THE

Medical and Physical Journal.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE general and indiscriminate use of bougies, armed with caustic, and formed of various materials, induced me to trouble you and the public with a few observations, in the hope of exciting those who have had greater experience, to make a candid declaration of their success or failure, in the diseases for which these instruments have been recommended. Mr. J. Hunter's skill and penetration have not, in all the cases of his improvements in Surgery, followed the employment of his methods. The use of caustic, which he adopted in cases of strictures in the urethra, was, doubtless, often accompanied with success; but I have reason to believe that his expectations were, by no means, so sanguine toward the end of his practice. When novelties are introduced into medicine, whether they be wisely ordered, or the contrary, it seems an invariable consequence, that the hopes of the promulgator are too sanguine; and in the hands of the sanguine imitator, this error is seldom amended.

I do not propose, in this communication, to say, that the application of caustic, in cases of stricture in the urethra, has not produced essential benefit to many persons; but I am called upon by my experience, to state those inconveniences and dangers which occurred in my own practice. The young surgeon, filled with the statements contained in books, and the cures so easily performed at the Lecture Table, sets out in the profession without fearing the management of any recorded disease; he flatters the hopes of the patient, tries his skill, having, in his own mind, from the first, a full assurance of success, and too often meets with the bittereſt disappointment. I am aware that a number of great practitioners possess more ample materials for the task I am undertaking than myself; I only hope to draw them forth.

From what I have observed in the use of caustic to the

urethra, I am led to believe, that this ſubſtance ſeldom produces an eſchar, and where it really does ſo, the conſequences are to be highly dreaded. The urethra, defended by its mucus, and capable in every part of throwing out a ſerous fluid, which has a power of diluting the moſt cauſtic ſubſtances, cannot be eaſily acted upon by a cauſtic in its own peculiar quality.

To produce a ſlough or local death in a part by a metallic ſalt, like lunar cauſtic, requires the retention of the ſolvent ſubſtance, in contact with the living part, for a conſiderable length of time, and alſo that the ſolvent ſhould preſerve its concentrated ſtate. None of theſe events happen in the application of cauſtic to the urethra; and, upon ſtrict examination, I have found the ſubſtance voided from the urethra, after the uſe of the lunar cauſtic, to be nothing more than a flake of coagulated mucus, produced by that metallic ſalt. In ſome inſtances, I have ſeen the whole mucus of the urethra thus coagulated, and the power of ſecreting it again thus ſuſpended for ſeveral weeks; the paſſage being moiſtened during that time with a ſerous fluid. When, however, the cauſtic has the effect of producing a ſlough, I fear it will be found to extend far wider than the ſurface touched; and a large part of the urethra will mortify, ſo as to endanger the life of the patient. This calamity, I underſtand, has happened more frequently than is conſiſtent with the unlimited recommendation of ſuch remedies. The effect which appears to me to be deſired from the uſe of cauſtic applications to ſtrictures in the urethra, is that of ulceration; and I believe all the ſucceſsful caſes are cured by the ulcerative proceſs, excited by this irritating ſubſtance, upon a part whoſe powers of action are moderate. Whether any other ſubſtance would produce the ſame effect upon an altered ſtructure, or new formed ſubſtance, like that which conſtitutes a ſtricture, is, I ſuſpect, yet to be tried. The moſt dangerous conſequences which I have witneſſed from the application of lunar cauſtic to ſtrictures, is that of producing an extenſive hæmorrhage, ſuch as to give juſt cauſe for alarm. A young gentleman, to whom I applied the cauſtic for a ſtricture, near the bulbous part of the urethra, had a hæmorrhage produced by it, which continued ſeven days; in the two firſt he loſt four pounds of blood, and nearly as much afterwards. I have heard that ſome perſons have actually died of this kind of hæmorrhage. It would be very honourable to thoſe practitioners, who have ſeen ſuch caſes, to make them public, as it might put the ſurgeon and the patient on their guard. In what manner the lunar cauſtic acts, ſo as to induce hæmorrhages of longer duration than from injuries of the ſame extent, pro-

duced

tinguiſhed by the appearance of "*concave ſcaly eruptions*" on the top of the teat, which is never produced by a ſpurious ſort.

With reſpect to Dr. Jenner's aſſertion, that a perſon may be "*repeatedly affected, both locally and generally, with the Cow-pox*," I am ſufficiently ſatisfied of the contrary by a variety of well-atteſted caſes. A farmer, at ſome diſtance from this place, had the Cow-pox a few years paſt; and though he has been in the habit of milking cows, when the diſeaſe has appeared in its moſt virulent ſtate, he has never experienced ſo much as an inflamed hand; nor has he received any infection from the Small-pox, though recently inoculated.*

I could recount numerous caſes, to corroborate this aſſertion; and I have found them unſuſceptible of either. If the Small-pox is ever received after being inoculated with vaccine matter, it muſt unqueſtionably ariſe from the latter not being genuine; as, in every caſe I have witneſſed, where the perſon had been infected with Cow-pox, though at a diſtant period, the inſertion of variolous matter has been productive of no effect.

Some medical gentlemen have been inclined to ſuppoſe, and have, indeed, ventured to aſſert, that the appearance of puſtules in Cow-pox, has been occaſioned by the unknown introduction of variolous matter; whereas, it has been proved that eruptions, ſimilar to the Small-pox, had appeared, though a new lancet had been uſed. A convincing proof of this I witneſſed not long ago, where a farmer (for all ſorts of people inoculate here) inſerted the vaccine matter on the point of an awl, and three out of five had eruptions to the number of twenty; three or four on the face and hands, but chiefly confined to the arm. Theſe puſtules were filled with matter—and others were inoculated from the puſtules, experiencing the diſeaſe in its mildeſt form, and without any eruption. I know it has been ſuppoſed, that matter taken from puſtules would produce them; but this is a ſtriking proof to the contrary. They certainly did not ariſe from Small-pox, (as has been repreſented) but from a deep inſertion of the virus. Indeed, a more valuable diſcovery cannot be made for the public than this, as it may be the means, under Providence, if not of baniſhing, at leaſt diminiſhing, the fatal influence of a diſorder which has ſo long deſolated mankind; and I am happy to add that the practice is daily extending. I have the honour to be,

GENTLEMEN,

Your humble ſervant,

J. H. GROSE.

Winſlow,
March 15, 1800.

* The gentleman alluded to, recollects the Cow-pox being known in the county as a preſervative from Small-pox thirty-ſix years ago.

On Burns and Scalds. By Mr. John Bell.

[Concluded from our last Number, p. 207.]

A Case that has lately fallen under my observation, places the advantages of the stimulating plan, in my opinion, upon a most substantial basis. The infant daughter of a gentleman, who came as a passenger in the Castor from Lisbon, (in December last) was scalded by pulling down a bason full of hot tea that had been poured out only a moment before. On examination, I found that the whole surface of the thorax and abdomen, the upper part of the right thigh, and nearly the whole of the right arm, were scalded. In the hurry and confusion of taking off her cloaths, a portion of the epidermis of the arm had been stripped off; the rest of the scalded surface was entire, and no blister had yet arisen, for I saw her a very few minutes after the accident. The scalded parts were copiously bathed with *ol. terebinth.* previously warmed by putting the phial into hot water, and slips of linen spread with *ungt. ceræ* afterwards applied; the child was then put to bed. On inquiring at the end of an hour, I was told she was fast asleep, and had been so for some time; at nine o'clock next morning she was still sleeping, and had rested remarkably well during the night. Towards evening the plasters were removed; every part was found without blisters, perfectly covered with the cuticle, (except the right arm) and free from pain, but of a high red colour. The dressings of *ungt. ceræ* were again applied, but taken off on the following morning, and never afterwards made use of. The arm was dusted with hair powder, which formed a scab that fell off in the course of a few days, and left the skin underneath perfectly sound.

For an explanation of the principles on which this method of treatment is founded, I must refer your readers to Mr. Kentish's Essay, as it would take up too much of your publication to enter farther on the subject.

Mr. Earle's well known professional abilities will doubtless operate in favour of his practice; and in cases where it can be used, it will certainly prove in some degree beneficial: but I must say, that I do not think it will supersede the stimulating plan, if the merits of each be fairly investigated.

Permit me to thank you for the information I have received from your valuable Journal, on many interesting subjects; it is a work highly useful to individuals like myself, whose situation precludes the advantage of an extensive assortment of medical books. I remain,

GENTLEMEN,

Your obliged humble servant,

JOHN BELL, Surgeon's Mate.

His Majesty's Ship Castor, Spithead, Feb. 1800.

duced by cutting or lacerating inſtruments, may form a future inquiry. The fact is, however, indiſputable. The young practitioner, therefore, availing himſelf of whatever advantages experience may aſſign to the application of cauſtic in ſtrictures of the urethra, will do wiſely to try other means in ſimple caſes; and whenever he feels juſtified in reſorting to this method, will be apprized of the danger to be apprehended in bad habits, from extenſive ſloughing of the urethra, and from a degree of hæmorrhage againſt which he was not previouſly prepared.

The other methods to be employed in ſtrictures of the urethra, which occaſion a permanent difficulty in voiding the urine, are, the bougies, which act mechanically. Two ways are at preſent followed of uſing theſe mechanical inſtruments; the one is deſigned to effect a dilatation of the paſſage by ſlow diſtenſion; the other, to deſtroy the ſtricture at once, by employing a greater degree of violence: only taking the precaution to keep the part dilated until the laceration is healed. The dilating bougies are conſtructed of various materials, oftener ſuited to the fancy of the practitioner. In the one inſtance the dilatation is effected, by paſſing a conical ſhaped bougie through the ſtricture, gradually puſhing it forward by ſucceſſive attempts. In the other, the bougies are uſually made cylindrical, with either a conical or a rounded point: and it often happens, that a ſtricture of long continuance is removed, by paſſing a firm bougie of the ſize of the natural urethra, at once through the diſeaſed part. A great practitioner in London,* has been in the habit of employing a large ſilver probe for this purpoſe, and, to my own knowledge, with frequent ſucceſs. The impediment, which uſually conſtitutes a recent ſtricture, is the contraction of a ſlender piece of the inner membrane of the urethra, only a few lines in thickneſs, and which may be broken down by a ſlight mechanical force. The moſt ſimple method to be recommended in ſuch ſtrictures is, that of the bougie for the purpoſe of dilatation. Theſe are made of hide leather, cut nicely, and poliſhed: or of thick catgut, which ſwell by abſorbing moiſture in the urethra, and thus enlarge the ſtricture, after they have been paſſed with eaſe in a dry ſtate.

The bougies made of plaſter, ſpread on linen, and rolled up, have not the abſorbing property of the two former, and the wax, &c. ſoon becomes ſo ſoft by the heat of the body as to render them incapable of a due degree of reſiſtance.

Mr.

* Mr. Cruikſhank.

Mr. Smith, chemiſt, &c. of Taviſtock-ſtreet, Covent garden, has lately contrived a compound metal, out of which he makes bougies of all forms and ſizes; the degree of flexibility of the metal, and the poliſh it bears, are admirable qualities for the manufacture of bougies. Where mechanical force is preferred, or the dilatation of a ſtricture by a conical bougie, or where the paſſage is ſo narrow as not to admit any other ſubſtance from the comparative want of reſiſtance, theſe metallic bougies are, in my eſtimation, decidedly the beſt. They are alſo well adapted for examining the paſſage to aſcertain the ſeat, &c. of ſtricture. For clearing the canal previouſly to the introduction of a cauſtic bougie, and for dilating the opening after a certain degree of ulceration has been excited by cauſtic, theſe inſtruments will be found preferable to moſt others.

I have the honour to be,
GENTLEMEN,
Your obedient, &c.
ANTH. CARLISLE.

Soho-Square,
March 8, 1800.

To Dr. BRADLEY, *&c.*

SIR,

AS the attention of many medical gentlemen has been engaged in inquiries and experiments relating to this queſtion, "What advantages are likely to reſult from introducing the practice of inoculating for the Cow-pox?" I preſume to offer a few obſervations on the ſubject.

A ſhort time ago, Dr. Jenner, a very ingenious and reſpectable phyſician at Berkeley, publiſhed a Treatiſe on the Cow-pox, in which he endeavoured, by manifold experiments and obſervations, to prove,

1. That cows were liable to a diſeaſe, which was popularly called the Cow pox.

2. That human beings might be inoculated with the limpid fluid produced in the puſtules of the Cow-pox.

3. That, in conſequence of ſuch inoculation, an action commenced, which made ſuch a change in the conſtitution of the inoculated perſons, as to render it impoſſible for them to be ever infected with the Small-pox.

4. That the diſeaſe induced by inoculating with the Cow-pox, was of a ſlight kind, wholly free from danger, ſeldom

attended

attended with fever, and never with ſuppurating eruptions, like thoſe of the Small-pox.

5. That if, by any accident, too much general diſturbance was excited in the conſtitution, by inoculating for the Cow-pox, it was eaſy, by a proper application to the inoculated part, to regulate or ſuppreſs ſuch diſturbance.

6. That one child in a family might be inoculated for the Cow-pox, without the hazard of infecting any other perſon in the family, the Cow-pox not being a contagious diſeaſe.

Theſe appear to be the principal circumſtances mentioned in Dr. Jenner's treatiſe, which being thus brought forward, it became the duty of medical men, eſpecially of thoſe who are much engaged in the practice of inoculating for the Small-pox, or who are often conſulted on infantile diſeaſes, to examine the truth of theſe by experiments, and to obſerve the reſult of them with all poſſible care.

