, like the affection of

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the bowels, were much more prevalent in one ſeaſon than another.

In children, the remittent fever ſometimes begins with fits, reſembling thoſe that happen to children at the eruption of the ſmall-pox. An excruciating pain is ſometimes fixed in one part, and follows the fever in its increaſe and abatement; and, after ſome continuance, the part mortifies. In two or three inſtances of this fever, Dr Hunter found patients complaining of a ſenſe of numbneſs, which, beginning either at the head or ſtomach, diffuſed itſelf over the whole body, and occaſioned an extreme alarm. And, among other ſymptoms, more rare in this fever, he mentions tetanus, and an effuſion of water in the ventricles of the brain.

After giving the hiſtory of this very fatal diſeaſe, our author remarks, that it is matter of ſome conſolation to be able to ſay that it is not infectious. He never ſaw the leaſt reaſon to believe, that men admitted with other complaints, ever caught a fever in the hoſpital: And in no inſtance did the yellow fever prove more infectious than the remit-

tent,

tent, in its ordinary form, without any change in the colour of the ſkin. He alſo remarks, that during all the time he was in Jamaica, he never ſaw an inſtance of the common jail, or hoſpital-fever, although many of the military hoſpitals were very confined, and ſome of the beſt of them conſiſted of a double platform, on which the ſick were placed as cloſe together as they could ly. The two diſeaſes are, he thinks, readily diſtinguiſhed by the diſpoſition to remit, which attends the Jamaica fever, even where there is no yellowneſs. The abſence of the jail fever, Dr Hunter aſcribes to the influence of ventilation. An hot climate, he obſerves, by rendering ventilation pleaſant and agreeable, prevents the hoſpital-fever; while a cold climate, rendering it neceſſary to warm the air artificially, which requires it to be confined to a certain degree, gives riſe to that fever.

After giving a very diſtinct account of the ſymptoms of the remittent fever, Dr Hunter next treats of the cure. He enumerates the remedies in the order in which they were adminiſtered, when the diſeaſe had its moſt ordinary appearance. He next takes no-

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tice of thoſe means which were found moſt ſucceſsful in removing or palliating particular ſymptoms; and concludes with a few obſervations on ſome of the remedies which have been either ſtrongly recommended, or are in general uſe.

No diſeaſe, he obſerves, requires more ſpeedy aſſiſtance, the efficacy of medicines depending on their being given early, and the diſeaſe gaining ſtrength by repeated attacks. When Dr Hunter ſaw a patient during the firſt fit, his practice was, to exhibit a purgative medicine, that would operate effectually, and without violence. Although the particular purgative to be uſed was immaterial, and in ſome degree to be accommodated to the former habits of the patient; yet he in general preferred Glauber's ſalt, on account of its certain and ſpeedy operation, while at the ſame time it keeps well in a warm climate. This he directed to the extent of an ounce: And after a few ſtools had been procured, the patient generally found himſelf eaſier, and a remiſſion enſued.

When a remiſſion took place, recourſe was immediately had to the Peruvian bark, which

was in general taken to the extent of a dram every ſecond hour. But both the quantity and the intervals muſt, he obſerves, be varied according to circumſtances. When the ſtomach would not bear the bark in ſubſtance, recourſe was had to the decoction, or infuſion. Dr Hunter preferred the latter, as being both leſs offenſive to the ſtomach, and alſo ſtronger: And in very ſevere attacks, he adviſes that the uſe of the infuſion ſhould be begun as ſoon as the pulſe becomes a little ſlower, and the heat begins to abate. After a few doſes of the infuſion, the powder is to be added as ſoon as the ſtomach will bear it: and Dr Hunter always firſt made a trial of the infuſion of bark, as being the moſt efficacious vehicle. But if this was found to diſagree, recourſe was had to ſome other, better ſuited to the ſtomach; as wine, coffee, milk, or the like. When the Peruvian bark operates as a cathartic, which he conſiders as no unfavourable ſymptom, he adviſes the addition of three or four drops of liquid laudanum to each doſe.

If no remedies be employed, the ſecond paroxyſm of a remittent fever is in general more

more violent than the firſt. But if the Peruvian bark has been liberally thrown in, it has in general a conſiderable effect in mitigating the enſuing fit. During the ſecond fit, the medicine which he has found moſt conſiderably to relieve the ſymptoms, and promote a remiſſion, is James's powder. This he directs to be given in ſmall doſes, ſeldom exceeding five grains, and to be repeated every three or four hours. But if the ſtomach be very irritable, half that quantity will be ſufficient: For no ſymptom is more troubleſome or dangerous than vomiting; and care muſt be taken to avoid what may either induce or aggravate it. The moſt ſalutary operation of James's powder, is either to excite a ſweat, or gently open the body; for it thus promotes a remiſſion of the fever.

The ſecond remiſſion, as well as the firſt, is to be employed in adminiſtering the Peruvian bark freely. In this way, two ounces may in general be got down, before another period of the fever returns: And this quantity will commonly be ſufficient either entirely to prevent the next fit, or ſo far to break the force of it, as to render it void of danger.

In ſubſequent attacks, the ſame courſe is to be followed; that is, ſmall doſes of James's powder during the paroxyſm, and the Peruvian bark in remiſſions. But if James's powder do not keep the belly open, recourſe muſt be had to laxative glyſters; for it is obſerved, that one or two ſtools in twenty-four hours, greatly relieve the ſick, and promote the good effects of the bark.

After thus mentioning the general plan of cure, Dr Hunter next treats of the means of alleviating or palliating urgent ſymptoms. No ſymptom is more diſtreſſing than violent retching or vomiting; and nothing is, he thinks, more pernicious than the uſe of emetics in ſuch circumſtances. If theſe ſymptoms take place in the beginning of the diſeaſe, chamomile tea, or warm water, are ſufficient to cleanſe the ſtomach: And if they continue after the uſe of theſe, he directs ſaline draughts in a ſtate of effervescence, to be repeated every hour, or oftener. When even theſe fail, fifteen or twenty drops of laudanum added to them, will often prove effectual. When very ſevere headach takes place, this ſymptom is generally either relieved,

ed, or entirely removed, by a bliſter applied between the ſhoulders. When a very low ſtate, ſucceeds violent paroxyſms, recourſe muſt, he tells us, be had to cordials; and, with this view, wine and nouriſhment are, he thinks, preferable to any which the ſhops can afford. Claret and Rheniſh were in general moſt agreeable to the ſick: but Madeira was the only wine that could with propriety be adminiſtered to the common ſoldiers. Chicken-broth, panada, ſago, ſalop, and thin gruels, were the kinds of nouriſhment beſt adapted to the ſtate of the ſtomach, and to the diſeaſe. When the ſick were much reduced after two or more paroxyſms, wine and nouriſhment became more eſſential than medicine: For, in theſe circumſtances, Dr Hunter found that the bark did little good till the powers of life were in ſome degree recruited. With regard to the quantity of wine to be uſed, Dr Hunter obſerves, that it is difficult to give a preciſe direction. But he has in general found, from careful attention, the quantity which had the beſt effect, to be leſs than has often been recommended. He has rarely given above

a pint in twenty four hours; and, from watching its effects, he was convinced that going beyond that quantity, in general did more harm than good. He obſerves, that, even in the jail fever, his own experience has not furniſhed him with caſes where the quantity could with ſafety much exceed that mentioned above. It happens, ſays he, moſt unfortunately in phyſic, that we can hardly correct one error, without ruſhing into another. Not contented with ſubſtituting wine and cordials in the room of evacuations, we muſt produce intoxication; without conſidering, that, in all caſes where the human body is greatly reduced or exhauſted, the ſtrength and quantity, even of cordials, muſt bear a direct proportion to the remaining ſtrength of the ſick. Our own experience leads us moſt readily to adopt his ſentiments on this ſubject. For although we are convinced that in the typhoid fever, very common in this country, the beſt effects may be derived from the prudent uſe of wine and opium; yet we have ſeen many caſes in which theſe, from being puſhed to a certain extent, have been productive of bad conſequences.

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For obviating diſtreſſing thirſt, Dr Hunter recommends water, toaſt and water, or Briſtol water, which he obſerves is often more grateful to the ſtomach than any other liquor, and frequently ſtays upon it when nothing elſe will be retained. He thinks that the great encomiums which have been beſtowed upon acid and aceſcent liquors, are the reſult rather of hypotheſis than experience: For they often augment the natural diſpoſition to ſourneſs in the ſtomach.

Where ſtupor and coma attending this fever, ariſe almoſt to a ſtate of inſenſibility, he obſerves that he has found nothing more effectual in helping to remove that ſtate, than James's powder, which, in ſuch circumſtances, may be given more liberally, as then the ſtomach is rarely in an irritable ſtate.

When a practitioner has no opportunity of preſcribing for a patient till a ſecond, or even a third paroxyſm has paſſed, it is not, he thinks, adviſeable to loſe three or four hours in giving an opening medicine. The Peruvian bark muſt be directly adminiſtered; but, to prevent any ſenſe of fulneſs which might ariſe from it, and to promote its ope-

ration upon the conſtitution, he adviſes that it ſhould be conjoined with ſome opening medicine, ſo as to procure three or four ſtools in the twenty-four hours. With this intention, he directs four of five grains of rhubarb to be added to each doſe of the bark.

For quieting delirium, with a conſiderable degree of wildneſs and agitation continuing after the uſual evacuations, he adviſes a moderate doſe of an opiate, repeated, if neceſſary, after an interval of two or three hours. When a large quantity of wind is collected in the bowels, producing conſiderable pain and diſtenſion, he tells us, that a drop of the oil of peppermint upon a bit of ſugar, or a few ſpoonfuls of the miſtura camphorata, will in general procure temporary eaſe.

When the conſtitution becomes liable to relapſes of this fever, which ſometimes occur with a degree of regularity, every two, three, or four weeks, Dr Hunter recommends a change of air, or, what is better, repeated changes of it, by travelling; and he obſerves, that eaſy journies, in the cool and mountainous parts of the country, continued for ſome time,

time, are very efficacious in reſtoring ſtrength and vigour to the conſtitution, and thus enabling it to reſiſt future returns of the diſorder. When this fails, he recommends a ſea-voyage, as often being able to accompliſh what change of air alone could not do. He obſerves, that the ſea air in the Weſt Indies is free from all the pernicious qualities of the air on ſhore; and that there is no climate in which ſeamen enjoy better health, provided they remain conſtantly on ſhip-board, and receive a ſufficient ſupply of vegetables, or fruits, to prevent the ſcurvy. Hence, with the view of preſerving the health of ſeamen in that climate, he recommends, that ſailors ſhould not be allowed to go on ſhore, when it can poſſibly be avoided; that negroes ſhould be employed for the watering ſervice; and that ſurgeons, while on that ſtation, ſhould have an allowance of bark from Government.

When dyſenteric ſymptoms occurred with remittent fever, they required ſome opening medicine, and often yielded to rhubarb; but when this was not the caſe, the dyſentery might be ſaid to conſtitute the principal diſcaſe; and he then recommends the method

of

of cure afterwards directed, in treating of that affection. Cat-boils, when combined with this fever, required no particular treatment, excepting the avoiding external violence, as ſqueezing, or even much motion of a joint, when they happened to be near it; for, in that caſe, they became extremely painful, inflamed all round, and formed a real carbuncle. With regard to tetanus as a ſymptom of this fever, he obſerves, that in one caſe, an electuary, formed of the flower of muſtard and common ſyrup, taken to the extent of a teaſpoonful every two hours, ſeemed to ſucceed. This remedy, he obſerves, was ſuggeſted to him by the late Dr Huck Saunders: but how far it will prove efficacious in other caſes, muſt be determined by future trials.

This fever, Dr Hunter obſerves, has many intermediate degrees of violence, between the ſevere attack which puts an end to life in one or two days, and a form ſo ſlight, that the preſence of fever is hardly ſuſpected. In theſe caſes, the ſymptoms were often removed by a doſe of cathartic, or emetic; but the former was commonly preferred, as being more effectual, and eaſier in its operation.

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He found, however, ſtill more benefit from James's powder, taken at bed-time, to the quantity of eight or ten grains, which often reſtored health, without producing any ſenſible operation.

Dr Hunter concludes this part of his ſubject with obſerving, that his practice had two leading objects in view; to procure a remiſſion, and to prevent a return of the fever. The firſt was obtained chiefly by opening medicines, and James's powder; and the ſecond by the bark, in different forms: and theſe ſimple means of cure ſo ſeldom diſappointed him, that he rarely employed any other medicines.

His practice, however, was not at once reduced to ſuch ſimplicity. At firſt, trials were made with ſeveral other remedies in common uſe; and he thinks it not improper to mention ſhortly the reſult of theſe. Blood-letting, even in thoſe caſes which ſeemed to require it moſt, did no good, and if copious, or repeated, was always hurtful, and that, too, even in inflammations of the lungs, where it was neceſſary to bleed freely. Vomits were not found to be of advantage in the remittent fever

ver of Jamaica, but often aggravated the retching, which was one of the moſt diſtreſſing ſymptoms. Emetic tartar could not be ſo managed as to produce the effect of James's powder; the peculiar advantage of which was, that it did not ſo readily affect the ſtomach as emetic tartar, but operated chiefly by purging and ſweating; and it was alſo found to be ſuperior to any preparation of the antimonium calcinatum. The red Peruvian bark was not found more effectual than the common kind, and was liable to ſeveral objections, frequently affecting the ſtomach and bowels with ſickneſs, vomiting, flatulence, griping and purging. It was found, that bliſters neither ſhortened the fit, nor prevented future returns; that the diſcharge from them was often ſo inconſiderable, as greatly to weaken the ſick; that they frequently produced ulcers, not healed without great difficulty; and that they ſometimes gave riſe to mortifications proving fatal. Their uſe was therefore entirely laid aſide, unleſs when patients were diſtreſſed with very ſevere headach, for which ſymptom they were found to be a ſort of ſpecific. The claſs of cordial medicines were ſeldom uſed, as wine

was

was found to be not only more agreeable to the ſick, but more effectual.

After thus giving a particular and diſtinct account of the moſt ſucceſsful practice in the remittent fever, Dr Hunter next enters into a diſquiſition reſpecting its nature and cauſes, which contains much ingenious and acute reaſoning. He refutes, with great ability, the opinions of its depending upon bile, or upon putridity, as well as ſeveral others, to which there have been fewer adherents. He thinks there can be no doubt, that the exhalations of wet or marſhy grounds, which are evidently the exciting cauſes of this fever, may be conſidered as a poiſon to the human body, and that this poiſon may find admiſſion into the body, by the lungs in reſpiration, by the abſorbing veſſels of the ſkin, or by the ſtomach, from its adhering to the fauces, and being carried down with whatever is ſwallowed. After the poiſon has got admiſſion into the body, the violence with which it acts appears to depend on two circumſtances, its quantity and virulence, and the ſtate of the habit into which it is introduced. In ſome inſtances, after being introduced, it would

appear

appear to ly dormant in the body for ſome length of time; for Dr Hunter has met with inſtances of this fever appearing at ſea, three weeks after expoſure to the cauſe of it. But after this poiſon acts upon the body, the moſt important queſtion is, How does it produce the ſymptoms of fever?—And here our author candidly allows, that our ignorance of the animal œconomy prevents us from being able to give any ſatisfactory anſwer to the queſtion. But when we conſider, that every function of the human body is diſturbed; that the blood is often in a diſſolved ſtate, and that there is a total loſs of ſtrength; he thinks we may conclude, that the poiſon affects the principles of life in every part of the body. A compariſon, therefore, of the effects of other poiſons with thoſe of the exhalations of marſhes, promiſes, he thinks, to throw more light on the ſubject of the remittent fever, than any other mode of inveſtigation; and although the inveſtigation of the operation of poiſons on animal bodies, be a ſubject of extreme difficulty, yet it is not to be deſpaired of: Nor are we, in any caſe, to ſet limits to the advancement of human knowledge, by experiment and obſervation.

ſervation. But we may venture to aſſert, that the experiments of the moſt induſtrious, ingenious, and judicious phyſiologiſts, have hitherto left this ſubject involved in great obſcurity.

Having treated of the remittent fever, Dr Hunter concludes his obſervations on the ſubject of fevers, with ſome remarks on intermittents. Theſe, in all their varieties, are frequently met with in Jamaica. While remitmittents are moſt common during the rainy ſeaſons, intermittents chiefly appear during the healthy part of the year. In the ſymptoms of theſe, there is little to be obſerved peculiar to the climate. The quotidian is the moſt dangerous form, and is more or leſs ſo as it approaches to the remittent fever, or recedes from it.

In the cure of intermittents, when the intermiſſion was complete, the Peruvian bark was given directly, without any previous evacuation. The bark was given, in the doſe of one or two drams, in wine, or any other vehicle agreeable to the ſick; and it was repeated every two hours, or oftener, according to the urgency of the caſe, and the ſtate of the ſtomach.

ſtomach. After the progreſs of the diſeaſe was ſtopt, a doſe of bark was given every day, for five or ſix days, in order to prevent a relapſe. If the bark rendered the body coſtive, an ounce of the tincture of ſenna, or of rhubarb, or an aloetic pill, was given at bed-time; or a few grains of rhubarb in powder were added to one or more doſes of the bark.

Although the Peruvian bark generally proved ſucceſsful, yet there were caſes which did not yield to it, even when given liberally, and for a length of time. In theſe caſes, chamomile flowers in fine powder, taken to the extent of half a dram, or even of a dram, and repeated every three hours, ſometimes ſucceeded. In other caſes, the cold bath was effectual in ſubduing old intermittents. Sal ammoniac, and alum, although their power did not appear to be great, ſtopt the fever in ſome caſes. And the mercurius dulcis, taken to the extent of one grain or two every night, or every ſecond night, according to circumſtances, ſeemed to give new efficacy to the bark employed in the uſual manner. Towards the end of Dr Hunter's reſidence in Jamaica, ſome of the red Peruvian bark was

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ſent to that iſland. This, when given in the ſame doſe with the common bark, affected the bowels, producing ſickneſs, vomiting, griping, purging, and flatulence; but when the doſe was reſtricted to half a dram, repeated every three hours, it cured many intermittents which had reſiſted the common bark. Dr Hunter, however, does not conſider this as a proof of its being more efficacious than the common bark in curing intermittents, if given in the firſt inſtance; for nearly as much might be ſaid of chamomile flowers, although the cures performed by theſe, are no ground for ſuppoſing that they are a better medicine than the common bark. Dr Hunter had no opportunity of bringing the queſtion of the comparative powers of red and pale bark to a fair deciſion; but he thinks we may ſafely conclude, that in the red bark we are in poſſeſſion of a valuable medcine, which will often ſucceed after the common bark has failed.

Intermittents, as well as remittents, often produce dropſy, ſwellings of the liver and ſpleen, and a complication of both theſe diſorders. In theſe caſes, he thinks the conſtitution is beſt repaired by having recourſe to

a colder climate, and more ſalubrious air; but mercury in ſmall doſes, either by itſelf, or combined with ſquills, was ſometimes of ſervice.

After fevers, Dr Hunter next proceeds to treat of dyſentery. Here, without treating minutely of the diſeaſe at large, he confines his obſervations to ſuch as more particularly apply to the climate. Though the dyſentery in Jamaica differs not in its ſymptoms from that deſcribed by Dr Sydenham, Sir John Pringle, Sir George Baker, and others; yet there evidently ſubſiſts a remarkable connexion between it and the remittent fever of Jamaica. The one frequently changes into the other; and the two diſeaſes are often complicated together. Dyſenteries occur in Jamaica with various degrees of violence, from ſlight griping, with frequent ſlimy ſtools, to the moſt excruciating pains in the bowels, inceſſant ſtraining, profuſe diſcharge of blood, great fever, and ſudden proſtration of ſtrength. In ſome particular quarters, as at Fort-Auguſta and Port-Royal, a mild kind of dyſentery often prevails, which Dr Hunter aſcribes to the water uſed there. The only

only ſymptom which Dr Hunter particularly points out, as not commonly mentioned by the moſt accurate writers on this diſeaſe, is an immediate call to go to ſtool, upon ſwallowing any thing either ſolid or liquid, accompanied with a feeling as if what had been juſt ſwallowed were running through the bowels. This ſenſation, he obſerves, is often ſo ſtrong, that the ſick imagine the food they have taken has really paſſed through them; and they are not convinced of the contrary, till they find that the diſcharge has been entirely ſlime or mucus. This ſymptom ſhows, he thinks, great irritability in the bowels, by which a motion excited in the ſtomach, is propagated almoſt directly to the anus.

Dr Hunter obſerves, that the dyſentery did not appear to be infectious in the hoſpitals in Jamaica. He does not from this affirm, that it is never an infectious diſeaſe; but he thinks that there is ſome difficulty in determining a queſtion, where the effects of contagion may be eaſily confounded with the effects of a cauſe generally diffuſed, and operating in ſome degree on all, as the cauſe of dyſentery muſt do. But although this diſeaſe may certainly be pro-

duced by other cauſes; yet we cannot help thinking, that we have ſeen ſome caſes, where it was clearly and decidedly communicated from one individual to another by infection.

With regard to the cure, he obſerves, that dyſentery requires very early attention. For remedies which will overcome or mitigate it at the beginning, will have no effect after it has continued for ſome time. He began the treatment by a purgative, moſt commonly of the ſaline kind, and, after a favourable operation of this, by giving laudanum to the extent of fifteen or twenty drops, at bed-time. The purgative, in almoſt every caſe, procured a truce of the diſeaſe, and the opiate prolonged it. When the ſymptoms recur, the ſame medicines are to be repeated; and the ſick, he obſerves, are not weakened by purgatives, as long as they produce relief from the griping pains. But when the patient's ſtrength is greatly impaired, there is a period, beyond which, purgatives cannot be given with advantage. In ſuch circumſtances, Dr Hunter tells us, that he has often employed with advantage draughts formed of an ounce of infuſion of Peruvian

Peruvian bark, and as much ſtrong chamomile tea, with about five grains of rhubarb. Theſe draughts, given every three or four hours, in general procured two or three copious diſcharges from the bowels in twenty-four hours; and the patients were eaſily able to diſtinguiſh the motions proceeding from the diſeaſe, from thoſe procured by the medicine.

When the griping and pain of the bowels are excruciating, they are often relieved by fomentations applied to the abdomen, and ſtill more effectually by bliſters on the ſame part. When vomiting, in the beginning of the diſeaſe, prevents the uſe of purgatives, the evacuation of the ſtomach is to be promoted by warm water, or weak chamomile tea; but nothing, he tells us, more powerfully emetic is to be adminiſtered. And, as ſoon as the ſtomach is quieted, the ſaline purgatives muſt be begun in ſmall doſes, and repeated till they be productive of the deſired effect.

From the acute, dyſentery often paſſes to a chronic ſtate. This has been ſuppoſed to depend on mere debility of the bowels. But

Dr Hunter thinks, that this is rarely the caſe; and that at leaſt nine out of ten inſtances depend upon obſtructions, and a diſeaſed ſtate of the bowels. This, he thinks, is clearly demonſtrated by diſſections. And to prove this, he gives a ſhort account of the appearance which he diſcovered in this way. And he mentions, particularly, the appearance of puſtules, or tubercles, which takes place, pointing out the changes which they undergo in different ſtages of their progreſs: And from theſe, with the conſequent ulcerations, he illuſtrates many ſymptoms of the diſeaſe.

In this ſtate, he adviſes the uſe rather of laxatives than of purgatives; and he ſtrongly recommends the repetition of an opiate every night. When the ſtools are frequent and copious, without pain, aſtringents, he tells us, may be uſed with advantage: And as ſuch, he recommends the lignum Campechenſe, the cortex Granati, and terra Japonica, or catechu, as it is now more properly called. In caſes of obſtinate teneſmus, he had recourſe with advantage to glyſters of lint-

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ſeed tea, or thin jelly of ſtarch, with thirty or forty drops of liquid laudanum.

Dr Hunter concludes his remarks on dyſentery with a few obſervations on the remedies commonly employed againſt that diſeaſe.

He thinks it not impoſſible that there may be circumſtances, in which blood-letting would not only be ſafe, but advantageous: But he is perſuaded that, in the ſlighter caſes, it is not requiſite: And, in the more violent ones, the ſtrength of the patient was ſo ſuddenly reduced, that he durſt not venture to uſe it.

He thinks there is nothing ſpecific in any purgative; and although he commonly employed the magneſia vitriolata, or natron vitriolatum, yet where experience has ſhewn any one to agree with particular conſtitutions, recourſe is, he thinks, to be had to it.

Opiates, he obſerves, have ſometimes been given, combined with a purgative or emetic medicine. This practice, he thinks, had often good effects in the chronic ſtate of the diſeaſe. But, upon the whole, he preferred their alternate uſe to combining them; as the emetic, if in ſufficient quantity to produce

ſenſible effects, occaſioned a diſtreſſing nauſea, and the opiate checked the effects of the purgative too much. In ſome caſes, however, Dover's powder, in doſes of ten or fifteen grains, had good effects. The confuſion of the head and ſtomach, which opiates ſometimes induce, was beſt counteracted by giving with them one or two ſpoonfuls of lemon juice.

Dr Hunter next treats of the dry belly-ach. After giving nearly the ſame deſcription of this diſeaſe that is given by others of the colica pictorum, or painters cholic, he obſerves, that the principal and leading object in the cure, is to procure a free paſſage, by removing and overcoming the ſpaſms and contractions of the bowels which occaſion the obſtinate coſtiveneſs. For this purpoſe, the purgative found to anſwer beſt, was rhubarb, combined with calomel. To relieve the pain of the abdomen, recourſe was had to fomentations, and the warm bath; but more effectual relief was procured by the application of a bliſter. It was ſometimes neceſſary to promote the operation of purgatives by glyſters; and nothing was found to anſwer bet-

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ter in this way, than a ſolution of common ſalt in water.

In general, by the means already recommended, the diſeaſe was overcome. But when pain and coſtiveneſs continued, recourſe was had to jalap, the compound extract of colocynth, purging ſalts, or caſtor oil; and theſe were ſometimes ſucceſsful. Where, with plethoric patients, the pulſe was quick, a ſmall bleeding, from ſix to eight ounces, promoted the ſolution of the diſeaſe.

In the treatment of this cholic, it became an object of much conſequence to prevent the palſy. As far as that could be effected, it depended entirely on the ſpeedy cure of the cholic. And where, after the firſt evacuations, a diſpoſition to coſtiveneſs remained, it became neceſſary to continue the uſe of opening medicines.

The ſecond ſtage of the diſeaſe, the palſy, is always a moſt obſtinate complaint; and, in many caſes, the ſick never recover completely either the ſtrength or motion of the arms or wriſts. The good effects of Bath waters in this complaint, Dr Hunter conſiders as entirely depending on their influence as a warm bath,

bath. But the difficulty of preſerving an uniform temperature for any length of time, gives a decided ſuperiority to the natural warm ſprings. As, however, the temperature of the ſea in Jamaica, at the middle of the day, is about eighty-four degrees, Dr Hunter thinks that this may be a good ſubſtitute. Where the paralytic parts are affected with much pain and puffy ſwelling, the linimentum ammoniæ was often ſerviceable. But ſometimes it was neceſſary to procure eaſe of the pains by opiates. Where the pain of the head ſhifted to the bowels, nothing was equally effectual with bliſters.

Dr Hunter concludes his remarks on this diſeaſe with ſome obſervations on its cauſes, and has no doubt in referring it to the influence of lead.

After a few obſervations on ſores, ulcers, and ſome other diſeaſes to which ſoldiers are ſubject, Dr Hunter makes ſome remarks on the diſeaſes of negroes. Here, he acknowledges that he had but little opportunity of ſeeing much of them from his own obſervation. But he regrets that the hiſtory of the affections peculiar to them, has not been more

more attended to; becauſe, he imagines, it would enlarge our knowledge of pathology, and teach us many new and intereſting facts in the animal œconomy. Here, therefore, his principal object is, to call the attention of others to this ſubject.

The yaws, he obſerves, while it is an infectious diſeaſe, never attacks a perſon a ſecond time. He conſiders it as being communicated only by very cloſe contact, and as running a natural courſe, but varying very much in its duration, extending from four or five, to fifteen or twenty months. He aſſerts, that we are yet acquainted with no means of eradicating this poiſon; and what he conſiders as the beſt method of ſhortening its courſe, is by putting the patient in circumſtances favourable to his general health, by giving relief from work, by allowing a good diet, and by frequent waſhings. He expreſſes doubts with regard to the propriety of employing mercury, and points out alſo many other deſiderata with regard to this affection. We are unacquainted, he obſerves, with the local effects of the poiſon when it is firſt applied, and likewiſe with the interval of time between

tween the application of the infectious matter and the firſt appearance of the diſeaſe upon the ſkin. Both theſe points might, he thinks, be aſcertained by inoculation; a practice which, in his opinion, well deſerves a trial in this diſorder.

Cacabay is, he obſerves, the negro name for a diſeaſe unknown among Europeans, or their deſcendents. From this, in conſequence of ulcerations beginning under the form of white ſpots, the joints ſucceſſively drop off, till in the end the miſerable ſufferer be reduced to a mere trunk. No remedy, he tells us, has yet been found either to cure it, or even retard its progreſs conſiderably. And it is, he thinks, to be wiſhed, that the ſymptoms of a diſeaſe ſo formidable, and ſo ſingular, were detailed at full length, by ſome one who has had many opportunities of obſerving it.

The laſt diſeaſe of the negroes, of which he takes notice, is that which ſhews itſelf by a very uncommon depravity of appetite, eating dirt. The dirt-eaters, as they have been called, can ſeldom if ever be corrected of this unnatural practice; for, in a ſhort time, they acquire even a ſtronger attachment

ment to it than that which ſometimes ſubſiſts either to ſpirits or tobacco. They are fondeſt of a ſort of white clay, like tobacco-pipe clay. With this they fill their mouths, and allow it to diſſolve gradually. It is a practice extending to all ages, the young learning it from the old, even almoſt as ſoon as they leave the breaſt. Whatever motive may induce them to begin the practice, it ſoon proves fatal, if carried to exceſs. There are inſtances of ſome killing themſelves by it even in ten or twelve days. But more frequently they drag out a miſerable exiſtence for ſeveral months, and even for years, in the end dying dropſical.

Dr Hunter gives an account of what was obſerved on the examination of the bodies of dirt-eaters after death. This account was communicated to him by Dr Thomas Clarke, botaniſt of the iſland of Jamaica, a very ingenious gentleman, whoſe obſervations, on many former occaſions, have enriched theſe Commentaries. In the colon, there are frequently found large concretions of the earthy matter which they have ſwallowed. This often lines the cavity of the gut, and almoſt completely

completely obſtructs the paſſage. The myſenteric glands are always ſwelled: The blood is thin, and with very few red globules, as is common in dropſies: And large polypi are found in the left ventricle of the heart and aorta. Theſe were ſometimes ſo ſtrong and firm, that, when pulled out, they gave the repreſentation of an injection of the aorta, ſubclavian and carotid arteries. To aſcertain whether theſe polypi were formed before or after death, ſome bodies were opened a few minutes after the patient expired; and, even in theſe caſes, they were found ſtrong and firm. But Dr Hunter thinks there can be no doubt of their being formed when the motion of the heart became feeble and languid, juſt before death.

Our author remarks, that no means of preventing the horrid practice of dirt-eating, as it has been called, or of remedying the deſtructive effects of it, have hitherto been diſcovered. A negro labouring under this malady, is conſidered as loſt. And on ſome eſtates, half the number of deaths, on a moderate computation, are owing to this cauſe. Neither medicines, ſtripes, promiſes, nor threats,

threats, have any influence. But upon ſome eſtates, it has been in part ſtopped, by cutting off the heads from the bodies of thoſe who died of this vicious practice. Of this treatment of dead bodies, the negroes have the utmoſt horror. And Dr Hunter thinks that the efficacy of this expedient, which can operate only on the mind, is a ſtrong proof that the diſeaſe, in its origin, is more a mental than a corporeal affection.

Dr Hunter concludes this valuable treatiſe with ſome obſervations on the beſt manner of taking care of the ſick of the armies in Jamaica and our other Weſt India iſlands. In theſe he points out many important particulars reſpecting attendance, medicines, hoſpital ſtores, and ſubſiſtence, which well claim the attention of thoſe whom the Nation entruſt with its ſafety, but which can be remedied only by the exertions of a vigilant Government.

IX.

IX.

The Works of the late William Stark, *M. D. conſiſting of Clinical and Anatomical Obſervations, with Experiments Dietetical and Statical, reviſed and publiſhed from his original Manuſcripts. By* James Carmichael Smyth, *M. D. F. R. S. Phyſician extraordinary to his Majeſty.* 4to, London.

THE ingenious and indefatigable author of the treatiſe now before us, was animated by an ardent deſire to aſcertain truth by obſervation and experiment: And it cannot be mentioned without the deepeſt regret, that, at an early period of life, he fell a victim to his zeal in the purſuit of knowledge. After his death, his manuſcripts were put into the hands of Dr Carmichael Smyth, a phyſician who has deſervedly acquired eminence in his profeſſion. By him they are now preſented to the public; and, we doubt not,

not, will be highly acceptable to thoſe who are deſirous of enlarging their knowledge from original obſervations made with accuracy and fidelity.

The work is divided into two parts: The *firſt*, intitled, Clinical and Anatomical Obſervations; the *ſecond*, Experiments Dietetical and Statical. The materials of the firſt part were collected, as the author informs us in his preface, at a large hoſpital, where he had at all times acceſs to the ſick, and conſequently the moſt favourable opportunity of obſerving the appearance and progreſs of diſeaſes, and, when they proved fatal, of examining the bodies after death: and the remarks he makes, are the reſult of obſervation and inſpection, unbiaſſed by any hypotheſis or ſyſtem. The author has endeavoured to arrange theſe according to their degree of ſimplicity and certainty. The *firſt* place is given to diſeaſes of the alimentary canal, which are moſt within our reach, and probably the beſt underſtood, and moſt ſucceſsfully treated. Next to theſe, are placed the diſeaſes of the heart and lungs, which convert the chyle into blood. The *third* claſs comprehends the diſeaſes of the blood itſelf,

and of the fluids ſecreted from it; and the *fourth* includes diſeaſes of the nervous ſyſtem, which are by far the moſt difficult to be underſtood.—In giving an analyſis of this work, we cannot pretend to mention every particular caſe, but muſt content ourſelves with taking notice of ſome of the moſt ſingular and important; and we ſhall particularly preſent our readers with his obſervations on the effects of remedies.

In treating of diſeaſes of the ſtomach, he deſcribes a caſe, in which, upon diſſection, a cancerous affection was found in the ſtomach. He thinks it ſurprizing, that, in this caſe, the patient neither complained of ſickneſs, nor was troubled with retchings: But he imagines that the ſtomach was perhaps too weak for that exertion. He deſcribes two caſes of patients affected with ſevere purging, accompanied with excruciating pain of the bowels, in which conſiderable quantities of a clear glutinous ſubſtance was diſcharged by ſtool. Upon diſſection, it was found, that, in the large inteſtines of both, portions of the internal coat were raiſed up in ſmall hemiſpheres, containing a colourleſs glutinous

glutinous ſubſtance, which was rendered white and firm by alcohol, or by heat; but by cold water was ſoftened, and partly diſſolved. The appearances in this caſe are illuſtrated by ſeveral engravings; and the author thinks it may be a queſtion, whether theſe hemiſpheres were not the inteſtinal glands enlarged; whether the coagulable part of the blood was not ſecreted by them, inſtead of common mucus; and whether the voiding of ſuch a clear glutinous ſubſtance be not a ſign of this ſtate of the inteſtines. He gives an account of the diſſection of the body of a man who died of a fever without any ſymptom of jaundice, in whom the extremity of the ductus choledochus was found to be quite ſhut up by a large gall-ſtone: but the ductus hepaticus adhered to the duodenum, and opened into it about an inch below the pylorus. The gall-bladder was empty, and much contracted, and the edge of the liver was a little rounded over it; but in other reſpects that viſcus was found.

In deſcribing the ſymptoms of diſeaſes of the ſtomach, taken from caſes where patients recovered, or where he had no opportunity of examining the bodies after death, after

making ſome obſervations on vomiting, purging, and coſtiveneſs, and after deſcribing the common ſymptoms of jaundice, he obſerves, that, in that diſeaſe, relief always follows ſpontaneous vomiting or purging; and he thinks this points out the proper method of curing the diſorder by emetics and purgatives.

In his obſervations on the effects of remedies given in the cure of diſeaſes of the ſtomach and inteſtines, he obſerves, that opium ſeldom failed to reſtrain purging for two or three days, or a week; but at the end of theſe periods, the diſeaſe returned, and commonly with more violence than before the opium had been taken. But although by itſelf it was inadequate to the cure of purging, yet when it was combined with other articles, moſt excellent medicines were formed, the effects of which were not leſs powerful, and were more laſting. In the ſlimy purging, he found, that the moſt efficacious remedy was a grain of opium, combined with five grains of the vitrum antimonii ceratum, taken daily. Another powerful remedy was, one grain of opium, united with ten of the colombo root, although the colombo alone gave only tempo-

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rary relief. In the gelatinous purging, the moſt efficacious medicine was a grain of opium, combined with as much ipecacuan; for he found, that in this ſpecies the vitrum antimonii ceratum aggravated all the ſymptoms. Where the pains were violent, fomentations gave relief; and in coſtiveneſs, the beſt remedies were, fomentations, and the common purgatives; and in the painters cholic, oil, or oil with rhubarb, were found moſt uſeful. He concludes with obſerving, that the combination of opium with other medicines, has been recommended by practitioners of all ages, and of all ſects. Of this, he obſerves, we have examples in the ancient compoſitions of mithridate, theriaca, and ſeveral others, as well as in ſome of the moſt highly celebrated medicines of Dover, Ward, and others.

In treating of diſeaſes of the cheſt, illuſtrated by diſſection, he deſcribes the caſe of a woman who got her bread by hard labour, who, for five years, was ſubjected to fits of palpitation, which attacked her commonly after an interval of ſome months; and at laſt ſhe died of a fit which laſted for five weeks, being more violent, and of longer continuance

than any of the preceding ones. Her pulſe was weak, quick, and irregular, ſometimes fluttering, ſometimes intermitting. Her breathing was oppreſſed, and ſo quick, that ſhe commonly inſpired forty-five times in a minute. On diſſection, it was found that the canal of the aorta was almoſt ſhut up by the ſemilunar valves. Of the morbid appearance which here took place, an illuſtration is given in Dr Stark's work by an engraving.

In treating of pulmonary conſumption, after enumerating the ſymptoms of the diſeaſe, he gives an account of the appearances on diſſection, drawn from ten caſes which he had an opportunity of examining. As theſe, though extremely uniform, were different in degree, he arranges them under the heads of tubercle, vomica, ſtate of the air veſicles, ſtate of the large veſſels, trachea, and the degrees of morbid affection.

Tubercles he deſcribes as firm, round bodies, from the ſmalleſt granule to about half an inch in diameter; as being of a whitiſh colour, and of a conſiſtence approaching nearly to the hardneſs of cartilage; and when cut through, their ſurface appears ſmooth, ſhining, and uniform;

form: But in ſome of them were found cavities containing a thick white fluid, like pus. The cavities leſs than half an inch in diameter, were always ſhut; but thoſe which were a little larger, had always a round opening, made by a branch of the trachea.