Before the publication of Dr. Jenner's Treatiſe, the Cow-pox was unknown, even by name, to the generality of the phyſicians in the kingdom; and of courſe, experiments, wherever made, muſt be made diſadvantageouſly; but by no one incident ſo obviouſly unfavourable, or ſo likely to defeat the intention, as that of their being made at the Small-pox Hoſpital, notwithſtanding the acknowledged abilities or integrity of its phyſician, Dr. Woodville. I believe, it is not at this moment doubted, that the two diſeaſes have been confuſed; and many caſes recorded as of the Cow-pox, ought, in fact, to have been aſſigned to the Small-pox.

Many vague reports have been circulated reſpecting the violence of the diſeaſe produced by inoculation for the Cow-pox, as well as of perſons receiving the Small-pox after ſuch inoculation. But neither of theſe points has, in any one inſtance, been ſupported by convincing evidence; and ſome of the inſtances I know to be untrue. I have, myſelf, ſeen a conſiderable number of children inoculated for the Cow-pox, which went through the diſeaſe, not only with perfect ſafety, but with very little diſturbance. There was no fever or illneſs of any kind worthy of notice, nor was there any eruption which could be attributed to it. And though my own experience does not enable me to form a deciſive opinion on the ſecurity from the Small-pox produced by that inoculation, I beg leave to mention the following fact, which was related to me by the Colonel of the regiment.

In one of the regiments of the Glouceſterſhire Militia, upwards of a hundred men, who had not had the Small-pox, were inoculated for the Cow-pox, and had the diſeaſe. This regiment was ſhortly afterwards ordered to go into barracks, which

which had been inhabited, and were juſt quitted by a regiment which had been infected with the Small-pox, and ſuffered ſeverely from it. The barracks were not even cleaned before the Glouceſterſhire regiment took poſſeſſion of them, yet not one of the men who had been inoculated for the Cow-pox was infected with the Small-pox.

Entertaining no doubt of the advantages which will reſult to ſociety, when Dr. Jenner's propoſal for inoculating with the Cow-pox ſhall be generally adopted, I have thought that ſome good might be produced by an attempt to remove prejudices; for it appears to me, that none of the facts or obſervations mentioned by Dr. Jenner have been diſproved or refuted, and that no new information has been gained on any material point, by all that has been written on the ſubject, ſince the publication of his firſt Treatiſe.

I am, SIR,

Old Burlington Street,
1 March, 1800.

Your very humble ſervant,
THO. DENMAN.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

HAVING had the pleaſure, ſome time ſince, to peruſe Dr. Jenner's Obſervations on the Cow-pox, wherein he aſcribes the origin of it to a diſeaſe in the horſe; and having heard thoſe remarks diſputed, I have taken the liberty of communicating ſome additional information.

I have had many opportunities of converſing with reſpectable farmers, whoſe cows were affected with the diſeaſe, and they unanimouſly agree in aſcribing it to a complaint in the horſe's heel, which is called, from its ſingularity of making the hair erect, "a ſcratchy heel." Now, there are many diſorders incident to the heel, which do not come under this deſcription; being well fed, or want of exerciſe, will frequently excite ſwellings, which are by no means connected with a ſcratchy heel. The ſpurious Cow-pox does not ariſe from this cauſe; but is frequently produced when cows, full of milk, are taken to fairs, and their bags permitted to remain full for a length of time: it will alſo ariſe from ſore teats neglected; and by the friction of the milker's hand, a quantity of extravaſated blood is carried on the fingers to the reſt of the cows, and produces, by abſorption, a diſeaſe ſimilar, but not exactly correſponding, with genuine Cow-pox. The real diſeaſe may always be diſtinguiſhed

Observations on Diseases in London.

List of Diseases from the 20th of December to the 15th of March; being the Result of the public and private Practice of a Physician at the West End of the Town.

ACUTE DISEASES.	
Catarrh	88
Contagious Malig. Fever	63
Influenza	18
Scarlatina Anginosa	15
Measles	9
Hooping Cough	5
Small-Pox	4
Acute Rheumatism	20
Rheumatic Pain of the Face	8
Inflammation of the Lungs	11
Pleurisy	2
Inflammation of the Eyes	4
Inflammatory Sore Throat	6
Inflammation of the Bowels	3
Gout	4
Hæmoptoe	5
Epistaxis	2
Inteſtinal Hæmorrhagy	6
Renal Hæmorrhagy	2
Menorrhagia	8
Abortion	2
Childbed Fever	7
Acute Diſeaſes of Infants	27
Hectic and Slow Fever	14
Apthous Fever	6
Quartan	1
Tertian	1

CHRONIC DISEASES.	
Cough and Dyſpnœa	151
Pulmonary Conſumption	46
Chronic Rheumatiſm	20
Lumbago	4
Sciatica	3
Dropſy	15
Aſthenia	38
Palſy	6
Spaſms of the lower Extremities	1
Spaſms of the Fore Arm	1
Vertigo and Headach	11
Epilepſy	2
Hydrocephalus	4
Hyſteria	3
Melancholia	2
Palpitatio	2
Dyſpepſia	35
Gaſtrodynia	19
Enterodynia	19
Bilious Vomiting	7
Diarrhœa	26
Obſtipatio and Colic	6
Chlorоſis	22
Fluor Albus	5
Scirrhus Uteri	2
Scirrhus of the Liver	2
Prolapſus	2
Gravel and Dyſuria	8
Incontinence of Urine	6
Hæmorrhoids	3
Jaundice	4
Worms	12
Tabes Meſenterica	7
Scrophula	8
Bronchocele	1
Tooth Raſh	3
Lichen	5
Prurigo	6
Lepra	2
Scaly Tetter	4
Ptyriaſis	3
Erythema	3
Purpura	1
Thruſh	4
Herpes	2
Shingles	1
Ecthyma	2
Itch	5
Impetigo	4
Porrigo	7
Lupus	3
Gutta Roſea	3
Furunculi	2

Pulmonic diseases were almost universal, and particularly severe in the months of January and February. During the latter month there occurred an epidemic catarrh, chiefly affecting children, and exhibiting the usual symptoms* of the influenza. This disease, although violent for some days, did not in any instance prove fatal. Since the beginning of March, inflammatory and hæmorrhagic complaints have been very prevalent. In the cases of pleurisy and peripneumony, venæsection was employed more than once before the acute pain and sense of constriction about the chest could be relieved.

The short frost in December was not sufficient to put a stop to the progress of the scarlatina anginosa, and typhus or malignant fever, the extent and fatality of which were formerly noticed. During the mild open weather in January, and at the beginning of February, the fever was again rapidly diffused to a very great extent, and with an aggravated train of symptoms. Among the poor, the mortality from this cause was nearly as stated in the last report,† notwithstanding the attentive administration of proper articles of diet, and of suitable remedies, with plenty of wine. The good effects of all these applications are almost wholly superseded by the miserable accommodations of the poor with respect to bedding, and by a total neglect of ventilation in their narrow, crouded dwellings. It will scarcely appear credible, though it is precisely true, that persons of the lowest class do not put clean sheets on their beds three times a year; that even where no sheets are used, they never wash or scour their blankets and coverlets, nor renew them till they are no longer tenable; that curtains, if unfortunately there should be any, are never cleaned, but suffered to continue in the same state till they drop to pieces: lastly, that from three to eight individuals, of different ages, often sleep in the same bed; there being, in general, but one room, and one bed for each family. To the above circumstances may be added, that the room occupied is either a deep cellar, almost inaccessible to the light, and admitting of no change of air; or a garret, with a low roof and small windows, the passage to which is close, kept dark in order to lessen the window tax, and filled not only with bad air, but with putrid, excremental, or other abominable effluvia from a vault at the bottom of the stair-case. Washing of linen, or some other disagreeable business is carried on, while infants are left dozing, and children more advanced kept at play whole days on the tainted

* For an accurate account of these, I beg to refer to Medical Communications, Vol. I. page 14.

† i. e. one in four of all persons affected with fever.

tainted bed: some unsavoury victuals are from time to time cooked: in many instances idleness; in others, the cumbrous furniture, or utensils of trade with which the apartments are clogged, prevent the salutary operation of the broom and white-washing brush, and favours the accumulation of a heterogeneous, fermenting filth.* From all these causes combined there is necessarily produced a complication of fœtor, to describe which would be as vain an attempt, as for those to conceive who have been always accustomed to neat and comfortable dwellings.

The above account is not exaggerated: for the truth of it I appeal to the medical practitioners, whose situation, or humanity, has led them to be acquainted with the wretched inhabitants of some streets in St. Giles's parish, of the courts and alleys adjoining to Liquorpond-street, Hog Island, Turnmill-street, Saffron-hill, Old-street, White Cross-street, Grub-street, Golden-lane, the two Brick lanes, Rosemary-lane, Petticoat-lane, Lower East Smithfield, some parts of Upper Westminster, and several streets of Southwark, Rotherhithe, &c.

It cannot be wondered at that in such situations contagious diseases should be formed, and attain their highest degree of virulence. The inhabitants of the second story, in houses occupied by the poor, are usually better accommodated; and therefore experience, during sickness of any kind, the best effect from public and private charities. But persons thus stationed, suffer from contiguity, and from their friendly attentions to those above them, or to the tenants of the cellars; so that in whatever part of the house a fever commences, it is soon diffused among all the inmates and their occasional visitors, especially in seasons which favour its progress, like the last autumn and winter. Children and women, constantly residing in infected apartments, seem to get habituated to the action of the fomites. Men and boys, by means of fresh air, and the exercise of the day, shake off the effects of the virus, and escape long unhurt. It must, however, be observed, that if through taking cold, or any other cause, they should be confined to the house for some days, they assuredly take the

* The rooms do not change their condition till they change their tenants; often, indeed, so little care is taken, that enough of the old leaven remains to infect all the inmates who successively occupy the same premises. I recollect a house in Wood's Close, Clerkenwell, wherein the fomites of fever were thus preserved for a series of years; at length, a friendly fire effectually cleared away the nuisance. A house, notorious for dirt and infection, near Clare-market, afforded a farther proof of negligence; it was obstinately tenanted till the wall and floors giving way in the night, crushed to death the miserable inhabitants.

fever. So it happened in the late unfavourable season: whoever was obliged to keep his bed for a catarrh, pleurisy, or inflammation of the lungs, within three or four days, caught the fever; and almost every one so affected died. The children are infected from the new source of contagion; and the mother, after closing the eyes of her husband, and, perhaps, of more than one of her offspring, sinks exhausted with grief, watching, and fatigue, and is, herself, the last victim to the disease. The fatality of this fever, within the limits of the Public Dispensary, has, during the present winter, exceeded our former experience, notwithstanding the care of all the medical assistants.* It is a melancholy consideration that, in London and its vicinity, hundreds, perhaps thousands of labourers, heads of families, and in the prime of life, are thus consigned to perish annually, being often so situated that medical applications, or cordial diet, cannot in any wise alleviate their distress. Persons in the higher ranks of life are often endangered by the thoughtlessness of servants, who privately visit their sick friends in infected rooms, and also carry thither the children entrusted to their care. Another circumstance by no means consolatory, is, that linen, and other apparel, sent to laundresses in close parts of the town, must sometimes return to families, thoroughly impregnated with the effluvia of putrid fever, and of the scarlatina, &c.

But where is a remedy to be found for so many evils?—Hospitals are for the most part barred against the entrance of contagious diseases. Pecuniary aid, whether transmitted by the warm heart of benevolence, or wrenched from the slow, reluctant hand of parochial administrators,† is an insufficient palliative for the present case. Shall the unhappy patient then seek for refuge in the parish workhouse? Alas! the fever is already making its ravages there.‡ — What therefore is to be done?—All these mischiefs

* My own endeavours were seconded by the abilities and active diligence of my colleague, Dr. Murray; and by the occasional assistance of Dr. Colladon, Dr. Shea, Dr. T. Smyth, Dr. Baumegarten, Dr. Yelloly, Dr. Ryan, and Dr. W. P. Dimsdale.

† I do not intend this as a general censure on parish officers; many do their duty conscientiously, but I have been mortified and indignant at the coldness with which some of them receive information of the most complicated misery, and at their positive refusal to inspect the distress represented by the medical attendants.

‡ This has taken place in very many of the workhouses during the winter; and several of the attending surgeons have suffered severely from the fever. I am sorry to add that our medical friend, Dr. Yelloly, was confined three weeks by a malignant fever taken near Brook's Market from a family, all the individuals of which were previously relieved by his care, and the co operation of the overseers.

chiefs admit of ready alleviation, and might, with proper management, be removed at a moderate expence. Let Houses of Recovery be established in open, airy situations, at some distance from other buildings, but adjoining to different districts of the metropolis; to be supported either at the joint expence of the several parishes within each district, or by a voluntary subscription among its principal inhabitants. As soon as any person exhibits symptoms of a fever from infection, let him be instantly removed into the House of Recovery, where, being washed, and put with clean linen into a fresh bed, he will soon be freed from his complaints, and able to rejoin his wife and family. To them, in the mean time, a loan of bedding should be made till their own bed is cleansed, and till the walls and floor are washed, or scoured. The revenue necessary to support houses instituted on such a plan is not so great as might be imagined. Both the utility and expence of them have been already put to a noble trial by the merchants and manufacturers of the populous town of Manchester. Their example deserves to be followed in this metropolis, and all other great cities; the necessity of a receptacle for contagious fevers being always proportioned to the magnitude of the place. The same receptacles might occasionally serve for the relief of asthmatic, consumptive, and other pulmonic diseases, which predominate, or are aggravated at a season when fevers are nearly extinct. One-fourth, and in very unfavourable seasons one-third of all the deaths in London, is, according to the bills of mortality,* caused by diseases of the lungs; a circumstance which surely merits some consideration. These complaints are universally, and perhaps with reason, excluded from hospitals: they require a free circulation of pure air, and admit of little relief where patients are confined to small rooms in close narrow courts and alleys. Pulmonic diseases, however, although so fatal in themselves, extend no farther than the individuals affected with them; whereas the scarlet fever, simple typhus, and typhus anginosus or malignant sore throat, through the medium of infectious fomites, endanger the health and peace of the whole community. Such diseases, therefore, should be the more immediate object of attention: and I thought it my duty, after observing so great a mortality, to sound an alarm to our fellow citizens; to

* From the London bills of mortality it appears, that in the year 1796 there died of pulmonic disorders 5,910 out of 18,238; in the year 1797 of pulmonic disorders 5,439 out of 16,714; and in the year 1799 of pulmonic disorders 6,210 out of 17,285. The articles of abortive and still-born, or violent deaths, and casualties, are necessarily excluded from the list. See the Account of Diseases in London, Monthly Magazine for April, 1797.

to ſtate the origin, cauſes, and rapid diffuſion, at ſome ſeaſons, of putrid infectious diſeaſes; and to point out the means of preventing the calamities, and devaſtation annually cauſed in an uſeful claſs of people, and extended from them to the ſuperior ranks.

Having given my ſentiments, and the reſult of my own knowledge on the ſubject, I cannot but do juſtice to thoſe who firſt carried into execution the plan above recommended, and to others, who, probably before me, have thought it applicable to the ſtate of the poor in London. It is, therefore, with ſatisfaction, I refer to Dr. Ferriar's Medical Eſſays; and to a tranſcript from them, publiſhed in the laſt report of the Society for bettering the condition of the poor, by the unwearied philanthropiſt Thomas Bernard, Eſq. treaſurer of the Foundling Hoſpital. I am happy to obſerve farther, that the treaſurer of the Public Diſpenſary, William Waddington, Eſq. (Sloane Street) has been ſtruck with the neceſſity of houſes for the reception of infectious diſeaſes, and is ready to co-operate in their eſtabliſhment near the metropolis. I need not add, what has I believe been full impreſſed on the public mind from his various exertions in the cauſe of humanity, that this gentleman is not in the habit of leaving unfiniſhed what he once undertakes.

Red Lion Square, March 30, 1800. R. WILLAN.

*** On receiving the above report, Dr. Bradley informs me that the medical gentlemen connected with the Weſtminſter Hoſpital formerly held ſome converſations on the ſame ſubject; but that no meaſures were taken for carying the deſign into execution.

STATE OF DISEASES IN LONDON.

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of February to the 20th of March, 1800.

	No. of Caſes.
ACUTE DISEASES.	
Pleuritis	2
Peripneumony	4
Peripneumonia Notha	6
Acute Rheumatiſm	1
CHRONIC DISEASES.	
Cough	16
Dyſpnœa	7
Cough with Dyſpnœa	19
Raucedo	2
Hæmoptoe	4
Hydrothorax	2
Pleurodyne	3
Dyſpepſia	5
Vomitus	4
Gaſtrodynia	6
Hypochondriaſis	2
Colica	2
Diarrhœa	15

Hæmorrhois

	No. of Cases.
Hæmorrhois	3
Dysuria	2
Dolor Nephriticus	1
Amenorrhœa	6
Fluor Albus	5
Anasarca	3
Vertigo	4
Hysteria	5
Epilepsia	1
Ophthalmia	3
Otalgia	2
Rheumatismus Odontalgicus	4
Chronic Rheumatism	18
PUERPERAL DISEASES.	
Ischuria	1
Rhagas Papillæ	3
Menorrhagia lochialis	3
Mastodynia	4
INFANTILE DISEASES.	
Fever	1
Measles	4
Ophthalmia	3
Convulsio	3
Diarrhœa	5

The long continuance of north and north-easterly winds, has protracted the duration of those diseases, which are most frequent in the early months of winter to a later period. Diseases of the pulmonic system are still prevalent, and in many cases, very obstinate. Peripneumonia, both of the true and the bastard species, has been a common complaint, and, to many persons far advanced in life, it has proved fatal. This disease, in several patients, could be traced to a very imprudent exposure of themselves to the influence of the very cold winds, which have blown, with but little intermission, from the east, the north, or north-east points. During such a state of the atmosphere, the most proper climate for old persons and young children is a warm room.

The measles, a disease of which children are most frequently the subjects, has been aggravated in some of its symptoms by the state of the weather. The cough and affections of the respiratory organs have been very troublesome, and even threatening, though the disease has not, in any of the instances referred to, proved fatal. Diarrhœa has been very frequent, as appears by the preceding list, and has been often tedious in its duration. This complaint, in several cases, might be referred to an exposure to cold; and has, in some instances, recurred upon too early a return to former habits of diet and regimen.

Rheumatism, both of the acute and chronic species, has frequently occurred during the last few weeks. A species of this disease, which Nosologists have denominated Rheumatismus Odontalgicus, has been troublesome. This is principally characterized by a pain in the teeth, and in the muscles of the face, which, instead of being confined to one spot, frequently changes its seat, and, like other rheumatic affections, is apt to return upon every slight occasion.

Diseases admitted under the Care of the Physicians of the Westminster Hospital, from the 18th of Feb. to the 20th of March, 1800.

Continued Fever	10	Amenorrhœa	5
Quotidian	1	Anasarca	5
Pleurisy	3	Ascites	

Asthenia

Aſthenia	4	Hypochondriaſis	1
Aſthma	5	Impetigo	2
Catarrh	2	Leucorrhœa	1
Cholera	1	Menorrhagia	1
Chorea	1	Obſtipatio	1
Cough	16	Paralyſis	1
Diarrhœa	5	Phthiſis	2
Dyſentery	1	Pleurodynia	1
Dyſpnœa	7	Prurigo	1
Dyſuria	1	Rheumatiſmus	12
Enterodynia	6	Struma	4
Epilepſy	2	Syphilis	1
Hæmoptyſis	2	Scirrhus	1
Hæmorrhois	1	Worms	2

MEDICAL THERMOMETERS.

Dr. Currie, in his excellent work on Fever, having evinced the great benefit often derived from the affuſion of cold water, Practitioners in the Army and Navy, as well as the Phyſicians to public Inſtitutions, became deſirous of availing themſelves of the uſe of a remedy ſo cheap, pleaſant, and efficacious. For this purpoſe, it was neceſſary to aſcertain the heat of the body with a degree of preciſion, for which the hand of the practitioner can ſeldom be relied on: thermometers were therefore recommended; and we have at length obtained a ſpecimen that appears perfectly ſatisfactory. The ſcale is attached to the tube, and the whole inſtrument is contained in a cylindrical caſe about five inches long, and a quarter of an inch in diameter; therefore ſufficiently portable.

As this inſtrument is deſigned for the ſole purpoſe of aſcertaining the heat of the human body, its range is very limited, in order to obtain the requiſite ſenſibility: it extends from about 80 degrees to 112; and is ſo ſenſible, that it will indicate the heat applied to it in leſs than ten ſeconds; and the ſcale may be read to a quarter of a degree. It will be ſcarcely neceſſary to caution our readers againſt immerſing it in fluids of a temperature higher than 112°, as it might endanger the inſtrument.

Gentlemen in the country may be ſupplied with ſuch Thermometers as above deſcribed, or with thoſe of more extenſive ſcales, if deſired, by Allen and Howard, chemiſts, in Plough-court, Lombard-ſtreet, at about 18s. each.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following correction of a misquotation by Dr. Maclean, being introductory to a few facts with regard to the natural history of the Digitalis, I will thank you to give it a place in your valuable Journal. I am,

GENTLEMEN,

With great respect, your's, &c.

Hadleigh, Suffolk, Feb. 18, 1800. NATHAN DRAKE.

AS inaccuracy in quotation, especially on controverted points, must necessarily discolour facts, and lead to conclusions totally unapprehended by the writer, it is incumbent upon every individual thus misrepresented, immediately to correct the error, whether arising from inadvertency or design.

Dr. Maclean has, in his last communication in your Journal, Vol. II. p. 151, when speaking of a proper situation for the culture of the Digitalis, represented me as affirming that his house is damp. "If the situation of my house," says he, "be certainly low and *damp*," as Dr. Drake has affirmed, it has hitherto eluded my own and my family's observation."

Now, if the Doctor will but advert to the paper in question (for I readily suppose his mistake to have arisen from his trusting to memory) he will find no such expression or term as damp in the sentence he refers to, nor the smallest allusion to dampness, as applicable to his house. Thus is the sentence written: "Dr. Maclean's house at Sudbury, is certainly situated low, not far from the river, and in the immediate neighbourhood of large chalk-beds." A situation which he has in common with the whole town of Sudbury, which is low, compared with the adjoining country, and built upon a chalky soil. This last circumstance alone, had I not been previously acquainted with the scite of Sudbury, would have precluded, in my mind, any idea of dampness, which is, in general, irreconcileable with strata of chalk.

Dr. Maclean has been led into this error by confounding two very opposite soils, though equally inimical to the growth of the Digitalis, and arbitrarily supposing I have applied them to his own situation; for in the paragraph preceding that he has misquoted, it is affirmed, that Digitalis delights in an elevated, a light and gravelly soil; on a fat and dense mould, in low and damp situations, and where strata of chalk abound, it always

degenerates, becomes dwarfish, and of a pale green." Here a damp situation, a rich soil, and a chalky one, are distinct and opposed, though alike unfriendly to the plant in question; and the latter, frequently found in a low, but never in a damp scite, I have expressly declared to be that of the Doctor's immediate neighbourhood.

So far from the Digitalis being cultivated without difficulty, in any garden, which the Doctor assures those who may wish to possess it, is the case; he will, if he consult the writers upon the natural history of the plant, discover that a *low* and *damp* soil, or a *chalky* soil, or a *fat* and *rich* soil, are highly detrimental to its growth; and that an *elevated* and *dry* soil, a *light* and *gravelly* soil, or a *barren* and *sandy* soil, are those in which it *alone* flourishes.

Dr. M. too, in insisting upon free exposure to the air, and freedom from adjoining plants, in cultivating the Digitalis, is, in another instance, deviating widely from the known habitudes of the wild plant. "These," observes he, "are often surrounded by weeds and other plants, which deprive them of a sufficient supply of light, air and nutriment from the earth, and thereby prevent them from attaining to full perfection."* Now, Botanical authors would inform him, that sheltered ground is the favourite situation of the Digitalis, which courts shade; is always found deep in hedge-rows; and even when growing on heaths or commons, the finest plants, as I well know through painful experience in gathering them, are found almost hidden by furze and bushes. That I may not be taxed, however, with general or unauthorised assertion, I shall conclude these remarks by quoting some of the first, both old and modern, writers on the natural history of the plant.

Nascitur in *montibus umbrosis*, et *saxosis* locis. Fuschius De Digitali, cap. 342, p. 892, edit. 1542.

Fox-glove groweth in *barren sandy* grounds, and *under hedges*. Gerard, p. 647.

It is observable of this plant, that it grows *only on gravelly soils*; *rarely* or *never* on those where there are strata of *calcareous* earths. Lewis's Materia Medica, edition by Dr. Aikin, 1791.

Digitalis. Place, *dry*, *gravelly* or *sandy*, soils. Withering on Fox-glove, Introduction, p. 13.

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* Medical and Physical Journal, Vol. II. p. 121.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the last number of your very respectable Journal, which affords a ready and convenient medium of communication to medical men, I recognised, with much pleasure, a signature affixed to an ingenious paper on the Phymosis, promising other communications, to which I look forward with much satisfaction and expectation.—After a lapse of thirty years, to meet with the name of a gentleman whom I had known and respected in the same service with myself in the East Indies, added much to the gratification which the perusal of your Journal always affords.

I observe, in the same Number, but with somewhat less of the agreeable, that your correspondent, Dr. Kinglake, has done me the honour to pay me a compliment on the score of my humanity—I say, with somewhat less of the agreeable, because, however dear the character of humanity may be to a medical man, there are, I believe, few in the profession who would thankfully accept of such a compliment, when coupled with an unnecessary reflection derogatory to his experience: That the reflection was unnecessary, and therefore impertinent, must be evident to any person who recollects, that in my paper on the subject of Digitalis, in your publication, I had *myself* disclaimed all pretensions to experience in the cure of consumptions by means of that medicine; but it does not follow from this, that I am either inexperienced or timid in its administration in other diseases, or that I have expressed any thing like a wish to excite timidity in the regular practitioner. But, before I advance a claim to considerable experience on this subject, permit me to repeat my most anxious wishes, that medical men, when they are boasting of the virtues of this plant (which I admit to be inestimable) will always have the humanity to guard the public at large against the unwary use of so insidious a poison. The Digitalis is a plant which medical men may certainly use with safety; but which they ought never to employ without much caution. I have already recorded one instance of a lady preparing large and unlimited doses for a friend in the last stage of a consumption; but I did not add, which I might then have done, that it would also have been administered, with equal confidence, and in unlimited doses, to two or three of her children, who were then afflicted with slight coughs.

In the year 1795, Mr. Martin, a respectable publican, was

taking the powder of Digitalis in the form of pills, by the preſcription of Dr. Lettſom:—while I was attending its adminiſtration with all proper caution, I was one day ſtruck with the appearance of a *large* bowl filled with the leaves of Digitalis infuſed in boiling water, by his bedſide. Upon inquiry, I was informed that a paſſenger in one of the ſtage coaches, which had ſtopped at his door, had told him that fox-glove tea was an infallible cure for the dropſy. I believe I need not add, that I reſcued this patient from premature diſſolution; for his was one of thoſe caſes in which I had previouſly aſcertained that Digitalis would make no uſeful impreſſion.

In the year 1788, Mr. J. K.* a ſtrong man, ſomewhat more than 40 years of age, in the early ſtage of a dropſy, was ſuddenly and unexpectedly carried off with all the dreadful diſtreſs and jactitation which an over doſe of digitalis ſometimes produces: his death was pretty generally aſcribed to apoplexy, and was indeed truly apoplectic. I ſuſpected that this plant, had been uſed; but the fact was moſt reſolutely denied. I have, however, ſince learned that he really fell a ſacrifice to the unguarded uſe of fox-glove tea, recommended by a perſon unacquainted with its nature, and ignorant of phyſic.