As, in this laſt ſtate, there was a free paſſage for the matter contained in the tubercle into the trachea, he thinks the name ſhould be changed from that of tubercle to vomica. The ſmaller vomicæ are commonly entire; the larger are frequently ruptured. Theſe are generally of an oval ſhape, and three or four inches in length. They are lined, either partially or entirely, with a ſmooth, thin, tender ſlough or membrane. The matter contained in them, when they have been previouſly ruptured, is often of a reddiſh caſt; but when the capſule is entire, it is of a yellowiſh, aſh-coloured, or greeniſh appearance, and often fœtid. In almoſt all the vomicæ, there are ſeveral openings of the bronchia: Theſe are round and ſmooth, while ruptures are generally irregular and ragged. But by means even of the bronchial openings, Dr Stark thinks there can be no doubt, that the matter

they contain, is diſcharged into the aſpera arteria. And accordingly, where theſe are numerous, although there be no rupture, the vomicæ contain very little matter. Whilſt other parts of the lungs unaffected by diſeaſe are readily diſtended, by blowing air into the trachea, thoſe portions which are contiguous to tubercles or vomicæ, remain depreſſed, and impervious to air; ſo that the function of the lungs ſeems there to be entirely deſtroyed. The pulmonary arteries and veins, as they approach larger vomicæ, are ſuddenly contracted. By blowing into them, they are not ſenſibly diſtended; nor does the air, excepting very rarely, paſs into the vomicæ, and even then by imperceptible tubes only. But the branches of the trachea opening into vomicæ, are never found in any degree contracted. Their internal ſurface, as well as that of the trachea itſelf, is ſometimes partially red. The degree of morbid affection is very various. In ſome caſes, no vomicæ are to be found above an inch in diameter: in others, there are ſeveral of two, three, or four inches. The lymphatic glands of the lungs are frequently

quently blackiſh, and ſometimes contain a ſubſtance like moiſtened chalk.

Dr Stark concludes his account of the appearances on diſſection, in caſes of pulmonary conſumption, with the following queries.—Is a conſtant cough, although unaccompanied with any other complaint, a ſymptom of tubercle in the lungs? Is it, when attended with fits of coldneſs, and of ſpitting, a certain ſign of vomicæ? Is not the ſpitting compoſed of matter from the vomicæ, and of mucus from the membrane of the trachea? Does not the contracted ſtate of the pulmonary veſſels, and the thickening of their coats, prevent, in moſt caſes, the fatal hæmorrhages which would otherwiſe enſue? Is there not ſome reaſon to apprehend, that though a tranſitory relief be ſometimes afforded by ſmall bleedings, the progreſs of the diſeaſe is thereby quickened?

In giving an account of ſymptoms of diſeaſes of the cheſt where patients recovered, he deſcribes a cough without expectoration, or with ſlight expectoration of mucus only, in which the pulſe is always quick, with almoſt conſtant headach, inceſſant thirſt, loſs of appetite, frequent retching, and ſometimes faintneſs.

faintneſs. This cough is, he tells us, frequently occaſioned by expoſure to cold and moiſture: it ſometimes terminates favourably, but oftener in phthiſis pulmonalis, and may be reckoned the firſt ſtage of that diſeaſe. He next deſcribes cough with very copious expectoration of thick matter, ſometimes to the quantity of not leſs than two or three pints in twenty-four hours. This cough, he obſerves, is commonly produced by the ſame cauſes as the preceding. It ſometimes proves fatal in a few months; and ſometimes patients are ſubjected to it for a number of years, continuing for ſeveral months at a time, eſpecially during the Winter.

In diſeaſes of the cheſt, Dr Stark obſerves that he has rarely ſeen any certain good effect from internal medicines. Vinegar of ſquills has, on ſome occaſions, ſeemed to give relief; and oily medicines appeared for a ſhort time to allay violent coughing. But the remedies which have ſtill more laſting effects, are bleeding, bliſters, and other local diſcharges. Bleeding, he tells us, excepting in the laſt ſtage of a conſumption, ſeldom fails to afford very conſiderable relief.

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This is ſometimes felt immediately after the operation; at other times, not till the next, or even the third day; and, on ſome occaſions, not till after repeated bleeding. Bliſters, he conſiders as being of conſiderable efficacy in caſes of difficult breathing, or hoarſeneſs, and ſometimes of cough. Setons and iſſues are uſeful in pains of the cheſt; and fomentations are of ſervice in pains occaſioned by external injury. From the early application of theſe remedies, pains of the ſide, and dry coughs, ſometimes terminate favourably. But if they be delayed for a week or a fortnight, the diſeaſe does not ſo readily yield to them. In caſes of cough with expectoration, theſe remedies contribute, he thinks, but little towards retarding the progreſs of the diſeaſe. He obſerves he has ſometimes known good air of ſervice, after other remedies had failed in affording even a temporary relief. But he concludes with regreting, that theſe diſorders, which are the moſt common and moſt fatal of any, are leaſt under the power of phyſic.

The next ſubject of which Dr Stark treats, is the diſeaſes of the fluids. This title he

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has choſen, not from an idea that the diſeaſes deſcribed under it were diſeaſes of the fluids only, but becauſe the changes which took place in the fluids were obvious to the ſenſes, whilſt thoſe of the ſolids were not. After deſcribing caſes of the extravaſation of the ſerum or thinner part of the blood, of the extravaſation of the red part of the blood, and of the extravaſation of coloured ſerum, he relates an example of what he calls putrefaction of the fluids.

A woman, aged twenty, was ſeized with ſhiverings, followed by fever. She became dull, heavy, ſtupid, and ſometimes delirious. She had a violent purging: Her tongue and eyes were parched; her pulſe quick and ſmall; and there were petechiæ on the right arm. She died on the eleventh day of her illneſs; and immediately after death, a change of colour took place in her body. This diſcolouration was principally on the right ſide. The belly was green, the back livid, and the pudenda quite black. At inciſions made in any of theſe parts, a conſiderable quantity of muddy liquor, nearly of the colour of the part,

part, run out. It was intolerably fœtid; and the parts from which it flowed were tender, and eaſily pulled aſunder. In the pudenda, the blackneſs penetrated to the cellular ſubſtance, and fat; but it did not extend inwardly beyond the nymphæ. The green colour of the abdomen penetrated through the integuments, the fat, and the oblique muſcles. But the recti, tranſverſe muſcles, and peritonæum, were free from it. The livid colour of the back penetrated almoſt to the bones, near which, the muſcular fibres appeared ſound. Nothing preternatural was found in the cavity of the abdomen, excepting one black ſpot on the fundus uteri.

Twelve hours after death, Dr Stark examined the body of a young man, who died of a fever ſimilar to the preceding. The ſkin of the left breaſt was brown. The pectoral muſcle had loſt its colour, and was rotten. The liver was in ſo tender a ſtate, that a very ſmall force was ſufficient to puſh the finger into any part of it. The other abdominal viſcera appeared ſound. Soon after examining this body, Dr Stark felt an acute pain

pain in the finger which he had puſhed into the liver. It ſoon inflamed; a ſmall piece of it near the nail became black and mortified; and, after a few days, was thrown off by ſuppuration.

From theſe caſes, Dr Stark ſuggeſts the following queries: Are dulneſs, ſtupor, or lowneſs of pulſe, the criteria of this fever, or of a tendency to it? Is infection more readily communicated from the living than the dead body? May an external part of a healthy body be affected without injuring the reſt of the ſyſtem? If putrid matter has been mixed with the blood, will a putrid fever always follow? Is there a connection between this and the petechial fever? From the external parts being principally affected, is it not probable that the air has ſome influence in promoting putrefaction? And would not the external application of antiſeptics have an effect in retarding this progreſs?

In giving a deſcription of the ſymptoms of diſeaſes of the fluids, taken from caſes where the patients recovered, after ſome remarks on ſwelling of the belly with fluctuation,

tuation, on general external ſwelling retaining the impreſſion of the finger, and on general external ſwelling with ſwelling of the belly, he propoſes it as a query, Whether either ſpecies of dropſy be not commonly a ſecondary diſeaſe? He thinks that the view of the phyſician ſhould often be directed rather to the amendment of the fluids, than to the evacuation of water; and he thinks it probable, that this amendment may ſometimes be obtained by animal food, and Peruvian bark. After deſcribing the ſymptoms of fever with red or purple ſpots upon the ſkin, he ſuggeſts it as his opinion, that the ſpots, the blood effuſed and concreted on the tongue, the colour of the liquor of bliſters, that of the ſtools, and the ſediment of the urine, ſhew that the red part of the blood was broken down.

In giving an account of the general effects of remedies employed in the cure of diſeaſes of the fluids, he obſerves, that in ſpotted fevers, inſtances of recovery were moſt frequent after the uſe of bark, of cordials, and of bliſters. The ſwelling of the belly, or of the external parts, in general

ſubſided,

ſubſided, though commonly only for a time, from the uſe of the more powerful purgatives, jalap, elaterium, or dried ſquills, given either ſeparately or combined. The ſame thing happened during the uſe of diuretics, as ſal diureticus, now named kali acetatum, infuſion of horſe-raddiſh, and tincture of cantharides. The ſwelling of the belly conſtantly returned after tapping, and ſometimes the patients died very ſoon after the operation. The puncturing of the legs was likewiſe attended with danger. As evacuations then are commonly ineffectual, and even dangerous, a medicine is, he thinks, much wanted, which would produce ſuch a change on the parts, as, after abſorption, to prevent the farther extravaſation of the fluid. He records two inſtances of happy effects produced by mercury and bark, which he thinks may poſſibly ſuggeſt ſome uſeful hints on this important ſubject. In the one of theſe, mercury was employed with great advantage againſt an obſtinate ſwelling of the limbs, which had continued for more than two years and an half, and had reſiſted other powerful remedies. In the other, the Peruvian bark was attended

tended with the happieſt effects in removing a copious diſcharge of putrid ſaliva.

The laſt ſet of diſeaſes of which Dr Stark treats, in this part of his work, are thoſe of the head, nerves, and muſcles. He here deſcribes three caſes of fever with violent phrenitic delirium, in which, upon diſſection after death, a conſiderable quantity of a colourleſs liquid, not coagulable by heat, was diſcharged from between the dura and pia mater. In theſe caſes, the violence of ſymptoms was nearly in proportion to the quantity of lymph effuſed; from which Dr Stark thinks it not improbable that they were occaſioned by the preſſure of that liquor on the brain. He relates a caſe of apoplexy, in which, after very careful examination, no morbid appearance in the brain could be diſcovered.

From a deſcription of the ſymptoms which commonly attend the loſs of motion and feeling, he infers that the pains which generally precede recovery, point out the uſe of irritating and painful applications to the part; and he thinks that the eruption of

painful ſpots indicates, in a peculiar manner, the utility of bliſters.

In his remarks on the effects of particular remedies in diſeaſes of the head, he obſerves, that the ſenſe of feeling, and the power of motion, were commonly increaſed after the application of bliſters to the nape of the neck, or to the arms, when theſe parts were affected, and to the os ſacrum, when the lower limbs were affected. The linimentum ſaponis rubbed upon the parts, appeared to have a ſimilar effect. The ſame effect was alſo obſerved to ariſe from electricity. After going into the warm bath, the pulſe roſe, and the ſtrength of the limbs was ſometimes increaſed. Painters, whoſe wriſts were weak, found ſome benefit from having repeatedly held their hands, and the lower parts of their arms, in the warm moiſt grains of malt. After hot medicines, ſuch as volatile ſalt of hartſhorn, muſtard ſeed, horſe-radiſh root, gum-guaiacum, and ſome others, a glowing was felt in the affected parts, and was followed by ſweating; and, in ſome caſes, when bliſters alſo had been applied, the ſenſe of feeling, and power of motion, were perfectly reſtored. After the uſe of Peruvian

Peruvian bark and ſteel medicines, tremors and weakneſs of the limbs were diminiſhed. Muſk, taken for ſome time, to the quantity of a dram and a half in the day, produced an almoſt perfect recovery in a woman who had been for three years ſubjected to perpetual involuntary motions in her arms. In ſome ſimilar caſes, opiates, with fœtid gums and ſalt of hartſhorn, ſeemed to have very good effects.

Dr Stark concludes this part of his work with ſome remarks on the advantages which may be derived from the diſſection of morbid bodies. Beſides the ſatisfaction and pleaſure which a phyſician muſt derive, by finding, from appearances after death, that he underſtood a diſorder, and treated it properly, he thinks there can be no doubt, that, by the united and continued efforts of induſtrious and intelligent phyſicians in this way, the knowledge of diſeaſes may be very highly and eſſentially promoted. Of this there is a high probability, when it is conſidered, that even the accidental diſſections of anatomiſts, have led to ſeveral uſeful and neceſſary methods of treating diſeaſes, which were formerly unknown; and have likewiſe ſhewn the inutility and im-

propriety of many common methods of practice.

The *ſecond* part of this work, conſiſts of experiments on diet, of which Dr Stark, poſſeſſing a degree of enterprize and enthuſiaſm which has ſeldom been equalled, was himſelf the ſubject. Theſe are detailed with minute exactneſs. They are chiefly preſented to the reader under the form of tables, and will not admit of farther abridgement. Hence, although they be in their nature highly intereſting, we muſt content ourſelves with merely mentioning the concluſions he has drawn from ſome of the moſt important of them.

The *firſt* trials here related, were with a diet of bread and water. Upon an allowance of twenty ounces of bread and four pounds of water, he was hearty, and in good ſpirits; but as he fell away, and was often hungry, he found it neceſſary to increaſe it. With an allowance of thirty ounces and two pounds of water, he ſtill fell away very viſibly, though hearty in other reſpects. He ſometimes felt ſlight ſickneſs, and want of appetite, which went off after eating a bit of bread. Imagining that this ſickneſs might be owing to an

over

over proportion of liquid, he endeavoured, during a third period, to determine how much was abſolutely requiſite. He found he could eaſily eat a meal of ten ounces of bread, and was not at all thirſty, even for ſome time after: But in two or three hours, an intolerable thirſt came on, which could not be allayed by leſs than ten ounces of liquid. During a fourth period, he eat thirty-eight ounces of bread, at five or ſix times. His appetite in this way was not more than ſatisfied; but if he ate that quantity at fewer meals, it was ſatiated. During this diet, his ſtools were generally of a ſmooth conſiſtence, and ſlimy ſurface; and he had rarely any venereal deſires. By experiment, he determined the quantity of ſaliva to be, whilſt the parts were at reſt, four drams; but whilſt eating, five ounces four drams.

His next experiments were with a diet of bread and water with ſugar. After he began the uſe of ſugar with his bread, he found that a ſmaller quantity of liquid prevented thirſt, than when he ate bread alone. With thirty ounces of bread, and eight ounces of ſugar, he found that two pints of liquid in the

day were ſufficient to allay his thirſt; whereas when he ate thirty-eight ounces of bread without ſugar, he found three pints and an half of liquid were abſolutely neceſſary. After he had continued this diet for about the ſpace of a fortnight, he began to perceive ſmall ulcers about the inſide of his cheeks. The gums were ſwelled, red, and bled when preſſed with the finger; and the right noſtril was internally red and purple, and very painful. After this, ſmall purple ſtreaks appeared on his left ſhoulder; his appetite now failed, and he could not taſte ſugar; which led him to have recourſe to meat and wine. During the continuance of this diet, he had, in general, every day three or four liquid ſtools, containing ſome clear gelatinous ſubſtance; and he felt but little pain or wind in his bowels. But as theſe trials with the ſugar were made after he had for a conſiderable time lived on bread and water alone, he had again recourſe to the uſe of diet with ſugar, after he was in perfect health. Upon this occaſion, he continued the ſugar for five days; but his gums were not in the ſmalleſt degree affected.

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His *next* trials were with bread and water, with oil of olives. Two ounces of oil taken at a meal, was ſo large a quantity as to be diſagreeable. Three ounces in the day occaſioned ſome uneaſineſs in his bowels, and four ounces griped him very much. After continuing on this diet for ſome time, his appetite was very much impaired, he was attacked with ſevere looſeneſs, and became ſo weak as to be unable to walk acroſs the room. This led him to have recourſe to wine, bark, and animal food, by which he was ſoon perfectly recovered. But this experiment was certainly much affected by the condition of his body when he began it, his gums at that time being in a diſeaſed ſtate; and this had probably conſiderable influence on the following experiment, in which he employed milk. When he began the milk diet, his gums were ſtill a little ſwelled, but daily getting better: but, after he had continued it for ſome time, although they were not to appearance worſe, yet he frequently ſucked blood from them; and his finger, after touching them, had an offenſive ſmell. Under this diet his ſtools became very hard, were forced off with great

difficulty and pain, and were covered with blood. He was however quite ſtout and hearty, and had ſometimes venereal deſires. But theſe deſires were much more conſiderable, when he afterwards took daily from ſix to eight ounces of roaſted gooſe. During the uſe of the gooſe, as well as of the milk and oil, the weight of his body was at ſome periods increaſed, at others diminiſhed.

Dr Stark next relates many experiments which he made with a diet of bread and water, conjoined with beef. In ſome of theſe he employed the lean, and in others the fat part of beef. The latter diet, after aſcertaining the quantity he could digeſt, he found moſt nouriſhing and agreeable.

He next contraſted a diet of flour, water and ſalt, with the ſame articles, conjoined with a proportion of beef ſuet. Under the former he loſt weight; under the latter he gained. When his pudding was made with the ſuet, his appetite was ſooner ſatisfied, and his urine was diminiſhed in quantity. With the ſame quantities of flour, water and ſalt, he afterwards employed four ounces of butter in place of as much ſuet. But, under this, in

place

place of gaining, he loſt weight conſiderably. He became uneaſy at ſtomach from the uſe of it, had pain in his bowels, and ſoon afterwards thin ſtools, accompanied with conſiderable heat in the fundament, and ſtraining, even with ſweating and trembling. He ſuſpected, however, that in this experiment, the butter might have diſagreed with his ſtomach, from its not being intimately combined with the flour and water. He alſo imagined, that although in this way it might diſagree with the ſtomach, yet the oil of butter, ſeparated from the other parts, might not have the ſame effect. He therefore afterwards employed freſh butter and the oil of butter alternately, both being intimately mixed with the flour and water into a pudding. But on thoſe days in which the pudding was made with butter, although he was quite well, and had a good appetite at breakfaſt, he had no appetite for dinner. After dinner, he was drowſy, thirſty, and obliged to drink more than his allowance. On thoſe days again in which he uſed the oil of butter, he had a good appetite for dinner, and no thirſt or uneaſineſs in his bowels after it. But ſtill he was not

quite

quite ſo eaſy as he had been when he uſed the ſame quantity of the oil of ſuet. During this courſe of experiments, when butter and the oil of butter were uſed alternately, the weight of his body was increaſed.

By theſe and ſimilar experiments, Dr Stark attempted to aſcertain the nutritious quality of different alimentary matters; for he tried in the ſame manner the oil of marrow, roaſted fowl, roaſted veal, bacon-ham, honey, and Cheſhire cheeſe. While he employed the laſt of theſe articles, his belly became very bound; he was ſeized with great uneaſineſs in his bowels, and univerſal diſtreſs; and notwithſtanding all that could be done for his relief by different medical friends, he died in the ſpace of a few days.

That the intelligent and diſcerning reader will derive uſeful ſuggeſtions from the different facts related in theſe experiments, can hardly, we imagine, be doubted. But at the ſame time, it is not to be ſuppoſed, that they decidedly aſcertain the comparative nutritious power of the different articles employed as food for the human ſpecies. The degree of nutrition which different articles afford, is not

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to be determined by a temporary increaſe or diminution of weight, even although proper allowance be made for every accidental increaſe or diminution of the diſcharges. But beſides this, the power of digeſtion, both with reſpect to the quantity and quality of food, is not only permanently varied in different genera of animals, but even in different individuals of the ſame ſpecies. Hence, experiments on any one individual, can never lead to a general concluſion; and eſpecially when theſe have been performed in ſuch quick ſucceſſion, that the ſtate of health induced by one, muſt neceſſarily have conſiderable influence on the reſult of another. It is therefore from a numerous collection of accurate obſervations alone, that even a probable concluſion can be drawn. But the purchaſe of this knowledge would be too dear, were theſe experiments to be made at the expence of valuable lives.

During the courſe of ſome of theſe experiments on diet, Dr Stark inſtituted alſo a ſeries of ſtatical experiments, with the view of determining the quantity of inſenſible perſpiration. Theſe, reduced alſo to the form of tables,

tables, are ſubjoined to the experiments, of which we have already given ſome account. They were made chiefly during the month of December, and in weather conſiderably varied, with reſpect to temperature, moiſture, and other circumſtances. The number of obſervations made during the courſe of each day, ſhews a wonderful degree of aſſiduity and attention. We cannot, however, here pretend to enter into particulars: But the general reſult is, that in three hundred and fifty-five hours during the day-time, the perſpiration was ſix hundred and ninety eight ounces ſeven drops; and that, in one hundred and ninety hours fifteen minutes during the night, it was one hundred and ninety-ſix ounces fourteen drops. After he began to mark exactly the quantity of urine, as well as of perſpiration, it appears, that in one hundred and ſixty-nine hours during the day-time, the perſpiration was, three hundred and twenty-four ounces two drops, the urine three hundred ounces ſix drops; and in one hundred and nine hours and forty minutes during the night, the perſpiration was, one hundred and eleven ounces

nine

nine drops, the urine two hundred and ninety-ſeven ounces ſix drops.

There can be little doubt, that the quantity of theſe diſcharges, as well as the proportion which the urine and perſpiration bore to each other, would be much affected by the diet which Dr Stark employed for the other experiments which he was at this time carrying on; and that therefore, they are leſs fitted to ſhow what may be called the natural ſtate of theſe diſcharges, than if he had been living in a different manner. He even obſerves, that from this table, the influence of certain kinds of food upon perſpiration and urine, may, in ſome degree, be aſcertained: But he acknowledges, that it can be done imperfectly only. And he concludes them with remarking, that his experiments on this ſubject were made, not ſo much with the hopes of determining any thing, as of enabling him to undertake ſome more accurate and deciſive experiments. But of his farther labours, the world were deprived by his untimely death.

This work is concluded with an account of Dr Stark's laſt illneſs, and death, which Dr Carmichael received from Dr Garthſhore, but which

which was written either by Sir John Pringle, or by Dr Huck Saunders. When proſecuting his experiment with Cheſhire cheeſe, already alluded to, he became very coſtive; and, on Sunday, February 18th 1770, was much affected with pain of his head and belly. Recourſe was firſt had to blood-letting, and afterwards to ſome opening medicines. But theſe proving ineffectual, five or ſix motions were procured by the oleum ricini. But as his ſymptoms continued, with oppreſſion and ſickneſs at ſtomach, it was ſuſpected that he had ſtill ſome load in his ſtomach and bowels. He was therefore adviſed to employ a ſolution of emetic tartar, with Rochelle ſalt. This produced ſome vomiting, and frequent looſe ſtools. On the following day, the looſeneſs continued, and he had a great degree of the anxietas præcordiorum. To check this looſeneſs, the julepum e Creta, with a proportion of laudanum was employed: but he became feveriſh and delirious, and died on the 23d of February.

His body was examined after death, by Mr Hunter and Mr Hewſon. Upon opening the abdomen, two or three ounces of water were found

found in the pelvis: the bladder contained about ſix ounces of urine, of a natural colour: the ſmall inteſtines appeared very red and inflamed, at particular parts; and, upon opening them, this was found to be an affection of the glandulæ Peyeri. One cluſter of theſe ſeemed ulcerated: ſome of the glandulæ ſolitariæ were of the ſize of a ſplit pea. The myſenteric glands were likewiſe enlarged, and, when cut, were very ſoft and tender. The ſtomach, near its upper orifice, internally had the veſſels of its villous coat tinged with blood, which broke down on very ſlight preſſure. The liver ſeemed rather ſmall; the ſpleen larger than common, but it had no morbid appearance. The kidneys had their veins fuller of blood than uſual; but the ureters and pelvis were of a natural ſize. The large inteſtines ſeemed to be quite ſound. In the thorax and pericardium, there was a collection of water larger than ordinary. The lungs had ſeveral black ſpots in different parts of their ſubſtance, from extravaſated blood. The heart ſeemed flaccid, and had no coagulum in it, the blood being fluid. The dura mater had no morbid appearance; but the veſſels

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of the pia mater had more moiſture in the cellular membrane contiguous to them than is natural. The ventricles contained each about a tea-ſpoonful of water; and that in the left was of a bright yellow colour. The pineal gland had ſeveral earthy particles in it: the other parts of the brain had no preternatural appearance.

How far all, or any of theſe morbid appearances here deſcribed, could be conſidered as the conſequences of that ſeries of experiments to which Dr Stark ſubjected himſelf, may be a matter of doubt; and it is even no leſs uncertain how far any of them were immediately connected with the cauſe of his death. There is, however, at leaſt a high degree of probability, that he fell a victim to the regimen to which he ſubjected himſelf: and, as far as that train of experiments, which proved even fatal to him, can warrant any general concluſion, they ſerve to demonſtrate, that, with the human ſpecies at leaſt, a pleaſant and a varied diet, is in a higher degree conducive to health, than a more ſtrict and ſimple regimen.

X.

X.

A Diſſertaion on the Properties of Pus, *which gained the Prize-Medal given by the* Lyceum Medicum Londinenſe, *for the year* 1788; *and was ordered to be printed for the uſe of the Society. By* Everard Home, *F. R. S. and one of the Preſidents of the* Lyceum Medicum. *4to*, London.

THIS ingenious prize-diſſertation, treats of ſeveral particulars, of very conſiderable importance in the practice of medicine. Prefixed to it is the following general title, which was probably the terms in which the queſtion was propoſed:—*The peculiar properties of Pus, particularly thoſe which diſtinguiſh it from other ſubſtances; the caſes in which it is formed; the time of its formation; and the effects it has upon the body.*

As Mr Home profeſſes it to be his chief object to inveſtigate theſe differents points by

experiment, he does not reckon it neceſſary to enter into the conſideration of the opinions of other authors, whether ancient or modern, with reſpect to thoſe ſubjects of which he propoſes to treat. But he thinks it may not be improper to mention, that the opinion moſt generally received reſpecting the nature of pus, was its being compoſed both of ſolids and fluids. It was ſuppoſed to differ materially from mucus; yet the difference between them was by no means accurately aſcertained. The principal mark of diſtinction adopted by many, was, that a breach of ſurface was neceſſary to the formation of pus, but not of mucus. But for this diſtinction Mr Home thinks there is no foundation; for the diſcharge produced in conſequence of a bliſter being applied to the ſurface of the body, is on all hands allowed to be pus; and the appearance of a diſcharge produced from the ſecreting ſurface of an internal canal, when the reſult of common inflammations, is exactly ſimilar to a diſcharge in conſequence of inflammation in any other part of the body. In his opinion, the only difference is,

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that the one is ſuppuration alone, the other ſuppuration attended by ulceration.

He obſerves, that through the whole of this inquiry, he conſiders pus as a fluid, whoſe formation depends upon a proceſs in the animal œconomy analogous to glandular ſecretion. He does not, however, take to himſelf the merit of all the obſervations contained in this diſſertation, but candidly acknowledges, that having paid particular attention to the opinions of Mr John Hunter reſpecting pus, he has availed himſelf of his obſervations in the preſent inquiry.

It is at preſent a very prevalent opinion, that inflammation, which has been ſuppoſed neceſſary to the formation of pus, is attended with a preternatural degree of heat. But this opinion Mr Home conſiders as ill-founded. In proof of this, he here relates eight experiments, mentioned by Mr Hunter in his lectures. In theſe, thermometers were applied to different parts of animals bodies in a ſound ſtate, and again to the ſame parts after inflammation had been excited in them by ſtimulating applications. From theſe experiments, Mr Home thinks it is evident that the

heat which takes place in a part during the preſence of inflammation, however conſiderable it may appear to our ſenſations, is no more than bringing it nearer to the ſtandard heat of the fource of circulation; and therefore, in parts near the heart, we have no ſuch increaſe during that proceſs; but in parts at a conſiderable diſtance, and in ſmall projecting parts, the heat is found to be increaſed ſeveral degrees. He concludes, therefore, that preternatural heat is by no means neceſſary for the formation of pus.

Mr Home defines pus to be a whitiſh fluid made up of globules, and of a tranſparent aqueous liquor. It may perhaps be thought improper to find fault with this definition, without offering one leſs exceptionable. But if the eſſential characteriſtic of a definition be, that it diſtinguiſhes the ſubject to be defined, from every other, it will hardly be alleged that this holds with reſpect to the preſent definition. But even allowing this definition to be defective, yet that defect is ſupplied by the account which our author ſubjoins of the properties of pus. It is, he obſerves, nearly of the conſiſtence of cream; it

it is of a white colour, has a mawkiſh taſte, and when cold is inodorous, but when warm has a peculiar ſmell. Examined by the microſcope, it is found to conſiſt of two parts; of globules, and of a tranſparent colourleſs fluid. The globules, he thinks, are probably white, at leaſt they appear to have ſome degree of opacity. Its ſpecific gravity is greater than that of water; it does not readily go into putrefaction. Expoſed to heat it evaporates to dryneſs, but does not coagulate. It does not unite with water in the cold of the atmoſphere, but falls to the bottom; yet in a conſiderable degree of heat it riſes, diffuſes through water, and remains mixed with it even after having been allowed to cool, the globules being decompoſed.

Of this account of pus, there are ſome particulars obvious to every obſerver: others Mr Home has aſcertained by his own experiments. But as this hiſtory of pus might be deemed imperfect, without giving ſome account of its chemical affinities and analyſis, he next mentions ſome particulars reſpecting theſe, extracted from an inaugural diſſertation, publiſhed at Leyden by Dr Burgman in 1787.

Pus poured upon the vitriolic acid ſwims on the ſurface, and no effervescence takes place; but the mixture, upon ſtanding for two hours, becomes ſemi-opaque, and of a dark purple colour. When pus is added to ſtrong nitrous acid, an effervescence takes place, and the mixture becomes firſt green, afterwards pellucid, and then yellow. Mixed with phlogiſticated muriatic acid, it does not ſeem at firſt to unite with it, although ſome globules of air are let looſe; but in the courſe of two days, the mixture becomes an homogeneous aſh-coloured maſs. Mixed with the fixed vegetable alkali, in the form of oleum tartari per deliquium, it is neither diſſolved nor coagulated by it. A ſmall portion of it unites in ſolution with the fixed foſſile alkali, forming a milky fluid; the remainder falls to the bottom. Upon adding weak nitrous acid to the ſolution, the pus is ſeparated in form of a viſcid aſh-coloured fluid. By means of the volatile alkali in a dry ſtate, pus becomes very viſcid; and upon the addition of water, a homogeneous, ſemipellucid, and white ſolution is formed. But by means of the nitrous acid, the pus is ſeparated under the form of a viſcid white

film

film on the top of the liquor. Cauſtic volatile alkali diſſolves a conſiderable portion of pus; and upon adding water, the pus is ſeparated in the form of a mucilage. Cauſtic fixed alkali wholly diſſolves an equal quantity of pus, forming a very viſcid fluid; but upon adding water, it is all depoſited in a viſcid form. Alcohol condenſes pus, by uniting with its aqueous parts, but neither coagulates nor diſſolves it.

Although pus, in a recent ſtate, ſeems to contain neither an acid nor an alkaline impregnation, yet, after remaining for ſome time expoſed to moderate degrees of heat, it takes on other properties: it acquires a pungent ſmell; it changes the ſyrup of violets to a red colour; it corrodes copper, turning it green, ſhewing ſigns of an acid quality, from taking on the acetous fermentation.

In the way of chemical analyſis, eight ounces and a half of thick yellowiſh white pus, in a recent ſtate, and without ſmell, when diſtilled in a ſand-heat never raiſed above 212°, yielded, on the firſt day, a limpid phlegm, at firſt without any ſmell, but afterwards with the ſmell of recent pus:

the whole amounted to ſeven ounces two drams nine grains. This phlegm contained neither an acid nor an alkali, as appeared from its producing no change on the blue colour of violets; and when expoſed to heat, it evaporated wholly like diſtilled water.

After this phlegm, a vapour aroſe by degrees, with an empyreumatic ſmell; and a freſh receiver being applied to the retort, a whitiſh phlegm, with an ungrateful ſmell and taſte, was collected, to the extent of three drams. This fluid turned the infuſion of violets green, and formed a white precipitate, upon being added to corroſive ſublimate: evident proofs of an alkali. With this phlegm, a conſiderable quantity of air was extricated. The heat being increaſed, a little dry volatile ſalt attached itſelf to the neck of the receiver, but was ſoon diſſolved and removed by the vapour.

A phlegm with a ſtronger ſmell, and a yellowiſh oil, which from its weight fell to the bottom, weighing two ſcruples fifteen grains, was collected in another receiver. This oil was empyreumatic, fluid, and free from acidity, not becoming ſolid in a moderate cold.

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The phlegm was found to contain a conſiderable quantity of volatile alkali. An oil after this began to riſe, of a deeper colour, exceedingly fœtid and empyreumatic, with a thinner yellow oil, with which it did not mix. The vapour of the volatile ſalt formed cryſtals, which attached themſelves to the ſides of the receiver. The heat being now raiſed, till the bottom of the retort was red hot, a maſs was obtained of the oil and dry ſalt, weighing two drams one ſcruple and fifteen grains. Of this maſs, one fourth part was volatile alkali. Theſe empyreumatic oils, as far as could be obſerved, reſembled exactly a ſimilar oil obtained from blood.

The retort being cooled and broken, was found to contain a black, light, ſhining caput mortuum, which weighed three drams and five grains. This was put into a crucible, and expoſed to a violent reverberatory fire for eight hours. There remained eight grains of reddiſh brown aſhes, with an earthy taſte, not at all ſaline. Theſe aſhes ſhewed a polarity, on the application of the magnet. When the aſhes were digeſted in warm diſtilled water, and the liquor ſtrained and evaporated, no

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ſalt could be obtained from them. Upon adding to them vitriolic acid, a ſmall part was diſſolved, like calcareous earth: the greateſt part, however, was neither affected by the vitriolic nor nitrous acids.

From the above analyſis Mr Home infers, that pus is compoſed of the ſame materials with blood and animal jelly. But he adds, that a knowledge of theſe chemical properties gives us but little information reſpecting thoſe properties which diſtinguiſh pus from other parts of an animal, or from the different ſecretions.

After this account of the chemical analyſis of pus, Mr Home next mentions ſome varieties in its appearance. Theſe changes, he tells us, ariſe more from indolence and irritability, than from any abſolute diſeaſe, and depend upon what he ſtyles the ſtate of health and ſtrength of the parts yielding pus. The pus is made up of globules and flaky particles, floating in a tranſparent fluid; and theſe globules and flakes are in different proportions, according to the degree of indolence. This, he thinks, is particularly obſervable in ſcrophulous abſceſſes, preceded by a ſmall degree

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of inflammation. In irritable ſores, the diſcharge, he obſerves, is often thin, being principally made up of an aqueous fluid, poſſeſſed of an irritating quality, and containing few globules. Such ſores are commonly attended with hæmorrhage from the ſmaller veſſels; by which means, the diſcharge is very materially altered in its properties, is rendered acrid, and more ready to run into putrefaction than true pus.

He tells us, that both the conſtitution and part muſt be in health, to form good pus; that very ſlight changes in the general health are capable of producing an alteration in it, and even of preventing its being formed at all, and of ſubſtituting in its place coagulable lymph. This, he aſſerts, happens moſt readily in ulcers of the lower extremities, as the diſtance of the parts from the ſource of circulation renders them weaker: and he points out, as a curious circumſtance, the influence which diſtance alone from the heart, has upon the appearance of pus. In proof of this, he mentions the caſe of a man who had a compound fracture of the right leg, and an ulcer on the ancle of the left. When he was

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in health, both the ſores looked well; but upon an attack of fever, the ulcer on the ancle ceaſed to form good pus, although the matter from the fracture continued to look well; and in twelve hours more, the ſame change had taken place in the ſore of the compound fracture, which was about ſix inches farther up the leg than the ulcer.

That diſtance from the heart may have influence on the appearance of pus, we will not venture to deny; at leaſt, we are unacquainted with any fact which ſerves to demonſtrate the contrary. But, in our opinion, the doctrine is very far from being proved by the caſe here alluded to. It is hardly neceſſary to obſerve, that many other reaſons may have here operated, beſides diſtance from the ſource of circulation; and it is highly probable, that the phenomenon here taking place, may with equal probability have been explained on many other grounds. If the ulcer of the one ancle, and fracture of the other leg, here, took place at different times; this caſe might, with no leſs juſtice, have been employed to prove the influence of the duration of ſuppuration on the appearance of pus. If the ulcer on

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the one leg was larger than that on the other, it might have been employed to prove the influence of the ſize of an ulcer; and, at any rate, the difference of the diſtance of the two ulcerations from the heart, was, in this caſe, but very inconſiderable. To eſtabliſh the doctrine here contended for, it ſhould be ſhown, that diſtance from the heart has influence on the appearance of pus, if not univerſally, at leaſt generally. As far as our obſervation goes, however, this is by no means the caſe. Hence we are inclined to think, that if diſtance from the heart has any influence on the appearance of pus, that influence is very generally more than counteracted by other circumſtances.

Pus, our author aſſerts, has commonly been ſuppoſed to be of a corroding quality. Mr Home here relates ſome experiments which he made, with a view of aſcertaining the truth or fallacy of this aſſertion. He immerſed a portion of a muſcle, weighing exactly one dram, in the matter of a compound fracture in the arm of a living man; in ſome of the ſame matter contained in a glaſs veſſel; and in fluid calf's-foot jelly, in which the animal ſubſtance was pure, having neither

neither wine nor vegetables mixed with it. Theſe three portions of muſcle were taken out once every twenty-four hours, waſhed in water, weighed, and returned again. Mr Home here gives us a particular account of the appearances obſerved on theſe examinations. But it is ſufficient for us to obſerve, that from this and ſimilar experiments, he found the aſſertion to be void of foundation, and to have ariſen, from obſervers not having attended to the diſtinction between pus in a pure ſtate, and when mixed with other ſubſtances. This concluſion we are inclined to think is well-founded: But at the ſame time, it does not appear to us to be different from the common opinion. For although vitiated pus, whether it has acquired that ſtate from the mixture of other matters, from the condition in which it is ſeparated by the veſſels of the ulcer, or from changes which it has undergone after ſeparation, has been imagined to be corroſive, and probably often not without good reaſon; yet mild and bland pus has commonly been conſidered rather as a balſamic application, than any thing elſe.

According

According to Mr Home, the property which chiefly characterizes pus, and diſtinguiſhes it from moſt other ſubſtances, and which was firſt pointed out by Mr Hunter, is its being compoſed of globules. While this appearance, diſcovered by the microſcope, diſtinguiſhes pus from other ſubſtances, it ſhews its great affinity to other animal ſecretions, although in many circumſtances it differs from them. Pus, our author obſerves, differs from blood in the colour of the globules, in their not being ſoluble in water, which thoſe of blood are, and from the fluid in which they ſwim being coagulable by a ſolution of ſal ammoniac, which ſerum is not. It differs from chyle, in its globules being larger, not coagulating by expoſure to air, nor by heat; which thoſe of chyle do. It differs from the pancreatic juice, in the globules of that fluid being much ſmaller than thoſe of pus. Milk, he tells us, is compoſed of globules nearly of the ſame ſize as thoſe of pus, but much more numerous. Milk coagulates by runnet, which pus does not; and it contains oil and ſugar, which are not to be diſcovered in pus. If theſe microſcopical

croſcopical obſervations reſpecting pus be well-founded, it will readily be allowed, that they throw much new light on the nature of this fluid.

In Mr Home's opinion, the caſes in which pus is formed, are all reducible to one, which is the ſtate of parts conſequent to inflammation. Inflammation, he thinks, is not only the forerunner, but the abſolute cauſe of the formation of pus; and on this ſubject he adopts an idea which he conſiders as new, and as peculiar to Mr Hunter: "That, viz. the veſſels of the part, take on the nature of a gland, and ſecrete a fluid which becomes pus." That Mr Hunter may not have borrowed this idea from any other perſon, we think is by no means improbable; but, at the ſame time, there can be no doubt, that in this idea he has been long ſince anticipated. To prove this, not to mention authors of later date, we need only quote the words of Dr Simſon, in his elegant Diſſertationes de re Medica, publiſhed more than ſixty years ago. He ſays, "Quod ſi jam piſum vel ejuſmodi quid in plagæ fauces injiciatur ſimulque arceatur aeris contagium, efficitur ut pus

illud

illud quamdiu voles fluat; prorſus ut hoc pacto repente exiſtat emergatque nova quædam glandula."