In the year 1787 or 88, Mr. James P——, a reſpectable tradeſman, about the age of 50, was afflicted with a dropſy. The late Dr. Hugh Smith, and the preſent moſt excellent Phyſician Dr. Wm. Sanders, preſcribed for him without alleviating his complaints. I propoſed the Digitalis to each in turn, and each declined its uſe. It fell to my lot to adminiſter it on my own judgment.—A few deſert ſpoonfuls of the decoction compleatly diſcharged the water by urine, without exciting one unpleaſant ſymptom. The patient continued well and happy ſome months, till a return of the diſorder was gradually uſhered in by a return of cough and dyſpnœa. It was again removed in the ſame pleaſant and benign manner, by the ſame quantity of the decoction of Digitalis. At the diſtance of eight or nine months, the cough, dyſpnœa, and watery accumulation in the abdomen again appeared, and he had again recourſe to the Digitalis, which now produced not the ſmalleſt diuretic effect; unfortunately, the patient, eager to excite this evacuation, and full of confidence in a medicine which had been twice the means of preſerving and prolonging his life, took a larger quantity than he had been directed to do, and, in the courſe of the night, with little or no previous notice, fell a ſudden ſacrifice to its narcotic qualities.

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* For obvious reaſons the initials are only printed, but the name at length is left with the Printer.

These are not all the cases in which I have had reason to suspect its furtive administration; and they may be considered, perhaps, as amounting to nothing more than the well-known consequences of an injudicious use of Digitalis. I grant they are so; but they, at the same time, afford the most convincing proofs, that, unless professional men will be much upon their guard, this valuable medicine, like laurel water, may do incalculable mischief: While *they* are administering it with all the caution of science and experience, in the form of pills, or powders, or tincture, the nurse, or the anile prescriber, will be pouring it down by cups full in the form of infusion or decoction.

I am glad that you afford room for the free discussion of this important subject, which is yet far from being exhausted; and I wish to add another page. It would, however, occupy too much of your excellent work, were I to enlarge upon the multiplicity of dropsical affections in which, during the last twelve years, I have administered this noble remedy with the most heart-felt satisfaction and success. I have the pleasure daily to see persons in good health, who, but for its use, would have been long since numbered with the dead.

——— Hawkins, a labouring man, upwards of 50 years of age, ten years since was relieved from a confirmed dropsy by the decoction of Digitalis. The disorder in twelve months returned, and was again permanently removed by the same remedy. He is now at the age of 60, or more, a labouring man, free from this disease.

——— Brunt, upwards of 70, was rescued from the most imminent danger, near twelve months since, by a few grains of the powder; and is now equally free from the disease.

——— Grey, a young woman, with confirmed dropsy, her abdomen equal in size to that of a woman at the full period of gestation, after the unsuccessful use of various other medicines, was speedily and effectually cured by the decoction of Digitalis, combined with the late Dr. Griffiths's chalybeate mixture, and the electuary of cream of tartar. She is now a hearty married woman, the mother of one or more children.

I could enumerate patients of almost every age, who have in my hands experienced the beneficial effects of Digitalis in various forms; and, during the course of an assiduous attention to these, I have been enabled to make the following general observations respecting its use, with which I will conclude this paper.

Whoever cultivates the Digitalis in his own garden, will, during six or eight months in the year, be able at all times to procure a decoction of the recent herb for extemporaneous prescription;

ſcription; and will perhaps find the decoction of the recent herb the beſt and moſt manageable preparation.

When ſmall doſes of this decoction produce little or no effect, it will ſeldom be of much uſe, or ſafe, to perſevere with large ones. •

• By one drachm added with the approbation of a very experienced phyſician (bis vel ter die) to one of his preſcriptions, a pair of anaſarcous legs and thighs were in a few days reduced to their proper ſhape; and a pair of lungs, labouring under ſerous accumulation and ſpaſmodic oppreſſion, freed during ſeveral months.

In drying the plant, the largeſt, ſoundeſt, and moſt luxuriant leaves ſhould be ſeparately laid on a table, and placed near the window of a green-houſe, or any large room, expoſed to the ſun, that they may be quickly dried, and the green colour preſerved.

If the leaves, when properly dried, be cut ſmall like the advertiſed Britiſh herb tea or tobacco, and ſtrongly compreſſed into a caniſter, or one of the drawers of an apothecary's ſhop, and covered with writing paper, they will, in a dry ſituation, preſerve their virtues unimpaired for ten years; but it is much better to preſerve a freſh quantity every year.

One ounce of the dried leaves is equal to four of the green, for the purpoſe either of decoction or tincture. I have been, for many years, conſtantly provided with a tincture drawn both with proof ſpirit and nitrous æther, and have ſometimes thought the latter the moſt efficacious.

When the Digitalis is given in ſubſtance, the SEEDS are, on many accounts, preferable to the dried leaves.—In them the whole virtues of the plant are concentrated—they are exceedingly minute, and, in fact, a powder already prepared, and held out to us by the bountiful hand of Nature, requiring little or no care either in drying or preſerving.

The moment they are bruiſed in a mortar, the peculiar odour of the plant will be recogniſed—combined with nitre, or cream of tartar, they form a convenient powder; and one grain will be found an active doſe.

Preſuming that their uſe is at preſent nearly confined to my own practice, and as it will be many months before they can be eaſily obtained, if Dr. Kinglake ſhould think it worth his while to adopt them on the ſtrength of my EXPERIENCE and recommendation, I will moſt cheerfully ſupply him (as I now do you) with a ſmall quantity.

It is worthy of remark, as ſomewhat curious, that the peculiar virtues of the digitalis, hyoſciamus, nicotiana, ſtramonium, geniſta, and ſeveral others of the narcotic claſs, ſhould reſide

reside in the seeds, while those of the white poppy are not only perfectly free from every sedative or narcotic property, but very esculent and nutricious. This last remark is not, I believe, equally true of the papaver erraticum; I suspect the seeds of that plant to be possessed of an anodyne property worthy of future observation.

Enfield, Feb. 14, 1800. JOHN SHERWEN.

P. S. After what I have advanced in a former paper on the subject of Digitalis, as applied to the cure of consumptions, it is incumbent upon me now to add, that I have lately had one case of incipient phthisis strongly marked, (Eliz. Mathews) in which I have great reason to believe that the tincture of Digitalis contributed much towards performing what I trust will continue to be a perfect cure; but as the case originated in chlorosis, and the preparations of myrrh, steel and kali had been also had recourse to, some doubts may be entertained respecting the effect of the tincture.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN addition to the cases which I have already detailed, I transmit to you the following. The pressure of arrangements necessary to the publication of my Essay on *Scrophula* and *Consumption*, prevented me from furnishing them for insertion in your last Number.

Respecting the curative powers of the *Digitalis*, there is a strange diversity of opinion; and the evidence on both sides is respect-ble: the bulk of practitioners, therefore, by whom the qualities of the plant are certainly unknown) must necessarily be at a loss, what belief they ought to espouse. As the subject, however, has so very generally arrested medical attention, it will have an ample discussion; and it is much to be wished, that the public mind remain suspended till experiment either establish or subvert the salutary effects of the *Digitalis*. When I first entered upon the use of the plant in *Consumption*, I did not even entertain a hope that it could afford relief. I disbelieved its efficacy; and the issue of the first cases, in which I prescribed it, confirmed my scepticism. My patients perished! The failure I now ascribe to the circumstance of the plant being of a bad quality; since its prominent effects were

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never apparent. This consideration induces me to recommend the experimentalist to provide himself with the *genuine plant, properly collected, carefully preserved, and recently pulverized.* At present, we are certainly not employing the same remedy, and of course the result of our experience must be widely different. Indeed, I have the strongest conviction, that a want of due attention to the quality of the *Digitalis*, and to the quantity administered, is the principal source of medical disagreement relative to its powers. I am well persuaded that this is the case; for I have recently seen specimens of the *Digitalis*, (sent to Apothecaries by their Druggists, and warranted to be collected and prepared according to the most approved method) the colour, flavour, and strength of which, were completely destroyed by the application of too much heat. I have also known portions of the powder administered, which had laid in a shop drawer for years. Are we to expect that the *Digitalis*, exhibited in this state, should exert its influence over the arterial system, or produce any beneficial effect? The practitioner is disappointed; he abandons the further application of the plant; and he pronounces it useless. I know some striking instances of this having happened; I therefore solicit the scrupulous attention of medical men to the quality of the plant which they employ.

Again, I am persuaded that the *Digitalis* is, in general, too speedily thrown into the system, by doses too large, and too frequently administered. I am clearly of opinion, that in all cases of *Pulmonary Consumption*, it should be so managed, as not to display any of its powers previous to the termination of the first, or commencement of the second week from its exhibition. I ought to observe here, that there are cases which require much time, and a large proportion of the plant, before they come under its influence; and I believe that those people who have indulged in the free use of spirituous or strong liquors, are more difficultly affected than others. I have, however, met with none who did eventually resist its influence; and I think, that unless it obtain dominion over vascular action, it will never produce any curative effect. It is therefore incumbent on every practitioner, who details failures, to state with precision, whether the *Digitalis* did or did not retard the motion of the heart; for without this information we are not certain that their patients are charged with the plant; and the cases are good for nothing. *I rejoice that the Digitalis is becoming a fashionable remedy; and I know that the period will soon arrive, which will rank it with the first of healing agents. In my mind, it is the most important, and the most extensively useful instrument in our art.*

In

In addition to what I have said in my Essay, I have to observe, that I now keep my consumptive patients on *animal food* and *cream* exclusively. I am,

GENTLEMEN,
Your's, obediently,
Bradford, Feb. 9, 1800. GEO. MOSSMAN.

CASES continued.

CASE 10.—Sept. 5th. B. A ætat. 27, caught cold about four weeks ago. He has fruitlesly tried several remedies; he complains of a tightness and pain in his chest, accompanied by a violent dyspnœa; his cough is hard, dry, and incessant; his tongue is furred; he has no appetite; his urine is high coloured; his pulse is 120. I enjoined him to abstain as much as possible from the use of liquids; and recomended his diet to consist of *eggs* and *animal food*. I ordered a *blister* to be applied to the thorax; and prescribed a grain of the *Digitalis* four times a day, with six drops of the *muriated barytes*.

Sept. 8th. The *blister* has operated well, and his breathing is easier; his cough is particularly distressing; his pulse as frequent as before. There is yet no perceptible effect from the exhibition of the *Digitalis*.

Sept. 10th. His breathing is still easier; his cough is more exasperated than ever; his pulse equally frequent. I discontinued the *muriated barytes*, and prescribed the *pectoral julep*, prepared as in Case the 9th. I increased the dose of the *Digitalis* to six grains a day.

Sept. 11th. He took six grains of the *Digitalis* yesterday. He feels a sensation of giddiness and stupor; his eyes are considerably affected; he seems to have a slight convulsive affection of the left side of his face; he vomited his breakfast; his pulse is 110; his cough is easier; he experiences a load at his stomach, which is occasionally accompanied by a faintness; I ordered him to day six grains of the *Digitalis* as before.

Sept 12th. He feels relieved; he has vomited again this morning; he describes a very singular sensation affecting his head and stomach; his pulse is 90. I directed him to day to take only four grains of the *Digitalis*.

Sept. 15th. He vomits every morning; his urine continues high coloured, and he complains of a little pain when he voids it; he has pain in his head; and, when he awoke this morning, every object appeared to him as if covered with snow; this phænomenon continued for half an hour; rigors, successive heats, and profuse perspirations follow each other; he expectorates pus, or thick mucus, occasionally streaked with blood;

his pulſe is 100, with a conſiderable intermiſſion; his thirſt is very great. I directed another *bliſter* to be applied to the thorax; and I inſtructed him to take only three grains of the *Digitalis* daily.

Sept. 18th. The *bliſter* operated well; he continues to vomit occaſionally; all objects ſtill appear white at particular periods; his urine is become much paler; his pulſe intermits much, and is reduced to 68; his perſpirations are leſſened; his cough is leſs diſtreſſing; and there appears a very complete alleviation of every morbid ſymptom. He is obviouſly under the influence of the *Digitalis*. I inſtructed him to continue its uſe as before.

Sept. 24th. He has been remarkably coſtive, and has had recourſe to aperients; his tongue is clean, and his appetite is much improved; his cough and dyſpnœa have ceaſed to give him any uneaſineſs; and he can inſpire fully without experiencing any painful ſenſation in his cheſt; he does not vomit; his viſion is natural; his expectoration is trifling; his pulſe is 80, regular and full; he feels an increaſe of ſtrength, and every conſumptive ſymptom is materially diminiſhed. I directed him to take two grains of the *Digitalis* daily.

Oct. 13th. He called upon me in the moſt perfect health; he ſaid his appetite was as good as ever it had been in his life, he had no complaint remaining, and had been following his uſual laborious employment for a week.

A few weeks afterwards this patient relapſed; without any inſtructions from me, he again had recourſe to the *Digitalis*, and again it exhibited effects completely curative.

Case 11.—Sept. 30th. T. H. ætat. 42, has been in a declining ſtate of health for ſeveral months. About three weeks ago he contracted a ſevere cold from ſitting in wet cloaths; he was immediately ſeized with rigors, thirſt, difficulty of breathing, and violent pain in his cheſt. He cannot lie on his left ſide, nor on his back, without exciting a moſt diſtreſſing cough, and a ſenſe of ſuffocation. He expectorates a taſteleſs white froth; his tongue is much furred; his urine is high coloured; his pulſe is 120. I enjoined a *milk* diet, and applied a *bliſter* to the thorax; I alſo recommended the occaſional employment of the *pectoral julep* already mentioned, and preſcribed four grains of the *Digitalis* daily.

Oct. 2d. The *bliſter* operated well; his cough is much abated; and the dyſpnœa is very conſiderably relieved. He can lie upon both ſides without coughing, or experiencing any ſenſe of ſuffocation; his tongue is leſs furred; and his urine leſs high coloured. His pulſe is 90.

Oct. 7th. He has imprudently expoſed himſelf to cold, which has produced a little tightneſs in his cheſt, accompanied by a conſiderable

conſiderable dyſpnœa and cough; his pulſe is 100. He continues to take four grains of the *Digitalis* daily.

Oct. 11th. He is much better; his pulſe is 65. I inſtructed him to take two grains only of the *Digitalis* daily.

Oct. 15th. He is now in perfect health; and the further exhibition of the remedy appears unneceſſary.

I was deſired to viſit this patient again about the latter end of November, and found him labouring under an exacerbation of all his former ſymptoms. He had enjoyed very tolerable health for ſeveral weeks, and had recovered his uſual ſtrength. He had been from home upon buſineſs, and had been repeatedly wet, to which circumſtance he aſcribed the re-appearance of his complaints. I again had recourſe to the ſame general method of cure, and preſcribed the *Digitalis*. I found that he had, ſince his former indiſpoſition, indulged much in the uſe of ſtrong liquors; and that even at this period he could not be perſuaded to abandon their uſe. The *Digitalis* was taken, but never regularly; nor was he ever in any degree under its influence. A confirmed *pulmonary conſumption* has continued to waſte him. He is now periſhing.

[To be continued.]

N. B. My next communication will contain a caſe of *meſenteric obſtruction*, and ſome caſes of *pleuriſy*, in which the ſalutary powers of the *Digitalis* were ſtrikingly diſplayed.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AMONG the numerous admirers of your valuable publication, I feel a pleaſure in acknowledging myſelf one of the moſt ſincere. The liberal plan upon which it is conducted, the extenſive correſpondence it includes, the hints and improvements in the various branches of medical ſcience it contains, entitle it to the higheſt commendations; and whilſt every thing of a perſonal and controverſial nature continues to be ſo ſtudiouſly avoided, its reſpectability will be preſerved undiminiſhed, and its ſucceſs thus neceſſarily enſured. The opportunity now offered of communicating Obſervations and Caſes, (which otherwiſe the Public would never have known, and which, perhaps practitioners themſelves might either not have thought of or forgotten) is by no means the leaſt conſiderable advantage ac-

cruing from the publication of the Medical Journal. Partial evils, I am aware, may sometimes arise from your being now and then pestered by the tedious recital of uninteresting cases; but the good resulting from the communication of more important ones is incalculable. I know not whether you will consider the following case as interesting or not; in so far as it tends to confirm the favourable opinion of the anti-phthisical virtues of a medicine lately introduced (or rather revived) into practice,—I mean, the *Digitalis Purpurea*,—it may probably not be deemed unworthy of notice; and, if so, I shall think myself honoured by its insertion in an early Number.

About the middle of last summer, I was desired to visit Mrs. ———, ætat. 33, who had laboured under complaints of the chest for a considerable time before, and had medical attendance without relief. I found her emaciated, and much reduced in strength; her appetite though occasionally tolerable, yet in general very much impaired; her nights were restless, owing to the constant flying pains in her chest; and the cough, which was distressing, followed by a copious expectoration evidently of a purulent nature. The night sweats were profuse, and sometimes made her so weak, that she could scarcely rise from her bed. The hectic fever marked by morning and evening exacerbations, so accurately described by Cullen, was completely formed; and her pulse was about 120 in a minute. The usual treatment was followed; she was desired to wear flannels throughout, and expressed herself much more comfortable from their use. Expectorants were ordered, which eased the cough without making it less frequent; opiates administered at night, and laxative pills occasionally given, to obviate costiveness induced by the opium. The morning and evening febrile accessions were suspended, and at length removed, by the exhibition of a powder composed of nitre and antimony, just before the commencement of an attack. This was the only ground it could be said I had gained, after many weeks attendance.—Sometimes, indeed, the patient would revive, and acknowledge herself better; though as often would she sink, and become as ill as ever; for still the night sweats continued profuse, and the expectoration was undiminished, amounting to a full pint in twenty-four hours, and frequently mixed with blood. Tired of a plan which was productive of such partial benefit to the patient, and reflected so little credit on myself, I determined to try, as a dernier resource, the *Digitalis*; and as the tincture is preferred in these cases, I was particular in procuring some prepared precisely according to the formula given us by Dr. Maclean, which for convenience of exhibition, and elegance of appearance,

pearance, is far preferable to any other preparation I am acquainted with.

As she was in such a weak state, it was necessary to observe the utmost caution; to let the system feel the influence of the medicine in the most gradual way, sometimes repeating similar doses, and at others increasing them, according to the effects produced, as well as the state and disposition the patient herself was in at the time. The following was the course pursued, and the history of symptoms on each visit.

November 11. Cough and expectoration as usual, bowels regular, tongue and skin natural, pulse 112.

℞. Tinct. Fol. Digital. gt. x. ex lactis cyatho. = 12. A better night than usual; fancies her appetite better; expectoration as usual; b. t. and sk. natural, p. 110. Augeatur dosis Digitalis ad gt. xi. bis in die. = 13. A good night; sweated much less than usual; appetite improving; free from pain of breast; p. 100, b. t. and sk. natural, cough and expectoration nearly the same. Aug. dosis ad gt. xii. bis in die. = 14. An indifferent night; return of pain of breast; cough rather troublesome; expectoration more considerable, and slightly tinged with blood; little or no sweating; appetite tolerable; b. t. and sk. natural, p. 100. Aug. dos. ad gt. xiii. bis in die = 15. A tolerable night, no sweats, less cough, and expectoration less copious, without tinge of blood; has observed the tincture keeps her bowels regularly open; complains of slight vertigo; free from pain; appetite as usual; t. and sk. natural, p. 98, and rather fuller. Aug. dos. ad gt. xiv. bis in die = 16. A good night, cough and expectoration as usual, slightly tinged with blood; vertigo less, appetite not quite so good; free from pain; b. t. and sk. natural, p. 96. Aug. dos. ad gt. xv. bis in die. = 17. A tolerable night; complains of slight faintness; cough and expectoration less, though slightly tinged with blood; appetite not so good; free from sweats and pain of breast; b. t. and sk. natural, p. 96. Aug. dos. ad gt. xi. ter in die. = 18. A middling night; cough not so troublesome; expectoration without tinge of blood, and of a more favourable appearance; no sweats; free from pain, but slight vertigo; appetite diminishes; b. t. and sk. natural, p. 96. Aug. dos. ad gt. xii. ter in die. = 19. A good night, cough less, and expectoration less tinged with blood; not so giddy; free from pain; appetite bad; b. t. and sk. natural, p. 96. Aug. dos. ad gt. xiii. ter in die. = 20. A good night, cough less, expectoration also less, but tinged with blood; had considerable pain of breast; rather more giddy; no sweats; appetite bad; b. t. and sk. natural, p. 92. Aug. dos. ad gt. xiv. ter in die. = 21. A poor night, more pain of breast, and more vertigo; vomited considerably at midnight;

night; cough rather leſs, and expectoration by no means ſo copious; appetite bad; no ſweats; b. t. and ſk. natural, p. 90. Aug. dos. ad gt. xv. ter in die. = 22. A tolerable night; no vomiting; no ſweats; cough not ſo troubleſome; expectoration tinged with blood; appetite not ſo bad; vertigo increaſed, with the appearance of objects floating before the eyes; b. t. and ſk. natural; pain of the breaſt not ſo much; p. 90, and irregular. Aug. dos. ad gt. xvi. ter in die. = 23. A reſtleſs night; vomited, and the vertigo is become diſtreſſing, with frequent faintneſs; cough the ſame, but expectoration leſs, though ſlightly tinged with blood; appetite bad; fears ſhe ſhall not be able to go on with the medicine; no ſweats; b. t. and ſk. natural, p. 96. Is perſuaded to perſevere: Rep. doſis ut heri. = 24. A much better night; cough not ſo troubleſome, and expectoration far leſs copious; vertigo leſs, appetite better; has obſerved that her urine is more copious, though before it was always ſcanty, and depoſited a lateritious ſediment; b. t. and ſk. natural, p. 100. Aug. dos. ad gt. xvii. ter in die. = 25. An indifferent night; cough troubleſome; expectoration diminiſhes, though ſlightly tinged with blood; vertigo as yeſterday; appetite rather better; no vomiting; b. t. and ſk. natural, p. 96. Aug. dos. ad gt. xviii. ter in die. = 26. A tolerable night; cough nearly the ſame; expectoration diminiſhes; complains of vertigo, with frequent faintneſs, and ſenſe of ſinking at the ſtomach; appetite as yeſterday; ſweats have entirely left her; urine flows ſtill more copiouſly, and without ſediment; b. t. and ſk. natural, p. 96. Rep. dos. ut heri. = 27. A tolerable night; cough troubleſome; expectoration as yeſterday; vomited this morning; complains of great ſoreneſs; vertigo the ſame; appetite as before; b. t. and ſk. natural, p. 96. Rep. dos. ut antea. = 28. A much better night, and feels better in every reſpect; has not vomited; cough not ſo troubleſome; expectoration leſs, though conſiderably tinged with blood; appetite better, and vertigo leſs; b. t. and ſk. natural, p. 96. Aug. dos. ad gt. xix. ter in die. = 29. Continues much better; a good night; cough leſs; expectoration leſs tinged with blood; vertigo and faintneſs by no means ſo conſiderable; appetite better; b. t. and ſk. natural, p. 90. Aug. doſis ad gt. xx. ter in die. = 30. Symptoms equally or more favourable than yeſterday; p. 88, and unequal. Cont. doſis = Dec. 1. Was ſo giddy that ſhe fell on going up ſtairs, and is ſomewhat bruiſed in conſequence, otherwiſe is nearly as yeſterday; expectoration has diminiſhed nearly one half in quantity; vomitted this morning; p. has riſen to 100. Rep. doſis = 2. A reſtleſs night; vomited much this morning; very giddy with dimneſs of ſight and faintneſs; complains ſhe can hardly keep life within

within her; cough as yesterday; expectoration less tinged with blood; general soreness; no appetite; b. t. and sk. natural, p. 88. Is persuaded to continue = 3. A bad night; frequent nausea, but no vomiting; vertigo rather less, and appetite somewhat better; cough and expectoration as yesterday; being fatigued by sitting up, is resting herself on bed; b. t. and sk. natural, p. 92. Cont. = 4. A better night than for some time past; cough not so troublesome, and expectoration less without tinge of blood; free from pain; appetite better; vertigo and faintness less; b. t and sk. natural, p. 100. Rep. dosis = 5. A good night; cough less troublesome; expectoration as yesterday; free from pain; no vomiting; vertigo less, though the dimness of sight is considerable; appetite better; b. t. and sk. natural, p. 90. Is persuaded to increase the dose: Aug. dos. ad gt. xxi. ter in die = 6. A restless night; cough troublesome, though expectoration less; frequent nausea, but no vomiting; vertigo increased, vision confused, and objects appear of a yellow tinge; appetite little; b. t. and sk. natural, p. 96. Rep. dos. ut heri = 7. Rather a better night; vertigo and dimness of sight distressing; being somewhat discouraged in consequence, has omitted the dose of the Tincture this morning; cough and expectoration as yesterday; appetite somewhat better; b. t. and sk. natural, p. 96. Rep. dos. ut heri = 8. A tolerable night; has continued her medicine; is free from pain; vertigo less; cough much less, and expectoration diminished full two-thirds; b. t. and sk. natural, p. 96. Is encouraged to persevere: Rep. dos. = 9. A good night, without being disturbed by the cough, though it is somewhat troublesome this morning; expectoration rather more copious than yesterday, but free from tinge of blood; feels quite easy, and better in every respect; vertigo rather less; p. 100. Increased the dose this morning, of her own accord, to gt. xxii. Cont. = 10. A good night; cough and expectoration as yesterday; the latter slightly tinged with blood; appetite better; free from pain; b. t. and sk. natural, p. 96. Since taking the tincture, has observed a tumour in the right axilla, of considerable size, and of many years standing, is totally removed. Aug. dos. ad gt. xxiii. ter in die. = 11. A good night, free from pain; vertigo and confusion of vision less; appetite better; b. t. and sk. natural; p. 92. Aug. dos. ad gt. xxiv. ter in die. = 12. A restless night; vomited considerably this morning, and is very languid; vertigo and confusion of vision distressing; general soreness; appetite indifferent; cough more troublesome; expectoration rather more copious, and slightly tinged with blood; b. t. and sk. natural, p. 88. Rep. dosis. = 13. A better night; has not vomited; cough troublesome; expectoration nearly the same; vertigo