In inflammation, Mr Home contends, that there is not only an enlargement of veſſels, and that this enlargement takes place in the greateſt degree in the veins, but that the ſmall veſſels become more numerous, in conſequence of new ones being formed: and, from a caſe of ſtrangulated hernia, of which he relates the circumſtances, he infers, that ſuch a new growth may take place even in leſs than the ſpace of twenty-four hours. The circumſtances of that caſe, in his opinion, ſhow, that inflammation forms a vaſcular ſurface, upon which pus is afterwards depoſited. Hence he thinks it highly probable, that the newly formed parts are ſo organized as to ſecrete pus.

In treating of the time required for the formation of pus, he obſerves, that in caſes of wounds made into muſcular parts, where blood-veſſels are divided, the firſt proceſs which takes place is the extravaſation of red blood; the ſecond, is the exudation of coagulable lymph, which afterwards becomes vaſ-

cular; the third, the formation of matter, which in general does not take place in leſs than two days. He relates an experiment, however, made by the application of a ſmall bliſtering plaſter to the pit of the ſtomach of a healthy young man, which he thinks proves that pus may be formed in about twenty-four hours. From another experiment, made by introducing a bougie into the urethra of an healthy young man, he infers, that the time required to form pus on a ſecreting ſurface, appears to be five hours.

He next endeavours to aſcertain the changes which this fluid undergoes, from the time of its leaving the extremities of the veſſels which form it, till it becomes that thick fluid which we find upon ſuppurating ſurfaces. After ſeveral unſucceſsful trials in different ways, to collect the fluid in the various ſtates of its formation, he uſed ſmall pieces of very fine lamellæ of talc, which, although hard ſubſtances, were, from their thinneſs, very light; and having a ſmooth poliſhed ſurface, gave leſs irritation than any other ſubſtance he could deviſe. From different experiments,

periments, made by means of this ſubſtance, he draws the following concluſions:

1. That the fluid formed during expoſure, is not pus at the time of its formation; and that it afterwards goes through no changes which give it the leaſt reſemblance to that fluid.

2. That pus, at its formation, is not globular, but a tranſparent fluid, of a conſiſtence reſembling gelly; and that the globules are formed whilſt lying upon the ſurface of the ſore.

3. That after the fluid is once ſeparated from the veſſels, its becoming globular is a change taking place within itſelf, independently of the ſore which ſecretes it.

4. That theſe globules are formed in a much ſhorter time when the fluid is expoſed, than when kept from the air.

And, *5thly*, That the time required for the formation of pus, in the ſtate we commonly find it upon a healthy ſore, varies according to circumſtances, and is from five to twenty minutes.

The laſt ſubject of which Mr Home treats, is the effects which matter produces on the

body. He conſiders pus as eſſential to the formation of granulations in wounds, which are kept from healing by the firſt intention; and to the filling up of cavities which are expoſed. But he confeſſes himſelf ignorant what the particular effects are, by which pus either gives riſe to the proceſs of forming granulations, or aſſiſts that proceſs.

The abſorption of matter has long, he obſerves, been conſidered as a cauſe of many diſeaſes; but he thinks, that the effect is not ſufficiently general, to ariſe from ſuch a cauſe, ſince inſtances of matter being abſorbed occur daily, where no ill conſequences whatever are produced upon the conſtitution. Many of the conſequences attributed to the abſorption of pus, ſuch as general waſting of the body, hectic fever, and the like, are rather, he thinks, to be attributed to the debilitating effects of a long continued diſcharge, or a conſtant irritation preying upon the conſtitution, and in the end becoming the cauſe of conſtitutional diſeaſes. It would here be foreign to our buſineſs, to enter into a controverſy which has been the ſubject of much diſpute. But if it be on the one hand alleged,

that

that there are many inſtances of matter abſorbed without hectic fever; on the other hand it may be contended, that there are often long continued diſcharges, and conſtant irritation, where no hectic fever takes place; and that the moſt acute hectic fever is the conſequence of the ſuppuration of tubercles, from which a very ſmall quantity only of vitiated pus is diſcharged, and from which there does not appear to be any conſiderable irritation. Although, therefore, it may be allowed, that pus, in a mild and bland ſtate, is either not abſorbed, or, although abſorbed, is innocent; yet we cannot help thinking, that from the abſorption, vitiated pus, or, to uſe the words of our author, of pus having ſome extraneous ſubſtance mixed with it, the worſt conſequences often ariſe.

From the whole of this inveſtigation, Mr Home concludes that the opinion, of pus being a ſecretion, is a juſt one. This opinion is, he thinks, ſupported by its chemical analyſis, from which it is found to contain ſimilar ſubſtances with the blood; by its being free from any tendency to putrefaction in a recent ſtate; by its having no power of ir-

ritating the parts which form it; by the variety of its appearances according to the ſtate of the conſtitution at the time, ſimilar to ſecretions which are affected by very ſlight changes in the general habit; by its being readily abſorbed into the circulation, without producing any ill effect upon the conſtitution, as happens of ſecretions; by its being compoſed of globules ſwimming in a tranſparent fluid, as is the caſe with many ſecretions; and laſtly, by its being thinner at the time of its leaving the veſſels than afterwards, ſimilar to ſecretions in general.

From the analyſis now given of this diſſertation, it will appear that we do not altogether adopt the ſentiments of the author in every particular. Yet the reader will readily diſcover, that it contains many ingenious conjectures, deduced from actual experiment, which are not unconnected with circumſtances of importance in practice.

XI.

XI.

A Deſcription of all the Burſæ Mucoſæ of the Human Body; their Structure explained and compared with that of the Capſular Ligaments of the Joints, and of thoſe Sacs which line the Cavities of the Thorax and Abdomen: with Remarks on the Accidents and Diſeaſes which affect thoſe ſeveral Sacs; and on the Operations neceſſary for their Cure. Illuſtrated with Tables. By Alexander Monro, *M. D. Profeſſor of Phyſic, Anatomy, and Surgery, in the Univerſity of* Edinburgh; *Fellow of the Royal College of Phyſicians, and of the Royal Society of* Edinburgh; *and Fellow of the Royal Academy of Surgery of* Paris. *Folio,* Edinburgh.

IN an introduction prefixed to this work, Dr Monro obſerves, that although the organs of which he is here to treat, form a

very curious part of our ſtructure, the knowledge of which is important in practice; yet the ſubject has been unaccountably overlooked, even by the lateſt and moſt accurate anatomiſts, and, of courſe, is little underſtood by phyſicians and ſurgeons. Some of them, indeed, were diſcovered by Winſlow and Albinus, who were the firſt to give them the name of Burſæ Mucoſæ. But their knowledge of them was very imperfect; and from the writings of Albinus ſucceeding anatomiſts have chiefly copied, without attempting to throw any new light upon the ſubject. From theſe circumſtances, a pretty full analyſis of this work might here be naturally expected. But as the work conſiſts chiefly of tables, and an explanation of theſe, a deſcription in words could convey to our readers but a faint idea of the organs here repreſented. We muſt therefore content ourſelves with merely mentioning ſome of the moſt important particulars, eſpecially thoſe which have an immediate reference to practice.

Dr Monro begins this work with a few general obſervations on the number, ſituation, and connection of the burſæ. He next deſcribes

ſcribes the particular ſituation of all of them, with a reference to tables, which repreſent them of their natural ſize. After that, he explains accurately the ſtructure of each part which enters into the compoſition of the burſæ, and compares their ſtructure firſt with that of the capſular ligaments of the joints, and then with that of thoſe ſacs which line the containing parts of the thorax and abdomen; and he concludes, with treating of the cauſe of the dangerous inflammation which generally follows wounds that penetrate into the cavities of the ſhut ſacs, and of the manner of preventing this.

Theſe ſacs, as far as Dr Monro's anatomical inveſtigations have yet gone, are to be met with in the extremities of the body only. He has found about one hundred and forty of them in all; thirty-three in each of the ſuperior, and thirty-ſeven in each of the inferior extremities. Many of them are placed entirely on the inner ſides of the tendons, between theſe and the bones; many others cover not only the inner, but the outer ſides of the tendons, or are interpoſed between the tendons and external parts, as well as be-

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tween theſe and the bones: ſome are ſituated between the tendons and the external parts; ſome between contiguous tendons, and others been the tendons and ligaments of the joints. A few are interpoſed where the proceſſes of bones play upon the ligaments, or where one bone plays upon another. Where two or more tendons are contiguous, and afterwards ſeparate from each other, a burſa is commonly found divided into branches, with which it communicates; and a few burſæ, of contiguous tendons, communicate with each other. Some burſæ, even in young and healthy children, communicate with the cavities of the joints; and in many old perſons, Dr Monro has obſerved communications, formed by uſe, or worn by friction, although there had been no lameneſs or complaint of pain made by the perſon on that account during life.

There is, Dr Monro obſerves, ſome little difference, in different perſons, with regard to the manner in which contiguous ſacs communicate with each other, or with the cavities of the joints: And he has, in particular, obſerved, that a burſa as large as a hen's egg,

which

which is placed behind the tendons of the extenſors of the leg, has, in ſome perſons, no communication with the cavity of the joint of the knee; but in the greater number of children, as well as adults, he has found an opening large enough to allow one or two fingers to paſs from the burſa into the joint.

After theſe general obſervations, Dr Monro next proceeds to delineate, more particularly, the ſize, ſhape, ſituation, connections, and communications of particular burſæ, by repreſentations of them given in engravings as large as the life. The firſt table repreſents the burſæ mucoſæ, ſeen in the fore part of the ſuperior extremity; the ſecond, thoſe ſeen on the back part of the ſame extremity: the third repreſents the burſæ mucoſæ which appear on a fore view of the inferior extremity; the fourth repreſents thoſe which are ſeen about the knee joint, on the removal of the patella from its natural ſituation; the fifth repreſents thoſe which are ſeen on the back part of the inferior extremity; and the ſixth, thoſe on the ſole of the foot. The ſeventh table contains three figures, in which are delineated, holes worn by uſe in the liga-

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ments of elderly perſons, by which the cavities of their joints communicated with thoſe of the burſæ. In the eighth table he repreſents the ſtructure of the fat, and of fimbriæ connected with maſſes of fat, obſerved within the cavities of the joints and burſæ. In table ninth he repreſents many cartilaginous bodies which he found within the cavities of the joints, burſæ, and other ſhut ſacs. And in his tenth and laſt table, he repreſents the inteſtines eroded in one caſe, and punctured in another; in both of which caſes, the air effuſed produced fatal conſequences.

To theſe delineations, Dr Monro ſubjoins ſome general obſervations on the ſtructure of the burſæ. He obſerves, that the proper membrane of the burſa is thin and tranſparent, but very denſe, and capable of confining air, or any other fluid; that it is joined to neighbouring parts, by common cellular ſubſtance; and that, between the burſa and the hard ſubſtance of the bone, a thin layer of cartilage, or tough membrane, is very generally interpoſed. To the cellular ſubſtance on the outſide of the burſa, the adipoſe ſubſtance is connected, excepting where the bur-

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ſa covers a tendon, cartilage, or bone, much expoſed to preſſure and friction. He remarks, that in ſeveral places, a maſs of fat, covered with the continuation of the membrane of the burſa, projects into its cavity; and in all ſuch places, the membrane covering the fatty ſubſtance has a red colour, from the number of blood-veſſels which run on its outer ſide, or between it and the fat; and from the extremities of theſe fatty ſubſtances, fringes project. The inner ſide of the membrane of the burſa is not only ſmooth, but, by the copious ſecretion of a lubricating liquor, is rendered extremely ſlippery.

Dr Monro next enters into a compariſon of the ſtructure of the burſæ with that of the capſular ligaments of the joints. He obſerves, that the more attentively this compariſon is purſued, the more juſt and perfect their agreement will be found; that the internal membrane of the ligaments and joints, like that of the burſæ, is thin and denſe; that it is connected to the external ligaments by common cellular ſubſtance; that between it and the bones, layers of cartilage, or the articular cartilages, are interpoſed; that

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at the ſides of the joint, where it is not ſubjected to violent preſſure and friction, the adipoſe ſubſtance is connected with the cellular membrane; that within the cavities of the joints, there are ſimilar maſſes of fat projecting, covered with ſimilar blood-veſſels, and with ſimilar fimbriæ, or fringes, hanging from their edges; that in the knee, the upper part of ſuch a maſs of fat forms what has been called the mucilaginous gland of the joint, and the under part of it projects into the burſa behind the ligament which ties the patella to the tibia; that the liquor which lubricates the burſæ, has the ſame colour, conſiſtence and properties, as that of the joints; both being alſo affected in the ſame manner by heat, mineral acids, and ardent ſpirits; and that, in ſome places, the burſæ conſtantly communicate with the cavities of the joints, in others they generally do ſo.

To render the ſameneſs of the ſtructure of the burſæ and capſular ligaments ſtill more evident, he next minutely deſcribes the appearance of the ſeveral organs ſuppoſed to furniſh that lubricating liquor, which has been called Synovia. He has found, by the aſſiſtance of the

the microſcope, that the fat, in all parts of the body, is lodged in folicles, the diameter of each of which does not exceed the ſix hundredth part of an inch; yet their blood-veſſels may be filled with coloured injections. He minutely deſcribes and repreſents, in his eighth table, the fimbriæ or fringes which hang within the joints and burſæ, from maſſes of fat. But he denies that there are any knotty, granulous, or glandular bodies lodged, as has generally been ſuppoſed, within theſe maſſes, to which the fimbriæ are ſubſervient, as being ducts to theſe glandular bodies, as ſome have alleged. He therefore gives it as his opinion, that the ſynovia ſeems to be furniſhed by inviſible exhalent arteries, by the ducts of the fimbriæ, and by oil exſuding from the adipoſe folicles by paſſages not yet diſcovered. He thinks theſe paſſages muſt be very minute; not only becauſe they are not to be ſeen with the microſcope, but becauſe the oily matter is ſo well incorporated with the mucilaginous, as not to be diſtinguiſhable, even with the microſcope, in the form of globules: And he adds, that as, in theſe ſacs, the fat ſeems to be mixed and incorporated with the mucilage, it would

perhaps

perhaps be more proper to name them *veſicæ unguinoſæ*, than *burſæ mucoſæ*.

The ſameneſs of the ſtructure and properties of the burſæ mucoſæ, and capſular ligament of the joint, is, Dr Monro thinks, further proved, by the effects produced upon them, from uſe, accident, operation and diſeaſe. In old perſons, he has often found a hole worn, both in the membrane of a burſa, and of a contiguous ligament; by which a communication was opened between their cavities. But notwithſtanding this, during life, there was no complaint of pain, or ſtiffneſs of the joint. He has frequently obſerved an effuſion of fluid into the cavities of the joints, and of the burſæ, from the ſame cauſes, or in conſequence of the ſame diſeaſes; as not unfrequently happens in rheumatic, gouty, and ſcrophulous caſes. Cartilaginous bodies have been repeatedly obſerved by ſurgeons in the cavity of the knee joint; and a few have been taken out, after cutting into the cavity of the joint. In like manner, Dr Monro has found cartilaginous bodies formed within the burſæ of the wriſt, after violent ſprains; and theſe cartilaginous bodies taken from the bur-

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ſæ, many of which he delineates in his ninth table, not only reſembled thoſe taken from the joints in their conſiſtence, but alſo in their internal ſtructure; for both, when cut, ſeemed to be compoſed of lamellæ. In the laſt place, as a mark of reſemblance between the capſular ligaments and burſæ, Dr Monro obſerves, that the burſæ and ligaments correſpond remarkably, in having little ſenſibility in a ſound ſtate of the body, and in acquiring a great degree of it by inflammation. In proof of this, he not only quotes ſome obſervations and experiments from Dr Haller and others, but alſo relates ſeveral caſes falling under his own obſervation, in which the reſemblance, in point of ſenſibility, between the burſæ mucoſæ, or veſicæ unguinoſæ, and capſular ligaments of the joints, was very manifeſt.

After thus comparing the ſtructure of the burſæ with that of capſular ligaments, he next compares it with that of the pleuræ, pericardium, and peritonæum. He allows, that we do not find in theſe, as in the capſular ligaments and burſæ, fimbriæ, or fringes, projecting from the membranes which cover the fat; and he alſo obſerves, that fewer veſſels con-

taining red blood, are diſperſed in the cellular ſubſtance between the fat and theſe membranes. And from theſe circumſtances, he thinks it probable, that the liquor ſecreted into the joints and burſæ, differs from that poured into the cavities of the thorax and abdomen: But notwithſtanding this, there is, he affirms, a conſiderable reſemblance of ſtructure; for although theſe, in their ſound ſtate, have little ſenſibility, yet wounds of them produce a high degree of inflammation, attended with the moſt dangerous conſequences.

The importance of this particular in practice, naturally leads him, in the next place, to treat of the cauſe of that dangerous inflammation which generally follows the wound of a ſhut ſac, and of the manner of preventing it. Different conſiderations long ſince led him to ſuppoſe, that the bad ſymptoms were much more owing to the admiſſion of air, than to the mere diviſion of the ſolid or membranous parts. Hence he has, for many years, in his lectures, inculcated the advantages which attend the excluſion of the air from the deep receſſes of the body, in performing different operations, and in treating wounds accident-

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ally inflicted. As a proof and illuſtration of this, he makes ſeveral remarks on the extraction of cartilaginous bodies from the capſules of joints; on the operation of the trepan; on the paracenteſis of the thorax and abdomen, which, in two caſes of air effuſed by the rupture of the lungs and inteſtines, was performed by his direction; on the Cæſarean operation; and on the high and lateral operations of lithotomy. He ſhews very clearly, that in all theſe, the danger may be much leſſened, by uſing every means to exclude the air from the wound during the operation, and by afterwards ſtitching the integuments, in different caſes, more accurately than has been commonly practiſed.

But, after taking notice of theſe, he treats ſtill more particularly of the operation for incarcerated ruptures; and he here deſcribes a method of operating in hernia, which, he is perſuaded, from ſucceſsful trials in different caſes, as well as from reaſon and analogy, would render this operation far leſs dangerous than it has hitherto proved, in the hands even of the moſt experienced and dexterous ſurgeons. After making ſome remarks on the

method of performing this operation recommended by Mr Pott, which he quotes and conſiders, not as being more cenſurable than that of others, but becauſe, from the high reputation which the author has juſtly acquired, it is very generally adopted in Britain, he concludes, that the danger of the operation is not owing to the mere diviſion of the tendon, or of the peritonæum, but that it depends chiefly, and almoſt ſolely, on the handling of the bowels, and on the expoſure of theſe, and of the inner ſurface of the ſac, to the air. In place, therefore, of laying open the herniary ſac its whole length, he propoſes merely to cut the ſtricture made by the tendon, and then to reduce the bowels, by preſſure, poſture, or agitation, if neceſſary.

If indeed it be certain that the bowels are mortified, the neceſſity of opening the ſac is evident; but if there be the ſmalleſt chance that the inflammation may terminate without mortification, he thinks it equally certain, that nothing can be ſo pernicious as opening the ſac, and that the bowels ought to be returned, without expoſing them to the air. After Dr Monro had for ſome time reaſoned in this manner,

manner, opportunities occurred for his directing it to be put in practice: And he here relates four caſes in which the operation was performed in this manner; in all of which, the patients recovered without a ſingle bad ſymptom, although, before the operation, they ſeemed to be in very great danger. From actual practice, therefore, as well as from reaſoning, he concludes, that many lives would be ſaved, by adopting the following rules, in the operation for hernia.

If the ſurgeon be not called till the bowels are evidently in a ſtate of mortification, the method commonly recommended, of opening the ſac, is to be followed; but if he be called in proper time, the operation ſhould conſiſt merely in taking off the ſtricture, by cutting the tendon. If, however, after dividing the tendon, the bowels cannot be eaſily returned into the abdomen, there may be reaſon for ſuſpecting that they are confined by a ſtricture of the neck of the ſac, which muſt therefore be, in the next place, removed. After this, the bowels are to be returned, by preſſure upon the ſac, without opening it further; and the wound in the ſkin is to be ſtitched

ſo accurately, as to prevent the acceſs of the air.

How far Dr Monro has in this treatiſe deſcribed all the burſæ mucoſæ, or how far the deſcription he has given of theſe, is altogether free from error or miſtake, we will not pretend to ſay. But there can be no doubt, that an accurate anatomical inveſtigation of theſe organs, is a ſubject of conſiderable importance; and that the practical remarks thrown out in different parts of this work, deſerve the moſt ſerious attention.

XII.

XII.

Pharmacopœia Collegii Regalis Medicorum Londinenſis. 4to, Londini.

THERE is perhaps no branch of medicine, which, during the courſe of the preſent century, has undergone more material reformation, than that which reſpects the preparation and compoſition of medicine. At one period, the numerous and confuſed farrago of articles which entered almoſt every formula, rendered it often impoſſible to ſay, on what particular article the activity of the compoſition depended; and it not unfrequently happened, that by one article the active powers of another were either totally altered, or completely deſtroyed. But, for a conſiderable number of years paſt, a much greater degree both of ſimplicity and certainty has taken place.

To this reformation, the pharmacopœias of the Edinburgh College, publiſhed in 1744, and of that of London, publiſhed in 1746, contributed in a very high degree. But even ſince that period, it may readily be ſuppoſed, that in conſequence of many new diſcoveries, particularly in chemiſtry, an opportunity ſhould have been afforded for many important alterations. Accordingly, the Edinburgh College, availing themſelves of theſe diſcoveries and improvements, have, on three different occaſions, viz. in 1756, in 1774, and in 1783, publiſhed new editions of their pharmacopœia, with conſiderable alterations and corrections. But, for a period of forty-two years, the London College made no alteration upon their pharmacopœia; although it is not to be imagined, that the operative chemiſts and apothecaries neglected to take advantage of thoſe reformations in the preparation of different articles, which more accurate chemical knowledge had pointed out.

From this circumſtance, an improved edition of the London pharmacopœia was anxiouſly deſired by every intelligent medical practitioner,

practitioner. But the long delay which had taken place, was a great objection to this, because the changes which now appeared to be neceſſary were ſo numerous. The neceſſity, however, of a new pharmacopœia (for otherwiſe it could not poſſibly continue to be the ſtandard of practice) became ſo obvious, that this neceſſity overcame every other objection; and the united labours of the London College of phyſicians, probably aided by ſome judicious pharmacians, into whoſe hands their ſpecimen, and ſpecimen alterum, mentioned in former volumes of theſe Commentaries, were put, has at length produced a very elaborate and maſterly work. And although it would be abſurd to view it as perfectly unexceptionable in every particular, yet we have no doubt, that by much the greateſt part of thoſe alterations which have been made, are highly beneficial both to the phyſician, the apothecary, and the patient.

We are indeed aware, that the ſame favourable ſentiments are not univerſally entertained, with reſpect to the preſent edition of the London pharmacopœia. Nor is this wonderful, when we conſider how averſe ſome

are to every change, even although obviouſly and to a high degree for the better, eſpecially if it coſts them the ſmalleſt additional exertion of judgment or recollection; and where ſo many changes have taken place, as between the preſent and the former edition of the London pharmacopœia, this muſt neceſſarily be the caſe to no inconſiderable degree. The labour attending this work, as well as the difficulties it muſt occaſion to ſome practitioners, would have been much diminiſhed, had the reformation which has now taken place been introduced in a more gradual manner. It is therefore to be hoped, that the London College will not again allow ſo long a ſpace of time to intervene, without accommodating their work to the diſcoveries which are gradually brought to light: and it is hardly poſſible to ſuppoſe, that eight or ten years can elapſe without affording ſufficient grounds for a new and improved edition of any pharmacopœia. By this gradual mode of introducing improvements, both the labour of the reformers, and the eaſe of practitioners in general, will be materially conſulted.

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The work now before us, is of ſuch a nature as hardly to admit of an analyſis. We might indeed give an account to our readers of every change which has been made from the laſt edition, and of the advantages and diſadvantages which, in our opinion, will reſult from it; but even this would rather be a tedious than an inſtructive taſk. We ſhall therefore content ourſelves, after the character which we have already given of this work, with making a few general remarks upon the changes which have taken place, deſcending to particulars only in thoſe caſes where the changes are of the greateſt importance.

The order followed in the preſent edition, deviates very little from that of the former. The firſt part of the work is a liſt of the materia medica, arranged in alphabetical order. From the preſent liſt, about fifty articles are rejected, which had a place in the former ones; and from the excluſion of moſt, if not all of theſe, we may venture to aſſert, that the practice of medicine will ſuſtain little or no injury; for moſt of them have been long baniſhed from practice, and for a conſiderable

ſiderable time have ceaſed to have a place in the ſhops. There are, however, ſome few of the rejected articles, as the acacia, lapilli cancrorum, fuligo ligni, hædera terreſtris, and thymus, which are not without active powers, and are ſtill in uſe among ſome judicious practitioners.

The additions made to the liſt of the London College of articles, which had not formerly a place in it, amount to about forty in number. Among others, we may mention aconitum, arnica, cardamine, cicuta, colchicum, colomba, digitalis, filix, gratiola, kino, mezereum, quaſſia, ricinus, ſimarouba, ſpigelia, and uva urſi; articles which, although but lately introduced into practice, are unqueſtionably often employed with great advantage: and accordingly, all of them have already obtained a place in moſt of the modern pharmacopœias. Perhaps the additions made to the liſt ſhould have been ſtill more conſiderable; and, in our opinion, a place might with propriety have been given to arſenicum, belladonna, caſſia lignea, dolichos, dulcamara, geoffræa, hippocaſtanum, lobelia, nux vomica, radix Indica, rhododendron, ſalix, ſtramonium,

ſtramonium, verbaſcum, and ſome others. They indeed, in their preface, aſſign a good reaſon for being cautious in the introduction of articles commonly eſteemed poiſonous; but the advantages which may be derived from ſome of theſe we have mentioned, are confirmed by the concurring teſtimony of many practitioners, while others are held in high eſteem, at leaſt by a few, and theſe too men of judgment and accuracy. Their being in the liſt, does not oblige any one to employ them; their omiſſion, not only renders it doubtful whether they can be had when preſcribed, but may ſometimes lead to very improper ſubſtitutions. We can therefore ſee no danger which was to be dreaded from adding them to the liſt; and we think that ſome advantage might have reſulted from it.

In the former liſt of the materia medica, to the officinal name of each article, that employed by Bauhin or Tournefort, was ſubjoined. But to theſe, the College have now, with great propriety, ſubſtituted the Linnæan names, as being almoſt univerſally adopted by modern botaniſts. In a few inſtances, as in the balſamum Peruvianum, and catechu, they

they have taken the botanical name from the ſupplement to Linnæus's ſyſtem, publiſhed by his ſon; and in a few others, they have quoted botanical deſcriptions of ſtill later date, with which even the younger Linnæus was unacquainted; as in the benzoe, and nux moſchata.

The alterations which have taken place with reſpect to the materia medica, are but very inconſiderable, when compared with thoſe which have taken place with reſpect to preparations and compoſitions. Without pretending to deſcend to particulars, we may obſerve, that very generally they appear to be manifeſtly for the better, and to demonſtrate a thorough knowledge of the principles of chemiſtry, as far as theſe have hitherto been diſcovered. There are, however, a few articles, with reſpect to which, the beſt mode of preparation may perhaps be ſtill a matter of doubt: and we are inclined to think, that in the preparation of ſome articles, ſuch, for example, as the æther vitriolicus, Lond. liquor ætherius vitriolicus, Ed.; the ſpiritus ætheris vitriolici, Lond. acidum vitriolicum vinoſum, or ſpiritus vitrioli dulcis, Ed.; and the antimonium

antimonium tartariſatum, Lond. tartarus antimonialis, or emeticus, Ed.; the modes of preparation directed by the Edinburgh College, are, upon the whole, preferable to thoſe adopted by the London College. There can however be no doubt, that, in both ways, medicines, of very nearly at leaſt the ſame degree of activity, may be obtained. It is however, we think, much to be regreted, that, in ſome of the moſt active medicines, ſuch as thoſe containing opium and mercury, the analogous medicines of the two colleges, even where the ſame names are employed, differ very conſiderably in the proportion of thoſe articles entering their compoſition.—Thus, five grains of the pilulæ ex hydrargyro, prepared according to the directions of the London College, contain two grains of mercury; while four grains of the ſame maſs, prepared according to the directions of the Edinburgh College, contain only one grain of mercury. The proportion of opium contained in the tinctura thebaica of the one, and tinctura opii of the other, is not the ſame, although both are commonly preſcribed under the name of liquid laudanum. But there is ſtill a greater difference

ence in the proportion of opium, contained in the elixir paregoricum of the Edinburgh pharmacopœia, and the tinctura opii camphorata of the London College; a name now ſubſtituted for what they formerly denominated paregoric elixir.

The London College have indeed, very properly, annexed to their work a table, ſhewing the exact proportion in which mercury or opium enter particular preparations, the want of which may juſtly be conſidered as a deſideratum in the Edinburgh pharmacopœia, and ought to be ſupplied in their next edition. We hope alſo, that they will then reduce to the ſame ſtrength, all thoſe articles containing very active ingredients, to which the ſame name is affixed; and we cannot help thinking, that the London College, in their preſent edition, would have done better, had they, on ſome occaſions at leaſt, paid more attention to this circumſtance. Thus, for example, they might have formed their wine of emetic tartar, with only two grains of the antimonium tartariſatum to each ounce of the menſtruum, the proportion directed by the Edinburgh College, who firſt introduced this formula,

formula, in place of four grains to each ounce, the quantity they have directed; by which means, their vinum antimonii tartariſati, is double the ſtrength of the vinum e tartaro antimoniali of the Edinburgh pharmacopœia, although it may naturally be ſuppoſed, that both are but different names of the ſame medicine.

While the London College have made many changes on their pharmacopœia in other particulars, they have alſo made many alterations in the names they have employed, particularly with reſpect to the preparations and compoſitions. About one hundred and fifty different articles have received, in this edition of the pharmacopœia, names different from thoſe which were formerly in uſe. This muſt certainly be at firſt productive of ſome inconvenience and trouble to practitioners: but we think there can be little doubt, that the changes in general are judicious and uſeful: and the inconvenience reſulting from theſe changes will be more than counterbalanced, by the information which the new names give reſpecting the principal conſtituents of each formula; for it is from the active ingredients

alone that formulæ now derive their names; all thoſe appellations being rejected, which were founded on imaginary virtues, on colour, or ſimilar circumſtances. Thus, for balſamum traumaticum, they uſe the term tinctura benzoës compoſita; for decoctum album, they employ decoctum cornu cervi; and for hiera picra, they have ſubſtituted pulvis aloeticus. But although the changes made on names, are in general evidently made for the better, there are ſome, and theſe, too, changes of the greateſt importance, with regard to which it may be doubted whether they have made the beſt change that could have been adopted. Thus, it was certainly an object of conſequence to ſhorten the names employed by the Edinburgh, and other colleges, for the foſſile, vegetable, and volatile alkalies, eſpecially as the names to be given theſe were often to enter neutrals. Accordingly, for the ſal alcalinus fixus vegetabilis, they have employed the term kali; for the ſal alkalinus fixus foſſilis, they have employed natron; and for the ſal alkalinus volatilis, they have employed ammonia. The laſt of theſe names is, we think, as unexceptionable

exceptionable as any one they could have employed; but in the uſe of the two former, ſome inconvenience muſt ariſe from their being indeclineable words: and beſides this, the term kali, uſed for denominating the vegetable alkali, is a name long ſince appropriated to a plant from which the foſſile alkali is often obtained. Perhaps, therefore, they would have done better, if, for natron and kali, they had employed the terms ſoda and potaſſa, which have at leaſt had the ſanction of being uſed as names for the foſſile and vegetable alkali by ſome of the beſt modern chemiſts. But notwithſtanding this, the names here adopted, ſerve to give a better idea of many of the neutrals than the former names. Thus, the employment of natron vitriolatum for ſal Glauberi, and of kali acetatum for ſal diureticus, ſerves not only to diſtinguiſh theſe ſalts from others, but to point out the conſtituents of which they are formed. Hence, although we be of opinion, that old names ſhould not be changed without ſome good reaſon; yet we cannot help thinking, that, by much the greateſt part at leaſt, of

thoſe changes which have been made by the London College, are both proper and uſeful: Nay, we are even diſpoſed to regret, that they have not changed a few others. They have ſtill, for example, retained the abſurd names of ſperma ceti, and ſanguis draconis. It is indeed true, that theſe have the ſanction of univerſal practice, not in medicine only, but in arts alſo: but the continuance of theſe names, among other people, is, we think, no ſufficient reaſon why a leſs exceptionable appellation ſhould not be introduced into the work of a learned body, at a time when their endeavours were employed in the reformation of other exceptionable names.

We have thus offered a few general remarks on the changes which have taken place both in the matter and language of the new edition of the London pharmacopœia: and we may conclude with obſerving, that although, in our opinion, it is materially improved in both theſe particulars, yet we have no doubt, that there is ſtill room for many other reformations; and even thoſe who have had the greateſt ſhare of the merit of preſenting

preſenting it to the public in its preſent ſtate, may, in the ſpace of eight or ten years, ſee ſufficient reaſon for again contributing to the public ſafety, by an improved edition of this work.

XIII.

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. *Illuſtrated with Copperplates.* Six volumes, 8vo, Edinburgh.

OF this work we have already, oftener than once, had occaſion to make mention in theſe Commentaries. The firſt volume of it was publiſhed in 1783; and it is now completed, by the publication of the ſixth and laſt, which appeared a few months ago. The deſign which the author announced, at the commencement of his work, was to exhibit a full and ſyſtematic view of the art of ſurgery, as at preſent practiſed by the moſt eminent ſurgeons in Europe; and this deſign, by the aid of extenſive reading,

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by the aſſiſtance of correſpondence with men of knowledge, and by attentive obſervation at different hoſpitals, joined to the reſult of his own judgment and experience, he has been able to accompliſh in a very maſterly manner. We are far, indeed, from pretending to ſay, that in every, or even in any part, this can be conſidered as a perfect ſyſtem. There are many important operations, reſpecting the beſt mode of performing which, the moſt eminent practitioners are by no means agreed in opinion; and there is perhaps no operation whatever, which, however much it may be improved from the manner in which it was once performed, may not admit of ſtill further improvements. There can be little doubt, that modern ingenuity, caſual occurrences, and a variety of other circumſtances, may add both to the facility of the mode of performing operations, and to the ſucceſs of them. Yet he who wiſhes to find collected, in one work, a full and diſtinct account of the moſt generally received doctrines, and beſt eſtabliſhed modes of operation, will not be diſappointed, on a careful and candid peruſal of that now be-

fore us. Of a general ſyſtem, however, collecting practices, many of which have for a long time been univerſally received by the moſt eminent ſurgeons, it would be entirely foreign to our work to attempt any analyſis. Without, therefore, entering into particulars, we ſhall content ourſelves with merely mentioning the order in which the different ſubjects of greateſt importance are conſidered.

In the *firſt* volume, Mr Bell treats of ſutures, of the ligature of arteries, and other means employed for putting a ſtop to hæmorrhages, of blood-letting, of aneuriſms, of herniæ, of the hydrocele, of the hæmatocele, of the varicocele, of the ſarcocele, and of the diſeaſes of the penis.

In the *ſecond* volume, he treats of the different operations for the ſtone; of incontinence of urine; of ſuppreſſion of urine; of obſtructions in the urethra; of the fiſtula in perinæo, of the hœmorrhoids, or piles; of condylomatous excreſcences, and ſimilar affections of the anus; of prolapſus ani; of the imperforated anus; of the fiſtula in ano; of the paracenteſis of the abdomen and thorax; of bronchotomy; of œſophagotomy;

tomy; and of the amputation of cancerous mammæ.

The ſubjects treated of in the *third* volume, are affections of the brain from external violence, and diſeaſes of the eyes. But, after the publication of this volume, Mr Bell had many opportunities of converſing with a foreign oculiſt of great eminence, Mr Jean François Pellier, who, poſſeſſing the advantages of a liberal education, a ſound judgment, and much experience, had made improvements in the treatment of many diſeaſes to which the eyes are liable. Theſe improvements he freely and candidly communicated to Mr Bell; and at the ſame time, gave him permiſſion to lay them before the public. Mr Bell therefore begins his *fourth* volume with additional remarks on diſeaſes of the eyes; after which, he treats of the diſeaſes of the noſe and fauces; of diſeaſes of the lips; of diſeaſes of the mouth; of diſeaſes of the ears; of the wry neck; of diſeaſes of the nipples; of iſſues; and of inoculation for the ſmall-pox.

In the *fifth* volume, Mr Bell treats of wounds, of burns, and of tumours of various kinds.

kinds. And, in the *ſixth* and *laſt* volume, he treats of fractures, of luxations, of diſtorted limbs, of diſtortions of the ſpine, of amputation, of removing the ends of bones in diſeaſes of the joints, and of preventing and diminiſhing pain in chirurgical operations. This volume is concluded with ſome general remarks on midwifery, on the Cæſarean operation, and on the diviſion of the ſymphyſis pubis; and with a few obſervations on opening dead bodies, on embalming, and on bandages.

Each of the different particulars which we have now pointed out, as contained in theſe ſix volumes, is the ſubject of a ſeparate chapter; and many of thoſe chapters, as, for example, thoſe on wounds, luxations, fractures, and the like, are divided into ſeveral ſections, according to the particular part in which the diſeaſed ſtate occurs: but of theſe, as well as of the particular obſervations and directions given with reſpect to each operation, we reckon it unneceſſary, and even improper for us, in this place, to ſay any thing. We may only in general obſerve, that, throughout the whole, this work ſeems to us to demonſtrate equal judgment, ingenuity, and candour. We are indeed

deed aware, that, to ſome readers, our author may appear too prolix; to others, too conciſe. And with reſpect to particular ſubjects, there may perhaps be a juſt foundation for both criticiſms; at leaſt with reſpect to particular readers. Indeed, it is hardly poſſible to ſuppoſe, that any ſyſtem of ſurgery will ever appear, which will not, in ſome degree, be liable to theſe objections. But, in our opinion, Mr Bell's ſurgery, as a general ſyſtem, is the beſt yet extant. With every thing moſt uſeful in ancient ſurgery, it includes all the moſt important diſcoveries of the moderns: and we doubt not that the author will fulfil the engagement which he has voluntarily come under to the public, in the preface to his laſt volume, of inſerting, in future editions, whatever improvements future experience may add to our ſtock of chirurgical knowledge, and, at the ſame time, of publiſhing theſe in a ſeparate ſtate; ſo that the purchaſers of the work in its preſent form, may poſſeſs it in a ſtate as perfect as it can be made, by the induſtry, abilities, and opportunities of the author.

XIV.

XIV.

A Botanical Arrangement of Britiſh *Plants, including the Uſes of each Species, in Medicine, Diet, rural Oeconomy, and the Arts; with an eaſy Introduction to the Study of Botany*, &c. *The ſecond Edition. By* William Withering, *M. D. F. R. S. Member of the Royal Medical Society of* Edinburgh, *and Phyſician to the General Hoſpital at* Birmingham. *Including a new Set of References to Figures, by* Jonathan Stokes, *M. D. late Preſident of the Royal Medical Society of* Edinburgh, *correſponding Member of the Society of Antiquaries of* Scotland, *Phyſician at* Kidderminſter. *Vol. 1ſt and 2d.* 8vo, London.

WHILE many other branches of ſcience have made a rapid progreſs, for more than a century paſt; yet it is only, Dr Withering obſerves, ſince the beginning of the preſent century, that the ſtudy of natural hiſtory has

has attracted the general attention of mankind. Botanical enquiries, in particular, have been confined to but a few individuals; partly from the difficulties which attended them, and partly from an opinion, that they were useful only to medical practitioners. But the establishment of the Linnæan system, called forth a number of votaries to cultivate this science; and the labours of Linnæus and his pupils, convinced mankind, that the medical properties of plants were far from being the only circumstances meriting their attention.

But, although the importance of the study was obvious, difficulties remained in the attainment of it; and to understand the terms which Linnæus employed, an acquaintance with the learned languages was absolutely necessary. A desire to remove these difficulties, and to render the path in the walk of science as easy as it is delightful, first gave rise to Dr Withering's undertaking; and we may safely venture to assert, that his attempt to naturalize this science, which, in its improved state, was new to the English language, has been by no means unsuccessful. The present work, which demonstrates that the author possesses a very

very great ſhare both of induſtry and botanical knowledge, will, we are perſuaded, tend, in a high degree, to facilitate the ſtudy of this ſcience.