vertigo and confuſion of viſion diſtreſſing; appetite bad; b. t. and ſk. natural, p. 88. Aug. doſis ad gt. xxv. ter in die.= 14. A tolerable night; cough not ſo troubleſome, and expectoration much diminiſhed; vertigo, and confuſion of viſion, when looking at ſilver, it appears of a yellow colour; appetite better; b. t. and ſk. natural, p. 92. Rep. doſis.=16. A reſtleſs night; vomited conſiderably; cough and expectoration nearly the ſame; appetite a little better; other ſymptoms as yeſterday; p. 100. Aug. dos. ad gt. xxvi. = 17. A very good night; no vomiting; feels better than uſual this morning; appetite better; cough not ſo troubleſome, and expectoration much diminiſhed, without tinge of blood, and of a lighter colour; b. t. and ſk. natural, p. 88. Aug. dos. ad gt. xxvii. ter in die. = 18. An indifferent night; vomited this morning; cough rather troubleſome, and expectoration rather increaſed, though without tinge of blood, and of a lighter colour; appetite not ſo good; vertigo and confuſion of viſion increaſed, but does not feel that ſinking at the ſtomach ſhe complained of ſome time ago; b. t. and ſk. natural, p. 94. Aug. dos. ad gt. xxviii.=19. A poor night; vomited; cough troubleſome; expectoration leſs; appetite rather better; other ſymptoms the ſame; p. 96. Aug. dos. ad gt. xxix. ter in die.=20. A good night; no vomiting; expectoration much leſs; p. 100. Aug. dos. ad gt. xxx. ter in die.——Having now arrived at what is conſidered a ſtandard doſe, my patient was pleaſed that ſhe had got to her journey's end, and that ſhe ſhould not be requeſted to increaſe the number of drops. She, however, continued their uſe for upwards of three weeks from the laſt report, and every day experienced a change for the better; the pulſe keeping up almoſt invariably to 100. Her nights became nearly undiſturbed, her appetite good, her ſtrength in a great meaſure reſtored, and the expectoration, which, as mentioned, amounting to a full pint, of a purulent nature, emitting an abominable fœtor, was reduced to a little more than a tea ſpoonful of pure mucus, and perfectly inoffenſive in ſmell. It was my wiſh that ſhe might have continued the medicine for ſome weeks longer; but being tired of medicine, and imagining herſelf ſo far reſtored as to be ſecure from a ſecond attack, ſhe declined having any thing to do with it; obſerving, it was time enough to have recourſe to the remedy when the diſeaſe ſhould demand it.—— The reduction of the pulſe in this caſe was by no means remarkable, though on a few occaſions it was pretty conſiderable; a proof that the good effects of this medicine does not depend upon the retardation of the circulation. Though the ſtate of the pulſe was particularly attended to, it was impoſſible to be ſo extremely preciſe as Dr. Magennis was in the Caſe inſerted in

your

your laſt Number, on account of the patient reſiding at ſome diſtance from the town. No doubt, improvement may be derived from ſuch accuracy, where it can be attended to; and I ſhould have been happy to have obſerved it myſelf, had it been poſſible. In the caſe tranſmitted by Mr. Magennis, the pulſe was generally much reduced towards evening, which may be owing to the ſyſtem being then more under the influence of the medicine from the ſucceſſive doſes taken in the day-time. The concluſions drawn by the Doctor from the internal uſe of this medicine, I preſume, will be allowed to be extremely juſt and highly beneficial. The preſent Caſe, however, proves (differently from that related by Dr. M.) that the Tinct. Digital. is *certainly diuretic*, and *gently aperient*. It appears that this medicine has a wonderful influence on the abſorbent ſyſtem, from the circumſtance of an indolent, ſcrophulous tumor, full as large as an hen's egg, in the axilla, being totally removed during its adminiſtration. Yet this fact is not ſufficient to warrant the concluſion, that it is on this principle we are to account for the modus operandi of Digitalis; becauſe there are other medicines (ſuch as mercury for inſtance) which are ſuppoſed to act particularly on the abſorbents, and are conſidered as injurious in phthiſis pulmonalis. But however ſatisfactory it might be to trace the modus operandi, it is comparatively of little conſequence as long as we are acquainted with the remedy. I am,

GENTLEMEN,

Plymouth Dock,
Feb. 16, 1800.

Your humble ſervant,
JOHN PENKIVIL, Surgeon.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

YOU will very much oblige me by inſerting the incloſed Remarks in your next Number of the Medical and Phyſical Journal.

It is with much pleaſure that I witneſs the increaſing circulation of your publication among the Surgeons of the Fleet; for in their department it is ſingularly uſeful, by giving a compendium of all improvements, and enabling them to apply the ſame to their own practice. I am,

GENTLEMEN,

With much conſideration,
Your very humble ſervant,
T. TROTTER.

Hamoaze,
March 5, 1800.

IN the 4th volume of The Annals of Medicine, (1799) Dr. Yeats, of Bedford, has made ſome remarks on fumigation with *nitrous vapour*, and pointed out a few miſtakes in my ſtatement of the ſubject. Theſe miſtakes have already produced an apology, on my part, in the 2d volume of *Medicina Nautica*.

On looking over my letter publiſhed in the laſt number of the Medical and Phyſical Journal, I obſerve the words *nitrous vapour* uſed throughout; my error was therefore corrected, at leaſt a month, before meeting with the caſtigation of Doctor Yeats.

In thus changing the term, becauſe the degree of *oxygenation* of this vapour has not been aſcertained by its author, and becauſe *nitrous gas* implies a preciſe quantity of *vital air* in combination with *azote*, it is not to be inferred that I mean any compromiſe of opinion with either the principles or practice. The firſt I hold to be vague and undefined; and the latter is unſupported by any clear or deciſive teſtimony. When both the principles and practice ſhall be proved from indiſputable authority, it will then remain for the favorers of *fumigation* to demonſtrate, by equally indubitable proofs, the chemical nature of that power or ſubſtance, which, only for the ſake of explaining a fact, we call CONTAGION. When this is done, they will reſcue their darling *antidote* from the opprobious epithet of quackery, as being the relic of a barbarous and ſuperſtitious age.

With reſpect to what I ſaid of the combinations of *azote* with *caloric* and *oxygen*, the miſconception is ſuch as might have eaſily happened in quoting from memory. But the ſituation of Dr. Yeats, perhaps, does not enable him to make allowance for the ſhifting ſcene to which our ſtudies are expoſed. Our motto has not been, *fortiter occupa portum.*

Having now confeſſed my ſins, let me turn to what Dr. Yeats calls a "further proof," in favour of *nitrous fumigation* arreſting the progreſs of a jail fever. The moſt valuable part of the evidence, in this inſtance, is kept in the back ground. The hiſtory of the caſe is imperfect. It ought to have been mentioned, whence this contagion came; or how it was generated in the priſon; whether by foul air, damp and cold apartments, and perſonal filth joined to irregularities or depreſſing paſſions. If any of theſe cauſes produced it, I can well ſuppoſe, the penetrating eye and ſympathizing heart of the attending phyſician would quickly diſcern them, and ſee that they were ſpeedily corrected. When ſuch ſalutary precautions are taken, is it fair to overlook them, and attribute every healthy change in the condition of the patient to fumigation? I know it may be ſaid, as it has been by all the ſupporters of this Empiriciſm,

piricism, that without fumigation, *cleanliness*, *ventilation*, &c. will not be sufficient. But to this we oppose ten thousand facts, collected on the largest scale, in the Channel Fleet; and more accumulating at the moment I am writing. We cannot be accused of troubling our readers with solitary cases of infection; yet there was scarcely a cruize in which the Hospital-ship did not receive patients in typhus: but no person was ever infected there. It therefore becomes a solemn duty on my part, to guard officers against confidence in any *preventive* that is in danger of attracting their attention from *means of safety* that have received the sanction of experience, and that disclaim all mystery.

I can allow Dr. Yeats full credit for the interest he takes in the health of his Majesty's naval subjects, in this discussion; and if he looks back to the facility with which seventeen sail of the line and five frigates were cleared after the victory of the First of June, he will not be afraid to trust it to the present rules of practice. When fevers become prevalent in ships, the ease with which they are expelled is not only more certain, but they no longer appear under that malignant character, or followed by the same number of deaths, that marked their progress in former times. This part of prophylactic means, without the least jealousy, I freely consign to officers; and if ever they tamely yield it up to the trumpery which has lately been introduced among us, with a success that was worthy of a better cause, they will deserve to lose their commissions. Men who are accustomed to such matchless prowess in their own profession, cannot be insensible to a duty the most essential to secure the acquisition of their reputation and fortune.

A mind like that of Dr. Yeats, familiarized to investigation, with a powerful chemical agent in his hands, whose attractions are well known, could not fail to attempt some explanation of its manner of operation against contagious matter. In one part of his critique, speaking of the *nitric vapour*, he says: "It will readily part with it, (oxygen) and thus render the atmosphere purer." Here then he fully gives up the point, that it *directly* attacks *contagious miasma*; and consequently, it must act by meliorating the respirable portion of the air. But he gives no proof that the *nitric acid*, converted into *vapour*, yields oxygen to the common atmosphere. I apprehend, if the Doctor attends to the evolution of the fumes from the pipkins, he will find no separation of *oxygen*, unless it should be attracted by some filthy exhalations, which have in their composition *hydrogenous gas*, as happened in the dirty wards of the Union hospital-ship. If, however, Dr. Yeats means that the only end in view from fumigation, ought to be to increase

the oxygenous quality of the atmosphere, in sick apartments, I shall most readily subscribe to the principle. But, if he admits this, he will think also with me, that chemistry, at the present day, affords a process much superior to what can be effected by the decomposition of *nitre*, or of *sea salt*, in the *muriatic acid gas*, which destroys unpleasant smells, in the same manner as nitrous vapour neutralises the foul effluvia of unpurified utensils. In the wards of hospitals, the decks of ships, or the cells of a jail, if windows cannot effectually throw in pure air, mechanical philosophy provides us with suitable means; the best of which is, perhaps, the common bellows, sufficiently large, and fitted with leathern tubes.*

That a former contagion, some years ago, spread from this jail to the town, is a very negative proof in favour of the *nitrous fumigation* nipping the present fever in the bud. The cells probably underwent beneficial alterations in the interval: if I mistake not, in this spot Mr. Howard, the champion of humanity, first exercised his talents. But the difference in the conditions of life, between the victims of the two fevers, might also essentially aid the means of extinction, or give the infection activity to spread further, and ought to be taken into the account. To these might be added, the season and state of the weather.

Since the second volume of my work was published, seven or eight ships are added to our list of infections; most of the evidence was collected under my own attendance; and a considerable part of that offers very new facts. Had those authors who have written on fumigation been on the spot, instead of reading reports, I am apt to believe, very different conclusions would have been drawn. It is not to be expected that a practice which has prevailed for 3000 years, is to be quickly relinquished; but I do not despair of ultimate success; *magna est veritas et prevalebit.*

I cannot dismiss this paper, without adverting to a second alarm spread concerning the importation of the plague. Serious indeed! for three ships, laden with corn, have been destroyed on account of it; and at a period of the utmost scarcity. It is much to be lamented, that the inquiries which led to this measure, had not been published for the information of the medical world. The peace of society can never be preserved, if such alarms

* For all purposes of ventilation, I would recommend the means of throwing in *pure air* into ships, cells, or wards, by mechanical apparatus, if windows and ports are insufficient, in preference to the negative method of extracting *foul air*.

alarms are to be repeated. Could no advocate for fumigation be found, who would hazard the reputation of the *nitrous vapour*, on the iſſue of a trial that might have ſaved food for fifty thouſand human beings?

> Felix, heu nimium felix! ſi littora tantum,
> Nunquam Dardaniæ tetigiſſent noſtra carinæ.

But this ſubject will occupy more of our attention, ſhould a few years of peace ever enable us to give a more correct and ſyſtematic arrangement of our nautical labours.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Have taken the liberty of communicating to you the following caſe of Hydrocephalus Internus, (it having occurred ſince I ſent the other caſes) if you think it worth inſerting in the Medical and Phyſical Journal. I remain,

GENTLEMEN,

Your obliged and humble ſervant,

Bath, Feb. 8, 1800. W. WHITE.

ANNE SPENCER, aged 39, of a common ſanguine temperament, who had had occaſional attacks of head-ach upwards of four months, attended with chilline ſs and epileptic fits; but did not come under my immediate care till within nine days of her death: ſhe then complained of a violent head-ach, and could not bear an erect poſture: the fits alſo recurred very often, although they only continued a few minutes. There was no unnatural appearance of the eyes, except that I obſerved, two days prior to her death, the pupil of the left eye to be more dilated than that of the right; the next day, however, it appeared the ſame as the other: and it may be worthy of remark, that ſhe even appeared to retain her ſight till within a few minutes of her death. Except during the fits, ſhe appeared ſenſible. Her appetite was very good, but ſhe ſometimes vomited; her pulſe, during the whole of the time, was preternaturally ſlow; tongue was clean; bowels were coſtive. The application of leeches, bliſters, &c. appeared to relieve her much from the violence of the pain, but the diſeaſe terminated fatally in a fit of apoplexy.

On examining the head, the veſſels of the *dura* and *pia ma-*

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ter were found extremely turgid with blood; and about two ounces of clear fluid were found in the ventricles, which was neither coagulable by heat, nor by the concentrated acids.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE utility of a publication like your Journal muſt be to every one extremely obvious; but if any new mode of practice recommended, is introduced, which is not the reſult of ample, or, I may ſay, true experience, the moſt dangerous conſequences are likely to accrue; hence, how neceſſary it is for every medical man, before he publiſhes to the world any new remedy, to be particularly exact in his diagnoſis between the diſeaſe in which it is employed, and other diſorders; and alſo moſt accurate in his obſervations as to the real effects produced on the ſyſtem by ſuch a remedy.

Some time ago, I peruſed a letter in the 8th Number of your excellent Journal, on the effects of venæſection and opium, written by Dr. Huggan, of the Weſt Kent regiment of militia, wherein he endeavours to prove, that the former remedy may be ſafely, and more ſucceſsfully, ſuperſeded by the uſe of the latter. Now, as no anſwer to this letter has yet appeared, I think it my duty to make ſome obſervations on it, particularly as the welfare and even the very exiſtence of the ſick perſon, in many inſtances, depend on the judicious employment of one of theſe two means.

The author, after pointing out the many advantages of a regimental ſurgeon, begins, by aſſuring us, that *where his practice or opinions differ from others, they are the reſult of experience only, he having no theory to ſerve.* But in proceeding a little further, the gentleman is ſo truly unfortunate as to hold out a theory, which he appears to make the very baſis of all his practice; for after aſſerting that venæſection is unneceſſary in any diſeaſe whatever (which I hope to prove is a mere aſſertion) he begs the queſtion, by ſaying, "If we grant that every deviation from the healthy ſtate denotes debility, either general or partial, ſurely whatever has a tendency to debilitate further, it is reaſonable to ſuppoſe, ought to be carefully avoided." This is a propoſition that, with certain reſtrictions, muſt always hold good; but to admit of it ſo generally as the gentleman ſeems to demand, would be throwing aſide thoſe diſtinctions ſo eſſentially neceſſary in many diſeaſes. It may be ſaid, at the

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beginning of fevers, there is debility; but may there not be such a re-action, in many cases of fever, as to set aside the idea of debility? or, may there not, in the first stage, be such an oppression from the severity of the attack, as to have little or no re-action, and the case be thus mistaken for real debility, when large bleedings, and other evacuations, would give freedom to the circulation, and prevent the fatal consequences that so frequently ensue?

I am led to make these queries from my own observations and experience in pneumonic complaints, having been called upon to attend some military men, where almost every patient attacked with the fever died, because it was supposed to be of the typhoid kind, from the great apparent debility at the commencement; till it was proved, by a very liberal use of the lancet, that there was a most violent inflammatory diathesis, and a want of re-action. For it was a fact, that few or none died afterwards, under the timely employment of the antiphlogistic plan.

I am not the only one who is of opinion that we have many diseases as opposite in their nature as possible, which of course require a contrary kind of treatment; however, I shall only now allude to pneumonia, or inflammation of the lungs and pleura, and the typhus mitior of Dr. Cullen, or what is most generally known under the appellation of low nervous fever. I will venture to affirm, that every practitioner of discernment, who has seen these two affections in their most exquisite state, cannot but have noticed, that in the former there exists an evident increased action, or energy of the vascular system (except in those instances of oppression above mentioned); in the latter, symptoms of debility from the very commencement, and through the whole of the disorder; therefore, as this is so clearly the case, the most rational method that I can conceive of treating inflammatory complaints, is by employing, instead of stimulants, means which diminish the increased excitement, such as venæsaction, &c. and a rigid adherence to the antiphlogistic plan; not by adding fuel to the fire, so clearly exemplified in the administration of opiates; for even blisters cannot be applied with any degree of safety in violent pneumonic complaints, unless preceded by the above means (a fact well known to every accurate observer), and much less can such a powerful stimulant as opium be given; for, if the inflammatory diathesis is not sufficiently subdued, they never fail to increase the dyspnœa and other symptoms; but when judiciously administered in the latter stages, when the expectoration is thin and copious, and the cough urgent, the happiest effects may be expected from them. Yes, daily observation convinces us that this practice

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will as certainly anſwer, as the proper uſe of ſtimulants in real aſthenic complaints, where phlebotomy would be as indubitably injurious, as opium preſcribed for thoſe of the ſthenic kind.

This I conceive to be the opinion of the moſt celebrated phyſicians of the paſt, as well as preſent ages, and which has of courſe been ſubſtantiated by ſuch an unlimited and true experience, as ought to make any practitioner cautious in his attempts to eſtabliſh, as facts, whatever tends to overthrow a doctrine ſo confirmed.

I will readily concur with the author, that *a prevalence of any particular mode of practice is not a convincing proof of its utility, or even ſafety*; but, ſurely, the gentleman will allow others to be as careful in their obſervations as himſelf: indeed, a man muſt be uncommonly weak to perſiſt in a routine, which proves more detrimental than ſalutary; but a practice ſo eſtabliſhed, by daily occurring facts, (as that for which I am now arguing) will, I believe, never be ſubverted by one ſo truly incongruous as that which the gentleman has advanced.

The author will no doubt appeal to the caſes which have been publiſhed in ſupport of his aſſertion. I totally agree with him, that caſes, with their ſymptoms juſtly and accurately detailed, with the experiments made on them, beſides being productive of the greateſt benefit to mankind in general, are ſufficient to warrant the uſe of a particular remedy; but a few caſes only, ought not to ſatisfy any practitioner. I muſt take the liberty to ſay, that there does not appear to me a ſingle caſe in point, among the author's ſelection, by which his aſſertion can be aſcertained; nor has he been very minute in his details of the few caſes he has publiſhed; circumſtances that muſt render them very unſatisfactory. It is not improbable that the loſs of blood, in ſome of the caſes of contuſion, might have prevented the coming on of bad ſymptoms; though, indeed, in moſt of them, the injury does not ſeem to have been ſo great as to make one apprehend danger from opium; alſo, in the pneumonic caſe, the ſymptoms appear to have been ſo mild that a recovery might have happened as ſoon (or ſooner) without the uſe of it; perhaps the effects of the firſt doſe were counteracted by the union of the calomel with it, which might have acted on the bowels, and a catharſis have been produced, or the affection might have been more ſpaſmodic than inflammatory: the others were evidently ſpaſmodic, and, as ſuch, opium was certainly requiſite, particularly when in combination with a cathartic.

We have only now to conſider the latter part of Dr. Huggan's letter, relating to the opinion of Dr. Trotter, concerning ague, where the author again aſſerts, *that he is confident, bloodletting will never be found neceſſary.* But I muſt beg leave to differ

differ from him also in this instance, and coincide with Dr. F. that in some instances venæsection is indispensable. I had a case in point, not long since: A soldier, who after having had several returns of an ague, was seized with a most violent dry cough, from imprudent exposure to cold, and which, during every hot fit, was attended with pain and difficulty in respiration; he was almost instantly relieved by a large bleeding; and what is worthy of remark, the bark appeared greatly to aggravate the cough previous to his losing blood; but after it, a speedy recovery from the use of the bark was the consequence.

I now flatter myself the unprejudiced reader will do me the justice to acknowledge, that sufficient arguments have been adduced to controvert the opinion of Dr. Huggan; an opinion in its nature so calculated to mislead young and inexperienced practitioners, as to be productive of the most fatal consequences. If what he supposes be true, that *every derangement of the system depends on debility*, the necessary quantity of blood taken away in some instances must induce irreparable mischief; but, on the contrary, we find the recovery to happen frequently much sooner than any body, a priori, would imagine; I shall therefore conclude, with briefly mentioning two cases in point. The first was that of a man labouring under pneumonia in the Clinical Ward of the Royal Infirmary at Edinburgh, and under that judicious and admirable practitioner, the present Dr. Gregory. This patient had lost about a pound of blood, before his admission, and the symptoms being very severe, Dr. G. advised a large bleeding, which greatly relieved the pain and dyspnœa; but these symptoms returning, he lost eighteen ounces more, with some relief. On the third day, they recurred as violent as before, and thirty-two ounces were taken away at a single bleeding; the next morning Dr. G. thinking a repetition necessary, twenty-two ounces more were taken from him; so that, first and last, this man lost above an hundred ounces of blood, which, according to the calculation of physiologists, was full (or more than) a fourth part of his circulating mass. And after this treatment, to my great surprise, his pulse remained full and strong, even to the time of his dismissal.

The other was a similar case, which very lately fell under my own observation; this man lost near eighty ounces of blood, and to which I almost entirely attributed his recovery.

A maxim of Galen's now presents itself to my mind, viz. *Reason as a practitioner, and practise with reason.*

By inserting the above in your next Journal, you will greatly oblige,

GENTLEMEN,

Your humble servant,

Hythe, Kent, March 8, 1800. W. D. DRAY.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE incloſed having been well thought of by ſeveral of my medical acquaintance, to whoſe opinions I have always paid great deference, and drawn from Dr. Remmett ſome collateral remarks, which I conceive to be very valuable, and of which, at my particular requeſt, the Doctor has permitted me to make what uſe I judge proper; I am encouraged to offer it for inſertion in your much approved Journal; and at the ſame time, to deſire you will ſubjoin to it, Dr. Remmett's letter, as I know not how to diſpoſe of it better, than by giving it a place in a work which ſo generally obtains, and connecting it with the circumſtance that gave riſe to it. I am,

GENTLEMEN,

Plymouth Dock, February 22, 1800.

Your moſt obedient humble ſervant,
RICHARD DUNNING.

DEAR SIR,

HAVING lately had a caſe of ſtrangulated Hernia under my management, the removal of which I attribute, in a great meaſure, if not wholly, to the exhibition of the Fox-glove, I wiſh to ſtate to you a few minutes of it, and to requeſt (if you judge it worth while) that you'll forward them to Dr. Ferriar, to whom I am of opinion, that every fact or obſervation ariſing from the uſe of this excellent remedy ſhould be addreſſed, as a well-earned acknowledgement of the juſt diſcrimination and great abilities, evinced by him in his late very valuable and diſpaſſionate communication to the medical world on that ſubject. And I am the more readily induced to aſk this of you, becauſe I know with how much earneſtneſs you are, at all times, and on all occaſions, embarked in promoting the beſt intereſts of the profeſſion; and becauſe alſo, I know that your attention is at preſent very particularly engaged in the inveſtigation and appreciation of this novel, or rather revived medicine. It may not, perhaps, be irrevelant to remark, that judging from what we know of the general œconomy of Providence, it is not very probable that this beautiful plant, which is almoſt every where, for ſeveral months in the year, challenging and even commanding our obſervation, by the luxuriance of an elegant and ſtately flower, ſhould have been given us merely as an ornament to

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our fields and hedges — I believe it about to aſſume an additional and more important character.

A. B. between ſixty and ſeventy years old, of a ſtrong, hale conſtitution, had many years been ſubject to a large ſcrotal hernia, and had many times ſuffered ſymptoms of ſtrangulation for ten or twelve hours; but had hitherto, after a little reſt, without any medical aſſiſtance whatever, been himſelf able to replace it. When I was lately called to him, it had been down nearly thirty hours, though he had, as uſual, reſted himſelf, and had made more violent attempts than formerly, to reduce it. The tumour was large, hard, very tenſe, and extremely painful to the touch. He complained of exceſſive thirſt; and his pulſe was very full and ſtrong. I immediately bled him largely; and after having made long, though gentle, ineffectual efforts to reduce the hernia, ordered a clyſter to be injected as ſoon as poſſible, the parts to be conſtantly covered with ſeveral folds of linen cloth, wetted in a cold ſolution of ſal ammoniac and nitre in vinegar and water, and forbade every thing which could have the ſmalleſt tendency to keep up inflammation. Calling ſeveral hours afterwards, I was concerned to find that no advantages had been obtained from what had yet been done; I thought, indeed, every ſymptom aggravated: the tumour was not leſs tenſe, certainly more painful; the pulſe harder, the thirſt unabated, the heat and dryneſs of the ſkin extreme; and there was about him that reſtleſſneſs and anxious diſtreſs which we frequently obſerve in caſes of this nature.

As the ſecond attempt was as unſucceſsful as the firſt, I began to think very badly of his ſituation, and that nothing but an early operation would give my poor patient a chance of eſcape; when, *perhaps fortunately for him*, the Digitalis occurred to me: and I was inſtantly moſt forcibly ſtruck with the idea, that this was one of thoſe caſes, of all others, the moſt likely to be benefited by the uſe of it. I accordingly gave him, Pulv. digital. (the powder was moſt carefully prepared) gr. i. opii colat. gr. i. calomel gr. iv. together with a draught, in which were xx drops of the tincture of Fox-glove, made from the green leaves; and directed theſe remedies to be repeated every four or ſix hours. Soon after the firſt doſe, however, he became evidently eaſier; and very ſhortly after the ſecond, he fell into the moſt complete ſtate of relaxation ſhort of faintneſs, and into the moſt perfect calm, I ever remember to have ſeen. The tenſion of the general ſyſtem, and, along with it, that of the tumour, having ſo completely given way, I was enabled to reduce the contents of the latter by the moſt inconſiderable preſſure; and I had the great ſatisfaction to ſee my patient recover, in the courſe of a few days, without interruption.

That these most desirable effects might have been entirely the consequences of the opium and calomel, without an auxiliary, I cannot venture to deny. Be this, however, as it may, I must be allowed to say, that I have never hitherto observed any thing so decisive from their use in similar cases; that therefore, I cannot help feeling myself under some obligations to the Fox-glove in this instance; and consider it a duty not to suffer this case, though a solitary one, to pass by unnoticed.

I am, DEAR SIR,
At all times, with great respect,
Your most obedient humble servant,
RICHARD DUNNING.

Plymouth Dock,
Feb. 20, 1800.

To DR. REMMETT.

To Mr. DUNNING.

MY DEAR SIR,

YOU have very highly gratified me, by making me the instrument of conveying to Dr. Ferriar your Case of strangulated Hernia, accompanied by sentiments of respect for him, in which I heartily join. And I beg leave to offer you my unfeigned thanks for the very liberal testimony you have given to my poor endeavours to support the credit of a profession, whose true interests have indeed been long among the first wishes of my heart.

Your Case contains a most important suggestion, the result of very sound judgment, both with respect to the disorder and the remedy. Any more than yourself, I will not attempt to determine the exact degree of benefit which was produced by the Digitalis; but I have no doubt, that in the future treatment of colic, as well as in cases of strangulated Hernia, whether attended with symptoms of considerable inflammation or not, as also in other instances of fixed spasm, such as locked jaw and the like, the Fox-glove will be found a most important aid. The atony, induced by it, is more complete than can be effected by any other means with which I am acquainted. I am,

MY DEAR SIR,
With great regard,
Most truly, your's,
B. B. REMMETT.

Plymouth,
Feb. 21, 1800.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

CONCEIVING your correspondent, Mr. PECK, to have misapprehended the nature of my case, on "the adhesion of the placenta," noticed by him in the last Journal; by inserting the annexed elucidation of it, you will much oblige,

GENTLEMEN,

Piccadilly,
March 7, 1800.

Your's, respectfully,
H. DAVIES.