Dr Withering, following the arrangement into thoſe claſſes and orders which were introduced by Linnæus, or what has commonly been called the Sexual ſyſtem, has here preſented us with ſuch a deſcription of all the indigenous plants of Britain, as may eaſily enable any induſtrious botaniſt to inveſtigate them for himſelf, when he finds them in a proper ſtate for that purpoſe.

At the beginning of each claſs, Dr Withering gives a ſynopſis of the genera included under it, arranged under the orders to which they belong. When he comes to deſcribe particular genera, theſe generic deſcriptions are chiefly tranſlated from the edition of the genera plantarum of Linnæus, publiſhed by Reichard: but, in ſome inſtances, Dr Withering has given additional marks, by which the plant is ſtill further characteriſed, without however omitting any part of the original deſcription. The characters of the ſpecies are tranſlated from Reichard's edition of the ſpecies plantarum; but additional deſcriptive marks

marks are added to almoſt every ſpecies, to render the deſcription more full and perfect. Theſe additional marks are taken from the Flora Suecica, the Flora Laponica, and the Amœnitates Academicæ of Linnæus; ſo that they include almoſt the whole of what that ingenious and ſagacious naturaliſt, or his numerous diſciples, have ſaid concerning the native plants of the Britiſh iſles. But to theſe, Dr Withering has added original obſervations, the communications of his friends, or taken from his own notes.

To the deſcription of each ſpecies are ſubjoined references to figures, in which the plant is delineated. For this part of the preſent work, as may be inferred from the title of the book, we are indebted to Dr Stokes, formerly phyſician at Kidderminſter, now at Shrewſbury; and on this part of the work alſo, an uncommon degree of attention ſeems to have been beſtowed. His object has been, to afford to the inveſtigating botaniſt as full a collection of references to figures, as the ſize of the work would admit. He has, however, inſerted no figures which he has not examined and compared, unleſs when the contrary

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is expreſsly noticed; and this is very rarely the caſe. Theſe figures he has arranged, according to the beſt of his judgment, in the order of their comparative excellence; and, in forming this judgment, abſtracting from the glare of ſplendid colouring, and the leſs obtruſive, though no leſs deceitful finiſh of the engraver, he ſeems to have conſidered impartially, which of the figures have the merit of giving, moſt exactly, the true genius and habit of the plant. Hence, the reader will ſometimes find a wooden cut from the old herbals, precede an engraving in copper. Theſe references, beſides the immediate aid which they afford in the inveſtigation of plants, may alſo be productive of ſome benefit to ſcience, in pointing out to the ingenious artiſt, who employs his pencil in botanical works, what plants have been already well-figured, and what ſtill remain to be delineated. In the references, for the ſake of brevity, the names of authors are much contracted; but the volume and page are exactly quoted: And a general catalogue is given of the botanical works cited in theſe references; in which the full title of each book, and the particular edition

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of it which has been employed, is ſubjoined to the abbreviation uſed. Theſe references make a very valuable part of the preſent edition, and demonſtrate extenſive knowledge of the ſubject, joined to indefatigable induſtry.

In this manner has Dr Withering executed that part of the preſent work which is more ſtrictly botanical. But there are other conſiderations relative to plants, which render this work more generally intereſting, and more extenſively uſeful. In ſome parts of the vegetable kingdom, there are ſuch peculiarities of ſtructure, ſuch wonderful contrivances to anſwer the wiſe purpoſes of the Creator, that a total diſregard to them would have been a material omiſſion. Theſe our author has mentioned in a manner, although conciſe, yet ſufficiently full to excite the attention of the ingenious.

The œconomical uſes of vegetables, have been too little attended to, by men eminent for botanical knowledge. To theſe, however, in the preſent work, particular attention is paid. In years of ſcarcity, it has been alleged that mankind ſometimes periſh by famine. But this would not be the caſe, if they were

acquainted with the great number of eſculent vegetables which grow wild in the field. Many of theſe may eaſily be gathered in quantities ſufficient to ſupport life, when better or more agreeable food cannot be had. With this view, Dr Withering has not only mentioned the ſpecies which have been found moſt ſuitable for food, but, under theſe ſpecies, has alſo pointed out the part of the plant to be preferred, and the beſt mode of dreſſing it.

But, beſides their uſe as food for the human ſpecies, he has alſo paid particular attention to their uſe as food for cattle. And here he has endeavoured to determine, what ſpecies of plants are preferred by particular animals; for what is noxious to one animal, is often highly nutritious to another. He gives a catalogue of the inſects which feed upon particular ſpecies of plants; and although he allows this to be confeſſedly very imperfect, yet he thinks it may ſerve as a foundation for future obſervations of the ſame kind, and will not be without its uſe.

Beſides theſe, two other circumſtances alſo particularly engage our author's attention; the uſes, viz. of particular vegetables, in arts and

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in medicine. There can be no doubt, that the inhabitants of different countries, and artiſts of different kinds, know how to apply a number of plants, to anſwer a variety of purpoſes. Theſe, as far they could be collected from good authority, or obtained from private information, are ſubjoined at the different articles. With reſpect to medical virtues, leſs is ſaid than many readers would have expected; for the ſuperſtition of former ages, operating upon the ignorance of mankind, gave riſe to miracles of every denomination; and the faſhion of combining a great variety of ingredients, with a deſign to anſwer any particular purpoſe, rendered the real efficacy of any of them extremely doubtful. A number of vegetables, fit only for food, were ſuppoſed capable of producing the greateſt alterations in the human body: Nay, by ſome, almoſt every common plant was eſteemed a cure for almoſt every diſeaſe. On the other hand, the moſt dreadful apprehenſions were entertained, of employing ſubſtances capable of doing miſchief. Thoſe plants capable of producing ſudden, and remarkably deliterious effects upon the human body, have been called poiſons, and, by

many, were entirely rejected from medical purpoſes. But poiſons, in proper doſes, are perhaps the beſt medicines; for what can do no harm, will, in general, do little good. This being the caſe, little advantage would have reſulted from detailing the catalogue of ſuppoſed virtues, attributed to different vegetables. Hence, Dr Withering's remarks on this ſubject, are drawn rather from his own obſervation, than from the experience of former times. On this ſubject, the truth, in numberleſs particulars, yet remains to be aſcertained: And Dr Withering very juſtly obſerves, that we ſhall ſooner arrive at the end propoſed, if, rejecting the fables of ancient herbaliſts, we build only on the baſis of experiments, well conceived and accurately executed. There is therefore reaſon to hope, that, by the future induſtrious exertions of Dr Withering, joined to the aſſiſtance of many intelligent friends, particularly ſome of thoſe, whoſe names he mentions, as having already aided him in the preſent undertaking, future editions of this work may, in this particular, be conſiderably improved. But the accounts which, in the preſent edition, he has given of

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the medical virtues of vegetables, are more to be depended upon, than thoſe given by the greater part of writers on the materia medica, being, in general, founded either on his own experience, or ſupported by good authority.

We have thus given a general account of the preſent work: and it is unneceſſary for us to add, that it would be altogether foreign to our purpoſe, to deſcend to particulars. The two volumes already publiſhed, include all the Linnæan claſſes, excepting the laſt, the cryptogamia. This claſs, with an introduction to the ſtudy of botany, directions for preparing and preſerving a hortus ſiccus, a gloſſary of terms, indexes, and ſome other particulars, will be comprehended in the third and laſt volume, which the author gives us reaſon to hope may ſoon be publiſhed: And we have no doubt that this work, when completed, will tend very much to faciliate, and, we hope, alſo to render more faſhionable than at preſent, the ſtudy of a branch of ſcience, which, viewed in a variety of lights, muſt be allowed to be no leſs uſeful than it is entertaining.

XV.

Traité de la Cataracte, avec des Obſervations qui prouvent la Neceſſité d'inciſer la Cornée tranſparante et la Capſule du Cryſtalin, d'une maniere diverſe, ſelon les differentes Eſpeces de Cataractes. *Par* M. de Wenzel, *fils, Baron du* St Empire, *Medecin de la Faculté de* Nancy, *et Docteur Regent de la Faculté de Medicine en l'Univerſité de* Paris. 8vo, Paris. *Vide Commentarii de rebus in Scientia Naturali et Medicina geſtis, Vol.* XXIX, 8vo, Lipſiæ.

BARON WENZEL the elder juſtly acquired, over all Europe, the higheſt reputation for the cure of diſeaſes of the eyes, and particularly for his method of extracting the cataract; but he publiſhed nothing upon that ſubect. In this treatiſe, his ſon preſents to the public a full and diſtinct account of his father's method of operating;

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of the inſtruments he employed; of the cautions he obſerved, both previous to the operation, during the time of it, and after it was finiſhed. He points out, alſo, the different modes of cure, ſuited to different ſpecies of cataract: ſo that his work contains many valuable obſervations on this diſeaſe. Every thing, however, directed in this work, reſpects the method of treatment of the elder Wenzel. He has omitted all obſervations with reſpect to the cauſe of the cataract, and to its cure by internal medicines, which have very rarely, if ever, ſucceeded.

He firſt treats of the definition of the cataract. It always, he obſerves, appears under the form of a white or greyiſh ſpot, ſometimes indeed of a dark colour; but in every caſe different from the black colour of the pupil. This diſeaſe is, he tells us, more common after, than before forty years of age; but at the latter period, it is more eaſily cured than in younger ſubjects. The operation is the moſt difficult in the youngeſt ſubjects, and in thoſe with whom the cataract is connate. It is then neceſſary to defer the cure, till the patient be far enough advanced

to bear it with eaſe. In this caſe, a ſlight coalition of the cryſtalline to neighbouring parts, is not to be feared.

Thoſe moſt frequently are affected with cataracts, whoſe eyes are continually expoſed to bright light, as workers in glaſs-houſes, and the like. A cataract ariſing from an external injury, only occurs in the injured eye, and is in general difficultly cured, on account of the injury which other parts of the eye at the ſame time receive. This diſeaſe is very rarely, if ever, cured by internal medicines. Thoſe who have imagined that this has been done, have in general deceived themſelves, by miſtaking lymphatic infarctions of the cornea for cataracts. Theſe infarctions, he obſerves, often yield to mercury, and other remedies; but he contends, there is no remedy which has ever cured a real cataract, whether cryſtalline or capſular, even in its incipient ſtate.

The cryſtalline lens, when depreſſed by a needle, and immerſed in the vitreous humour, is not, our author affirms, diſſolved there, as ſome have aſſerted: for, upon diſſecting the eyes of thoſe who had cataracts depreſſed

depreſſed many years before, he has found the cryſtalline lens entire, and of its natural form. After ſome obſervations on the inconveniencies of depreſſion, he takes notice of the chief objections which have been made to extraction. Staphylomata have been by ſome alleged to be frequent after extraction; but when the cornea is properly cut in Wenzel's method, theſe, we are told, very rarely appear, nor are they difficult to cure. The pains attending depreſſion, are much more intenſe, than thoſe which follow extraction. When extraction is properly performed, a diſcharge of the vitreous humour very rarely takes place in ſimple cataract, not combined with a diſeaſe of the vitreous humour; but if this ever exiſts, a ſmall diſcharge of the vitreous humour will not prevent the reſtoration of viſion; and even a large diſcharge of this humour does not prevent, but only diminiſhes viſion.

An irregular pupil is very rarely the conſequence of extraction, eſpecially if too much force be not applied to the eye. Beſides, it is often convenient, as conſiſting chiefly in dilatation, and being better fitted for the

tranſmiſſion

tranſmiſſion of a number of rays. If the cornea be cut only by one inſtrument, and at one time; if the cut be near the tunica ſclerotica, and of a fit ſize to tranſmit the lens without force, the cicatrix produced will very rarely give any obſtruction to viſion.

A ſecondary cataract, he tells us, much more frequently ariſes, and is more difficultly cured, after depreſſion, than after extraction; and when it ariſes after depreſſion, it can be cured only by extraction. When it ariſes after extraction, it is much more eaſily extracted, and without any leſion of the eye; for in that caſe, the vitreous humour remains unhurt, which in general does not happen after depreſſion. Among other evils reſulting from depreſſion, he mentions intenſe pain, vomiting, ſuppuration, ſecondary cataracts, pains of the eye itſelf during the whole after courſe of life, want of ſucceſs from ſoftneſs of the lens, &c. the lens recovering its former ſituation, the ciliary proceſſes wounded, and a variety of others.

Baron Wenzel next treats of thoſe caſes in which the operation is indicated. He repreſents the ſucceſs of the operation as very doubtful,

doubtful, where the eye waters very much; as an hypopyon, though without pain, yet incurable, in general follows. Thoſe alſo are difficultly cured, who have been long habituated to ſevere pains of the head frequently returning. The pupil ought to retain a ready motion: but he relates a caſe, in which, although it was immoveable, yet, after the operation, viſion was completely reſtored. Hence, although immobility of the pupil be preſent, if other ſigns of amauroſis are abſent, extraction of the cataract may be performed with advantage.

He tells us, that little is neceſſary in the way of preparation; that it is ſufficient, a ſhort time before the operation, to bathe the feet in warm water, and gently to open the belly. With plethoric patients it is proper to open a vein; to diſcharge ſordes from the primæ viæ in the way to which they have the greateſt tendency; and to enjoin, for ſome time before the operation, a light vegetable diet.

He next deſcribes the inſtrument uſed in cutting the cornea, which he repreſents as ſomewhat reſembling the lancet uſed by ſurgeons

geons in bleeding, but a little broader and longer, ſtraight, and not convex; its cutting edge being about eighteen lines in length, and its breadth, at the broadeſt part, being three lines, and gradually tapering to a point.

There is never, he tells us, any occaſion for inſtruments fixing the eye during the operation. He affirms, that all inſtruments invented for this purpoſe, render the operation more complicated, and in general do more harm than good.

He next deſcribes what is to be done in the operation in ordinary caſes. Without entering into theſe very particularly, we may obſerve, that his directions, in general, are, that the inciſion of the cornea ſhould be begun at the ſmalleſt angle, about the fourth part of a line from the tunica ſclerotica; that it ſhould be ſufficiently large; that the direction of the knife ſhould not be changed, although the cornea be of a very hard and firm conſiſtence; that while the cornea is cut, the capſule of the cryſtalline lens ſhould alſo be cut, by which the uſe of many inſtruments, which are always pernicious to the eye, may be avoided. The inciſion of

the cornea being finiſhed, the upper eye-lid, which had been raiſed by an aſſiſtant, muſt be gradually let down; and the lens coming in view at the cut part of the cornea where the inciſion has been made, is to be extracted either by the needle ſometimes employed in cutting the capſule, or by a ſmall hook. The eye is, after this, to be carefully cleaned from glutinous matter, which often comes out with the lens, and ſometimes depends even on the diſſolution of the lens itſelf. Often, however, particularly in inveterate cataracts, the cryſtalline lens is difficultly removed, from its attachment to contiguous parts. In this caſe, theſe adheſions are to be deſtroyed by means of a golden needle; but this is often not to be accompliſhed without great difficulty.

Sometimes the cryſtalline lens ſinks, as it were, to the bottom of the eye, eſpecially after its capſule is deſtroyed. Then the ſuperior edge of the lens alone preſents itſelf. When this is the caſe, the eye muſt be by no means compreſſed, leſt the vitreous humour, no longer retained by any membrane, ſhould flow out. The lens, the ſize of which is in general very ſmall, is to be extracted by a

ſharp

ſharp iron hook. After it is extracted, the eye-lids are immediately to be brought together, leſt the vitreous humour ſhould flow out. He however obſerves, that, even in ſome caſes where the vitreous humour has flown out very copiouſly, the patients have yet recovered their ſight, either perhaps from the regeneration of this humour, or from the aqueous humour regenerated ſupplying its place. If, however, he obſerves, the vitreous humour be in its natural ſtate, and every thing in the operation properly performed, this humour is never diſcharged but in conſequence of a fault of the oculiſt.

On ſome occaſions, varicoſe veſſels in the retina or choroid coat of the eye, are complicated with a cataract. In that caſe, not long after the operation, a copious hæmorrhage, which however is void of danger, will enſue. This ſtate of the eye may be diſcovered by diligent examination, and by the ſight. The eye is then harder than in its natural ſtate. The cornea, contracted, is raiſed to an apex; the pupil is dilated and immoveable. Some judgment may even be drawn from antecedent circumſtances. The ſclerotic coat being affected

affected with varicoſe veſſels, is eaſily diſcovered, from the angles of the eye being beſet with varices.

If the cornea, at its inferior and lateral part, be beſet with cicatrices or ſpots, or be too ſmall, an inciſion ought to be made, from the inferior to the ſuperior part, towards the larger angle of the eye. This inciſion, he tells us, is not more difficult than the former, and is to be preferred where the cornea is very ſmall, with the view of avoiding a ſtaphyloma, the inciſion being almoſt covered by the upper eye-lid, and admitting more readily of a coalition.

The cryſtalline lens is ſometimes almoſt entirely diſſolved into a purulent matter; ſo that the capſule contains only a nucleus ſwimming in this matter. Then the lens reſembles a hydatid; which may be eaſily known, from the pupil being almoſt ſtopt up, and the white colour of the lens. In this caſe, the inciſion of the cornea is to be directed upwards, and the extraction of the lens is not to be hurried. If the inciſion be made in the uſual manner, the cryſtalline lens being for the moſt part too quickly

quickly diſcharged, there will follow a conſiderable loſs of vitreous humour.

Baron Wenzel obſerves, that the humour of Morgagni, although the contrary has been maintained by celebrated men, may undergo ſuch a change, that viſion may be obſcured, though the cryſtalline lens remain ſound and pellucid. Accordingly, in ſome caſes, where the eye appeared to be affected with a cataract, he has reſtored viſion, by a profuſe diſcharge of a milky or purulent matter; upon which it was found, that the cryſtalline lens, which had been protruded by the change of equilibrium, was perfectly ſound.

The author next treats of the coalition of the iris, when wounded during the inciſion of the cornea. That the divided iris will unite, is, he thinks, proved by many obſervations; and hence a coalition of the pupil ſometimes takes place after an hypopyon, after violent inflammation, or after the operation of the cataract. If, therefore, an artificial pupil be neceſſary, he recommends, that part of the iris be removed by the knife, leſt the cut margins ſhould again reunite. He even brings an example of the iris cut longitudinally, during

ing the inciſion of the cornea, where the wound coaleſced without much pain or inflammation, and the patient was ſoon reſtored to perfect health.

He obſerves, that inflammation, pain, and other ſymptoms which follow this operation, cannot be always avoided, although the neceſſary preparation has been employed, and every thing has gone on ſucceſsfully during the operation. But he aſſerts, that theſe more rarely occur, and are more gentle, when the operation is performed in the manner he deſcribes, than when performed otherwiſe: for a chirurgical operation, ſpeedily finiſhed, and accompliſhed by a ſingle inciſion, muſt neceſſarily be productive of leſs diſtreſs, than one which requires longer time, and more variety of inſtruments. He looks upon inſtruments multiplied beyond neceſſity, as always prejudicial; and he conſiders the ſimplicity of operation, as the greateſt excellence in ſurgery.

The operation being finiſhed, care muſt be taken that the eye be not moiſtened with any fluid. It ought only to be covered with a dry linen cloth, kept on by a ligature; or charpee may be applied, in the ſame manner:

And this is to be daily renewed, that the tears and other matters collected about the angles of the eye may be wiped off, unleſs particular circumſtances indicate the contrary. When a patient has a cataract extracted from both eyes, he ſhould ly upon his back; but if a cataract has been extracted from one eye only, he ought to ly on the oppoſite ſide. This poſition, he tells us, moſt effectually prevents too long a diſcharge of the aqueous humour, a diſcharge of vitreous humour, pain, inflammation, ſwelling of the palpebræ, and ſimilar ſymptoms. For the firſt and ſecond day, the diet of the patient ſhould be ſpare, and he ſhould be enjoined the copious uſe of diluents; but if, on the third day, he be free from pain, he may uſe animal broth. When pain and inflammation ſupervene, recourſe muſt be had to blood-letting from the foot; and this operation is even to be repeated, if neceſſity requires. The patient muſt, at the ſame time, perſiſt in the antiphlogiſtic regimen, and low diet; but if theſe ſymptoms do not occur, ſuch practices are not to be uſed; and they are ſeldom, we

are

are told, neceſſary, when the operation is performed in Baron Wenzel's method.

When the ligature is removed, and the eyes are expoſed to the light, tears flow copiouſly. But this ſymptom is rarely of long continuance, nor is it dangerous; for it in general diſappears in the ſame degree in which the eye becomes habituated to the light. Neither is an œdema of the palpebræ to be conſidered as by any means a dangerous ſymptom: it is very generally removed by the mere action of air on the parts affected; and tonics employed for reſolving this inflation, are either uſeleſs, or retard the cure. Theſe accidents are therefore to be truſted to nature alone; nor ſhould we deſpair of its operation, even although the inflation be very great, and has continued for ſome time.

The moſt dangerous ſymptom which can ſucceed the extraction of a cataract, is an inflammation of the bulb of the eye, in which the tunica conjunctiva, infarcted by acrid ſerum, is ſwelled. In that caſe, the cornea is often obſcured, and affected with hypopyon. In the chambers of the eye themſelves, puru-

lent matter is collected, and the pain becomes violent and continued. If general antiphlogiſtic remedies and regimen be not ſufficient, no hope can be entertained of the eye, and its pains will not ceaſe till ſuppuration enſues. Such fatal accidents, however, are to be aſcribed to a depraved ſtate of the fluids, or to a bad conſtitution of the bulb of the eye, and have rarely been ſeen by Baron Wenzel.

Sometimes, from the firſt days after the operation, a purulent matter is depoſited on the eye, without any great pain, or any other remarkable ſymptom. In that caſe, a collection of pus, either in the anterior or poſterior chamber of the eye, is to be apprehended. This is eaſily known, as the cornea, a day or two after the operation, is obſcure, and the iris has a greeniſh hue. In that caſe, a large bliſter is to be applied to the neck, or behind the ears; blood-letting is to be performed, evacuants are to be given, and the eye is to be bound by no ligature; for topical applications of any kind are then of no uſe.

For healing the cornea after the operation, forty-eight hours are in general ſufficient.

cient. Hence it is by no means neceſſary, that the eyes ſhould be kept ſhut for nine days. If the cornea do not heal within the ſpace mentioned, there is great reaſon to fear that it will not coaleſce even in the ſpace of many days; but at the ſame time, from allowing the patient, at too early a period, the uſe of the eye, ſtaphylomata are ſometimes the conſequence. In the treatment of ſtaphylomata, Baron Wenzel directs the following plan of cure: The eye is neither to be irritated by compreſſion, nor by cauſtic medicines; for the action of free air aſſiſts the cure, and ſafely and quickly reduces hernia of the palpebræ: but if ſtaphylomata of watery humour long ſubſiſt, it is proper to cut the ſac; an operation which is free from all danger, and may even be repeated, when the complaint returns.

After ſome obſervations on the different ſpecies of ſecondary cataracts, he concludes this treatiſe with ſome remarks on the coalition of the fluctuating membranes of the iris, and on the method of forming an artificial pupil. A coalition of the pupil is often the conſequence of inflammation and ſuppuration

of the iris; and this ſymptom has always been held to be one of the moſt fatal which can ſupervene to the operation. If, from nativity, or after the operation for the cataract, the iris be ſhut, a longitudinal or crucial inciſion of it has been adviſed: but this method has rarely ſucceeded, the iris almoſt always reuniting again. Baron Wenzel, therefore, recommends another method, which has always anſwered his expectations: The cornea is to be cut in the ſame manner as in the extraction of the cataract; but when the point of the knife has reached nearly to the middle of the iris, it is to be plunged into that membrane for about half a line in breadth, and then to be drawn out again about the fourth part of a line diſtant from that place where it had been introduced. After this, the inciſion of the cornea is to be completed in the ſame manner as in the operation for the cataract; and the iris ſhews a ſemicircular inciſion, almoſt a line in breadth, and ſimilar to that in the cornea. This flap of the iris being afterwards cut off by means of a ſmall pair of ſciſſars, an artificial pupil is formed, which does not coaleſce.

When

When the pupil coaleſces after violent inflammation, the lens is, for the moſt part, at the ſame time obſcured. But if it ſhould even remain diaphanous, on account of the almoſt inevitable leſion which is conſtantly to be dreaded, from the ſmallneſs of the ſpace between the lens and the iris, it is in general proper to extract the lens, that an operation for this purpoſe may not again be requiſite at ſome ſhort diſtance of time.

Sometimes, where the pupil is not entirely ſhut, a ſmall chink allowing a paſſage for the rays of light, viſion is yet prevented by an opacity of the capſule of the lens. When this is the caſe, it is neceſſary both to remove a portion of the iris, and to extract the membranous cataract. Violent ſymptoms hardly ſucceed the operation for forming an artificial pupil; nor is it neceſſary that the eye ſhould be kept ſhut for ſo long a time, as after the operation for the cataract. All thoſe upon whom Baron Wenzel performed this operation, had, we are told, a ſafe and ſpeedy recovery, with but little pain.

XVI.

Deſcription de Pyrmont, *traduite de* l'Allemand *de Mr* Marcard, *Medecin de la Cour de S. M.* Britannique *à* Hanovre, *Membre des Sociétés Royales de Medecine d'*Edinbourg *et de* Copenhague, *Correſpondant de la Société des Sciences de Gottingue. Enrichie de Planches. Tom.* 1. *&* 2. 8vo, Leipſic.

THIS work of Dr Marcard, now tranſlated from the original German into the French language, has alſo, in part at leaſt, appeared in an Engliſh dreſs, under the title of A Short Deſcription of Pyrmont, with Obſervations on the Uſe of its Waters. This abſtract from the work before us, as appears from the title-page, was reviſed by the author. But beſides this, he has alſo added, in this abridgement, ſeveral things which are intended for a third volume, which he means to add to his larger work. And, as the waters and baths

baths at Pyrmont are very much reſorted to, and highly valued, it will not, we preſume, be unacceptable to our readers to give them ſome account of it; which, however, for the ſake of brevity, we ſhall draw rather from the ſhort abſtract, than from the larger work.

He begins by giving a deſcription of the village of Pyrmont and its environs. Pyrmont lies in the circle of Weſtphalia, not far from the Weſer, and about thirty-five miles from Hanover. The ſurrounding country is repreſented as highly beautified, both by nature and art; as being embelliſhed with a great variety of very fine walks, which are little affected either by long continued rain or drought; and as affording, at a very moderate rate, almoſt every convenience or amuſement which a ſtranger could wiſh for: And indeed, ſuch, we are told, are the beneficial qualities of the waters, and the delights of the ſpot, that the number reſorting to it for health and amuſement, has ſometimes amounted even to ten thouſand.

After giving an account of the country, and of many remarkable monuments of antiquity, as well as natural curioſities, with which it abounds,

bounds, Dr Marcard next proceeds to treat of the different mineral ſprings at Pyrmont, and of their compoſition. The chief mineral ſpring he repreſents as the ſtrongeſt of all the known chalybeate acidulous waters. It contains, in a pound of the water, ſomewhat more than a grain of iron, diſſolved by fixed air only; and it contains from twenty-five to twenty-ſix inches of fixed air, or aerial acid, in ſixteen inches of water. Beſides theſe, each pound of the water contains about eight grains and an half of magneſia; nearly ſeven grains and an half of ſal amarum; three of ſal Glauberi; a few of calcareous earth; ſome ſal marinum and ſelenite; and a ſmall portion of reſinous matter. Upon the whole, each pound contains from twenty-eight to twenty-nine grains of ſolid matter.

The temperature of the well is 57 degrees of Fahrenheit's thermometer; and it never varies in Summer or Winter. It is from this fountain that Pyrmont water is ſent all over the globe.

Beſides the principal ſpring, there are others at Pyrmont, of inferior qualities. The chief of theſe is that which ſupplies the baths,

and

and which flows in prodigious quantities. It contains the ſame principles as the one already deſcribed. It has leſs aerial acid, but ſomewhat more of the fixed ingredients. Its abundance renders it particularly proper for the purpoſe of bathing. Beſides this, there are three other wells which Dr Marcard briefly mentions. The firſt of theſe is the Sauerling, a very light and agreeable acidulous water, and more drank for pleaſure than for medical uſe. It is often mixed with hot wine, or with lemon juice and ſugar, in which way, it makes a refreſhing and agreeable drink. The ſecond is called Augen-Brunnen. It is commonly employed externally, for the eyes. It is a ſlight chalybeate water, ſomewhat cooler than the reſt of the ſprings, and may be employed in caſes where Pyrmont water would be too ſtrong. The third is called Neu-Brunnen. It is ſituated about a mile from the village. Its compoſition is nearly the ſame as Pyrmont water; but it contains, Dr Marcard tells us, a good deal of dephlogiſticated martial vitriol, more common ſalt, and fewer terreſtrial particles. Hence, he thinks it will prove particularly uſeful in thoſe caſes of relaxation

laxation which require a more aſtringent treatment.

After this account of the Pyrmont waters, Dr Marcard next proceeds to treat of the effect of the internal uſe of them. He aſcribes its activity principally to the fixed air, or acidulous gas, which it contains. The effects of this volatile principle are, he tells us, to render the motions of the body more energetic and lively, and to augment the vivacity of the operations, without augmenting the quickneſs of the pulſe. By means of it, the water affects almoſt every excretion; and as this acidulous gas, by its action on the ſolids, becomes, at the ſame time, a powerful corrector of the humours, producing a diſſolution of the tenacious fluids, and throwing out whatever is offenſive, nothing can be better adapted, in Dr Marcard's opinion, to relieve ſuch complaints as proceed from bad humours, or from that morbid ſtate of the ſolids which depraves the fluids, provided there be no peculiar or ſpecific contagion in the caſe. For the proof of this, we are not, he obſerves, left to plauſible conjecture, or ingenious theory. He tells us, that the ſalutary effects produced, every year, on numbers

numbers of perſons affected with ſuch complaints, afford incontrovertible evidence of the truth of the aſſertion.

But beſides the fixed air, Pyrmont water is alſo active from the iron it contains. As the iron is completely diſſolved, and abſolutely inviſible, the water being as clear as cryſtal, it enters the body in ſo ſubtile a form, that it may be eaſily abſorbed by the capillary veſſels, and introduced into the circulating humours, where it will give a gentle and natural ſtimulus to the veſſels; and, while it operates as a bracing medicine, the ſaline matters which it contains, have the effect of gently opening the body and removing infarctions. Even the alkaline earth, which the Pyrmont water contains in a moderate quantity, is, Dr Marcard thinks, not without uſe to thoſe ſtomachs in which acidity is generated; while he thinks that its reſinous matter contributes to render it ſomewhat more agreeable to the ſtomach.

After thus reaſoning *a priori* on the effects of the water, Dr Marcard next proceeds to ſpeak of it on the more ſure baſis of experience. It has, he tells us, been found highly

beneficial

beneficial in many chronic diſorders, proceeding from obſtructions in the viſcera of the lower belly; and from this, he obſerves, there often proceed giddineſs, aſthma, ſpaſmodic, cough, palpitations, lowneſs of ſpirits, hypochondriac, hyſteric, and melancholic complaints. In theſe complaints, he recommends that it ſhould be drank to a conſiderable extent; and it is, he thinks, of advantage to add ſome diſſolvent medicines, as tartarus ſolubilis, ſuccus taraxaci, or the viſceral glyſters of the late Mr Kampf. Theſe glyſters he recommends as highly efficacious. They are prepared in the following manner:

℞ Rad. tarax.
Herb. fumar.
—— ſaponar.
Card. benedict.
Flor. verbaſc.
—— chamom. *aa.* unc. unam.
Furfur. tritic. paul. uſt. unc. ſex.

Conciſ. D. S. manip. ii. infund. cum aq. bulient. unc. viii. Stet in vaſe clauſo in loco callido per horas vi. dein col. et applic. Theſe glyſters are to be taken twice a-day, and kept in the inteſtines as long as poſſible; which

which after ſome time is eaſily done, if care be taken that the rectum be previouſly emptied by a ſtool. This glyſter is, we are told, entirely abſorbed by the capillary veſſels of the inteſtines; and Dr Marcard adds, that it has proved to be a more powerful method of removing obſtructions, or infarctions of the lower belly, than any other.

Another general cauſe of many chronic diſeaſes, is, relaxation or weakneſs. In real weakneſs of the fibre, or relaxed habit, Dr Marcard tells us, no better remedy can be found than Pyrmont water, eſpecially when drank at Pyrmont. Invalids, who arrive ſo weak as hardly to be able to walk, often in leſs than a fortnight recover their complexion, and can walk for miles with eaſe. He thinks, however, this is not wholly to be attributed to the water; but that the wholeſome, dry, and bracing air of Pyrmont, and the conſtant living in the open air, which is uſual there, contribute greatly to promote that effect.

He repreſents the Pyrmont water as having alſo proved highly uſeful in chronical diſeaſes from bad humours, brought to the ſurface of the body, as in eruptions. In theſe caſes, he obſerves,

obſerves, that the bath greatly augments the effects of the waters taken internally. He tells us, they have alſo been found uſeful in complaints proceeding from a congeſtion of blood towards the lower belly; which he conſiders as the cauſe of bloody vomiting, and of hæmorrhoidal complaints.

The laſt ſet of diſeaſes, againſt which he repreſents this water as having been found uſeful, are thoſe ariſing from morbid irritability, or mobility of the nerves. During the violence of theſe diſorders, indeed, it is not, he tells us, to be uſed; but after their violence is ſomewhat abated, Pyrmont water has, he affirms, proved an excellent remedy in nervous illneſſes, in gouty and rheumatic complaints, and in weakneſs of the ſtomach and of digeſtion.

The Pyrmont water, we are told, proves particularly effectual in many diſorders of females, eſpecially deficiency or ſcarcity of the menſtrual flux; and thus it is often ſucceſsful in removing cauſes of ſterility. Dr Marcard tells us, there is no danger of giving Pyrmont water to children; and that he could mention many inſtances, where, by means

means of it, infants were cured of bad humours, eruptions, ſwelled bellies, and a diſpoſition to feveriſh diſeaſes.

After thus mentioning the diſeaſes in which it may be uſed with advantage, he next enumerates thoſe in which it ought not to be employed. Any proper fever whatever, he tells us, forbids its uſe. It ſhould not even be drank during the continuance of an ague; although, after that diſeaſe has ceaſed, few remedies have proved more effectual in preventing returns. It ſhould not be uſed where there is a diſpoſition to hæmorrhage of a dangerous nature, eſpecially from the lungs; and it never, he obſerves, can agree with patients who have their lungs phthiſically attacked, where there is ulceration, or a great diſpoſition towards it. There are alſo, he tells us, ſome of the claſs of nervous diſeaſes, in which it is not to be given; as in epilepſy, and thoſe kinds of inſanity where there is a violent agitation of the nervous ſyſtem.

Dr Marcard next gives directions for drinking the Pyrmont water with advantage. Here, he obſerves, it is impoſſible to lay down any general rule, as the mode of giving it

muſt be adapted to the intention in view. The common mode, he tells us, is to drink it before breakfaſt, immediately after getting up, taking five or ſix ounces every quarter of an hour, from three or four, to eight or nine times; the repetitions of the doſe being increaſed, as it is found to agree with the patient. In moſt caſes, the patient will obtain relief in three or four weeks; but if a cure be not then effected, there ſhould be an interval of a week.

Some people, he obſerves, mix a little milk with the water, which makes a pleaſant compoſition, and is particularly uſeful with children. In general, milk agrees perfectly well with the water. The time between drinking glaſſes of the water, is to be occupied with walking about; and the water ſhould always be drank in the open air. Breakfaſt is to be taken about an hour after the laſt glaſs; and for this, patients are in general well prepared, as the water cauſes a poignant appetite. According to different taſtes, breakfaſt may conſiſt of coffee, chocolate, cocoa, or the like. Butter is rarely admitted; and tea ſeems not to agree with the water. Thoſe who bathe,

ſhould

ſhould do it before dinner; and the remainder of the day is to be ſpent at meals, or in amuſements. Much reading or writing would retard the cure; and it is obſerved, we are told, that the uſe of the water renders the eyes irritable.

The beſt ſeaſon for drinking Pyrmont water, is from the beginning of May till the end of September. The hours kept at Pyrmont are, Dr Marcard thinks, beſt accommodated for its ſucceſs. It is there uſual to begin drinking the water at ſix in the morning; to breakfaſt at nine; to bathe between ten and twelve; to dine at one; to ſup at eight, and to retire about ten. The diet, in general, ſhould conſiſt of food of the lighter kind, and of eaſy digeſtion; and great moderation as to quantity, cannot be enough recommended. Groſs animal food, fat cheeſe, and ſtrong liquors, ſhould never be uſed during the uſe of the water. A good deal of exerciſe is abſolutely neceſſary: But it ſhould always be moderate, and never puſhed further than to excite a gentle perſpiration; for ſweating is an excretion which does not agree with the waters. The mind ſhould be kept

as tranquil as poſſible, and anxiety and inquietude diligently avoided.

The third volume of the deſcription of Pyrmont, which is not yet publiſhed, will, we are told, treat of the external uſe of the water in general, and of the warm bath in particular; and it will probably contain many important obſervations on theſe ſubjects. But, in the mean time, to the ſhort deſcription publiſhed in Engliſh, the author has here added a few obſervations on the martial bath at Pyrmont. The efficacy of this bath he repreſents as very conſiderable. It is commonly uſed at a temperature from 88 to 95 of Fahrenheit's ſcale; and with this degree of heat, we are told, it does not weaken or relax. Its bracing effect he aſcribes to the iron ochre which it contains. In conſequence of this, it ſo far tinges the ſkin, as to render it rediſh during the bathing; and after the bath, the ſkin continues rough. That ſome of its active parts enter into the abſorbents of the ſkin, is, he thinks, proved, from its being found, that the perſpiration will tinge linen of a rediſh colour, ſeveral days after leaving off the baths, and after waſhing the whole body.

body. The diſeaſes in which this bath has been found chiefly uſeful, are, weakneſs of the bowels, nervous, gouty, paralytic, and eruptive diſorders, and particularly diſorders of the ſex, ſterility, and ſuppreſſion of the menſes; and he recommends it alſo as removing a diſpoſition to be much affected by every ſlight expoſure to cold.

The Pyrmont water is likewiſe uſed externally, in its cold ſtate; and in this way it produces the ſame effect as any other cold bath. The body, indeed, remains too ſhort a time in the cold water, to draw any advantage from the active ingredients it contains. The ſkin, however, is left much more rough than after bathing in river or common ſpring water; ſo that there is reaſon to think it may have higher tonic powers.

SECT. II.

Medical Obſervations.

I.

An Account of different Medical Caſes, with ſingular Occurences. By Mr Henry Helſham, *Surgeon at* Stoke *in* Norfolk.

No. 1.

A Caſe of imperforated Hymen.

IN May 1767, I was deſired by Mr Keeble, a neighbouring ſurgeon at Brandon in Suffolk, to viſit a girl about ſeventeen years of age, who was ill with a ſuppreſſion of urine.

urine. When we examined her, we found ſhe had never had the menſes. There was a large ſwelling puſhed down at the os externum, like the membranes at the time of birth. She had a conſiderable ſwelling in the abdomen, chiefly in the right ſide, which extended quite up under the falſe ribs; and this complaint had come upon her gradually. She was now in great pain, from the diſtenſion; and had been ſubjected to a total ſuppreſſion of urine for a day or two.

On examining the ſwelling at the pudenda, it evidently appeared to be an imperforated hymen; and that the catamenia, which ought to have been evacuated for a year or two, had gradually collected there.

Mr Keeble made an opening immediately with a lancet, and diſcharged ſeven pints of a thick chocolate-coloured fluid. While it was diſcharging, I preſſed with my hands upon the abdomen, and could feel the ſwelling gradually ſubſide.

After the fluid was diſcharged, Mr Keeble enlarged the opening. She was immediately relieved, recovered her health, and the menſes

flowed regularly afterwards. She is now alive, and in good health.

No. 2.

A ſudden fatal termination of a Caſe of ſtrangulated Hernia.

How ſuddenly fatal does a ſtrangulated hernia ſometimes prove, though reduced in a ſhort time; whilſt, in other caſes, you may wait ſeveral days for performing the operation, and it ſhall at laſt be attended with ſucceſs!—June 29. 1760, I was called, about eleven o'clock at night, to ——— Cap, a woman 70 years of age, who had been affected with a bubonocele in the right groin from her youth, which ſhe always found it a very eaſy matter to reduce when ſhe lay down, but ſhe never wore a truſs. It had come down about nine o'clock this evening; was now ſtrangulated, and of a prodigious ſize, and protruded quite to the labium pudendi. She had frequent vomitings, hiccup, and a ſlow, hard pulſe.

I took

I took away about ten ounces of blood; and, after fomenting a conſiderable time, and throwing up a glyſter, endeavoured to reduce it, but could not ſucceed. An emollient cataplaſm was applied to the part; and ſhe took the Miſtura corallat. Full. with tinct. Thebaic. every three hours.

I returned again at nine the next morning; and, after fomenting, and injecting another glyſter, endeavoured to reduce the hernia, which I at laſt effected.

She found herſelf eaſier. I ordered a mixture, with infuſ. ſenn. & mann. to be taken every two hours, till ſhe had a motion.

I returned at ſeven in the evening, and found her dying. She lived only half an hour. Her death was unexpected, as the hernia had been down only twenty-three hours, and had been reduced nine.

No. 3.

A Caſe of obſtinate Conſtipation, from indurated Fœces.

In the 4th volume of Medical Inquiries, is the relation of an obſtinate complaint, from indurated fœces. About nine years ſince, I had a caſe under my care, in which the recollection of that obſervation was of particular uſe to me.

A lady, about ſeventy-eight years of age, was taken ill with griping pains in her bowels, and a purging; for which ſhe took, in the evening, a cordial draught, with an opiate; and the next morning a lenient purgative, which anſwered its purpoſe, and made her perfectly eaſy. From this time ſhe was troubled with an obſtinate coſtiveneſs, for which ſhe was obliged to take purging medicines occaſionally. Her complaints went on increaſing for a month, when ſhe complained of a violent teneſmus, and forcing pains, reſembling thoſe of labour. She obſerved, that

that the purging medicines which ſhe had taken had never brought away any conſiderable ſtool; but that ſhe voided only fluid excrement, during the time of their operation; and that ſhe had never had a motion of the form of the bowel ſince ſhe was firſt taken ill.

I got permiſſion to examine the ſtate of the bowel; and upon introducing my finger into the rectum, found a large ball of indurated fœces, nearly the ſize of a child's head, which I broke with my finger, and brought away. She was immediately eaſier; had an oily glyſter injected in the evening, and took an opening medicine in the morning, which brought away a great deal more which my finger could not reach; and from that time ſhe continued perfectly well.

Since the above, I have met with two other caſes of the ſame kind in elderly women, who were both relieved in the ſame manner.

No.

No. 4.

Caſes of ſingular herpetic Eruptions, ſucceeding inoculated Small-Pox.

There is a diſeaſe, the conſequence of inoculation, which I have not yet ſeen taken notice of by any writer on the ſubject. I have thrice had an opportunity of ſeeing it, and will endeavour to deſcribe it.

John Juddenham, a tall, healthy, robuſt man, about thirty-five years of age, was inoculated by Mr Robert Sutton, in April 1767, and paſſed through the diſeaſe extremely well. About a fortnight after he was recovered from it, he was ſeized, April 30th, with chillneſs, ſucceeded by fever, and pains in his limbs, for which he loſt twelve ounces of blood, and took a doſe of the antimonial powder in the evening, and a ſolution of nitre, every five or ſix hours. The inflammatory ſymptoms continuing, he was bled again the next day. The uſe of the nitre

was

was continued; and he took in the evening a bolus, with calomel. gr. v.; and the next morning a doſe of infuſ. ſen. with ſal Glaub.

In a few days, an herpetic eruption broke out upon the ſkin, and he was affected with a moſt extraordinary convulſive motion of the muſcles. It was very different from the common ſubſultus tendinum, being rather an undulatory, vermicular motion of the body of the muſcles, which might be felt diſtinctly, by applying a hand to the muſcular parts of the extremities, and ſeen diſtinctly, by looking attentively at them. He had, at the ſame time, the moſt afflicting deſpondency of himſelf and of his recovery that I ever ſaw, attended with a tremulous quickneſs of pulſe, want of reſt and appetite, and a train of nervous ſymptoms.

Bliſters to his back, legs, and arms, were ſucceſſively applied. The antiphlogiſtic medicines, Dover's powders, opiates, nervous medicines of all kinds, and the bark, were tried in ſucceſſion, without his obtaining the leaſt relief. The diſeaſe gradually gained ground, the eruption ſpread, and excoriated the ſkin in large ſurfaces. The convulſive motion of the

the muſcles, and deſpondency of mind continued. He gradually wore down, and died the 20th of June following.

Thomas Wright, aged twenty-two, a healthy young man, was inoculated in February 1769, by a neighbouring ſurgeon; had the eruption very ſlightly, and, to all appearance, perfectly recovered.

On the 21ſt of March, he complained of pains in his limbs; had fever, with an herpetic eruption like the preceding. Between the 21ſt of March and 6th of April he had been twice bled, had taken the Pil. ad erupt. Full. at bed-time, and the ſaline draughts in the day, with now and then an opening medicine interpoſed. Theſe were continued about a week; and he then took a bolus at bed-time, with Pulv. febrifug. antim. Camph. *aa.* gr. v. Opii gr. i. Theriac. ven. ſcrup. ſs.; and in the day-time the decoction of the woods, with vin. antimonial.

On the 6th of April, Dr Taylor, who had ſeen the former patient, viſited him. His complaints were now much increaſed: Total want of reſt, a violent itching eruption on the ſkin,

ſkin, with an undulatory vermicular motion of the muſcles, if any thing different, even more manifeſt than in the preceding, attended with the moſt afflicting deſpondency.

The Doctor ordered him to try Dover's medicine for three nights, and the ſaline julep in the day. Theſe not abating the ſymptoms, he altered them for the following: A bolus at bed-time, with Cinnab. fact. ſcrup. i. Moſchi Confect. card. *aa*. ſcrup. ſs. Opii gr. i.; and a draught twice a-day, with decoct. cort. Peruv. and gtt. 40. tinct. guiac. vol. By the uſe of theſe, he gradually recovered his health, and was perfectly well in a month following.

——— Bennett, a healthy woman, aged thirty years, was inoculated by Mr Sutton, in March 1769; and, in the beginning of April, was ſeized with the ſame ſymptoms as the preceding, but in a ſlighter degree. By the uſe of an electuary with cinnabar and guaiacum at bed-time, and the decoct. cort. Peruv. in the day-time, ſhe gradually recovered.

Theſe three patients were all taken ſoon after inoculation, in the ſame manner, and the

the ſymptoms nearly the ſame. In all, they ſeemed to proceed from great irritation. The pains in the joints, and membranous aponeuroſes, the eruption, and the vermicular contraction of the muſcles, were alike; and in all, did the nervous ſyſtem ſeem to be more particularly affected. Was this owing to any relict of the variolous matter, not thrown off from the conſtitution? or, Was it owing to the mercurial medicines given during the preparation? Our calomel is too frequently prepared with the ſublimate brought from Holland, which is known to have a deleterious poiſon in its compoſition. By acting as a ſtimulus in the nervous ſyſtem, and minima vaſcula, might it not produce the ſymptoms related above?

I ſaw the ſame ſymptoms produced in two young women, by anointing for the itch with an ointment prepared by a farrier, which I had great reaſon to think contained arſenic in its compoſition. One died, and the other recovered with great difficulty.

No. 5.

A Caſe of obſtinate Headach, from Hydatides in the Ventricles of the Brain.

Are not obſtinate headachs, and epileptic diſeaſes in adults, more frequently owing to the hydrocephalus internus than is generally imagined? If we were oftener permitted to inſpect the bodies after death, perhaps we ſhould be aſcertained of this aſſertion.

In May 1759, Mary Viol, about forty years of age, applied to me. She was very regular with regard to the catamenia, and had, till lately, enjoyed a good ſtate of health; excepting a conſtant pain in her head, with which ſhe had, more or leſs, been always troubled. Her complaints now were, conſtant pain in the crown of her head, which extended about the breadth of the palm of a hand. She had violent exacerbations of this pain, two or three times a-day, which threw her into immediate faintings, ſucceeded by profuſe ſweats, which relieved her; or, if this did not happen, ſhe vomit-

ed a quantity of bile, which had the ſame effect. She could not look perpendicularly upwards, without bringing on a violent return of the pain. She was ſometimes free from theſe violent returns for two or three days; but never from the pain and heavineſs, attended with a tingling in the ears. Her ſenſes were pretty clear, excepting when ſhe had theſe frequent returns, and her appetite tolerably good.

Gentle evacuations of all kinds were tried; bleeding, cupping in the neck, bliſters to the back and head, a ſeton in the neck. She was vomited, took ſmall doſes of ſacred tincture, nervous and fœtid medicines of all kinds: but from nothing that was done, did ſhe find any relief.

When her head was ſhaved to apply the bliſter, I examined it; and, juſt at the place where ſhe complained of the pain, there was a longitudinal depreſſion, in which I could almoſt lay my finger.

Dr Hepburn of Lynn was conſulted, who adviſed her being ſcalped upon the part; and if, after the removal of the integuments, the bone ſhould be found depreſſed, to apply the trepan,

trepan, which was accordingly done. The diſcharge from the wound was conſiderable, but did not in the leaſt relieve her. She lived a fortnight after the trepan was applied. When ſhe died, I got permiſſion to open her head. Upon turning aſide the left lobe of the brain, and opening the left ventricle, I diſcharged ſix or eight ounces of a ſerous fluid, with a number of hydatids of different ſizes, from that of a pullet's egg to the ſmallneſs of a pea.

II.

Account of the ſucceſsful Treatment of an Ulcer of the Leg; with Remarks on Ulcers of the Legs in general, in warm Climates. By *Mr* Stewart Henderſon, *Surgeon of his Majeſty's Ship* Aſtrea, *at* Jamaica.

I OBSERVED, when I was employed during the laſt war in the Weſt Indies, and when I attended one of our principal naval hoſpitals there, that no complaint baffled the efforts of the medical art more than ulcers in the legs: I ſaw many brave men fall victims to this cruel complaint, and many loſe their limbs. I remarked, that the cure of the ſtump was greatly accelerated, by making the patients uſe exerciſe; which firſt led me to try what it would do in the cure of the ulcer. And, laying aſide all relaxing and emollient applications, (which I conſidered as evidently tending to increaſe the complaint), the reſult

of

of purſuing this method of practice has been, the cure of ſeveral ulcers; and particularly the one of which an account is here annexed.

1787. *February the 12th.*

George Gordon, aged thirty, ſhewed me this day, an ulcer on the tibia, about the ſize of a half crown. It diſcharges a thin ſanies, mixed with blood. It is painful and inflamed. He ſays, that he had a large ulcer on the ſame place ſome years ago, when in the Weſt Indies, and that it did not heal until he was ſome time in England. He has a pale, ſallow countenance, and appears to be of a bad habit of body.——Apply a little lint moiſtened in oil on the ulcer, and over it a warm emollient cataplaſm, till the pain and inflammation abate. Let him uſe reſt, and keep his leg ſupported, and take as a purgative, Infuſ. Tamarind. cum ſenna unc. octo.

13*th.* The mixture operated. The pain and inflammation are a little abated: but the ulcer ſpreads, and diſcharges the ſame matter as before. Continue the cataplaſms.

14*th.* Complains ſtill of pain; and the inflammation has not ſubſided. Let fomenta-

tions be uſed, and the cataplaſms continued. ℞ Miſt. Nitroſ. unc. x. Tart. Emet. gr. ii. M. capiat unc. i. ſecund. quaque hor.; et habeat, h. s. Eſſent. Antim. gtt. xxx. L. L. gtt. xx. Aq. Menth. unc. ii. M. f. hauſt.

15*th*. Inflammation abated; and the draught procured him a good deal of reſt.—Continue the fomentations and cataplaſms, and let him take Extract. Thebaic. gr. i. h. s.

16*th*. Reſted pretty well laſt night. The inflammation is now almoſt gone; and he has little pain from the ulcer. Diſcontinue the emollient applications, and dreſs with dry lint and a compreſs, wet in a ſolution of Sacch. Saturn. with vinegar; to be renewed three or four times a-day. Let him abſtain from ſalted meat and ſpirits, and have rice and ſago for diet, and a pint of Madeira wine every day. Apply a flannel roller, from the foot to about three or four inches above the ulcer; and let him every day take Decoct. cort. Peruv. lb. i. Tinct. cort. Peruv. Huxham. unc. ii. Succ. Lemon. unc. i. Sacchar. rubr. unc. ſs. M.

20*th*,

20*th*. The ulcer is conſiderably larger.—Continue the laſt ordered remedies. As the inflammation is gone, let him walk about, and uſe exerciſe. Continuetur Cortex et Succ. Lemon. ut antea, et rep. Extract. Thebaic. h. s.

25*th*. The ulcer looks better, and has not ſpread any ſince the 20th. Appears now to be at a ſtand. Diſcharges little. Apply ſtrong digeſtive of red precipitate, and a compreſs wet in camphorated ſpirit. Let him uſe more exerciſe, as he can now do it without giving pain; and let him make uſe of the cold bath every morning. Keep the flannel roller conſtantly on. Add to the Cortex ſal. Martis ſcrup. i. in die.

30*th*. Continued the Cortex and ſal Mart. and the laſt ordered dreſſings. The ulcer diſcharges a good deal by the precipitate, but rather fœtid. Apply lint in Tinct. Cort. Peruv. to the ſurface of the ſore, and renew the ſaturnine applications, with the addition of a little camphorated ſpirit. Let his leg be well rubbed with a coarſe cloth every morning, and the utmoſt cleanlineſs be attended to.

6th March. Continued the ſame, with ſeeming advantage; for the ulcer has contracted one half its ſize. Healthy granulations are riſing; and the diſcharge is much altered for the better. He has recovered his looks a good deal. The edges of the ulcer appear to be a little callous: Let them be touched a little with a ſcalpel, and repeated every two or three days, if neceſſary.

The ulcer continued to contract daily, when it was perfectly healed on the 24*th*; and he he went to his duty, enjoining him to wear conſtantly a compreſs and bandage, to prevent receiving any injury from the ropes.

Upon the whole, from my own practice I can venture to ſay, that the moſt effectual method of treating ulcers on the extremities of ſeamen, the effects of a warm and relaxing climate, as well as living on a putreſcent diet, is to uſe ſuch topical applications as warm and ſtimulate, increaſing the action of the extreme veſſels. This I found beſt anſwered, by avoiding all emollient and relaxing applications, unleſs when pain and inflammation required their uſe; which was left off as ſoon

as

as theſe ſymptoms abated, and reſt was continued no longer. Dry lint, with ſometimes a little red precipitate to increaſe the diſcharge; compreſſes wet in ſaturnine ſolutions with camphorated ſpirit; and, above all, a flannel roller, properly applied, ſo as to enable the patient to make uſe of ſufficient exerciſe, were of great ſervice. This, with the cold bath, greatly accelerated the healing proceſs. While theſe external means were going on, internal remedies were given at the ſame time, with two intentions: *firſt*, To correct the putrid diatheſis, and to produce good juices; *ſecondly*, To brace and ſtrengthen the ſyſtem.

To anſwer the *firſt*, Peruvian bark, with the juice of lemons or limes with brown ſugar, a nouriſhing diet, and a ſufficient quantity of good wine, were given daily; which was afforded by the generous humanity of Captain Rainier.

The *ſecond* was anſwered by preparations of ſteel with the bark, aſſiſted by exerciſe and the cold bath. Opium was occaſionally given, to allay pain and irritation.

I have not yet had ſufficient practice, ſince I began to purſue this mode of treatment,

ment, to affirm whether I ſhall equally ſucceed in large ulcers on the extremities of men whoſe ſolids and fluids are in a worſe ſtate from having been longer in the country, and who have had acceſs to new rum, and been engaged in irregularities.

III.

III.

Account of the Diſſection of two ſingular Caſes. *By Mr* Robert Lawſon, *Surgeon*, Leith.

Case I.

Unexpected Hydropic Appearances.

MARGARET STEWART, aged ſixteen years, unmarried, of a healthy make, was ſeized with a pain in the breaſt and bowels, with a violent bilious vomiting and nauſea, on the 23d April 1787, in conſequence, as ſhe imagined, of lifting a heavy baſket. Her complaints increaſing, ſhe walked from Edinburgh to Leith on the 23d, and on the evening of the 24th I was ſent for; when, beſides the above complaints, I found a ſlight ſwelling of the abdomen; a ſmall pulſe, about 100; menſes regular; belly coſtive; with a very

very dull, heavy eye. I then preſcribed an emetic powder, with tartarus antimonialis, to be taken in ſmall doſes every twenty minutes, till ſhe vomited five or ſix times. She took two doſes, was vomited four times, and purged once. After this ſhe ſeemed eaſier, and paſſed a tolerable night; but, in the morning, the vomiting returned, which continued till 8 o'clock that evening, when ſhe died. Anodynes, conjoined with magneſia, were frequently given without any apparent effect.

I opened this girl on the 27th, in preſence of Mr James Ruſſel, ſurgeon in Edinburgh, and Mr Andrew Fyffe of the College; when we found in the ventricles of the brain about two ounces of a watery fluid; in the thorax, two pounds; in the pericardium, two ounces; in the abdomen, ſix pounds; in the ovarium, an ounce; with inflammation and mortification of the inteſtines. My finger was cut with the ſcalpel, in conſequence of which it feſtered; was two weeks in healing, and brought on ſome feveriſh complaints.

CASE

Case II.

A ſingular Abſceſs, occaſioned by the head of the Os Femoris.

Chriſtian Harlow, when four years old, leapt from a conſiderable height, and fell on her right leg when extended. It was however neither fractured nor diſlocated. The ſwelling and pain went off in a few days, and ſhe could uſe it as well as ever; but it was, at leaſt from that time, a full inch ſhorter than the other. On the 4th July 1788 (ſhe being then nine years and four months old), I was called to her. I found her very much emaciated, with her pulſe at 120 in the minute. She had no complaint or pain from her leg, but ſlight ones in the belly and right ſide, with a diſcharge from the anus of about eight ounces of blood, and a little matter mixed with it of a fœtid ſmell. This had begun four weeks before I ſaw her. The parts were all excoriated, and the anus itſelf of a ſpongy appearance.

I firſt

I firſt purged her gently; and, as I was unable to find any ulcer from introducing my finger into the gut, and no opening externally, I was truly at a loſs how to proceed. I then applied an aſtringent cataplaſm, which had no effect. On the 5th, I applied a quantity of powdered bark, which ſtopped the diſcharge. She was then attacked with vomiting, which no anodyne could ſtop; and ſhe died on the 6th.

I opened her on the 8th, and found that the head of the os femoris was entirely through its ſocket, in the right os inominatum; and on the concave ſide of the os inominatum, lay an oblong bag, containing about twelve ounces of purulent matter. The one end of the bag opened into the rectum, four inches from the anus, and conſequently its contents were voided by that part. The matter in the bag was exceedingly thick and fœtid: thus it appeared, that it had been the thin part of the matter which was diſcharged.

IV.

IV.

Account of a Suppuration of the Liver, terminating ſucceſsfully, after a large Diſcharge of purulent Matter by the Anus. By Thomas Garnett, *M. D.*

CHARLES AREY, ætat. 34, a labourer, under the neceſſity of earning bread for a numerous family, had for ſome months laboured very hard, in a very inclement ſeaſon, (October, November, and December 1760), expoſed to all the viciſſitudes of the weather.

He was ſupported by food not half ſufficient to ſatisfy the cravings of nature, and by drink conſiſting only of water, or milk and water. His wife was at this time lying dangerouſly ill of a conſumption, which obliged him to ſit up whole nights attending her. If we add to theſe cauſes the great anxiety and depreſſion of mind which neceſſarily attends a perſon in ſuch a ſituation, we ſhall not be ſurprized

prized that his ſtrength began to decay, and that he found himſelf very much debilitated. But he was obliged by neceſſity to continue his labour, and his poverty prevented his applying for medical aſſiſtance.

Some time after this, he began to feel a pain in the right hypochondrium, which was ſoon followed by a ſwelling of the liver, and ſymptoms of jaundice. This continued from February to May 1787, when he made application to Mr Dawſon of Sedburgh, a gentleman well known for his abilities as a mathematician and philoſopher, and an excellent medical practitioner. He ordered him a medicine, which he had often found ſucceſsful in caſes of jaundice, conſiſting of ſoap, rhubarb, and ſal. polychreſt. By means of this, and an emetic, the ſymptoms of jaundice left him; but the ſwelling of the liver increaſed very faſt, and was by this time become very large. On the 31ſt of May, he was directed to take ſmall doſes of calomel every day, in the form of pills, which he did without any diminution of the ſwelling, or any other obſtruction.—On the 8th of June, I ſaw him for the firſt time. His pulſe was about 96, and feeble;

and

and his appetite bad, with univerſal debility. I deſired that he might continue the pills, and ordered him the following mixture:

℞ Infuſ. Amar. ſimp. unc. iii.
Tinct. Amar. unc. i.
—— Aromat. unc. ſs. M.

Of this he was directed to take two table-ſpoonfuls twice a-day, and enjoined a nouriſhing diet and a little wine. In a few days, he found his appetite ſomething better, and thought he was not quite ſo weak. But the ſwelling did not diminiſh, and he had a hectic fever, with exacerbations every evening, accompanied with profuſe ſweats in the night-time. On the 15th of June, he was ſeized with a diarrhæa, ſuppoſed to be occaſioned by the calomel, for which we preſcribed the following:

℞ Confect. Japon. unc. i.
Aq. Cinam. ten. unc. iii.
———— ſpir. drach. vi.
Tinct. Thebaic. gtt. xl. M.

Of this he was ordered to take a table ſpoonful after every looſe ſtool. This ſoon moderated the diarrhæa; but as he thought it alſo

made his general health better, he took it conſtantly, morning and evening, till the 28th, when, on account of the ſweating, he was directed to take twenty drops of the elixir of vitriol twice a-day, which had the effect of moderating it; but the ſwelling ſtill continued to increaſe, and became very painful. On the 12th of July, about four o'clock in the morning, he was ſuddenly awaked by a pain and weight in his bowels, and a great irritation to go to ſtool; when he diſcharged between five and ſix pounds of a purulent-like matter, mixed with blood, and which had a moſt intolerable ſmell. The hectic fever now increaſed to a great degree; but the ſwelling of the liver was much diminiſhed. He continued to diſcharge a quantity of this kind of matter every two or three days, for ſeveral weeks, and his death was expected to be at no great diſtance. It is evident, that an abſceſs had formed in the liver, the matter of which had made its way into the inteſtines, probably by eroding their coats. The diſcharge however leſſened by degrees, and ceaſed before the end of Auguſt; and, by continuing

nuing to take the elixir of vitriol, together with the bitter infuſion above-mentioned, and a nouriſhing diet, he began to recover ſtrength faſt, and is, at preſent, free from any complaint.

V.

An Account of a Rupture of the Oeſophagus, from the action of Vomiting. *By Mr* John Dryden, *Surgeon in* Jamaica.

SIR J—— P———, of his Majeſty's 10th regiment of foot, was ſeized, on the morning of the 1ſt of December 1787 (after taking a little breakfaſt), with nauſea, and inclination to vomit, which he encouraged by drinking plentifully of warm water, until it produced full vomiting. He had an idea, which is very common in this country, that his ſtomach was loaded with bile, and, of courſe, its evacuation neceſſary to his future health. However, in this he certainly was miſtaken; for the irritability of the ſtomach proceeded from a debauch over-night, with which he had been much inebriated.

He always guarded againſt emetics: for, during their operation, he uſed to ſtrain exceedingly

ceedingly hard, and felt generally a conſider-able weakneſs and ſoreneſs in the parts for ſome time after.

The warm water cauſed him to ſtrain very much; and in this action he felt ſomething give way internally, which gave him a ſenſation as if he had received an injection of ſome liquid matter into the cavity of the thorax. He alſo brought up a little blood; from whence he conjectured, that one of the large blood-veſſels of the lungs was ruptured, and occaſioned the acute pain he then began to feel about the region of the ſtomach and abdomen.

The vomiting now ceaſed, and was ſucceeded by thirſt, great heat in the ſtomach and throat, conſtipation and reſtleſſneſs.

Three laxative injections were exhibited without effect. Anodynes alſo cauſed no abatement of pain. After this, an emphyſematous ſwelling took place all round his neck and throat. On breathing, a circulation of air in the cellular ſubſtance could be very diſtinctly perceived.

About 4 o'clock, P. M., in conſequence of another glyſter being thrown up, he had a

ſmall lumpy ſtool, which gave him ſome eaſe, and removed his pain to the left ſide. His breathing now became more laborious, accompanied with heavy groans and ſighs. He complained of a little pain in the right ſide, but by no means equal to that on the left. He could not alter his poſition, without feeling his lungs compreſſed, to ſuch a degree, that he was afraid of inſtant ſuffocation.

Fomentations, and the warm bath, were uſed, without the ſmalleſt relief. At 7 o'clock, perſpiration copious and warm. His pulſe rather full. Twelve ounces of blood were taken from the arm. While the blood was flowing from the vein, he could breathe rather more eaſily: however, about five minutes after, his former ſymptoms recurred; pulſe very low; perſpiration clammy and cold. Still retained his ſenſes.

At half paſt nine, had a copious ſtool. His breathing became ſmaller and ſmaller to the laſt; and about 10 o'clock he died.

Bliſters were applied to his ſide, and other remedies were uſed, without the leaſt benefit.

Appearances

Appearances on Diſſection.

On perforating the cavity of the thorax, a conſiderable quantity of air eſcaped. The cellular ſubſtance was found much diſtended with air, particularly about the neck. The œſophagus was found ruptured, before it paſſes into the diaphragm; and the whole contents of the ſtomach had paſſed through that orifice into the cavity of the thorax, and compreſſed the lungs into a very ſmall compaſs. About one gallon, conſiſting of a mixture of wine, water, and the matter employed as aliment, was taken out of the left ſide, where he felt all his pain. Nearly two quarts of the ſame were alſo found effuſed in the right ſide, and in an effervescent ſtate.

Particles of oil were ſeen floating on the ſurface of this liquor in the thorax. Could theſe proceed from the oil of the glyſters that were thrown up?

The laceration in the œſophagus was longitudinal, and ſo large as to admit the fore and middle finger.

A part of the ſtomach, below the cartilago enſiformis, about the ſize of a crown piece, appeared red and inflamed.

The reſt of the thoracic and abdominal viſcera, were all perfectly ſound.

The ſmell of the urine could be very plainly perceived. It had undergone a ſlight degree of fermentation.

He was a ſtrong healthy man, and by no means ſubject to diſeaſe. He only complained of a ſlight cold previous to this event.

The action of vomiting was the ſole cauſe of this rupture; and ſhews how cautious we ought to be in the uſe of theſe evacuants, particularly in a climate where the general ſyſtem is ſo relaxed. I am perſuaded, that more patients die by the injudicious exhibition of emetics, than moſt practitioners are aware of.

VI.

VI.

Some Obſervations on the Endemic Fever of the Coaſt *of* Guinea; *and on the Occurrence of Small-pox a few days after birth. By Mr* William Rait, *Surgeon,* Dundee.

1.

THE bilious fever, of which I am about to ſpeak, is the fatal endemic of the Torrid Zone. It may be fitly divided into two ſtages, the inflammatory and the putrid. With certain cauſes co-operating, it attacks all ages and conſtitutions. But it is particularly the bane of the young, vigorous, and plethoric; of thoſe whoſe blood is in a ſtate moſt liable to favour and produce obſtructions.

The cauſes moſt obvious in producing bilious fever are, firſt, violent exerciſe in, or expoſure to the ſun's heat; drinking of ardent ſpirits,

ſpirits, or any thing that cauſes a copious perſpiration, provided it gets a ſudden check, by the application of cold moiſt air; ſudden immerſion in cold water, or ſudden expoſure to the dew of the evening.

Theſe are the cauſes chiefly producing it in the young and plethoric. But the aged and infirm muſt be acted upon in a different way, to produce the ſame diſeaſe. Their fibres are naturally lax, and the texture of their blood diſſolved; conſequently, they are more liable to be acted on by ſlighter cauſes, than would produce the ſame ſymptoms in younger ſubjects.

In the firſt ſet, viz. the young and plethoric, it generally attacks with violent ſymptoms of inflammation and determination to the head; pains in the region of the loins; nauſea, coſtiveneſs, great thirſt, and the pulſe is hard and quick. In the ſecond ſet, viz. The aged and infirm, it attacks with ſymptoms of nervous atonia; great and ſudden proſtration of ſtrength; dejection of ſpirits; the pulſe ſmall, quick and fluttering; palpitations, and frequent deliquium animi.

The

The indications of cure are, *firſt*, To leſſen the momentum of the blood by proper evacuations: and that is firſt to be done by bleeding plentifully from a large orifice, from which we may often obſerve the moſt inſtantaneous good effects. Yet I would not adviſe the uſe of the lancet beyond ten hours from the firſt attack; as the violent momentum ſoon looſens the texture of the red globules, and hurries them and the whole maſs of fluids into a ſtate of putrefaction. The uſe of a warm ſemicupium is alſo ſometimes of advantage; but for the above reaſon, it ſhould not be employed later than the lancet.

2*dly*, To evacuate the primæ viæ of ſordes lodged there, which is beſt effected by antimonial preparations; and the beſt of that claſs, in my opinion, is the tartarus antimonialis.

3*dly*, To evacuate the redundant bile; which is beſt done by ſmall doſes of antimonial tartar and neutral ſalts, and plentiful dilution with mild teas and gruels.

4*thly*, To defend the primæ viæ and inteſtines from the acrimony of the bile. For this

this purpoſe, I have generally uſed mucilaginous and oily glyſters.

With this treatment, we may commonly be able to procure a ſlight remiſſion the ſecond or third day. Then the practitioner ſhould not, even for a moment, delay throwing in the Peruvian bark. If the ſtomach will eaſily bear it, he may throw in the bark at the rate of half an ounce, or more, every hour. I would alſo adviſe the copious uſe of the vegetable acid, and juices of ripe fruits, as oranges, &c.

Provided the bark binds, and occaſions a diſagreeable weight at the ſtomach, it will be neceſſary to add to each doſe a few grains of pulv. rhæi. If, on the contrary, it paſſes off freely by ſtool, I would by no means check it for a little time: The practitioner will always have that in his power, as by adding a few drops of tinct. Thebaic. he will ſoon conquer the bark's tendency downwards.

Theſe are the moſt common indications, and the method of cure which I have often known to ſucceed. It generally has a criſis by ſweat, or diarrhæa, about the ninth or eleventh day, but is ſometimes protracted till the thirteenth, when it leaves the patient in a ſtate

a ſtate of great debility both of body and mind; ſo great, that I have known patients (after the bark and other corroborants have been copiouſly uſed) incapable of *ſeeing*, *hearing*, or *thinking properly*, for a fortnight or three weeks; and during that time, their imaginations haunted with the moſt frightful ideas and fooliſh chimeras. Even the terrible idea of being hanged, though they endeavour to ſum up all the little fortitude they were then maſters of to get rid of, would ſometimes haunt their imaginations, till the general flow of the nervous fluid, and tenſion of the muſcular fibres, were reſtored.

A very common conſequence of bilious fever, is ſwelled ankles, which likewiſe generally ſubſide as the tone of the ſyſtem is reſtored.

It is impoſſible to ſay where the inflammatory ſtage ends, and the putrid commences, they ruſh ſo rapidly into each other. The emetic tartar is beſt calculated for the evacuation of bilious ſordes; for this reaſon, that it acts in a double capacity, by evacuating bile, and at the ſame time determining the circulating fluids to the ſurface.

Theſe

Theſe few curſory remarks are the reſult of my own practice, particularly on the Coaſt of Guinea, and in the Weſt Indies, when I was a very young practitioner.

2.

At a time when I was attending a patient under inoculation, a lady, whom I alſo attended, was ſafely delivered of a male child. Two or three days after the birth, I was deſired to look at ſome ſpots which appeared on the face, neck, and different parts of the body, and which alarmed the friends of the infant. I immediately pronounced the eruption to be that of the ſmall-pox; and in conſequence, took ſome pains to watch the progreſs.

From ſome particular circumſtances in the caſe of the mother, the child was rather fatigued than nouriſhed, and the eruption came but ſlowly out. However, it was found at laſt neceſſary to put the child out to nurſe; and, providentially, a very healthy one was found: in conſequence of which, in a few days I perceived the eruption (hitherto rather

flat

flat and tardy) put on a very different aſpect; that of filling up, and maturating kindly. The puſtules blackened, and went off, in the uſual manner of the beſt diſtinct ſmall-pox.

I know, that ſome in the profeſſion are prejudiced againſt the idea of infection taking place in utero from the mother. But I conſider this a marked caſe of that kind, and a full proof of the error of ſuch prejudice. It is a certain fact, that the ſmall-pox, in the natural way, have prevailed in the neighbourhood of the child ſince it was put to nurſe, without any new infection or exanthemata making their appearance.

And I know an old lady (grandmother to the ſaid child), who ſays ſhe was born with the ſmall-pox. It is certain, ſhe is now upwards of ſixty (in good health), and never had any other.

Theſe facts I humbly mention to you. They involve a number of queries, which I hope in time will be both put and anſwered by ſome of your numerous and very ingenious correſpondents. I only wiſhed to give them ſimply, and without any commentary.

VII.

VII.

An Account of a Caſe of Scorbutus occurring on Shore, and terminating ſucceſsfully. By Mr John Leedes, *Surgeon*, Hemingſton, Suffolk.

May 14th 1787.

I WAS this day applied to for medical aſſiſtance, by a woman of ſeventy-five years of age, who has ſpongy, putrid gums, contraction and pain about the flexor tendons of the hams, a remarkable livid appearance on the thighs, which is diffuſed to a conſiderable extent. There are alſo evident marks of extreme debility in the ſyſtem. Theſe complaints were firſt obſerved about a month ago; ſince that time they have been gradually increaſing. Under the preſent circumſtances, I preſcribed the following remedies:

℞ Tinct. Thebaicæ.

Eſſent. Antimonii Huxhami *aa.* drach. ii. M.

Of

Of theſe drops ſhe was directed to take thirty, every night at bed-time, out of a cup of warm ſage tea. This medicine had the effect of producing a general diaphoreſis. In the courſe of the day, ſhe was directed to take three or four times a glaſs of wine, in which ſome bitter aromatic ingredients had been infuſed. The acid elixir of vitriol was likewiſe taken ſeveral times in a day, to the quantity of thirty drops for a doſe. On account of the ſpongineſs and putridity of the gums, ſhe frequently applied to them a mixture, compoſed of an infuſion of ſage and honey, acidulated with vinegar. To remove the rigidity, as well as to effect an abatement of pain about the ham-ſtrings, recourſe was had twice in a day to fomentations, prepared from warm, antiſeptic herbs. With regard to diet, ſhe was deſired to uſe that which appeared beſt adapted to the weakneſs of the digeſtive organs.—In conſequence of regularly purſuing the plan here mentioned, I had the pleaſure to find her, in the courſe of a month, nearly reſtored to her uſual ſtate of health.

Remarks.

So very evident does the nature of the diſeaſe, under which this patient laboured, appear to be, that I think no doubt can ariſe concerning the propriety of pronouncing it a caſe of true ſcurvy. Although this diſeaſe is well known to attack, for the moſt part, thoſe who live at ſea, yet we ſometimes meet with it on land, where I ſhould imagine it ariſes from ſimilar cauſes to thoſe from which it proceeds at ſea. Thoſe which I had reaſon to believe to be principally active in the production of it, in the preſent caſe, were the following, viz. impure air, a ſedentary life, and the uſe of food not eaſily aſſimilated into chyle, or, at leaſt, not into ſuch as was ſufficient properly to anſwer the purpoſes of nutrition. The impaired and weakened ſtate of the vital powers, in conſequence of old age, had likewiſe probably no ſmall ſhare in favouring a diſpoſition to ſuch a diſeaſe. As perhaps, in every inſtance of true ſcurvy, the perſpirable matter is more or leſs retained,

ed, and diſpoſed to acquire an acrimonious, putrid ſtate, I was induced to have recourſe to ſuch a remedy as I thought was likely to act on the ſurface of the body, and produce ſweat. The tendency which ſuch an evacuation has to effect a recovery in thoſe who are afflicted with ſcurvy, appears to be ſufficiently well expreſſed by a learned and judicious writer *, in the following words: "Sudor enim vita ſcorbuticorum eſt, in omni cœli, in omni ætate."

With regard to the choice of diaphoretics, in the above-mentioned diſeaſe, I ſhould be led to give the preference to opium, conjoined with ſome antimonial preparation; for by frequent and repeated trials, I am fully convinced, that the operation of ſuch an union is in general conducted with much more certainty and ſucceſs, than when theſe articles are ſeparately adminiſtered.

Beſides employing ſuch means as are calculated to excite ſweat in ſcurvy, it appears to be no leſs neceſſary to have recourſe to thoſe remedies which are known to poſſeſs a power of reſtoring the natural tone and vi-

* Hulme.

gour to the organs of digeſtion, which, in this diſeaſe, are for the moſt part greatly weakened. It was therefore with ſuch an intention that I adminiſtered bitters, and the acid elixir of vitriol, in the preſent caſe. With regard to external applications, it is true, they are capable of being of no further uſe, in this diſeaſe, than in appeaſing pain, and rendering thoſe parts which are rigid and ſtiff, ſoft and pliable; for which purpoſe, the ingenious Dr Lind, in his admirable treatiſe on the ſcurvy, appears to approve of their uſe.

I readily acknowledge, there is nothing in this caſe that is ſufficient to entitle it to the claim of ſingularity; yet I ſhould hope, the detail here given of it may not, on that account, be altogether deemed uſeleſs and unintereſting; for I believe it may be juſtly aſſerted, that it is not an attention to uncommon occurrences alone, that may be ſaid to contribute to the improvement of the healing art, but alſo an attention to ſuch as more frequently preſent themſelves to our notice; as, in theſe, a diligent and diſcerning practitioner will ſeldom fail in being able to detect certain facts that cannot but tend to enlarge

his

his experience, as well as improve his judgment, in medical matters. And although the mode of treatment which I here thought proper to adopt, is nothing beyond what the common courſe of practice is capable of ſuggeſting, yet the ſucceſsful application of it in the preſent caſe, may perhaps in ſome degree further tend to illuſtrate its efficacy, and confirm its utility. For, as an elegant writer * of antiquity obſerves, " Sic medicinam ortam, ſubinde aliorum ſalute, aliorum interitu, pernicioſa diſcernentem a ſalutaribus."

* Celſus.

VIII.

Hiſtory of an Aneuriſm of the Crural Artery, with ſingular Circumſtances. By *Mr* James Clark, *Surgeon in* Dominica.

Dominica, 20th April 1784.

PATRICK DONALD, planter, came to town to have a conſultation of the medical gentlemen reſpecting a tumour in his left groin, having been informed, by the ſurgeon who attended him in the pariſh where he reſided, that it was of a dangerous tendency, and that he dreaded the conſequence. He was about forty-eight years old, had been long in the Weſt Indies, but enjoyed good health; had ſtill a good conſtitution, and was hardy and active. Upon examining the tumour, which was at this time about the ſize of a large turkey's egg, we found it to be an aneuriſm of the crural artery, which began about an inch and a half below the abdominal

nal ring. We were no doubt affected, from the idea of the certainty of the fatal event of this uncommon caſe: we, however, concealed our feelings from the poor man, and ordered a truſs to be prepared in a particular manner, ſo as to keep a conſtant and gentle compreſſion on the tumour. At the ſame time, we ordered him to live upon milk, vegetables, and fruits, and to avoid ſpirituous liquors and animal food, all with a view to put off the evil day. Upon being queſtioned particularly with reſpect to the cauſe of this tumour, he recollected, that about a month or ſix weeks before, in coming into the boiling-houſe, in the evening before the lamps were lighted (it being in crop-time, on a ſugar eſtate), he ſtruck his groin with ſome violence againſt the corner of a table that was in his way, which gave him moſt excruciating pain for a moment. He however thought no more of the matter till about ten days after, when he perceived a ſwelling in the place he had ſtruck againſt the table, about the ſize of a pigeon's egg, which gave him ſome pain; that he thought it was a ſwelled gland, from cold; but that, ſome time after, finding

it grow larger, he ſhewed it to the ſurgeon who attended the eſtate, ſuppoſing it to be an incipient bubo; but was told by him that it was of a more ſerious nature, and was therefore adviſed to go to town. By our advice he returned to the country, and put himſelf upon the regimen which we had recommended to him; and he was alſo deſired to uſe very little exerciſe. Three months after, viz. the 23d July, he returned to town, being much alarmed at the great increaſe of the tumour in ſo ſhort a time. It was now as large as a common melon, of an oval form, the longeſt ſide acroſs the thigh, and the throbbing pulſation ſo ſtrong that it could be obſerved at a diſtance, even when covered with the bed-clothes. He was viſited by moſt of the medical gentlemen in town, from curioſity; but he put himſelf under my particular care, and Dr Andrew Fillans, requeſting us to attend him frequently. The expected iſſue of the diſeaſe was however carefully concealed from him; and we were obliged to amuſe him, by uſing different means, and acquainting him that we could not decide on the event till the tumour burſt.

He

He had been obliged to lay aſide the truſs for ſome weeks before he came to town, on account of the exceſſive pain that he felt in the tumour, when the leaſt compreſſion was uſed upon it; and the pain was now become ſo violent, even when no compreſſion was uſed, that he could not reſt at night, and he had very little eaſe in the day-time. His leg and thigh of the ſame ſide were much waſted, and he had a pain and ſtiffneſs in the knee; and the tendons were ſo contracted, that he could ſcarcely walk.

July 24th. Being rather coſtive, we gave him an emulſion of caſtor oil, which operated plentifully without griping.

25*th* and 26*th.* In great pain.—Gave him a liniment compoſed of ſweet oil and opium, to rub the tumour with frequently; which, he ſaid, gave him ſome relief from pain, for a while after it was uſed.

28*th.* Having been in great pain for theſe laſt 24 hours, gave him forty drops of laudanum at night.

29*th.* Had no reſt laſt night, and very little relief from the laudanum. Ordered the doſe to be increaſed twenty drops every night.

Auguſt

Auguſt 1ſt. His leg and thigh were waſted to one third part the ſize of the other; and the tendons of the ham were ſo contracted that he could not walk. The tumour was much inflamed; and the pain in it is now become almoſt inſupportable. Had 100 drops of laudanum this night.

7th. The anodyne had been increaſed twenty drops every night, without procuring him any reſt at night, and very little relief from pain; and laſt night he had taken 200 drops, without obtaining the ſmalleſt eaſe.—We did not think it adviſeable to give him any more laudanum, as it was of no manner of ſervice to him; but we were obliged to ſubſtitute ſomething in the room of it, as he was in the utmoſt torture. We therefore ventured to give him Extract. Cicutæ gr. xx. h. s. ſumend.

8th. The cicuta threw him into a ſort of delirium, which continued almoſt forty-eight hours, during which time he felt no pain, but on the contrary ſeemed to enjoy a ſort of happineſs; and when the delirium ceaſed, he related a kind of an incoherent undertaking that he had been about. From this time he was perfectly

fectly free from pain, and there was no further occaſion to repeat the cicuta; but on examining the tumour, we obſerved ſome black ſpots on the ſurface, and round the edges of it.

25*th*. The ſurface of the tumour continued to mortify till this day, when a ſeparation began to take place all round the edges, by the oozing of a dark bloody fluid. We were now looking out for the fatal moment.

29*th*. The tumour appeared almoſt entirely ſeparated; upon the leaſt motion, it ſhook in a body, like a bog.

30*th*. The mortified parts of the tumour, and a quantity of coagulated blood, dropped out this morning, when he was at ſtool. We examined the hollow of the tumour, which was remarkably offenſive. We ordered it to be bathed often, with a ſtrong decoction of Peruvian bark; and we began to give him the bark in ſubſtance.

31*ſt*. Some more of the coagulated blood came out this morning when at ſtool. He takes as much bark as his ſtomach will bear; and we allow him nouriſhing ſoup, and porter

ter and water for his drink, as he is rather weak.

September 2d. Being ſomewhat aſtoniſhed that the artery had not burſt out, I ventured to examine the great opening where the tumour had been. It was about five inches long acroſs the thigh, three inches broad, and two and a half deep, nearly of an oval form. The edge was inflamed all round: it had a gangrenous appearance, and a moſt offenſive ſmell. The bottom was ſtill covered with coagulated blood, which I did not remove, but filled up the opening with lint, after having bathed it with a ſtrong decoction of bark and ſpirits. He takes ten doſes of bark every day, and is allowed a nouriſhing diet, and porter after meals.

3d. On removing the dreſſings this morning, the coagulated blood came out, all but a little piece, which ſeemed to plug up the opening into the artery, which I did not venture to remove, expecting that he would expire as ſoon as that came out. But after bathing and cleaning the parts, I examined the ſpot with my finger, and could feel no pulſation in the artery, which ſurpriſed me not a little. I examined

examined it over and over, and at the ſame time felt his pulſe. I could ſcarcely believe my own feelings: Sometimes I thought there was a tremulous pulſation, and at other times I could perceive no ſuch thing. I dreſſed him as uſual; and he took ten doſes of bark yeſterday.

4th. Still unſucceſsful in finding any pulſation, although I examined for it very carefully. His thigh and leg are much waſted, and the ham of his leg more contracted than before. The diſcharge is very great, and the mortified parts begin to ſeparate. He has a good appetite; we allow him a nouriſhing diet. Takes his bark, and is dreſſed, as uſual, twice a-day.

5th & 6th. The ſeparation of the mortified parts goes on very faſt. We can feel no pulſation. Dreſſed as uſual, and takes the bark, and plenty of nouriſhment.

7th & 8th. We ſtill diſcover a ſmall black ſpot over the opening into the artery; but no pulſation is to be felt. He is in good ſpirits, and takes his bark and nouriſhment, and is dreſſed as uſual.

9th & 10th. Examined the black ſpot with a probe; it was about the ſize of a large pea,

pea, and appeared as if it ſtill plugged up the opening into the artery. There are red granulations of fleſh all round it, and the opening looks well. He is in good ſpirits, has great hopes of recovering, and talks of walking with a crutch when the ſore is healed up.

12*th*. The granulations have now covered the black ſpeck above the artery, and the parts all round look well. We are aſtoniſhed at theſe favourable appearances, and begin to have flattering hopes of his recovery.

14*th*. Takes his bark as uſual, and is brought out into the hall every day.

16*th*. His leg is remarkably waſted, and he complains of a pain about the joint of his knee, from the contraction of the tendons of his ham. We diſcovered a ſinus running down among the muſcles, towards the outſide of his thigh, which was ſyringed, cleaned, and dreſſed. He continues the bark, and is in good ſpirits.

18*th*. On viſiting him this morning, I found him in the hall, writing letters to his friends in the country. He had been there for ſome hours; and the air being rather damp

damp and diſagreeable, I deſired him to be carried into his room, and dreſſed. The bark is continued, &c.

20*th*. In the night he was ſeized with a pain in his breaſt, hoarſeneſs, and other ſymptoms of a cold, which he ſaid he believed he had caught the other day in the hall. This was in the morning, at the uſual hour of dreſſing him, at which time the ulcerated parts in the opening looked well, and he had no fever. But, about two hours after, he was attacked with a fever, and a violent pain in his hip joint, extending to the bottom of the ulcer, all round, and down to his knee; and the tendons of the inſide of his thigh were rigid, and painful to the touch. Warm fomentations were applied all round the parts affected; and, on account of the hoarſeneſs and pain of his breaſt, an emulſion of caſtor-oil was adminiſtered immediately. In the evening we found him ſomewhat relieved, the emulſion having purged him plentifully. He was deſired to drink barley-water for his common drink, was dreſſed, and had the ſtupes and fomentations repeated.

21*ſt*.

21*ſt.* He had a fever all night, and could not ſleep for the pain in his breaſt, and the cough. He complains much of the pain about the articulation of his thigh and knee; but ſays, it is not ſo violent as yeſterday. We find him very weak already, and unable to bear any further evacuation; but, on account of the cough, and to keep him open in his bowels, we ordered a ſmall doſe of caſtor-oil and honey for him at night, and directed him to drink plentifully of barley-water. The fomentations are repeated frequently; and the ulcerated parts are dreſſed as uſual.

22*d.* His fever ſtill continues, and the cough and pain of his breaſt, but particularly in the left ſide; and he is ſo hoarſe that he can ſcarcely ſpeak ſo as to be underſtood. Fomentations, drinks, and emulſion, to be continued. He is ſupported with light nouriſhment.

23*d.* He is never entirely free from fever; but he begins to expectorate a little. The opening in his thigh, however, looks pale and foul, and has a gangrenous appearance. Began the bark, and keep him open

in

in his bowels with the emulſion, and order him plenty of diluting drink.

24*th*. The ſame as yeſterday, only he complains more of his left ſide.

25*th*. Continues to expectorate pretty freely. The cough was ſo troubleſome, that we were obliged to give him ſome elixir paregoric at night to relieve him. Continue the bark, and dreſs him as uſual.

26*th*. The expectoration continues, but he is never without fever, and the ulcerated parts have ſtill a gangrenous appearance. Continue the bark, and paregoric elixir at night, &c.

27*th*. The ulcerated parts have a very bad appearance this morning. He expectorates a kind of rediſh-coloured pus, has a conſtant fever on him. He complains much of his left ſide, and is very weak. We now deſpair of his recovery. In the evening he became delirious, and remained in that ſtate for four days, viz. till the night of the 1ſt of October, when he expired. During this time, he vomited up a black purulent ſort of ſtuff frequently, and his belly was much diſtended, although he was kept quite open in

his bowels, as he took every thing that was given to him. We continued to ſee him dreſſed till within forty-eight hours of his death; after which we were obliged to leave him to be dreſſed by his ſervants, as the ulcerated parts became quite offenſive.

October 2d. Early this morning, I was aſſiſted, in diſſecting the body, by Dr Andrew Fillan, who had attended this patient with me during his illneſs; and there were other medical gentlemen alſo preſent, from a deſire of knowing the nature of ſo extraordinary a caſe.

On dilating the ſinuſes, and laying open the large aneuriſmal ſac in the groin, we found it had been in a gangrenous ſtate ſome days before death. After clearing away the mortified parts of the ſac and integuments, we cut out a piece of the muſcular fleſh, including the crural artery and vein, about ſix inches down the thigh from the abdominal ring. And after removing the ſuperfluous cellular parts, we introduced the probe at the upper end of the artery, which paſſed into the opening where the aneuriſmal ſac had been. But upon introducing it into the

lower

lower end, we could not get it to paſs, which obliged us to lay that part of the artery open; on which we diſcovered a hard horny ſubſtance, about an inch and a half long, plugging up the artery, and adhering cloſely to the ſides of it. It very much reſembled that ſort of round paſte which is brought from Italy, called macaroni, only it had a rediſh tinge, and a very ſmall aperture in the middle, through which we could not paſs a ſmall probe: it would admit of nothing larger than a hog's briſtle, or a very ſmall wire. We called this ſubſtance a polypus, at the time we were diſſecting the parts; but it was much harder, and of a more compact texture. We alſo found a ſubſtance of the ſame nature plugging up an external branch from the crural artery, which opened into the aneuriſmal ſac. From theſe uncommon appearances, and finding ſome reſiſtance to the probe which we introduced into the iliac, we were induced to open the abdomen. After dividing the iliac artery a little below the bifurcation, and removing it, with part of the pſoas muſcle, we laid it open; and about two inches up from the abdominal ring, we found a red

horny ſubſtance, an inch long, reſembling that in the crural artery. It had a very ſmall opening in the middle, which would only admit of a very ſmall wire to paſs; it adhered cloſely to the inner coat of the artery, and plugged it up. From the bifurcation to this ſubſtance, the coats of the artery were in a ſound ſtate; but between that and the ring, they were ſomewhat corroded, and contained a quantity of pus. We diſcovered the openings of two branches of arteries above the horny ſubſtance; but, in taking out the iliac, we had unfortunately cut too cloſe to it, on which account we could not trace them. We ſuppoſed the right branch to have been the hypogaſtric. At a little diſtance from the aneuriſmal ſac, on the inſide, we diſcovered an artery coming from the abdomen, which admitted the probe with eaſe: it was probably one of the branches that took its riſe above the plugging ſubſtance, by which the blood was conveyed to the inſide of the thigh, and the circulation carried on there, by the means of the anaſtomoſes, with other branches. The muſcular and tendinous parts about the articulation of the os femoris being removed, the

the capſular ligaments were found to be almoſt deſtroyed; and the head of the bone, the acetabulum, and part of the ilium and pubis, were ſo much corroded, and ſo ſpongy, that they were eaſily penetrated by the probe. The ſtomach was eroded a little in two places. The reſt of the abdominal viſcera had been in a ſound ſtate before death, but they were now become very offenſive. On opening the thorax, we found the left lobe of the lungs in a purulent ſtate, having little coheſion. The right lobe was alſo affected, having been much inflamed, and adhering in many places to the pleura. The heart was a little eroded in ſeveral places, and ſomething like pus appeared between it and the pericardium. In ſhort, all the internal parts of the thorax ſeemed to have been in a diſeaſed ſtate.

Observations.

From the foregoing diſſection it appears, that this patient's lungs had been principally affected; which muſt have happened in the courſe of twelve days before his death, as, to

our knowledge, he never had any fixed complaint in his breaſt before, and we had been acquainted with him for many years. He was ſubject to the rheumatiſm at times; but otherwiſe enjoyed a good ſtate of health. The condition in which we found the head of the os femoris, acetabulum, ilium, pubis, &c. may be looked upon as the conſequence of the gangrenous ſtate of the adjoining parts, which did not ſhew itſelf till after he was attacked with a fever, hoarſeneſs, and pain in his breaſt. He had no pain in the adjoining parts for three weeks after the aneuriſmal ſac burſt; and the opening looked well, and he had every appearance of recovering, till he was ſeized with this diſorder in his lungs, ſuppoſed to proceed from cold. But all this time the ulcerated part diſcharged a great deal of pus; and there were ſinuſes between the interſtices of the muſcles of his thigh. From theſe different ſymptoms and circumſtances of his caſe, doubts ariſe in my mind; and the following query occurs to me, viz. Whether this diſeaſe of his breaſt was occaſioned by a determination or tranſlation of pus upon his lungs after abſorption? or,

Whether

Whether it was an accidental affection of his lungs, brought on by cold? I cannot take upon me to determine, what may be the general opinion relative to this queſtion: but I beg leave to obſerve, that as nature had taken ſuch effectual methods to prevent the fatal tendency of the original diſeaſe; and as the patient continued in a fair way of recovery for ſo long a time after the burſting of the aneuriſmal ſac; it may be preſumed, that if this adventitious diſorder of his lungs had not taken place, he in all probability would have recovered. At any rate, I think it will be readily allowed, that the vires medicatrices naturæ, were never more powerfully exerted, nor more evidently diſplayed, than in this caſe.

IX.

Account of a ſingular Caſe in Midwifery, by William Farquharſon, *M. D. Fellow of the Royal College of Surgeons,* Edinburgh, *and correſponding Member of the Antiquarian Society of* Edinburgh, *and of the Medical Society of* London.

THE following paper was accidentally found, two or three years ago, by the Laird of Mackintoſh, in his charter-room; and was communicated to me by Mr Charles Mackintoſh, writer to the ſignet.

I ſhall tranſcribe it verbatim; as I think it ought to be publiſhed as a literary curioſity, if not as an uſeful medical fact. I ſhall ſubjoin the reſult of ſome enquiries made on the ſpot by Mr Mackintoſh, which muſt remove every doubt of its authenticity.

At

At Moyhall, the 22d day of November 1738 years.—In preſence of James Mac-Queen younger of Corribrough, Baillie to the Honourable the Laird of Mackintoſh, ſitting in judgment in a fenced court.

The which day, anent an information laid and given in before the ſaid Baillie, in relation to Elſpatt Grant of the pariſh of Ardclach, and who, in the month of April 1736, came and reſided in this pariſh of Moy, being with child; and the time of her delivery being come, ſhe contracted her pains, which laſted for three days; during which time the child continued in the birth, till at length ſhe ſplit in the lower part of her belly, at which ſplit or rent the child came to the world.

The informer wanting to know the certainty of the above facts, craved, that ſuch perſons as were preſent at the above birth, be deponed upon the matter and circumſtances thereof, as they happened.

Which deſire the baillie granted; and gave warrant to the officers of court to cite all ſuch as were preſent.

Accordingly,

Accordingly, Iſabel Tarrell, ſpouſe to Alexander M'Kinlay in Dalreich of Moy, being ſummoned to this diet, and, in obedience to the ſaid charge, compearing, and being ſolemnly ſworn and interrogate upon the above matters, and what ſhe knew of the facts above repreſented, depones, That ſhe was not preſent at the birth, nor did ſhe ſee the ſick woman for ſome time thereafter; but, when an opportunity offered that ſhe did ſee her, ſhe enquired if that part of her body which rented, was as heal as any other part of it? to which the ſaid Elſpatt Grant replied, that it was; and accordingly allowed the deponent to take a ſight or view of the ſame. And depones, That ſhe accordingly did ſight and view the ſaid rent, which happened in the lower part of her belly, with a ſquaint, and ſeemed to her only as the ſcratch of a big pin in her body, it being at that time almoſt cured. Cauſa ſcientiæ patet: And this is truth, as ſhe ſhall anſwer to GOD. And depones ſhe cannot write.

Alſo compeared Anna Kennedy in Moymore, relict of Ewan M'Pherſon, ſome time tenant

tenant in Moy; being alſo ſummoned to this diet, and duly ſworn and interrogate, depones, That ſhe acted the part of midwife, and was by her the ſaid Elſpatt Grant for the ſpace of three days during her pains, which continued all the time; and that the child continued all that time in the birth, till in the end, the ſick woman's belly ſplit in the lower part thereof, towards the left ſide, with a ſquaint downwards, at which the child came to the world; and that ſhe the deponent took away the after-birth at the ſame ſplit or rent, by which ſhe perceived the woman's entrails through the ſaid rent. And depones, That ſhe knew the ſaid rent to heal of itſelf, without any ſewing, or any other medicinal application, except anointing it with butter, mixed with white ſugar. And this is truth, as ſhe ſhall anſwer to GOD. And depones ſhe cannot write.

Alſo compeared Robert Smith in Dalreich, a married man, aged 45 years or thereby, being alſo ſummoned to this diet, and duly ſworn and interrogated, depones, That the above Elſpatt Grant, being an acquaintance and a relation

relation of his, he went on purpoſe to ſee her, at the time of her being in travail, and hearing that ſhe was in ſuch diſtreſs; but before he came to the houſe where ſhe lay, there was a ſeparation; but that he was ſo curious to ſee the wound or rent, which the women then preſent would not allow him, that he preſſed hard to ſee it, and called for a light for that purpoſe. Depones, That he ſeed the ſaid rent ſquaintly, from the ſhare bone to the left ſide, and actually did ſee the woman's entrails. And depones, That the ſaid ſplit or wound was cured and healed in the manner repreſented in the above depoſition. Cauſa ſcientiæ patet. And this is truth, as he ſhall anſwer to GOD.

Alſo compeared Mary Ogilvie, ſpouſe to Alexander M'Pherſon taylor in Moy, aged 30 years or thereby, being alſo cited to this diet, and duly ſworn and interrogate, depones, That being in the neighbourhood, ſhe was called by the above Anna Kennedy, midwife, to the aſſiſtance of the ſick woman; and, after entering the houſe, ſhe heard a crack or noiſe about the ſick wife, and, in a few moments thereafter,

thereafter, heard another, which ſhe ſuppoſed was one of the couples of the houſe that broke; but, looking over the ſick woman, found it was her belly that ſplit, through which rent or ſlit the child fell out; and thereafter, ſhe did ſee the midwife take away the after-birth through ſaid rent; which rent healed of itſelf, as above repreſented. Cauſa ſcientiæ patet, ſhe was ſick of a fright at the ſight, for three days thereafter. Which is truth, as ſhe ſhall anſwer to GOD. And depones ſhe cannot write.

Alſo compeared Margaret Dallas, ſpouſe to Lachlan M'Intoſh in Achnagall of Moy, aged 40 years or thereby, in obedience to the citation given her to this diet; and being duly ſworn and interrogate, depones, That hearing of the ſaid Elſpatt Grant's being in travail, ſhe aſked leave of her huſband to go and ſee her, hearing that ſhe was in great diſtreſs; and having obtained leave, went; and when ſhe came to the houſe where the ſick woman lay, ſhe ſeed the child ly by, a dead corpſe. Haying enquired what it was, the midwife, Anna Kennedy, told her it was the dead child: ſhe

ſhe the deponent then quarrelled her, why it was not buried; to which the midwife replied, That they were waiting its going along with the mother, who was at the expiring, as was thought: upon which ſhe the deponent called for a light to ſee the mother; and, after ſighting her, found the after-birth was hanging to her: upon which ſhe quarrelled the midwife for not being in her duty, and immediately obliged her to go about her office, which, with her the deponent's aſſiſtance, ſhe did, and accordingly brought away the after birth from her, at the ſame rent or ſlit that the child came to the world; and thereafter dreſſed the ſick woman in the beſt manner they could: the deponent propoſed to have ſewed her up, with the aſſiſtance of thoſe preſent, which was refuſed. Depones, That ſhe knows the ſaid rent to have healed without any application, except anointing the ſame with butter, mixed with white ſugar; and that the ſaid rent was from the navel, ſquaintly, to the natural part. Cauſa ſcientiæ patet: And this is truth, as ſhe ſhall anſwer to GOD. And depones that ſhe cannot write.

When

When Mr Mackintoſh firſt ſaw this paper at Moyhall, he thought the fact ſo extraordinary, that it deſerved further inveſtigation; and with that view, propoſed to examine ſome old ſervants who had been long in the family, and any perſon in the country who had been upon the ſpot when the fact happened.

The reſult of the examination was, that though the ſervants could not ſpeak from perſonal knowledge, they mentioned the fact deponed to by the witneſſes, as a ſtory they had very often heard, and which was univerſally believed in the country at the time it happened: That none of the witneſſes were alive; but Alexander M'Pherſon, the huſband of Mary Ogilvy, and his daughter, were alive. The firſt declared, that he was in the room when Elſpatt Grant was delivered; that he heard the crack, ſaw the wound, and, in fine, gave the ſame account as that ſworn to. The laſt declared, that ſhe had heard the ſtory from her mother an hundred times. An old man, who lived in the ſame village, declared, that he knew Elſpatt Grant very well; that he remembered the ſtory perfectly; and that ſhe was ſo thoroughly recovered, in a few

weeks

weeks after her delivery, that he ſaw her go in a cart to a village, at two or three miles diſtance, where ſhe was engaged to ſuckle a child, which ſhe did.

Beſides theſe, a great number of old people recollected the ſtory completely; and all declared, that the truth of it had never been ſuſpected.

X.

X.

*Hiſtory of a curious Caſe of the Tranſlation of Inflammation from the Lungs to the Brain, ending fatally in Hydrocephalus *; with an Account of the Appearances on Diſſection.* By *Dr* Mathias Gahagan, *Phyſician in* Grenada.

ON the 31ſt of July 1786, a negro about thirty years old, of a robuſt and rigid temperament, was ſeized with ſymptoms of fever, attended with a violent pain in his left

* As the term Tranſlation of Inflammation, may be thought to favour of the doctrines of lentor, viſcidity, and morbific matter; I beg it may be underſtood, that by uſing theſe words, I mean to convey the idea merely of one inflammation following another, and being apparently connected with it by a common cauſe.

Although the ſubject of inflammation remains ſtill involved in a good deal of difficulty, not to ſay obſcu-

rity,

ſide, juſt under the breaſt. It ſoon became ſo excruciating as to impede reſpiration and motion. The night before, having bathed in the ſea imprudently, while heated and in a copious perſpiration, he was ſoon after taken with rigours, to which alternate fluſhings and chills ſucceeded; and toward morning, he began to feel the pain and difficulty of reſpiration. His pulſe was very full and hard, his ſkin hot and dry; his countenance ſtrongly marked with diſtreſs and anxiety. Twenty ounces of blood were immediately taken, and he

rity, yet I think it is evident, that the moving fibre in inflammations ſeems to be primarily affected. I cannot conceive ſuch an idea as that of metaſtaſis; although it is extremely probable, that a certain ſtate of the maſs of blood, as well as of the living ſolids, is more or leſs compatible with the production of inflammation. What that ſtate is, may be difficult to determine: But it is unqueſtionably certain, that a flexile ſlender fibre, and a ſanguineous temperament, often eſcape the more acute and dangerous attacks of inflammation, when the rigid, firm and robuſt, are very liable to the moſt violent affections, if expoſed to the ſame cauſes. I talk of the conſtitution at large, without adverting to ſome local inflammations, which have peculiarities of cauſe and phænomena.

he was ordered, every two hours, ſtrong doſes of nitre, camphor, James's powder, and thebaic extract. In ſome hours, the ſymptoms ſtill increaſing, he was blooded again to fifteen ounces, and a large bliſter applied to his ſide. A ſolution of ſalts was alſo given, as he had been coſtive for ſome days, but without much effect. Next morning, I ſaw him for the firſt time. The inflammatory ſymptoms were then ſo little abated, the anxiety and difficulty of breathing ſo urgent, that I blooded him again to ſixteen ounces; and I ordered the ſolution to be repeated with emetic tartar, and the powders after the operation of the ſolution, without the extract. His blood had been ſizy from the beginning; but the laſt exhibited the ſtrongeſt marks of inflammatory affection. The ſurface, which retracted to leſs than one half of the diameter, was as thick and tough as buckſkin. The bliſter had riſen, but without affording him any relief. In the evening, the ſymptoms were not ſo violent, but continued conſiderably urgent. I therefore took blood, from ten to fifteen ounces more, from the orifice made in the morning.

On the 2d of Auguſt, the ſymptoms were all conſiderably abated. The pain, difficulty of breathing, and anxiety, were all greatly diminiſhed. He had leſs fever; his pulſe was ſoft and undulating; his ſkin moiſt. He had ſlept pretty well, and could ly on both ſides. I directed the powder to be continued, and his body to be kept open. He complained much of pain, and difficulty in making water. This we conſidered to be the effect of the bliſter, as he had no previous affection of the urinary paſſages. A diuretic anodyne mixture was ordered to be taken freely. Hitherto no cough or expectoration had occurred. On the 4th and 5th he continued better, but ſtill felt ſome pain under his heart, on a full inſpiration. The following pectoral mixture was ordered, to facilitate expectoration, which now began to take place:

℞ Emulſ. e Sperm. Cet. lb. i.
Vin. Antimon. drach. i. Elix. Pareg. unc. ſs.
Acet. Scillit. unc. ſs. Sal. Nitri drach. i.
Syr. vel. Mel. q. s. M. cap. coch. ii. vel iii.
ſi tuſſis ſupervenerit.—His powders were alſo continued.

On

On the 6th, 7th, and 8th, he grew better. Little or no pain was felt in the ſide. He ſeemed in a certain way of convaleſcence. As he had undergone ſo much evacuation, and complained of weakneſs, a light decoction of bark with elixir of vitriol was ordered for him. On the 9th and 10th he continued ſtill better, had a good appetite, and began to feel his ſtrength reſtored. Having ventured imprudently out in the open air for a conſiderable time, he was ſuddenly ſeized, on the evening of the 10th, with violent pain of his head, which increaſed all night, attended with fever, and violent delirium. Our aſſiſtant, who viſited him in the abſence of my partner and myſelf, ordered his head to be ſhaved, and a bliſter to be applied, and gave him pretty large doſes of muſk, camphor, and James's powder, in the form of a pill. He continued all next day violently affected; his ſkin exceſſively hot; pulſe full and quick; his countenance wild. He frequently ſhook his head, and toſſed himſelf from ſide to ſide, attempting to bite thoſe who approached him. In the evening when I arrived, I found him held forcibly down by a number of people, whoſe

ſtrength was ſcarcely equal to it. His countenance was wild and furious; his eyes ſparkled, and ſeemed prominent in their ſockets. He uttered conſtantly indiſtinct but violent ſounds, ſhaking his head with threatening horror at thoſe who held him. He was awed a little by my preſence, and ſubmitted, with ſome difficulty, to the operation of dividing the temporal artery; on which, from the ſymptoms already mentioned, the fulneſs of his pulſe, and the violence of the other febrile ſymptoms, I became determined. After loſing eight ounces of blood, which flowed freely, he ſoon began to grow more calm. His pulſe ſunk almoſt to the natural ſtandard, and his countenance became milder. As the bliſter already applied to his head had ſcarcely frittered the ſkin, I ordered his head to be well bathed with lime juice, and a ſtronger bliſter to be applied, with a proportion of flour of muſtard. The blood drawn from the artery ſeemed almoſt an uniform maſs of whitiſh coagulum, but had little conſiſtence, and did not retire from the ſide of the veſſel; nor did the ſerum ſeparate. His eye ſtill retained ſomewhat of a wild

a wild ſtare, and his intellectual faculties were not perfectly reſtored. At noon he was pretty much in the ſame ſituation; but I found a tendency to ſubſultus tendinum. As he continued coſtive, glyſters were given, with fœtid tincture; and, by the ſuggeſtion of a medical friend, a ſeton was put in the neck, although without any confident hope of benefit; ſmall doſes of æther were alſo given now and then in cool water, which he called for. In the evening his pulſe roſe to above 100, and was almoſt as ſtrong as it had ever been; and the other ſymptoms of fever and inflammation recurred with great violence. His eyes particularly appeared horribly wild and ſtaring, and his mind was moſt violently affected; he talked inceſſantly and loudly, but very indiſtinctly, articulating apparently with difficulty. The ſtrangury had returned, and gave him great pain. At midnight, on viſiting him again, I found him reſtleſs and uneaſy; his pulſe ſomewhat ſlender. I ordered a camphorated julep, with a few drops of laud. liq. (not more than 30) to a pound of the julep: towards morning being thirſty, by the neglect of his attendants, and the imbeci-

lity of his underſtanding, he ſwallowed what remained of the julep, and fell into a ſleep, which laſted till I arrived about nine. On waking he appeared pretty diſtinct; but his pulſe was very ſlender and quick. The bliſter had riſen well; it was dreſſed with epiſpaſtic ointment, and ſinapiſms applied to his hands and feet; and as no ſymptom of inflammation was now ſo urgent as to contra-indicate the uſe of corroborant or tonic medicines, and nature ſeemed to require them, the bark was given in ſmall doſes, with a dram of ſpir. nitr. dulc. in each doſe, and nouriſhment, with a little wine, recommended. But the diſguſt he felt from the julep, made him obſtinately refuſe every thing. In this perplexing ſituation, we had no opportunity of exerciſing our judgment. Tempted to try again the topical evacuation, at leaſt by cupping, we had the beſt-grounded apprehenſions, that as ſoon as the violent excitement was over, (the different attacks had the appearance of paroxyſms, and were generally ſucceeded by great debility), we ſhould have reaſon to repent it, as an extravaſation appeared evidently to have taken place to a certain degree.

Although

Although a conſiderable degree of inflammatory congeſtion might ſtill remain in the veſſels of the brain, ſtill we were induced to forego the conſideration of the ſtimulating effects of mercury, and make a trial from which only we could derive any hope; in which opinion we were confirmed, by the concurring advice of an ingenious medical friend. A pill was ordered every three hours, with three grains of calomel, and half a grain of opium, which ingredient we were reduced to the neceſſity of uſing, to prevent the increaſe of a diarrhæa which had taken place with the laſt attack of ſtrangury, owing, perhaps, to the ſympathy which exiſts between the rectum and the neck of the bladder, as ſuch an event muſt defeat our main object. Frictions with mercurial ointment were ordered on his thighs and abdomen. In the morning he was more compoſed; his pulſe about 100, and full; pupil very much dilated; conſtant watchfulneſs and incoherence of idea, (the delirium mite). Took two pills in the night; makes water with great difficulty. Pills and frictions to be continued. A diuretic mixture was ordered to be taken freely. External impreſ-

ſions

ſions to be diminiſhed; and a glyſter with ſixty drops of laudanum to be given, if the purging continues. The 13th—Took his pills all yeſterday and laſt night. Pulſe natural, ſkin cool, ſeems more ſenſible, and leſs watchful; pupil ſtill dilated. Although he has taken eight pills, and friƈtions have been uſed all over his body, his mouth does not appear affeƈted; diarrhæa checked. The 14th—Takes his pills and nouriſhment well; ſeems much more ſenſible; gives diſtinƈt anſwers. No appearance of the mercury having reached his mouth, although the pills have been conſtantly given. Great difficulty in making water. Pills to be continued three times a day, and calomel rubbed on the gums. The 15th—Grew refraƈtory, and could not be perſuaded to take more than one pill all day. The over-anxious attention of his attendants induced them to deceive him, by giving him three or four pills at once when he could be prevailed on to ſwallow, which unfortunately brought back the purging. The 16th—Reſtleſs in the night, but ſtill more ſenſible; greatly reduced by the purging. Pulſe about 100, and ſlender. Subſultus

ſultus and collectio not noticed for two days. Complains of his throat, but no certainty of the mercury having reached it. Strangury violent. Pills to be interrupted. Frictions and the mixture contiued; nouriſhment to be given frequently with wine. Clyſters, as already preſcribed, have been often thrown up, and a cordial anodyne mixture given, to check the purging; but to no purpoſe. Still continues to diſcharge involuntarily green inſpiſſated bile. He refuſed every thing offered in the night; and, ſinking gradually into a ſtate of ſtupor, died at ſix o'clock in the morning.

Dissection.

The integuments being removed, notwithſtanding our caution in ſawing, the dura mater was divided, and a quantity of water ruſhed out on raiſing the cranium. We were able, however, pretty exactly to aſcertain the quantity, by having placed the brain in a diſh. We made allowance for the red blood that might have been effuſed from the mouths of

ſmall

ſmall ruptured red veſſels. The quantity of ſerum or bloody water found between the dura and pia mater, was from ſix to eight ounces. The veſſels on the meninges exhibited ſtrong marks of inflammation; but the brain itſelf and the ventricles were in a natural ſtate. In the latter a ſmall quantity of water, ſuch as is generally found, was diſcovered. We next inſpected the cavity of the abdomen, and found all the viſcera ſound, except the bladder, the neck of which was conſiderably contracted. At the fundus and ſides, there were evident marks of inflammation; and a number of ſmall protuberances appeared, particularly at the fundus, as large as peas. On cutting into them, we found it was grumous blood, which had been effuſed under the ſkin. In the ſtomach was found half a pint of green inſpiſſated bile, ſuch as had been diſcharged for days by ſtool. The gall-bladder was alſo turgid with the ſame. We next removed the ſternum, and found the right lobe of the lungs ſound: the left adhered to the pleura every where; was contracted; and on ſeparating its lower part from the pleura and diaphragm, exhibited a moſt curious

rious appearance. The whole lower edge, and conſiderably upwards on the under and upper parts, appeared of a very dark brown colour, as if gangrenous. On cutting into it, the internal part appeared of the ſame colour; but the ſubſtance was not tender; it appeared to be in the higheſt degree of inflammation. On ſqueezing the internal parts when cut into, ſmall globules of pus were perceivable. It was particularly dark-coloured towards the lower edge of the lobe; and, as we approached the large bronchial veſſels, put on a chequered or marble-like appearance, when cut; ſhewing in places the true ſpumous matter of the lungs interſperſed with a dark bloody fluid, correſponding exactly with the ſpots on the ſurface. The heart appeared larger than common, and the coronary veſſels were very turgid.

XI.

XI.

The Hiſtory of two Caſes of Amputation, in which Compreſſion of the Artery was ſucceſsfully made by the Finger of an Aſſiſtant, as there was no room for applying the Tourniquet. By Mr Alexander Johnſton, *Surgeon in the Royal Navy.*

1.

ON the 28th of May 1781, the Atalanta of 16 ſix-pounders, and the Trepaſſy of 10 four-pounders, engaged the Continental frigate Alliance of 28 twelve-pounders, 4 nine, and 8 ſix-pounders, in all 40 guns.

The action on the Atalanta's ſide was continued three hours and an half; on the Trepaſſy's, two hours. Her commander Captain Smith being killed, the Lieutenant ſtruck. Both ſhips were captured. The right arm of Lieutenant Arden of the Atalanta was carried away,

away, half way between the elbow and ſhoulder. He came down to me of himſelf.—Here, ſays he, meſſmate, I have loſt my arm; do what you may think neceſſary, that I may go upon deck. I amputated immediately, about two inches from the head of the humerus, that bone being much ſplintered. As there was not room to apply the torniquet, Mr M'Kean, the purſer, made a compreſſion with his finger on the ſubclavian artery, which anſwered every purpoſe. To this practice I was led, from Dr Monro, Profeſſor of Anatomy and Surgery at Edinburgh, having ſuggeſted it as practicable, when I attended his lectures in the years 1775–6.

In the operation, two veſſels were taken up. In this caſe, the medullary artery was pretty large, and bled freely. A little lint, dipt in a ſolution of blue vitriol, was applied to its orifice; and the ſtump was dreſſed as uſual with lint, and ſtraps of cerate round the edges. With ſome difficulty he was prevailed upon to go to bed, as he ardently wiſhed to go upon deck again.

About an hour after this, he informed me that the ſtump bled freely. I undid the dreſſings,

ſings, and found that the hæmorrhage proceeded from the medullary artery. I then applied a little powder of blue vitriol on lint, and afterwards dreſſed the ſtump as before. But about an hour and a half after this, I was again informed that it bled freely; and upon examination, I found that he had loſt a conſiderable quantity of blood from the medullary artery. At this time, I had my hands full of the people coming down very faſt; and as no time was to be loſt, a ſtronger ſtyptic ſeemed to be neceſſary. A little lint dipt in the elixir of vitriol was therefore applied to the bleeding veſſel, and the ſtump dreſſed as before. I ordered him alſo, for common drink, water acidulated with elixir of vitriol, to the extent of a dram to two pounds of water. At 10 o'clock at night, I found that no hæmorrhage had enſued from the time of this application; but as he complained of weakneſs, and had no inclination to ſleep, a draught was given him, conſiſting of thirty drops of liquid laudanum in an ounce of water.

After this there was no return of hæmorrhage. A free ſerous diſcharge took place from

from the ſtump. He was directed to take the Peruvian bark, acidulated with elixir of vitriol. Anodynes were given him occaſionally, and his belly was kept regular by injections. A diſcharge of well-digeſted matter in a few days took place; and he continued gradually to recover. On the 7th of June, the Atalanta was retaken near the mouth of Boſton harbour, and on the 15th arrived at Halifax. Good lodgings were provided for him on ſhore; and, at his own requeſt, I attended him during the remainder of the cure. On the 2d of July, the ſtump was completely cicatrized.

II.

On the 21ſt of April 1782, when his Majeſty's frigates the Grana and Charleſtown, were cruizing off the river Delaware, a fleet of thirteen ſail were ſeen, and both ſhips chaſed. A ſhip and brig, letters of marque, brought to, with the view of engaging the Charleſtown; but upon ſeeing our force, they endeavoured to make off; which occaſioned

the Charleſtown to fire ſeveral ſhot. After the Captain of the Navarre brig came on board, he acquainted Captain George, that one of his boys, John Norwood, aged 16, was wounded in the thigh, and he believed it fractured. Mr M'Culloch, my firſt mate, accompanied me on board the Navarre.

We found him lying upon deck, a free ſtream of blood iſſuing from the wound. He was wounded on the upper and exterior part of the right thigh, with a nine-pound ſhot. The muſcles on the poſterior part of the thigh were much lacerated. The femur was divided about three inches from the acetabulum; and the vaſtus internus, pectineus, and triceps, were the only muſcles left entire. The femoral artery was not injured; but the returning ſmall veins, and the arteries which ſupplied the muſcles behind, bled freely. On firſt ſeeing him, a compreſſion was made on the femoral artery, at the ring of the external oblique muſcle. This having been before neglected, he had loſt much blood.

In this caſe, immediate amputation was agreed upon. The laceration reached as high as the os ilium. But I propoſed to ſave as much

much of the muſcles and ſkin remaining entire on the inſide of the thigh, as to make a flap, to be brought up on the exterior part, to expedite the cure. This was accordingly done, taking up the blood-veſſels as they were divided, which were nine in number, excluſive of the femoral artery, which was referred to the laſt, when a ligature was thrown around it, excluding the nerve. The bone was taken off exactly below the leſſer trochanter; and I finiſhed the operation, by ſecuring the flap at the exterior and upper part. It nearly covered one half of the ſtump. It may be proper to obſerve, that a ſcalpel was employed in dividing the ſoft parts. During the operation, he behaved with the greateſt courage and reſolution. He fainted once, but was ſoon recovered by the application of ſpirits of hartſhorn to the noſtrils, and a draught of wine and water. After the operation, I gave him a draught with forty drops of laudanum; and before I left him, he fell aſleep.

As he had loſt a vaſt quantity of blood before the compreſſion was made on the femoral artery, and his pulſe was very low, I

directed for him a mixture of the powder of bark in port wine. He was ordered for drink, barley-water acidulated with elixir of vitriol; and opiates were to be given, ſufficient to eaſe pain, and procure ſleep. The ſurgeon of the Navarre was left to attend him.

With our prizes we ſteered for New-York; and the prize-maſter had directions to keep cloſe to the Charleſtown, that I might viſit him daily. But they ſeparated from us in hazy weather, during the night. Five days after, we fell in with them off New-York; when they acquainted us, that he had died of a locked jaw.

During the operation he loſt very little blood, the veſſels being taken up as they were divided. And the compreſſion with the finger, ſuggeſted by Dr Monro in his lectures, fully anſwered every intention of the tourniquet, which in this caſe could not be applied.

SECT.

SECT. III.

MEDICAL NEWS.

THE following account of the life, writings, and character, of the late Dr John Hope, profeſſor of botany at Edinburgh, was delivered by Dr Duncan, at the meeting of the Harveian Society of Edinburgh, held annually on the anniverſary of the birth-day of Dr Harvey, the diſcoverer of the circulation of the blood, and inſtituted with the view of preſerving the remembrance of diſtinguiſhed merit, of encouraging the exertions of riſing genius, and of holding forth to induſtrious youth examples worthy of imitation.

After a few preliminary obſervations on the nature of the inſtitution, Dr Duncan thus proceeded.

"At this meeting, Gentlemen, I mean to preſent you with a ſhort account of the life, writings, and character of the late Dr John Hope, profeſſor of botany in the Univerſity of Edinburgh. Were my abilities equal to the taſk, there can be little doubt, that a proper picture of ſuch worth as was exhibited in his conduct, might excite emotions in the mind of every hearer, which could not fail to be productive of the beſt effects: And, however unequal I may feel myſelf to the undertaking, yet I truſt, that even a ſimple relation of facts, and an humble attempt to do juſtice to ſuperior merit, may be favoured with ſome ſhare of your approbation.

Dr Hope was born at Edinburgh, on the 10th of May 1725. He was the ſon of Mr Robert Hope, a reſpectable ſurgeon, whoſe father, Lord Rankeilar, made a diſtinguiſhed figure as one of the Senators of the College of Juſtice, in the kingdom of Scotland. By his mother, Marion Glaſs, he was deſcended from the ancient family of Glaſs of Sauchie, in Stirlingſhire. When he had arrived at the period of life at which the ſtudy of the learned languages is uſually begun, his father placed

ced him at the ſchool of Dalkeith, then one of the moſt celebrated in Scotland, from the abilities of Mr Barclay, whoſe philological labours are ſtill highly inſtructive both to the Greek and Latin ſcholar. After finiſhing the uſual courſe of ſchool education, with no inconſiderable degree of approbation, he entered to the Univerſity of Edinburgh; and having, as it were, an hereditary predilection for the healing art, his attention was ſoon particularly directed to that branch of ſcience.

While he had the good fortune of ſtudying at a period when mathematics was taught at Edinburgh by the immortal M'Laurin, and other branches of philoſophical knowledge were entruſted to able teachers, he had alſo the happineſs of being the pupil of thoſe eminent profeſſors, whoſe induſtrious exertions not only laid the foundation of the medical ſchool at Edinburgh, but gave it a diſtinguiſhed reputation over all Europe. At that period, the late Dr Monro, and his worthy colleagues, had matured their lectures by induſtrious reconſideration for a ſeries of years, while they ſtill poſſeſſed that vigour, both of mind and body, which rendered them equal to the

greateſt exertions. But if he had thus an opportunity of profiting by the beſt fruits of their labours, he had alſo a peculiar advantage in the inſtructions he derived, from witneſſing the practice, and hearing the remarks of an intelligent and affectionate father. It is not therefore wonderful, if, among the companions of his ſtudies, to whom he was endeared by his manners, he ſhould alſo have been eſteemed for his knowledge; and of theſe there were many who have, ſince that, been juſtly diſtinguiſhed as eminent practitioners and ingenious authors. Among theſe we may mention the names of David Clerk, Patrick Ruſſell, William Fordyce, and Richard Smith, names which would do honour to any liſt. With theſe and ſimilar aſſociates, Dr Hope made a diſtinguiſhed figure in the Medical Society of this place; and he was one of the firſt whom that uſeful inſtitution, which has now for many years been juſtly celebrated as an happy ſource of improvement to the induſtrious ſtudent, raiſed to the rank of an honorary member. After finiſhing his academical education at Edinburgh, he viſited other medical ſchools; and he had thus an opportunity

nity of ſtudying botany; a branch of medical ſcience to which he had ſhown an early propenſity, and to which he had always beſtowed no inconſiderable degree of attention, under Bernard Juſſieu, profeſſor at Paris, at that time one of the moſt celebrated botaniſts in the world.

But the good fortune, with which many parts of his earlier ſtudies were attended, did not flow in an uninterrupted ſeries. For, ere the courſe of education was finiſhed, he ſuſtained an irreparable loſs by the death of his father; an event which not only deprived him of the ability of proſecuting his ſtudies with the advantages he had formerly enjoyed, but which rendered his exertions neceſſary, both for his own ſupport, and for the aſſiſtance of thoſe, to whom he was not leſs ſtrongly attached by the ties of affection than of nature.

Upon his return to his native country, he obtained the degree of Doctor of Medicine, from the Univerſity of Glaſgow, in the beginning of the year 1750. A few months after that, he was admitted a member of the Royal College of Phyſicians in Edinburgh, and entered upon the practice of medicine in this

this city. After he had continued about ten years in practice, diſcharging the duties of his profeſſion, with a degree of judgment, of attention, and of humanity, which did him great honour; by the death of Dr Alſton, the botanical chair in the Univerſity became vacant. Dr Hope's early attachment and ſteady partiality to that branch of ſcience, naturally pointed him out as a ſucceſſor, into whoſe hands the credit of the Univerſity might ſafely be entruſted, and by whoſe exertions, its fame might not only be ſupported, but extended. Accordingly, by a commiſſion from his Sovereign, dated the 13th of April 1761, he was appointed King's botaniſt for Scotland, and ſuperintendant of the royal garden at Edinburgh. A few weeks after this, he was elected by the Town-Council of Edinburgh, as the ſucceſſor of Dr Alſton in the profeſſorſhips both of botany and materia medica; and thus he became one of the members of the faculty of medicine in the Univerſity. After he had continued for about ſix years to give regular courſes of lectures on theſe ſubjects, with no leſs credit to himſelf than benefit to his hearers, teaching the one branch during the Summer,

mer, and the other during the Winter months, he found that his health was conſiderably impaired; which was aſcribed, and probably not without juſtice, to his unwearied and conſtant exertions as a teacher. From this he was led to form the reſolution of reſigning the materia medica, and of afterwards ſolely confining his labours as a teacher, to his favourite ſcience of botany. This reſolution he carried into effect in the year 1768; and by a new commiſſion from his Majeſty, dated the 8th of May, he was nominated Regius Profeſſor of Medicine and Botany in the Univerſity, and had the offices of King's botaniſt and ſuperintendant of the royal garden conferred upon him for life, which, till that time, had been always granted during pleaſure only. But although he reckoned his ſtate of health incompatible with a faithful diſcharge of the duties of two profeſſorſhips, each requiring much application in the way of ſtudy, yet this did not prevent him from beſtowing even an uncommon degree of attention on very extenſive private practice; and, not many many months after he had reſigned the profeſſorſhip of materia medica, he was elected

phyſician

phyſician to the Royal Infirmary, then vacant by the death of the late worthy Dr David Clerk. The duties of this office he diſcharged, till almoſt the day of his death, with a degree of attention and humanity, which can hardly fail to be remembered by thouſands of the indigent, with the warmeſt feelings of gratitude.

About ten years after Dr Hope had ſettled in buſineſs, he married Juliana Stevenſon, the daughter of Dr Stevenſon, an eminent phyſician in Edinburgh. By her he had four ſons, and one daughter; and although it is not to be expected that a parent can ever be altogether without care, yet it is perhaps a parent alone who can taſte real ſublunary happineſs to its fulleſt extent. It was the will of Heaven, to beſtow upon Dr Hope no inconſiderable ſhare of domeſtic felicity. While, however, he thus continued to enjoy the ſmiles of fortune at home; while he received the moſt flattering marks of eſteem from the learned abroad, having been elected a member not only of the Royal Society of London, but alſo of ſeveral celebrated foreign ſocieties, and having been enrolled in the

the firſt claſs of Botaniſts even by the great Linnæus, who denominated a beautiful ſhrub by the name of Hopea; and at a time when he might be juſtly conſidered as at the very head of his profeſſion in Edinburgh, holding the diſtinguiſhed office of Preſident of the Royal College of Phyſicians; he was ſeized with an alarming illneſs, which, in the ſpace of a few days, put a period to his valuable life, on the 10th of November 1786, in the 62d year of his age.

By this event, while the public ſuffered ſeverely, his own family ſuſtained an irreparable loſs; and although he might with confident ſatisfaction reflect, that, by provident induſtry, he had ſecured them againſt want, yet it is but natural to ſuppoſe, that, even in his laſt moments, it would be a ſource of ſome anxiety to him, that none of his children could then be conſidered as ſettled in life. What, however, has ſince happened, may afford conſolation to other parents in ſimilar circumſtances; for within the ſhort ſpace of a month after his death, all his ſons were placed in ſituations, where even moderate induſtry and abilities can hardly fail to inſure ſucceſs.

ſucceſs. Thus, by the aid of an overruling Providence, more has been done for them, than an affectionate and zealous parent could have reaſonably expected, even in the moments of his moſt ſanguine hopes.

Having thus given a brief ſketch of Dr Hope's life, I ſhall, in the further proſecution of this diſcourſe, offer a few obſervations on his character and conduct, as a Botaniſt, and as a Man.

Botany, while it was his principal official employment, was alſo, as we have already ſaid, his favourite ſtudy. To demonſtrate how much in this particular his country was indebted to him, let us compare the condition in which he found that ſcience at this place, with the ſtate in which he left it. Dr Hope's predeceſſor, although a learned and worthy man, could never obtain ſufficient public funds, for the eſtabliſhment of a proper botanical garden at Edinburgh; and from the ſituation, as well as the extent of the garden at that time, joined to the ſmallneſs of its conſervatories for plants, it could boaſt of no riches in the way of exotics. The only field for improvement, therefore, to the botanical

botanical ſtudent, was the environs of Edinburgh, to which it muſt indeed be allowed, that nature has been uncommonly liberal, in affording a very great variety of indigenous vegetables. In this ſituation, the eſtabliſhment of a new garden naturally ſuggeſted itſelf, as a grand and important object; and in the accompliſhment of this, Dr Hope exerted that degree of induſtry and judgment which will ſeldom fail of ſucceſs, where the object, whatever its magnitude may be, is rational and proper. The attachment which the Earl of Bute is well known to have for botanical ſtudies, and the great expence he had incurred for the engravings of the vegetable ſyſtem, publiſhed under the name of Sir John Hill, naturally pointed out his adminiſtration as a proper period for making application for public aid to this undertaking. It was peculiarly fortunate for this application, that Lord Bute was at that time the miniſter of a King, no leſs regarded at home as the father of his people, than celebrated over the world as the patron of ſcience. In conſequence of a judicious memorial, the wiſhed-for aſſiſtance was obtained. But the procuring ſufficient

funds

funds for the purpoſe, was not the only difficulty that Dr Hope had to combat. Money alone cannot create a botanical garden; and, in ſuch an undertaking, it is a much eaſier matter to miſpend money, than to employ it to the beſt advantage. Dr Hope fixed upon a ſpot for the ſituation of his garden, which, while it was of leſs intrinſic value than almoſt any other he could have ſelected, poſſeſſed many local advantages. While in the vicinity of the city, it was yet removed from the influence of its ſmoke, and it afforded a very conſiderable variety both of ſoil and expoſure. Although the greater part of it conſiſted either of barren ſand or uſeleſs moraſs, and could therefore be purchaſed at an eaſy rate, Dr Hope well knew, that, by proper culture, theſe would be highly conducive both to the beauty and utility of the garden; and the uncommon attention which he beſtowed on that culture, could only be equalled by the judgment with which it was conducted. His unwearied exertions, in procuring for the garden the vegetable productions of every climate, could not be exceeded. His endeavours were conſtantly directed in adding, not

to

to the ſhow, but to the riches of the garden; and they were employed with ſuch ſucceſs, that, in a very ſhort time, the intelligent botaniſt might gratify his curioſity, in contemplating the rareſt plants of every country which has yet been explored, on a ſpot which, but a few years before, could be conſidered as little better than a barren waſte, hardly producing even a pile of uſeful graſs. A ſtriking proof of the power of human induſtry, when aſſiduouſly and judiciouſly directed to an important object.

But while theſe exertions were able to make ſuch progreſs, Dr Hope had yet reaſon to regret, that his endeavours, as well as his wiſhes, were much limited, by the ſcantineſs of his annual allowance. He could hardly, however, expect, that, during an expenſive and unnatural war, thoſe who were then the King's miniſters, would beſtow much attention on objects of ſcience. But no ſooner were the bleſſings of peace reſtored, and the Duke of Portland placed at the head of his Majeſty's councils, than Dr Hope ſaw that a moſt favourable opportunity was offered for ſupporting and increaſing the riches of his

garden, by obtaining a proper addition to its funds. He had then acceſs to his Sovereign, by means of a Nobleman uniformly diſtinguiſhed by the moſt amiable virtues; a Nobleman who had an hereditary claim to be the patron and protector of botany; a Nobleman, whoſe mother, then alive, but whoſe death Science may now ſincerely deplore, was at once the ornament of her ſex, and one of the greateſt encouragers of botanical ſtudies in the known world. The application for additional aid was no ſooner made, than it met with the attention it deſerved; and the readineſs with which it was granted, at once demonſtrated the views of the Miniſter, and the diſpoſition of the Man. This interpoſition was no effect of borough politics, or election manœuvres. It was ſo far ſpontaneous, that the application was unknown, even to the Town-Council, the Patrons of the Univerſity, till the requeſt was granted. And upon good information I can aſſert, that if this truly patriotic miniſter had continued but a ſhort time longer at the head of his Majeſty's councils, the Univerſity of Edinburgh would ſoon have been indebted to him

him for other marks of Royal favour. The Portland adminiſtration, even ſhort as it was, had the happineſs of beſtowing upon their country many ineſtimable bleſſings, which deſerve the warmeſt thanks of every Briton. But a faithful attention to national concerns of the firſt magnitude, did not prevent the Duke of Portland from alſo paying attention to Science; and he eſtabliſhed a permanent fund for the ſupport of the botanical garden at this place, which may render it not inferior to any in Europe. To Dr Hope, who was the firſt mover in every thing reſpecting that garden, his Country in particular, and Science in general, are indebted, for all the advantages reſulting from that eſtabliſhment.

But Dr Hope's induſtrious exertions were no leſs aſſiduouſly beſtowed in forming and enriching the garden, than in cheriſhing and promoting a zeal for botanical ſtudies. From but a very ſmall number of lectures, which were all that his predeceſſor ever gave, he gradually prolonged the courſe, till it became as complete as any one delivered at this place; and during all this extended courſe, he taught in ſuch a manner, as clearly demonſtrated a

degree of ardour and enthuſiam in himſelf, which could hardly fail to inſpire ſimilar emotions in others. But even ſuch precept, and ſuch example, were not the only means he employed for directing the attention of the induſtrious, ingenious, and laudably ambitious ſtudent, to this branch of ſcience. By beſtowing, entirely at his own expence, an annual gold medal, as a teſtimony of ſuperior merit, he gave a ſpur to exertion, from which the toils of ſtudy were alleviated by the love of fame, and the labours of induſtry converted into the pleaſures of emulation.

But while he encouraged the exertions of riſing genius, by honorary rewards to the living, he furniſhed it alſo with an additional ſpring of action, by the tribute of applauſe to the dead. The world were no ſooner deprived of the great Linnæus, than Dr Hope formed the reſolution of inculcating a conſtant attention to his merit upon the mind of every ſtudent. For this purpoſe, he erected, in a well-choſen ſpot within the garden, at his own private expence, an elegant monument to that illuſtrious botaniſt. It contains only this ſimple inſcription, Linnæo poſuit Joannes Hope.

Hope. But by thus placing the name of Linnæus in the eye of every ſtudent, he furniſhed an infallible means of conſtantly calling to their recollection the merit of his writings; while the intelligent and contemplative obſerver cannot paſs the ſpot, without feeling, in proportion to the liberality of his own mind, thoſe pleaſing emotions of gratitude which the generous heart is ever ready to beſtow on intrinſic merit.

But it was not merely on ſuch conſpicuous characters as thoſe of Linnæus, that Dr Hope employed his endeavours in beſtowing the juſt tribute of well-earned approbation. The operative gardener, who, under his direction, had conducted the formation of the new garden, John Williamſon, a worthy and reſpectable man, while employed in the ſervice of his Sovereign, was ſnatched from his family and friends by a premature death. Dr Hope well knew how much was owing to his induſtrious exertions; and he was unwilling that it ſhould either be forgotten by others, or unknown to poſterity. To record his merit, therefore, he alſo erected a monument in the garden.

It has often been ſuggeſted, and, in my opinion, it is an idea which ought to be cheriſhed, that, by a ſuitable monument in the ſame garden, a generous city ought alſo to record their grateful remembrance of the diſtinguiſhed ſervices of Dr Hope. It is with ſome ſatisfaction I learn, that a friend to genuine worth ſoon intends to pay ſuch a tribute of applauſe to his memory, in a more private manner. But although no marble ſhould ever be marked with his name, yet, while the Edinburgh botanical garden itſelf is entruſted to honeſt ſuperintendants, and ſhall ſurvive the wreck of time, it will furniſh to every beholder a more beautiful and magnificent monument, than human invention, or human art, can either deviſe or execute.

Dr Hope will alſo long be remembered, by thoſe writings on botanical ſubjects which he has bequeathed to poſterity. In theſe his principal object ſeems to have been, to make botany ſubſervient to the arts more immediately uſeful in life, and particularly to medicine. Of the truth of this aſſertion, beſides ſeveral publications intended to facilitate the ſtudy of botany,

botany, which, though they could not be eſteemed original works, were yet highly uſeful to his pupils, the papers which he publiſhed in the Philoſophical Tranſactions, on the Rheum palmatum, and the Ferula aſſafœtida, afford incontrovertible evidence. While he was one of the firſt, who, in conjunction with the late worthy Sir Alexander Dick, turned his atttention to the practical cultivation of rhubarb in Britain; by the publication to which I allude, he communicated the important truth, of its luxuriant growth in this iſland, to other botaniſts; and he demonſtrated the facility with which it might be multiplied. He lived to ſee it cultivated in ſuch abundance, that the Britiſh market was no longer under any neceſſity of depending upon foreign climates for this valuable, and once expenſive medicine. The cultivation of the aſſafœdita plant, has not hitherto, indeed, made equal progreſs: but Dr Hope has clearly ſhown, that, by proper attention, it not only bears the viciſſitudes of our climate, but grows in ſuch a vigorous and healthful ſtate, as to be fully impregnated with its active gum. There is therefore reaſon to

hope, that, by the exertions of future induſtry, the ſhop of the apothecary may be ſupplied with this article alſo from his own garden.

Beſides theſe publications immediately ſubſervient to utility, Dr Hope had in contemplation a more extenſive botanical work, on which he had beſtowed much ſtudy and reflection. It was his wiſh, to increaſe thoſe advantages which reſult from the very ingenious and uſeful artificial arrangement of Linnæus, by conjoining it with a ſyſtem of vegetables, diſtributed according to their great natural orders. For this purpoſe, no inconſiderable part of that time which he could ſpare from other unavoidable engagements, was employed in attempts to improve and perfect natural method in the arrangement of vegetables. In this work he had made very conſiderable progreſs; and it muſt be the ſubject of ſincere regret to every lover of botany, if, from the event of his death, the public ſhall be for ever deprived of thoſe fruits of his labours.

It is however to be hoped, that this work will yet be completed, and publiſhed by ſome one of the able botaniſts who were educated under

under his tuition. None of them, perhaps, is better qualified for the undertaking than his third ſon, now a profeſſor in the Univerſity of Glaſgow. But ſhould his preſent academical purſuits, or other unavoidable engagements, prevent him from turning his attention to this ſubject, there are ſeveral eminent botaniſts, who ought to be prompted by the ties of gratitude, to tranſmit to poſterity the writings of Dr Hope, in the form moſt conducive to his fame. To him, many of them are deeply indebted: for, of all the diſtinguiſhing, and amiable features of his character, none was more remarkable, than the generous and diſintereſted patronage which he afforded to modeſt merit, when repreſſed by indigence. Both the Eaſt and Weſt Indies, and indeed every quarter of the globe, can furniſh examples of his diſcernment of real worth, and of the munificence with which he cheriſhed and ſupported it. From a judicious ſelection of the objects of his patronage, he was enabled, by means of what he could eaſily ſpare from a moderate income, to ſend into the world ſuch merit, as might excite at once the envy and the admiration of thoſe, whoſe princely

princely fortunes enable them to beſtow the higheſt encouragement on ſcience.

Although he poſſeſſed from nature a conſiderable heat of temper, yet this was ſo regulated by the dictates of prudence, that it led only to ſuch exertions as were good and uſeful. Although he often mentioned to his moſt intimate friends the trouble it was neceſſary for him to beſtow, in combating the keeneſs of his paſſions; and although he frequently expreſſed his regret that he had not been able to overcome them, yet, after an intimate connexion for more than twenty years, I am unacquainted with even a ſingle inſtance, in which they betrayed him into any impropriety of conduct. Paſſions thus regulated, are rather objects of deſire, than of regret; for it is by theſe alone, that the cool indifference of philoſophy can be made to partake of the tender feelings of human nature.

In one word—Dr Hope's conduct through life, exhibited to every attentive and candid obſerver, a ſtriking picture of an able philoſopher, an amiable phyſician, a ſincere friend, an affectionate parent, and a worthy man.—And however defective the character I have attempted

attempted to draw may be, in many particulars, yet the account which has been given, can hardly fail to afford to every hearer a ſtriking proof, how much even a ſingle individual is able to accompliſh, when his exertions are ſteadily and judiciouſly directed to the attainment of virtuous and important objects; and I truſt, that many of thoſe who are now preſent, will conſider his meritorious conduct as an example worthy of imitation.—The good citizen and the firm friend, has ſources of enjoyment to which the ſelfiſh mind is an entire ſtranger. For, to uſe the words of an elegant modern poet, we may conclude with obſerving,

"Friendſhip remains through changing time,
"Remains ſuperior and ſublime:
"Pure and unmix'd, her joys we ſhare,
"Nor ſelfiſh paſſion rankles there:
"Balm to the wounded heart's corroding woes,
"Peace to the weary ſpirit's final, ſolemn cloſe."

At

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At the laſt annual meeting of the Harveian Society of Edinburgh, after the anniverſary diſcourſe was delivered by Dr Duncan, from which the foregoing account of the life, writings, and character of the late Dr John Hope has been extracted, the annual premium given by the ſociety, was publicly preſented to Mr Joſeph Pinto Azeredo from the Brazils, who was found to be the author of a diſſertation on the chemical and medical properties of thoſe ſubſtances called Lithontriptics; to which was prefixed for a motto, "Multum egerunt qui ante nos fuerunt, ſed non peregerunt; multum adhuc reſtat operis, multumque reſtabit, neque ulli nato poſt mille ſæcula præcludetur occaſio, aliquid adhuc adjiciendi:" and which, in the unanimous opinion of the judges, was the beſt, preſented to the ſociety on that ſubject. We cannot pretend to do juſtice to this diſſertation by a ſummary

mary account of the various matter which it contains; but it may not be improper to mention a few particulars.

After giving a general and ingenious account of the different kinds of animal concretions, and particularly of the urinary calculus, of the ſymptoms it occaſions, and the ſolvents that have been employed; and after briefly relating the various opinions of authors on theſe ſubjects, he proceeds to a detail of his own experiments. Theſe relate to the analyſis of the ſtone, and its ſolvents.

He not only tried various ſolvents out of the body, but after taking ſolvents internally, he obſerved the effects of the urine on calcali kept in a proper temperature: And beſides this, he introduced calculi into the bladders of dogs, and injected ſolvents, both by the mouth and urethra.

As to the analyſis, he paid particular attention to the acid, which was merely mentioned by Scheele and Bergman; and, from an inveſtigation of its chemical properties, he is diſpoſed to believe it analogous to what has been called acidum perlatum, if not preciſely the ſame.

From

From various experiments he concludes, that there are two kinds of calculi, the one ſoluble in different menſtrua, the other in none yet known; but that thoſe in which lime or magneſia are ingredients, are ſoluble by means of fixed air. This he prefers to every other ſolvent. He did not find lime-water, the cauſtic alkali, or the vitriolic acid, taken internally, produce any effect on calculus.

Upon the whole, all his experiments, to the number of 106, are conducted with great judgment; and the inferences which he draws from them, are highly important, both in a chemical and medical view.

We mentioned in our laſt volume, that the ſubject of inveſtigation propoſed for 1788, was an experimental enquiry into the nature and properties of the Nicotiana Tabaccum of Linnæus; into the different active conſtituent parts of this vegetable, their effects on the human body, and their uſe in the cure of diſeaſes.

The ſubject propoſed for 1789, is an enquiry into the nature and properties of thoſe medical products, which are obtained from a combination of ardent ſpirit with acids.

This

This curious, but hitherto obſcure ſubject, affords room for many experiments, and may give birth to ingenious conjectures, particularly reſpecting the three medical products obtained from ardent ſpirit and vitriolic acid, viz. æther, dulcified ſpirit, and Hoffman's anodyne liquor. The general effects of theſe three forms on the human body; the caſes to which each is peculiarly adapted; and, laſtly, the manner in which acids modify the effect of ſpirits, as in the alleged caſe of intoxication, will afford curious ſubjects of inveſtigation.

Diſſertations on the firſt of theſe ſubjects, muſt be tranſmitted to Doctors Duncan or Webſter by the 1ſt of January 1789; and on the laſt, by the 1ſt of January 1790.

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The Humane Society of London, ſome ſome time ago reſolved, That in order to invite

vite the learned to the important ſtudy of ſuſpended animation, and to point out the moſt judicious modes of practice at ſuch an alarming period as that of apparent death, they would offer an honorary gold medal for the beſt original eſſay, and a ſilver medal for the ſecond, on ſome important queſtion relating to this ſubject.

Their prizes for 1788, were beſtowed on Dr Edward Goodwyn, and Mr Charles Kite. The ſucceſsful diſſertations publiſhed by theſe gentlemen, the one intituled, The Connection of Life with Reſpiration; the other, An Eſſay on the Recovery of Perſons apparently dead, have been lately publiſhed, and afford ſtrong evidence of the utility of this part of their plan.

The queſtion which the Society has propoſed for 1789, is in the following terms:

Are emetics, veneſection, and electricity, proper in ſuſpended animation, and under what circumſtances?

They have eſtabliſhed the following regulations, reſpecting the medals:

1. Each diſſertation ſhall be delivered or ſent to the regiſter, No. 8. Bury-Street, St

St Mary-Axe, on or before the third week in January 1790.

2. With it ſhall be delivered a ſealed packet, with ſome device on the outſide, and within, the author's name and deſignation.

3. The ſame device ſhall be put on the outſide of the diſſertation to which it belongs.

4. The determination of the merits of the diſſertations, will be veſted in the Medical Society of London; and the medals ſhall be adjudged in the month of April.

5. No eſſay with the name of the author affixed can be received, as the merits of each are to be impartially adjudged.

6. All the eſſays and diſſertations, the ſucceſsful ones excepted, ſhall be returned, if deſired, with the packets unopened which contain the names of the authors.

7. The ſucceſsful diſſertations are to be publiſhed by the Humane Society, unleſs the authors think proper to print them at their own expence.

* * * *

The Lyceum Medicum of London, have conferred their prize medal, for the year 1788, on Mr Everard Home, ſurgeon in London. The diſſertation which gained this prize is lately publiſhed, under the following title; A Diſſertation on the Properties of Pus, which gained the Prize Medal given by the Lyceum Medicum Londinenſe for the year 1788, and which was ordered to be printed for the uſe of the Society.

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The Medical Society of Goettingen, have propoſed a prize queſtion in the following terms:

Quinam

Quinam ſunt effectus opii in corpus animale ſanum, maxime reſpectu habito ad ejus analogiam cum vino; et quomodo necat?

Diſſertations on this ſubject, muſt be tranſmitted to the Society on or before the 1ſt of April 1789.

* * * *

The Royal Phyſical Society of Edinburgh, who have been lately formed into a legal body corporate, by a charter from the Crown, reſolved, in the beginning of laſt Winter, to beſtow annually a gold medal on the author of the diſſertation read at their weekly meetings, which, in the opinion of judges appointed by a majority of the Society, ſhould be judged to have the greateſt merit. Their medal for the laſt Winter ſeſſion was conferred on Dr James Robertſon, now phyſician at Inverneſs, for his paper on the viciſſitudes of the weather in producing diſeaſes.

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On Monday the 1ſt of December, the Royal Society of London held their anniverſary meeting, at their apartments in Somerſet-place in the Strand, when the Preſident, Sir Joſeph Banks, Bart., in the name of the Society, preſented the gold medal (called Sir Godfrey Copley's, to Charles Blagden, M. D. Sec. R. S. for his two papers "on Congellation." The Preſident, on this occaſion, delivered the cuſtomary diſcourſe on the ſubjects contained in Dr Blagden's papers.

* * * *

In the Journal de Phyſique for the month of Auguſt 1788, is contained a ſhort memoir on the phoſphorated ſoda, written by Dr George

George Pearſon, member of the Royal College of Phyſicians in London, phyſician to St George's Hoſpital, and teacher of phyſic and chemiſtry.

In the preceding volume of our Commentaries, page 364, we announced, that a new purging neutral ſalt had been introduced, compoſed of the acid of phoſphorus and ſoda. In the memoir mentioned above, a further account is given of this double ſalt, in which a reference is made to our Commentaries for the year 1787.

The author of this memoir obſerves, that Meſſrs Lavoiſier, Fourcroy, Klaproth, and Sage, had combined the acid of phoſphorus with the ſoda; but the reſult was a compound totally different in its appearance from the double ſalt here deſcribed, compoſed of the ſame ſubſtances. The perlate ſalt of Haupt, and the fuſible ſalt with the baſis of natron, deſcribed by Rouelle and Prouſt, which are compoſed alſo of the phoſphoric acid and ſoda, are not at all ſimilar to the phoſphorated ſoda made by Dr Pearſon. Therefore,

an account is here given of the proceſs by which this neutral was prepared.

1. The acid of phoſphorus was procured, by dephlogiſticating, as it is termed, phoſphorus by the nitrous acid. Five hundred grains of phoſphorus, and fifteen hundred grains of acid of nitre, the ſpecific gravity of which was 1.5. in three times its weight of water, afforded one ounce and two drams meaſure of phoſphoric acid, which weighed about eleven hundred grains. The ſpecific gravity of this acid, was uſually from 1.80 to 1.87.

2. Diſſolve, in a matraſs with a long neck, fourteen hundred grains of cryſtalliſed ſoda in two thouſand one hundred grains of diſtilled water, heated to 150 deg. Add, by degrees, five hundred grains of the phoſphoric acid juſt deſcribed. After the effervescence has ceaſed, boil the mixture for the ſpace of a few minutes, and filter it into a ſhallow veſſel. After ſtanding for twelve hours in a temperate air, rhomboidal cryſtals will be found at the bottom of the liquor; and after a longer time, they will increaſe in number and ſize. The quantity of theſe cryſtals is

from

from 900 to 1400 grains; but, by repeated evaporation of the liquor in which they are formed, more ſalt may be obtained: ſo that the above quantity of the acid and alkali will yield from 1450 to 1550 grains of rhomboidal cryſtals. The reſiduum, which refuſes to cryſtalliſe, effervesces with acids, and turns ſyrup of violets green. And when it is evaporated to dryneſs, the ſediment amounts to 150 or 200 grains.

When 150 or 200 grains of the acid of phoſphorus, more than the quantity mentioned above, were added to the above weight of ſoda, the only difference in the reſult was, that the liquor remaining after the cryſtalliſation was finiſhed, effervesced with alkalies, reddened the infuſion of turnſol, was a mucilaginous and gluy fluid, and, being united with a freſh quantity of ſoda, yielded more rhomboidal cryſtals. On the contrary, when 100 or 200 grains of ſoda more than the above quantity, were added to the above quantity of the acid of phoſphorus, the only difference in the reſult was, that there was a greater quantity of alkali in the reſiduum.

The author attempted to unite the above double rhomboidal ſalt with the acid of phoſphorus. But he did not find any chemical union between this ſalt and acid, as he expected, according to Mr Klaproth's experiment. Neither did he find the rhomboidal ſalt capable of uniting with ſoda, and thus forming the fuſible ſalt with the baſe of natron, of Rouelle and Prouſt. Theſe experiments may be probably ſufficient to point out the miſtakes which the moſt reſpectable authors have fallen into, on the ſubject of what has been called the perlate ſalt, and perlate acid.

The angles of the cryſtals of the phoſphorated ſoda were examined by the goniometer, an inſtrument made at Paris, for meaſuring the degrees of the angles of cryſtals. The cryſtals, when regular, are rhombes, compoſed of ſix tetraedral rhomboidal ſurfaces or planes, and their angles are of 60 and 120 degrees. The ſolid angles are alſo of 60 and 120 degrees; ſo that the extremity of the cryſtal appears to be a triëdral pyramid, the angles of which are of 60 degrees.

This ſalt, like Glauber's ſalt, effloreſces very ſoon if expoſed to the air; therefore, if it be wiſhed

wiſhed to preſerve it in its cryſtalliſed ſtate, it ſhould be kept in cloſe veſſels. It is extremely elegant in its appearance, and not inferior in beauty of cryſtalliſation to the Rochelle ſalt. When employed for medical purpoſes, it is found to have many ſingular properties; ſo that it is now frequently preſcribed by ſome of the firſt practitioners in London, in preference to the Rochelle ſalt. It has very little taſte when diſſolved; and that taſte is by no means diſagreeable. It excites no nauſea or ſickneſs, and gives no uneaſy ſenſations or irritations in the ſtomach. It operates in the moſt gentle manner, and may even be made palatable, and thus be taken with eaſe by children or infants. From ſix to ten drams of it diſſolved in a pint of broth, or of water-gruel made without any ſalt, gives no more than an agreeable ſaline taſte, and operates as a purge with an adult. To children, it muſt be given in ſmaller doſes.

Beſides the favourable accounts which Dr Duncan has had of this ſalt, from Dr Pearſon, and other reſpectable authorities in London, he has himſelf employed it in a few caſes, having got ſome of it from London, prepar-

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ed by Mr Willis, an eminent and ingenious chemiſt of that city; and the trials which Dr Duncan has made at Edinburgh, tend to confirm the favourable character which he has received of it from London.

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An ingenious correſpondent in London, has favoured Dr Duncan with the following articles of medical news.

"In the treatment of the acute rheumatiſm, I have no doubt, that the modern practice of many phyſicians, of curing that diſeaſe by topical blood-letting and ſweating, by means of Dover's powder, with general bleeding, practiſed only occaſionally, to diminiſh evident general plethora, inflammatory diatheſis, or inflammatory fever, is much more ſucceſsful than Sydenham's method, which conſiſted of repeated general evacuations of blood, and avoiding opium. But I do not find any advantage

tage from conjoining ipecacuanha with opium; and therefore, I do not exhibit Dover's powder, but opium alone, in the quantity of one grain every ſix or eight hours, or two grains every night, and one grain every morning. If the patient ly in bed, and drink warm and moderately ſtimulating vegetable infuſions, ſuch as thoſe of ſage, mint, balm, bohea or green tea, as is uſually practiſed in order to occaſion ſweating by the Dover's powder, he will ſweat as copiouſly by means of the opium alone, as by means of the mixture of ipecacuanha and opium. As Dover's powder is more bulky, more diſagreeable to the palate, and more apt to excite nauſea than opium, I have not exhibited that celebrated powder for theſe ſix months paſt.

I have lately exhibited the compound of the arſenical acid and potaſh, the potaſſa arſenicata, in a caſe of epilepſy of many years duration. Within the ſpace of a week, the paroxyſms began to return leſs frequently, and in another week not a ſingle fit occurred; nor have they returned ſince that time, although ſeveral weeks have elapſed. For ſeveral years before, ſcarce a day paſſed without

out the recurrence of an epileptic paroxyſm. The pulſe, a week after this medicine was begun, beat only from thirty-eight to forty ſtrokes in a minute. But as I neglected to number the pulſations when the patient firſt applied to me, I cannot with certainty conclude, whether this ſlow action of the heart and arteries was the effect of the medicine, or was a part of the natural ſtate of the conſtitution. The doſe of the arſenicated potaſh, was from one fortieth to one twentieth of a grain. In a larger quantity it produced pains of the breaſt, gripings and purging, as well as an affection of the head; but in theſe ſmall doſes, it produced no ſenſible effect on the patient, but a ſlight uneaſineſs at ſtomach. In ſome caſes, perhaps, ſtill ſmaller doſes will be required.

I obſerve in a reputable writer, Ward's white drop repreſented as a mercurial preparation, conſiſting of the muriatic acid and calcined quickſilver; whereas, according to the receipts of the celebrated empyric, publiſhed by Mr Page, that medicine is compoſed of the nitrous acid and mercury: For the volatile alkali mentioned in Ward's preſcription, has

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no effect; unleſs we ſuppoſe that a triple compound is formed, by the union of the volatile alkali, nitrous acid, and mercury. Now I find, that this medicine, prepared according to the receipt publiſhed by Page, throws down calomel, either on the addition of common ſalt or of muriatic acid. Accordingly it follows, that Ward's white drops conſiſt of three ſubſtances, viz. the muriatic acid, the calx of quickſilver, and quickſilver in its metallic ſtate; for if it only conſiſted of the calx of mercury, and the nitrous acid, it could not throw down calomel on the addition of the muriatic acid, but would form corroſive ſublimate. If, therefore, any one wiſhes to prepare this medicine of Ward's, which for cutaneous diſeaſes, I find to be the moſt efficacious of the mercurial preparations, he needs only diſſolve quickſilver in the nitrous acid, as directed for making Scheele's wet calomel in the new London pharmacopœia, called hydrargyrus muriatus mitis. This nitre of mercury, given from one eighth to one thirty-ſecond part of a grain in water, will be found to produce the ſame effects as Ward's white drops. This medicine is compoſed of metallic mercury,

cury, calcined mercury, and the nitrous acid; and is, in all probability, much leſs virulent than the calx of mercury and this acid joined; in the ſame manner, and for the ſame reaſon, as calomel is leſs virulent than corroſive ſublimate.

Zinc calcined by air and fire, or the flowers or calx of zinc, like antimony calcined by the ſame means, viz. diaphoretic antimony, I have good reaſon to believe, is much leſs efficacious than zinc calcined by acids, viz. calx of zinc precipitated by alkali from white vitriol. Accordingly I have, for theſe laſt ſix months, exhibited this metal calcined by acids, and with more efficacy than if I had preſcribed the flores zinci. I lately gave an ounce and a half of the flores zinci every week, for four weeks together, without their producing any ſenſible effect or alteration in the ſtate of the epilepſy, for which they were ordered; and I have ſometimes been diſpoſed to conclude, that this calx of zinc, like diaphoretic antimony, is inert, while that precipitated from white vitriol, like Algeroth's powder, is active. For external purpoſes, it is abſurd to employ the lapis calaminaris, or tutia, becauſe it is only employing

employing the calx of zinc, mixed with a quantity of extraneous ſubſtances. I wiſh, therefore, always to employ the zinc precipitated from white vitriol, as mentioned above.

The diſſection of bodies after different diſeaſes, frequently affords proof of the very little utility, in the practice of phyſic, of the greateſt ſtock of knowledge of the phyſiology of the human conſtitution. I have found the lungs with numerous tubercles, although the patient was never affected with cough; in the gall-bladder, calculi, filling completely that cavity, without any preceding diſorder of the liver; and, what is more extraordinary, ulcerations of the inteſtines, although no pain of the abdomen, or other ſymptom, had been preſent, which indicated any diſeaſe of theſe viſcera.

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Dr Robert M'Cauſland, who reſided for ſome time in Canada, has communicated to Dr Duncan the following obſervations reſpecting the method of heating water in that country:

"Soon after my arrival in Canada, in 1768, I obſerved a method of heating water which is univerſally practiſed in that country, and which appeared to me to be one of the ſtrongeſt illuſtrations of the doctrines of heat delivered by Profeſſor Black.

The cold in Canada, renders the uſe of ſtoves almoſt indiſpenſible; and the poorer inhabitants, from the want of a fire-place, and to ſave fuel, are generally obliged to dreſs all their victuals upon the ſtove. Whenever, therefore, they wiſh to heat a kettle of water quickly, they pour a ſpoonful or two of the water upon the ſtove, and immediately ſet the kettle

tle upon it while it is bubbling up. To throw cold water upon a hot ſtove, in order to make it heat any thing more quickly, ſeemed at firſt view not a little extraordinary; and yet the practice was ſo familiar, that although no one pretended to account for it, no one ſeemed ſurprized at it.

It appeared to me, that this ſmall quantity of water being inſtantly converted into vapour, flew up againſt the bottom of the kettle, and being there condenſed, communicated a large quantity of latent heat to the water therein contained. Thus condenſed into drops, it now fell down again upon the ſtove, and was, as before, inſtantly converted into vapour, and then condenſed by the bottom of the kettle. In this manner a ſmall quantity of water, alternately evaporated and condenſed, became a carrier of heat from the ſtove to the kettle, in the ſame manner that pieces of gold-leaf, &c. become carriers of electricity between two plates, one being ſuſpended over the other.

As a proof that ſuch a proceſs actually took place, it may be obſerved, that this ſmall quantity of water was not diſſipated for many

minutes, even by a very hot ſtove, but continued paſſing upwards and downwards between the ſtove and the kettle, as could plainly be heard by the falling of the drops upon the hot ſtove. And, on the contrary, if the kettle was not placed on the ſmall quantity of water thrown on the ſtove, it was diſſipated in an inſtant.

To form ſome eſtimate between this and the method of heating water without the aſſiſtance of ſteam, I placed two peuter baſons, of the ſame ſhape, ſize, and thickneſs, upon a ſtove moderately heated, each of the baſons containing 34 ounces of water, of the temperature of 33 degrees of Fahrenheit; and a large ſpoonful of water having been poured under one of them. In four minutes, the water in the baſon to which the ſteam had been applied, roſe to 60, whilſt the other had only got to 48; and in five minutes they were at 68 and 50. That no deception might ariſe, from the bottom of one of the baſons being thicker than the other, or from one part of the ſtove being hotter than the other, I now repeated the experiment, changing the baſons, and the places in which they were ſet. In four

four minutes, the baſon heated by the ſteam roſe to 80, the other being only at 45. In ſeven minutes they were at 94 and 54; and in nine minutes the difference was 102 and 63. Although this experiment ſucceeds upon any kind of ſtove, yet I am inclined to think, that it is more eaſily performed upon one that has ſome inequalities or roughneſs on its ſurface, as the water has a better opportunity of lodging there, and is not ſo ſoon diſſipated.

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Mr Iſaac Milner, Jackſonian profeſſor of chemiſtry at Cambridge, who, by the duties of his office, is obliged annually to depoſite a copy of one of his public lectures in the library of Trinity College, and in the Univerſity library, has, we are informed, given in an eſſay on heat, which has very much attracted the attention of thoſe chemical philo-

ſophers who have had an opportunity of conſidering it.

He has endeavoured to arrange the principal matters of fact concerning fire and heat, in ſuch a manner as to enable him to attempt with advantage an explanation of the moſt remarkable phænomena. Although, of late, it has been the faſhion to take it for granted that there is a peculiar matter of heat; yet he attempts to ſhow, that the opinion formerly entertained by ſome of the moſt eminent philoſophers, of heat conſiſting in motion, is as probable a conjecture as any other, and that the preſent prevailing hypotheſis has no advantage over the other in any one particular. This gives him occaſion to conſider fully the doctrine of latent heat, as it has been called, becauſe the facts which are uſually brought in ſupport of that doctrine, have been repreſented as inexplicable on the hypotheſis of motion.

Whether his obſervations on this ſubject will be thought ſufficient to invalidate that doctrine, we cannot pretend to ſay. But they may at leaſt ſerve to caution us againſt being miſled by ſome great authorities, who have

have talked poſitively as if it had been a ſettled point, that the cauſe of heat was a peculiar matter.

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The following extract of a letter from a gentleman in Bengal, to Dr Wright, formerly of Jamaica, now phyſician in Edinburgh, contains a piece of information in the practice of medicine, which, if eſtabliſhed by concurring obſervations in other countries, muſt be of great importance to mankind.

" Though I make no doubt every uſeful and ingenious improvement in medicine and ſcience is early known to Dr Wright; yet as there is a probability, that the following moſt excellent diſcovery has not yet reached the Weſt Indies, I will not deny myſelf the pleaſure of thinking I may be of ſome ſervice to ſome of my fellow-creatures, by mentioning it to him.

Eau de luce is now, by repeated inſtances, proved to be a certain cure for the bite of the moſt venomous ſnakes of this country, even after the patient's jaw is fixed, and every ſymptom of death's ſpeedy approach appears. Some drops are rubbed on the part, and fifty drops, mixed with a long glaſs of water, are drank, or poured down the perſon's throat, by forcing open the jaw, if the delay has been ſo long as to render that neceſſary."

Mr Fontana, in his treatiſe on the poiſon of the viper, mentions his having tried this remedy, but that he found it, by no means, to anſwer his expectations. The eau de luce is the volatile alkali, united with a proportion of the oil of amber, by the aid of alcohol and ſoap. It is now introduced into the London Pharmacopœia, under the title of ſpiritus ammoniæ ſuccinatus. Mr Fontana was particularly led to make trials of it, in conſequence of a publication, intituled, Experiences propres à faire connoitre que l'alkali volatile fleur eſt le remede le plus efficace contre les aſphyxies, publiſhed by Mr Sage of the Royal Academy of Sciences at Paris. In that work, the volatile alkali is repreſented as a

true

true ſpecific againſt the poiſon of the viper. But whether the account given by Mr Sage, as well as that contained in the above letter, or the repreſentations of Mr Fontana, are moſt to be depended upon, muſt be determined by future experience and accurate obſervation.

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Dr Parry of Bath, a learned and ingenious phyſician, has lately made many experiments and obſervations on a method of ſuſpending mania, headach, vertigo, convulſions, and hyſterical complaints, by a mechanical compreſſion of one or both the common trunks of the carotid arteries, by means of the fingers or thumbs. We are told, that in many inſtances, particularly where the paroxyſm is recent, this method has ſucceeded almoſt inſtantaneouſly, like magic, the ſymptoms diſappearing as long as the preſſure was continued, but for the moſt part immediately returning

as ſoon as it was removed. The obſervations which Dr Parry has made upon this ſubject, have led him, we are told, to a practice in the diſorders mentioned above, and in ſeveral others, generally denominated nervous, very different from that commonly employed, and even in many reſpects oppoſite to it. And this practice, we are informed, he has found infinitely more ſucceſsful than what has been generally recommended. We are informed by Dr Parry, that he ſoon intends to publiſh a more particular account of the obſervations he has made, and the new practices he has introduced. How far theſe, when communicated to the public at large, will be found ſucceſsful in the hands of others, future experience muſt determine.

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In former volumes of this work, we have repeatedly had occaſion to mention the advantages which have been derived from the uſe of

of the digitalis purpurea in ſome caſes of inſania. And we have lately been favoured with a caſe by a very ingenious correſpondent, Dr Joſeph Maſon Cox, who has the charge of a private mad-houſe in the neighbourhood of Briſtol, in which this remedy was productive of a very remarkable cure. Dr Cox's paper, however, as well as ſeveral other important articles, we are under the neceſſity of reſerving for our next volume. At preſent we ſhall only obſerve, that the medicine was given under the form of decoction; that it operated as a powerful diuretic; and that Dr Cox imagines it cured the diſeaſe, by removing an effuſion of water within the cranium.

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Accounts have lately been publiſhed in different newſpapers, of the ſucceſsful application of corroſive ſublimate mercury externally, in the cure of cancers. Dr Andrew Williſon of Dundee, has

has favoured us with the following account of a method of applying it, which, he tells us, in caſes of incipient cancerous affections, has been attended with conſiderable ſucceſs, and, even in caſes of an inveterate kind, has proved effectual, in converting the thin fœtid ichorous diſcharge into a more natural and good pus.

Take corroſive ſublimate in fine powder, and ſprinkle it from the point of a ſmall penknife around the edges of the ulcer, which muſt be previouſly waſhed with warm water. Apply a pledgit of yellow baſilicon over all, and give the patient ſome warm ſpirits or wine to drink, with a ſufficient quantity of laudanum to allay pain, as it will be very acute for ſome time after the application of the corroſive. Let the dreſſing remain on for twenty-four hours, and then remove it. Upon the removal, a large eſchar, or hard ſlough, of a lead colour, will be perceived. If this be not looſe all round the edges, cover it up again with the ſame pledgit. Next day take it away; and wherever the ſlough adheres, ſprinkle more ſublimate, and renew the pledgit. Continue in this manner till the whole ſlough comes off; after which, dreſs the wound with yellow

yellow baſilicon, or cerate, and it will often heal, in no long time.

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The uſe of fire, though much employed among the ancients, has been almoſt entirely rejected from modern ſurgery. But an ingenious Italian profeſſor, Mr Angelo Riboli of Milan, has lately endeavoured to revive its uſe. He is of opinion, that according to particular circumſtances, it acts ſometimes as a ſtimulus, ſometimes as the contrary; and from proper application, with due precautions, he has, we are told, found the happieſt effects from it in his own practice.

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Laſt ſpring, a very ſingular phænomenon in anatomy was diſcovered at the Theatre in Great Windmill-ſtreet in London.

Upon

Upon opening a body, the natural ſituation of the viſcera was found to be reverſed. The right lobe of the lungs was divided in the manner the left uſually is; and the left had the common diviſions of the right. The heart was on the right ſide, and pointed to the right, the large veſſels being at the ſame time tranſpoſed, to ſuit the new ſituation. The ſtomach was on the right ſide, the great lobe of the liver on the left, the gall-bladder and ducts being adapted to it. The beginnings and terminations of different inteſtines were on oppoſite ſides from what they uſually are. There were alſo ſome other peculiarities, as five ſmall ſpleens beſides the large one. As far as could be learnt, this uncommon ſtructure gave no uneaſineſs to the man during life; nor did he ſeem to have ever diſcovered, by any ſenſation, that he was formed differently from other people.

Dr Baillie, the heir and ſucceſſor of Dr Hunter to his theatre in Windmill-ſtreet, to whom this diſſection occurred, has, we are told, given an account of it to a reſpectable ſociety of medical gentlemen, who meet at the houſe of Mr John Hunter; and it is to be hoped,

hoped, that he will ſoon communicate a particular detail of it to the public at large.

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Dr John Heyſham of Carliſle, to his obſervations on the bills of mortality in that city for the year 1787, has annexed an account of a female child, which was born there at the full time, alive, and which lived for five days and twenty-one hours, although upon accurate examination, there was not the ſmalleſt appearance of a brain. This may juſtly be conſidered as a very curious, and perhaps an important circumſtance in phyſiology. We ſhall here, therefore, preſent our readers with the account there given of this ſingular phænomenon in Dr Heyſham's own words.

" At eight o'clock on Monday morning, May 26th 1788, Mary Clarke, aged 26 years, and the mother of ſix children, ſome of whom are healthy, and others unhealthy, was delivered of

of a living female child, at the expence of the Carliſle Diſpenſary.

The midwife, ſhocked at the ſtrange and unuſual appearance of the child's head, ſent for me immediately. I got there about an hour after the delivery. At firſt ſight it appeared evident, that the bones which form the upper part of the ſcull were wanting, and the brain ſeemed to be only covered by its proper membranes, the pia and dura mater. It reſembled a large excreſcence, which projected a little over the common integuments, eſpecially towards the forehead, where it extended over the root of the noſe. The colour of this ſubſtance was a dark rediſh brown; and upon examining it more particularly, I thought I could perceive the diviſion of two hemiſpheres of the brain, and likewiſe the diviſion of the cerebrum from the cerebellum. I gently raiſed with my fingers a part of it which projected over the integuments, which made the child cry, and produced a conſiderable ſtarting, ſimilar to that which is occaſioned by an electrical ſhock.

The child was full grown, and ſeemed in perfect health. Her limbs were plump, firm, and

and well-proportioned, and ſhe moved them with apparent agility. The external organs of ſenſe were alſo perfect. She ſwallowed well, and took a ſufficient quantity of nouriſhment for ſeveral days; but ſometimes, during the action of ſwallowing, ſhe ſtarted a little. She lived till five o'clock on Sunday morning, June 1ſt, when ſhe expired. Some time before her death, ſhe was affected with ſlight convulſions. During the three or four days preceding her death, there was a conſtant diſcharge of a thin watery fluid, ſomewhat tinged with blood, from the excreſcence, which greatly diminiſhed its bulk; for at her death it was only about half the ſize of what it had been when ſhe was born; and the ſurface was in ſome places beginning to put on the appearance of mortification.

A few hours after her death, Dr Blamire, and Mr Charles Fariſh, accompanied me to the houſe; where Dr Blamire cautiouſly diſſected away from the bones the whole of the ſubſtance. We found the greateſt part of the frontal, the temporal, the occipital, and the whole of the parietal bones, wanting. The ſubſtance removed was then carefully examined:

amined; and what was our aſtoniſhment, to find it entirely to conſiſt of membranes, blood-veſſels, but principally of ſeveral bags, one of which was as large as a nutmeg, the reſt of different ſizes, but much ſmaller! They were all filled with a browniſh-coloured fluid, which, when the cyſts were punctured, guſhed out with violence.

There was not the leaſt appearance of cerebrum, cerebellum, or any medullary ſubſtance whatever. The ſpinal marrow had a natural appearance, but did not ſeem to have been connected with the parts above deſcribed, nor was there the leaſt enlargement of its upper end.

Having accurately related the facts as they appeared to Dr Blamire and myſelf, which for their ſingularity deſerve to be recorded, I think the few following obvious inferences may be drawn from them. *1ſt*, That the fluid diſcharged from the excreſcence during the life of the infant, and which produced the great diminution of its bulk, was occaſioned by the rupture or eroſion of cyſts ſimilar to thoſe which remained ſound and full of water after death. *2dly*, That the living principle,

principle, the nerves of the trunk and extremities, ſenſation and motion may exiſt independent of the brain; and as the external organs of ſenſe, viz. the eyes, the noſe, the tongue, and the ears, all ſeemed perfect, may we not therefore ſuppoſe, that the optic, the olfactory, the guſtatory, and the auditory nerves, may exiſt independent of, and unconnected with, either the brain or the ſpinal marrow?

I content myſelf with little more than deſcribing this extraordinary caſe, and leave to others to deduce from it ſuch concluſions as the appearances obſerved may be thought to warrant."

After having thus given Dr Heyſham's account of this very extraordinary child, and obſerved with what caution he ſhuns forming any opinion with reſpect to it, we ſhall not preſume to amuſe or miſlead our readers, by offering any conjectures of our own. We ſhall only obſerve, that a caſe ſo ſingular, and perhaps even ſolitary, can hardly be ſuppoſed to warrant any general concluſion whatever.

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The Diſpenſatory, publiſhed by Dr Lewis, under the title of the New Diſpenſatory, had ſuch a decided ſuperiority over others, that for a long time it ſuperſeded every work of a ſimilar nature in Britain. During the life of the author, the improvements which that work received from his hands, in ſucceſſive editions, correſponded to the diſcoveries that were made in pharmaceutical chemiſtry. But, during the period which has elapſed, ſince the world were deprived of the labours of that ingenious, induſtrious, and learned man, chemiſtry in all its branches has received many important improvements. It was therefore concluded, that an attempt to collect and apply the lateſt and moſt important diſcoveries to his Diſpenſatory, would not be unacceptable to the public.

This attempt was carried into execution about two years ago, by the publication of a work

work under the title of the Edinburgh New Diſpenſatory. That work met with an unequivocal proof of public approbation; for, in little more than a year, a very large impreſſion was completely ſold off.

Upon this event, the publiſher would have immediately put it to the preſs again, had not a new edition of the London Pharmacopœia been in ſuch forwardneſs, that a ſpecimen of it had been diſtributed, with the view of obtaining the opinion of other intelligent pharmacians reſpecting the intended alterations. The expectation which the public entertained of an important reformation of the London Parmacopœia, is now accompliſhed; for, about the beginning of the preſent year, that work, in which no alterations had been made for near half a century before, was republiſhed, with a very great number of alterations and corrections.

As ſoon as the new edition of the London Parmacopœia appeared, Mr Elliot, the publiſher of the New Edinburgh Diſpenſatory, engaged Dr Duncan to prepare a new edition of that work, which might contain a com-

plete tranſlation of the lateſt editions both of the London and Edinburgh Pharmacopœias, with the addition of recent diſcoveries in natural hiſtory, chemiſtry, and medicine.

That work is now very nearly printed off, and will probably appear even prior to the publication of this volume. In this edition, many alterations and corrections are made in every part of the work; but particularly in the third part, which treats of pharmaceutical preparations and medicinal compoſitions. For, beſides a complete tranſlation of thoſe contained in the Pharmacopœia Londinenſis 1788, and the Pharmacopœia Edinburgenſis 1783, which are the preſent ſtandards, for the practice of the Britiſh apothecaries, the editor has added many formulæ at preſent held in eſteem in other parts of Europe, extracted from the beſt foreign pharmacopœias, particularly from the Pharmacopœia Suecica, Roſſica, Danica, Brunſvicenſis, and Genevenſis. To each article he has alſo ſubjoined critical and practical obſervations, illuſtrative of its preparation and uſe. And we have reaſon to believe, that his labours will neither be unacceptable nor uſeleſs to the public.

Mr

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Mr Kier, a gentleman well known to the philoſophical world, as having been the tranſlator of Macquer's Dictionary into the Engliſh language, and as having enriched that work with many valuable notes, has, for a conſiderable time paſt, been engaged in a work of a ſimilar nature. For as chemiſtry has, within theſe few years, made a progreſs inconceivably rapid, a work which is to exhibit a view of it in its preſent improved ſtate, can no longer be conſidered as a tranſlation of Macquer. The dictionary of chemiſtry, therefore, will now aſſume a very different form from what it did before. The greater part of it will now, we are informed, be Mr Kier's own compoſition, and will not, as formerly, be added under the form of notes, but interwoven with the text, the additions being ſtill however diſtinguiſhed from the original of Macquer by marks prefixed.

This work has been in the preſs at Birmingham for ſome time; and as the author intends to publiſh it in parts, there is reaſon to hope, that the firſt of theſe will make its appearance in a few months.

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We have taken an opportunity of mentioning, in former volumes of theſe Commentaries, the intended publication of a very large work on the materia medica, by Dr Cullen, and of another on the philoſophy of natural hiſtory by Mr Smellie. Both theſe works have been in the preſs for a conſiderable time paſt, and are now ſo far advanced, that unleſs ſome unforeſeen accident retards the publication, both of them may be expected to appear in a ſhort time.

The

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The new edition of the Encyclopædia Britannica, or Dictionary of Arts, Sciences, and Miſcellaneous Literature, which we mentioned in our laſt volume, began to be publiſhed at Edinburgh ſome months ago. It is delivered to ſubſcribers either in numbers or in half volumes. Three of theſe half volumes, each conſiſting of about four hundred pages, have already appeared. By theſe, this work is brought down from the article with which they begin, A, the firſt letter of the alphabet, to Aſpicueta, or the Doctor of Navarre, of whom they give an account, in compliance with their engagement, of preſenting their readers with hiſtories of the lives of the moſt eminent perſons in every nation, from the earlieſt ages down to the preſent time. Notwithſtanding the high reputation which the laſt edition of this work deſervedly acquired, yet any one who compares it with the edition now publiſhing, will ſoon be ſatisfied of the many important alterations and additions which have taken

place; and while it evidently appears, from what is already publiſhed, that the ſize of this work is very much augmented, we may with confidence aſſert, that its value is increaſed in a much higher proportion; and if, which there is every reaſon to believe will be the caſe, they continue to publiſh the ſucceeding parts of their work in an equally improved ſtyle, it will form a truly valuable publication, and one highly meriting the countenance and encouragement of the public.

* * * *

The ſyſtem of anatomical plates, in which Mr Andrew Bell of Edinburgh, engraver to his Royal Highneſs the Prince of Wales, has been for a conſiderable time engaged, has made conſiderable progreſs ſince the publication of our laſt volume. But it has been ſomewhat retarded by Mr Bell's engagements with the Encyclopædia Britannica, which is enriched by a great number of new engravings, executed by that ingenious artiſt.

M.

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M. de Neckar, botaniſt to the Elector Palatine, well known by his hiſtory of moſſes, and his Flora Belgica, has been long employed about two botanical works; the one a philoſophical ſyſtem of the ſcience in general, according to the natural orders of plants; the other an account of the genera and ſpecies of all the plants yet known. He is, we are informed, of opinion, that the number of ſpecies have been improperly multiplied, and will ſhow, that many new ſpecies are only varieties. Both theſe works he expects to publiſh in 1789.

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There is an intention of publiſhing at Madrid, a Flora Peruviana. It will, we are told, be

be enriched with above forty new genera, and a great number of ſpecies altogether unknown in Europe. But it is not expected that this publication will appear in leſs than two or three years.

* * * *

We are informed, that the ſecond volume of Dr Simmons's anatomy, the publication of which has been retarded by a variety of avocations, is now in conſiderable forwardneſs, and will probably be ſoon put to the preſs.

* * * *

The following proſpectus of a new botanical work, intended to be publiſhed at Vienna, appeared ſome months ago.

Proſpectus

Proſpectus operis botanici, cui titulus Joſephi Jacobi Plenk, Conſil. Cæſ. Reg. Chirurgiæ Doctoris; Chemiæ atque Botanices Prof. P. O. in Acad. Med. Chirurg. Joſephiana; nec non Directoris Pharmac. Militar. atque Chirurgi Status Militaris Supremi. ICONES PLANTARUM MEDICINALIUM ſecundum ſyſtema Linnæi digeſtarum; cum enumeratione virium et uſus medici, chirurgici, et diætetici.

1. Plantæ omnes repræſentabantur in charta magna Hollandica, magnitudine et colore naturali, quod quidem adhibita forma magni ut vocant folii vix non ubique fieri poterit.

2. Textus, in binis columnis, Latino et Germanico idiomate, exponet plantæ delineatæ nomen, claſſem, ordinem, characterem genericum et ſpecificum, patriam, partem officinalem, vires, uſum, et doſin maxime conſuetam.

3. Editio ipſa ad ordinem ſyſtematis Linnæani inſtituetur. Quovis anni quadrante prodibit faſciculus, XXV plantas, una cum textu complexus. Centum plantæ tomum efficient; hinc adjungetur initio cujuſvis centuriæ titulus, cum indice plantarum. Ad finem operis, ſequetur index univerſalis plantarum omnium.

As this work cannot be executed but at a very great expence, the author propoſes to publiſh it by ſubſcription, and to throw off only the number of copies that ſhall be ſubſcribed for. Subſcriptions are taken in at Vienna by Rudolph, Greffer and Co.; at London by Benjamin White and Son; and at Paris by the Widow Tilliard and Son.

* * * *

A new botanical work is ſoon to be publiſhed at Edinburgh, under the title of Flora Edinburgenſis, or a ſyſtematic arrangement and deſcription of all the plants which grow wild within fourteen miles round Edinburgh, thoſe of the cryptogamia claſs excepted. To which will be added, complete catalogues of the plants found on each of the iſlands in the Frith of Forth. By Malcolm M'Coig, gardener to the Royal Botanical Garden of Edinburgh.

In

In this work, at the beginning of every claſs, the ſeveral orders and genera will be enumerated, together with ſhort characters ſerving to diſtinguiſh one ſpecies from another. Under each genus, the ſeveral ſpecies, with their trivial names and ſpecific differences, will be comprehended. References will likewiſe be made to thoſe authors who have given figures of the different ſpecies. To every ſpecies its Engliſh name, duration, time of flowering, native ſoil, the particular places in which it is found, and a ſhort Engliſh deſcription will be ſubjoined.

While the environ of Edinburgh abounds with ſuch pictureſque views, as claim the admiration of every man of taſte, ſo it is alſo ſtored with a greater variety of vegetables than are perhaps to be met with in any circle of ſimilar ſize in any part of Europe: for the high hills, ſtupendous rocks, numerous rivulets, and freſh water lakes, which are ſituated cloſe in its neighbourhood, afford a variety of ſoil and expoſure hardly to be equalled in any other circle but a few miles in diameter. Beſides which, it is ſituated within a mile of a large branch of the ſea, affording not

not only a variety of different vegetables on its ſhores, but crowded with iſlands, differing as much from each other in ſoil and ſtructure, as different parts of the neighbouring ſhore. It will therefore appear leſs wonderful, when we inform our readers, that in the circle of fourteen miles round Edinburgh, to which Mr M'Coig means to confine himſelf, he has found about eleven twelfths of all the vegetables hitherto diſcovered in Britain; and beſides this, he has been enabled to add to the liſt of indigenous Britiſh vegetables, ſome, which are neither to be met with in the writings of Ray, Hudſon, Lightfoot, or Withering. The number of plants collected on ſo limited a compaſs of ground, renders it highly probable, that a frequent and minute ſearch into the various ſtations of plants, might diſcover many ſpecies not yet known to be natives of the country.

Mr M'Coig propoſes afterwards to add to this work a ſecond volume, containing the Cryptogamia. But the firſt volume, which contains all the other claſſes of Linnæus, is now ready for the preſs, and will probably be publiſhed in the Spring.

A treatiſe

* * * *

Dr Robert Walker, Fellow of the Royal College of Surgeons of Edinburgh, has been for ſeveral years engaged in preparing for the preſs, a work which he intends to publiſh under the following title: "An Inquiry into the Small-Pox, Medical and Political; wherein a new method of treating the worſt kinds of that diſeaſe is ſubjected to the conſideration of the public, in the way of obviating their moſt dangerous ſymptoms, both with reſpect to infants and adults; by which the cure is rendered more certain than that of moſt acute diſeaſes. Alſo, the cauſe of pits explained, and an eaſy method pointed out for their prevention. To which are added, Thoughts how far it is practicable to exterminate the ſmall-pox; or hints ſuggeſted for further reducing the mortality of that diſeaſe."

This work is particularly executed with a view to the reduction of the conſtant annual mortality

mortality ariſing from that depopulating diſtemper. And from the extenſive experience of the ingenious and judicious author, as well as from the great attention which he has beſtowed upon this ſubject, there is good ground for hoping, that due attention to his obſervations may be productive of the happieſt conſequences. This work is now ready to be put to the preſs, and will probably be publiſhed in a few months.

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During the courſe of the year 1788, Dr Thomas Spens, Dr John Drummond, Dr Patrick Baron Seton, and Dr William Spink, have been admitted fellows of the Royal College of Phyſicians at Edinburgh. Dr Alexander Hamilton, and Dr Charles Congalton, have been admitted licentiates of the College.

Mr James Farquharſon, and Mr James Hamilton, have been admitted members of the

Royal

Royal College of Surgeons at Edinburgh, during the above period.

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Dr Thomas Hope, ſon to the late Dr John Hope, profeſſor of botany in the Univerſity of Edinburgh, was appointed lecturer on chemiſtry in the Univerſity of Glaſgow, on the 10th of October 1787; and Dr Robert Cleghorn was appointed lecturer on materia medica in the ſame Univerſity, on the 10th of June 1788. Both theſe offices were vacant by the death of the late Dr William Irvine.

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On the 18th of Auguſt 1788, letters patent paſſed the great ſeal of Ireland, appointing Dr Robert Emmet and Dr Stephen Dickſon, and the ſurvivor of them, to the office and place

of his Majeſty's phyſician to the ſtate of the kingdom of Ireland.

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On the 6th of March, died at Paris, Dr Hyacinthus Theodorus Baron, phyſician to the armies of the King of France, and to the Hotel Dieu, and ſenior Dean of the Faculty of Medicine at Paris. He was the author of ſeveral uſeful and ingenious publications.

On the 14th of April, died at Paris George le Clerc, Count de Buffon, Intendant of the Kings Gardens and Cabinets of Natural Hiſtory. Mr Buffon's abilities in the line of natural hiſtory, have long been known to the world, and will tranſmit his fame to poſterity. He was a member of the moſt diſtinguiſhed learned ſocieties in Europe; particularly thoſe of Paris, London, Edinburgh, Berlin, Peterſburgh, Bologna, Florence, &c.

On the 5th of May, died at Stockholm Dr Caſten Ronnow, in the 87th year of his age.

He

He was a member of ſeveral learned ſocieties, and celebrated for ſome obſervations on the cataract.

On the 23d of May, Dr Maximilian Stolle, Clinical Profeſſor at Vienna, died there in the 45th year of his age. From his different medical publications, he had acquired great reputation; and his death is univerſally lamented by the friends of medical ſcience.

About the middle of June, died at Hanover, Dr John Frederick Cloſs, author of ſeveral uſeful treatiſes, particularly on Gonorrhœa, and on the uſe of the Peruvian bark in ſmall-pox.

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In our laſt volume we gave the general reſult of obſervations made about a mile from the city of Edinburgh, on the ſtate of the thermometer and barometer, and of the quantity of rain which had fallen during the firſt ſix months of the year 1787. We

ſhall now preſent our readers with a ſimilar account of the laſt ſix months of 1787, and of the firſt ſix months of 1788.

Months.	Thermometer.			Barometer.			Rain.
	High.	Low.	Med.	High.	Low.	Med.	
July	77	46	62.1	30.18	29.32	29.61	4.79
Aug,	74	46	63.7	30.22	29.27	29.7	2.03
Sept.	72	34	60.9	30.37	28.37	29.81	0.60
Oct.	62	32	56.3	30.07	28.8	29.57	2.17
Nov.	53	20	46	30.23	28.72	29.66	1.11
Dec.	54	17	37	30.25	29.02	29.59	8.42

In the courſe of the year 1787, according to the account of a gentleman whoſe obſervations are very accurate, there have been at Edinburgh,

Of	Clear days	157
	Cloudy -	34
	Rain -	155
	Snow -	6
	Sleet and Hail	13

State

State of the Thermometer, Barometer, and Rain, in 1788.

Months.	Thermometer.			Barometer.			Rain
	High.	Low.	Med.	High.	Low.	Med.	
Jan.	50	25	38.9	30.44	28.65	29.86	1.03
Feb.	47	20	34.5	30.17	28.95	29.48	1.98
Mar.	52	17	39.1	30.07	29.3	29.56	1.82
April	63	32	48.5	30.4	28.8	29.71	1.92
May	76	35	52.3	30.41	29.62	30.06	0.86
June	78	43	55.6	30.32	29.5	29.75	2.13

A very ingenious correſpondent, Mr John M^c^Nab, ſurgeon at Fort-Albany, in Hudſon's Bay, who has been employed by the directions of the Royal Society, in making many experiments upon cold, the reſult of which has been publiſhed in the Philoſophical Tranſactions, has favoured us with the following obſervations made on the height of the Thermometer there, during the year 1787. Fort-Albany is ſituated in Latitude 52°, 14′, 26″, N. and in Longitude 81, 51, W.

JANAURY.

Morning Higheſt -	+11.5
Loweſt -	—24
Medium -	— 7
Afternoon Higheſt -	+13
Loweſt -	—18
Medium -	— 3.5
Higheſt during the Month	+13
Loweſt - -	—24
Mean height - -	— 5.3

FEBRUARY.

Morning Higheſt -	+23
Loweſt -	—29
Medium -	— 1.5
Afternoon Higheſt -	+28
Loweſt -	—15.5
Medium -	+ 5.5
Higheſt during the Month	+28
Loweſt - -	—29
Mean height - -	+ 4

MARCH.

Morning Higheſt -	+34
Loweſt -	—21
Medium -	+ 3
Afternoon Higheſt -	+40
Loweſt -	— 3.5
Medium -	+13
Higheſt during the Month	+40
Loweſt - -	—21
Mean height - -	+ 8

APRIL.

Morning Higheſt -	+37
Loweſt -	— 2
Medium -	+14.5
Afternoon Higheſt -	+44
Loweſt -	+15
Medium -	+27
Higheſt during the Month	+44
Loweſt - - -	— 2
Mean height - -	+20.7

MAY.

Morning Higheſt -	+55.5
Loweſt -	18
Medium -	39.5
Afternoon Higheſt -	71
Loweſt -	24
Medium -	48.3
Higheſt during the Month	71
Loweſt - - -	18
Mean height - -	43.7

JUNE.

Morning Higheſt -	+56
Loweſt -	34
Medium -	47.5
Afternoon Higheſt -	65
Loweſt -	40
Medium -	54
Higheſt during the Month	65
Loweſt - - -	34
Mean height - -	50.7

JULY.

JULY.

Morning Higheſt -	+70
Loweſt -	41
Medium -	52
Afternoon Higheſt -	84
Loweſt -	40.5
Medium -	62
Higheſt during the Month	84
Loweſt - - -	40.5
Mean height - -	57

AUGUST.

Morning Higheſt -	+71
Loweſt -	40.5
Medium -	54
Afternoon Higheſt -	83
Loweſt -	45
Medium -	63
Higheſt during the Month	83
Loweſt - - -	40.5
Mean height - -	58.5

SEPTEMBER.

Morning Higheſt -	+50
Loweſt -	12
Medium -	33.5
Afternoon Higheſt -	58
Loweſt -	18
Medium -	38
Higheſt during the Month	58
Loweſt - - -	12
Mean height - -	36

OCTOBER.

Morning Higheſt -	+48
Loweſt -	12
Medium -	30.5
Afternoon Higheſt -	55
Loweſt -	18
Medium -	35
Higheſt during the Month	55
Loweſt - - -	12
Mean height - -	32.5

NOVEMBER.

Morning Higheſt -	+39
Loweſt -	15
Medium -	27.7
Afternoon Higheſt -	37
Loweſt -	20
Medium -	28.3
Higheſt during the Month	39
Loweſt - - -	15
Mean height - -	28

DECEMBER.

Morning Higheſt -	+26
Loweſt -	—17
Medium -	+ 2.7
Afternoon Higheſt -	+29
Loweſt -	—10
Medium -	+ 7.5
Higheſt during the Month	+29
Loweſt - - -	—17
Mean height - -	+ 5

SECT. IV.

List of New Books.

TRANSACTIONS of the Royal Society of Edinburgh. Vol. 1. 4to, Edinburgh.

A deſcription of all the burſæ mucoſæ of the human body, their ſtructure explained and compared with that of the capſular ligaments of the joints, and of thoſe ſacs which line the cavities of the thorax and abdomen; with remarks on the accidents and diſeaſes which affect theſe ſeveral ſacs, and on the operations neceſſary for their cure. Illuſtrated with tables. By Alexander Monro, M. D. Profeſſor of Phyſic, Anatomy, and Surgery, in the

the Univerſity of Edinburgh, and Fellow of the Royal Academy of Surgery at Paris. Folio, Edinburgh.

A ſyſtem of ſurgery. By Benjamin Bell, Member of the Royal College of Surgeons of Ireland and of Edinburgh, one of the Surgeons to the Royal Infirmary, and Fellow of the Royal Society of Edinburgh. Illuſtrated with copperplates. Vol. 6. 8vo, Edinburgh.

Principles of anatomy and phyſiology. By John Aitken, M. D. Fellow of the Royal College of Surgeons; Member of the Royal, Medical, Phyſical, and Antiquarian Societies; one of the Surgeons of the Royal Infirmary; Lecturer on Anatomy, Surgery, and Midwifery; and Honorary Reſident of the Chirurgo-Obſtetrical Society of Edinburgh. For the uſe of ſtudents. 2 vols. 8vo, Edinburgh.

Conſpectus medicinæ theoreticæ in uſum academicum. Auctore Jacobo Gregory, M.D. Med. Theoret. in Acad. Edin. Prof.; Reg. Soc. Edin. et Col. Reg. Med. Edin. Soc.; Societat. Reg. Med. Edin. Soc. Honor.; Reg. Matrit. Acad. Med. Soc. &c. Editio tertia, prioribus auctior et emendatior. 2 vols. 8vo, Edinburgh.

Heads

Heads of lectures on the theory and practice of medicine. By Andrew Duncan, M. D. F. R. and A. S. Ed.; Phyſician to his Royal Highneſs the Prince of Wales for Scotland; Fellow of the Royal College of Phyſicians, Edinburgh, and of the Royal Societies of Medicine of Paris, Copenhagen, Edinburgh, &c. The fourth edition, corrected and enlarged. 8vo, Edinburgh.

The Edinburgh new diſpenſatory; containing, 1. Elements of pharmaceutical chemiſtry. 2. The materia medica, or an account of the natural hiſtory, qualities, operations, and uſes of the different ſubſtances employed in medicine. 3. Pharmaceutical preparations and medicinal compoſitions of the new editions of the London and Edinburgh pharmacopœias. With explanatory, critical, and practical obſervations on each; together with the addition of thoſe formulæ from the beſt foreign pharmacopœias which are held in the higheſt eſteem in other parts of Europe. The whole interſperſed with practical cautions and obſervations, and enriched by the lateſt diſcoveries in natural hiſtory, chemiſtry, and medicine; with new tables of elective

lective attractions, of antimony, of mercury, &c.; and ſix copperplates of the moſt convenient furnaces and principal pharmaceutical inſtruments, being an improvement upon the New Diſpenſatory of Dr Lewis. The ſecond edition, with many alterations, corrections, and additions. 8vo, Edinburgh.

Encyclopædia Britannica; or a dictionary of arts, ſciences, and miſcellaneous literature, on a plan entirely new; by which the different ſciences and arts are digeſted into the form of diſtinct treatiſes or ſyſtems, comprehending the hiſtory, theory, and practice of each, according to the lateſt diſcoveries and improvements; and full explanations given of various detached parts of knowledge, whether relating to natural and artificial objects, or to matters eccleſiaſtical, civil, military, commercial, &c. Including elucidations of the moſt important topics relative to religion, morals, manners, and the œconomy of life. Together with a deſcription of all the countries, cities, principal mountains, ſeas, rivers, &c. throughout the world; a general hiſtory, ancient and modern, of the different empires, kingdoms, and ſtates; and an account of the lives

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