THAT the placenta, in all cases where no difficulty occurs, should be *early* delivered, is a sentiment perfectly consonant with sound practice. Nature alone, when unassisted by Art, points out the propriety of it, by its speedy expulsion after the birth of the fœtus. But as it is retained in utero, now and then, by various causes, it behoves the practitioner to adapt his mode of treatment, as nearly as he can, to the nature of the circumstance occasioning the retention.

Mr. Peck has only mentioned two causes of its retention, viz. "the rupture of the funis, and the irregular contraction of the uterus." I think a *third* should have been added, which, in my opinion, is far more formidable than either of the former, namely, *a firm adhesion of a considerable part of the placenta to the internal surface of the uterus*; which is not unfrequently the case, and not easily detached without either endangering an inversion, if forcibly attempted, or producing symptoms of irritation, if long continued; and those of so alarming a nature, that the patient has been known to *sink* under the operation; of which melancholy circumstance, I was once a painful spectator.

This was, in a great measure, the state of my patient's case, which Mr. P. condescended to comment upon; with whom I am by no means displeased, but, on the contrary, obliged for what he conceived to be useful hints. Yet, as some theories, rigidly persisted in, will not apply in all cases, a deviation, therefore, from established rules, under certain circumstances, will not only be justifiable, but indispensable.

I mentioned that the *exhaustion* of my patient was the cause of desisting from my attempt to separate the placenta then. Mr. P. inquires into the *cause* of the exhaustion; and replies, that it was the hæmorrhage; from whom I beg leave to differ, and do not hesitate to affirm, it was owing to the *fatigue* occasioned

ſioned by the previous labour, together with the irritation produced in endeavouring to detach the placenta from its adheſion to the uterus; for no material hæmorrhage had taken place *at that time*, which I thought fully juſtified me in giving the patient a longer reſpite; and when I found, after waiting a while, its tendency to *increaſe*, I proceeded to remove the cauſe, by extracting as much as I could of it with ſafety, leaving the remainder to the powers of the ſyſtem, invigorated by the plan I hinted at in the relation of the caſe, which fully anſwered my expectations; and, if a ſimilar caſe occurs in the courſe of my practice, I ſhould not think myſelf warranted to proceed upon any different plan.

Having ſaid thus much in vindication of the practice, I now diſmiſs the ſubject, taking it for granted, that every practitioner will be ſtudious to adopt that mode of treatment, which will appear to be moſt conducive to the welfare of his patient, as well as his own reputation. And as a difference of opinion will more or leſs obtain upon moſt ſubjects, it is but candid to hope that this very difference may ultimately tend to general utility.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

SHOULD the following obſervations be thought worthy a place in your uſeful Journal, you will oblige me by inſerting them in your next Number. I am,

GENTLEMEN,

Your's, reſpectfully,

GEO. CUSTANCE.

Kidderminſter,
March 8, 1800.

PERHAPS there is no diſeaſe incident to the human body, more general, or more troubleſome, than the Piles. Not only are aged perſons and pregnant women often tormented by this painful diſorder, but young people are very frequently ſubject to it. It is peculiarly diſtreſſing to many young females, who, from a ſenſe of delicacy, conceal their diſorder, or make it known to none but ſome female friend, who temporizes with the trial of a variety of noſtrums which afford little or no relief.

I know of no diſorder, in the treatment of which medical men appear more implicitly to have imitated their predeceſſors.

Lenitive

Lenitive electuary, lac sulph. and nitre, have been the reigning *triumvirate* so long, that any attempt to dethrone them may be deemed high treason against their established authority. I allow, that when Piles are the mere effect of pregnancy, these aperient medicines may be very useful, and all that is needful; but experience proves, that purgatives afford no further relief than removing occasional costiveness, which, I am of opinion, is more frequently the effect than the cause of Piles in men, and in women not pregnant. Dr. Cullen, and others, have considered the Piles as depending on *constitutional* plethora; but, with deference to such high authority, I am inclined to think they are a *local* affection of the rectum. Dr. H. Smith has defined the Piles to be "a disease which derives its origin from an effusion of blood into the cellular membrane of, and surrounding the rectum;" and advised "anodyne and repellent *liniments* and *fomentations*, keeping open the body by gentle, cooling purgatives;" these often prove palliatives where there are any external excrescences, but will generally be found ineffectual for the *inward* Piles. Considering the fulness and pain which are felt in this state of the disorder, to depend on a relaxed state of the coats of the rectum, occasioning a slower circulation of the blood, in that part, than in the healthy state, I have long been in the habit of administering anodyne and astringent *injections*, which I have found very successful in completely removing the Piles, especially in young persons. The injection I always use is the following; the proportion of each ingredient being varied according to circumstances.

℞. Tinct. Ferri muriati ʒij; tinct. opii ʒi to ʒij; decoct. hordei ʒiv. M. ft. enema bis de die injiciend.

Proper attention being paid to diet will commonly prevent costiveness; and bark, with other stimulants, I am persuaded, will be found more beneficial than purging medicines; as, by strengthening the tone of the viscera, their natural functions are gradually restored. It is manifest that these injections are not proposed as remedies for external excrescences, which may be removed by ligature, in most cases, without any danger.

To Dr. BRADLEY.

Dear Sir,

Do you not think with me, that the admirers of Mayow, in their ardour to rescue from a supposed oblivion the memory of an ingenious man, have attributed to him discoveries which belong

belong indiſputably to the chemiſts of the preſent day? I read him, nearly twenty years ago, in conſequence of what was ſaid of him by the tranſlator of Scheele's Treatiſe on Air and Fire, who, I believe, was the late learned naturaliſt, Reinold Forſter; but, though I peruſed his work with much pleaſure, I did not feel myſelf juſtified in ſaying more of him in my Theſis de Aëre Dephlogiſticato, Edinb. 1782, than "quae in ſeculo praeterito de aëre dephlogiſticato *auguratus eſt* iſte ingenioſiſſimus Mayow, experimentis pulcherrimis comprobavit celeberrimus Prieſtley," p. 31. It is an abuſe of language to call him the diſcoverer of an aërial fluid which he never ſaw, nor even attempted to obtain. Dr. Crane, in the Gent. Mag. for Jan. p. 48, goes farther back, and tells us, that Bathurſt, ſo long ago as 1654, "knew what oxygen" gas "was," becauſe he ſpeaks of "*pabulum nitroſum*," et "*ſpiritus* aëris *nitroſus*." But, if ſuch expreſſions are admitted as proofs of a knowledge of oxygen gas, I can go back to Sendivogius, who, according to Boerhaave, has ſaid, that *the food of life* lies in the air;"* and Hohenheim, commonly known by the name of Paracelſus, who, in his Treatiſe de Morbis Metallicis, writes as follows, "Et veluti ventriculus cibum ſuum digerit, partim in corporis nutrimentum illum vertens, partim reliquias ex corpore exturbans: ſic idem etiam de aëre judicandum eſt, *cujus pars una digeritur & conſumitur, altera excernitur ſpecie excrementi.*"†

The lateſt of the panegyriſts of Mayow tells his reader, that he "will probably be ſurpriſed to find the following account of the formation of the acids in ſo old a writer; for it is exactly ſimilar to the explanation which the new diſcoveries have given riſe to." "The ſulphuric acid, Mayow ſays, is formed *by the union of fire-air particles with the ſulphur during combuſtion.*"‡ Mayow aſſerts no ſuch thing; he ſuppoſes common ſulphur to be a compound body, compoſed of pure ſulphur and a certain ſalt of a fixed, or rather of a metallic nature. The particles of this ſalt, during the deflagration of the ſulphur, he conjectures, are ſo altered by the mechanical action of the nitro-aërial particles, as to be changed from a ſolid to a fluid form, becoming the corroſive acid liquor known by the name of ſpirit of ſulphur. "Suppono ſulphur commune praeter particulas ſulphureas puras putas, *ſalem quendam indolis fixae, ſeu potius metallicae*, particulis ejus ſulphureis

* Boerh. Chem. by Shaw, i. 419. Boerh. Prael. ab Hallero, ii. 218, note. Obſ. 141.

† Paracelſ. Opera i. 707. fol. 1658.

‡ Obſervations on the claims of the moderns to ſome diſcoveries in chemiſtry and phyſiology, by G. D. Yeats, M. B. 1798, 8vo. p. 23.

ſulphureis ſtrictiſſime conjunctum continere; quae quidem pars ſalina nonnunquam in cryſtallos concreſcit, dum ſulphur a ſpiritu terebinthinae diſſolvitur. Porro annotandum eſt, flammam ſulphuris accenſi, uti etiam flammam quamcunque in eo conſiſtere, quod particulae materiae deflagrantis ſulphureae, et nitro-aëreae mutuo ſe motu velociſſimo exagitant. Jam vero cum particulae ſulphuris ſalinae minutiſſime diviſae, particulis ejus ſulphureis arctiſſime implicantur, fieri contigit, ut in ſulphuris deflagratione, (dum, viz. particulae ejus ſulphureae et nitro-aëreae mutuo ſe motu igneo exagitant) *particulae ſulphuris ſalinae*, particulis ejus ſulphureis adhærentes, *crebris particularum nitro-aërearum ictibus verberentur atterantur comminuanturque*; ita ut *particulae eae ſalinae ſæpius attritae et contuſae, tandem inſtar gladiolorum exacuantur et inſuper adeo attenuentur, ut eaedem arigidis ſolidiſque in flexiles fluidaſque convertantur.* Particulae vero ſulphuris ſalinae, quae antea indolis fixae fuerant, poſtquam ita exacuantur et ad fluorem perducuntur, in liquorem acrem acidumque convertuntur; ſpiritumque ſulphuris vulgarem, uti veriſimile eſt, conſtituunt."*

Mayow regarded his ſpiritus nitro-aëreus, as one of his two ingredients of nitrous acid; but he did not conſider it as Lavoiſier did oxygen, as a component part of all the acids. He ſuppoſed it capable of combining both with acids and alkalies, and he imagined that its preſence increaſed their activity, and rendered them cauſtic. "Praeterae ſicut ſal acidum, ita etiam ſafixum calcis vivae, (for he believed an acid and an alkali to exiſt in quick lime) ob particulas igneas in diuturna calcinatione ei infixas, ſumme mordax igneumque factum eſt. Etenim annotandum eſt, quod licet particulae nitro-aëreae igneaeque indolis ſalinae ſint, eae tamen neque ſali acido neque alcali contrariae ſunt; ſed e contra eorum alterutri combinatae *vires ejuſdem augent, igneaſque reddunt.*" p. 230. See alſo, p. 22. That he believed this combination not to be a chemical union, is evident from what follows: "Jam vero cum particulae nitro-aëreae ſali acido & fixo calcis, confertim infixae ſint fieri contingit ut ſalia illa contraria particularum nitro-aërearum iis utriſque congruarum mediatione ab invicem detineantur, & veluti reconcilientur; ita ut ſe mutuo adoriri inque ſe invicem agere nequeant; dum vero ſalia iſta aqua diluta ſunt, *iſta particulas igneas ex parte ſaltem deponunt, & minus acria evadunt:* uti manifeſtum erit, ſi ſalia fixa igni violentiori commiſſa, poſtea in aqua ſolvantur; ita enim ſalia ea, quae ab igne ſumme acria & cauſtica evaſerunt, acrimoniam deponent, & in

* Mayow Tractatus, 1674, p. 34.

priſtinum eſſe remigrabunt. Unde fit ut ſalia calcis contraria, poſtquam ea in aqua ſoluta ſunt, tum demum in ſe invicem agere, mutuoque efferveſcere idonea ſint." p. 230. Theſe paſſages ſerve to explain what he means, when, ſpeaking of the acids, he ſays, "Quoad differentiam liquorum acidorum, eam a diverſitate ſalium, e quibus iidem conſtituuntur, procedere putandum eſt: uti etiam abeo, quod ſalia fixa nunc magis nunc vero minus a ſpiritu nitro-aëreo atterantur exacuenturque: & tamen inter ſalia acida quaecunque affinitas magna eſt & ſimilitudo; *inque iis omnibus particulae nitro-aëreae igneaeque veluti in ſubjecto idoneo hoſpitantur.*" p. 44. This paſſage, I apprehend, induced Dr. Yeats to ſuppoſe Mayo to have anticipated Lavoiſier in his theory of acidity, and to imagine that the former conſidered his ſpiritus nitro-aëreus to be a component part, not only of the nitrous but of all the acids. But if we attend to Mayow's account of the formation of the nitrous acid, we ſhall find him uſing a more preciſe language. "Ex iis quae dicta ſunt, haud difficile erit intellectu, quomodo ſpiritus acidus nitri in terra generatur. Etenim alibi oſtenſum eſt, terram fertilem nihil aliud eſſe quam ſulphur & ſal fixum, utraque immatura, arctiſſimo foedere invicem combinata; & utique terrae gleba atropurpurea colcothari haud multum ab ſimilis eſſe videtur; niſi quod in hoc ſulphur cum ſale metallico, in illa autem cum ſale fixo conjunctum ſit. Sicut ergo ſpiritus nitro-aëreus cum particulis ſulphuris vulgaris motu igneo efferveſcens, item cum particulis ſalina ſulphureis colcotharis aeſtu magis remiſſo congreſſus, particulas eorum ſalino-metallicas citius aut tardius exacuit & ad fluorem perducit: ita ſpiritus idem nitro-aëreus pro penetrantiſſima ſua indole in terrae penetralia deſcendens, ibidem ſulphur terreſtre adoritur, cumque eodem motu obſcuro exaeſtuans, particulas ſalinas in ejus ſinu ſtrictius detentas atterit, attenuat, exacuitque, ita ut eaedem tandem flexiles liquidæ *ſummeque acres* evadant. Particulae terrae ſalinae hoc modo ad fluorem evectae hoſpitium idoneum fiunt, in quo particulae nitro-aëreae recondantur detineanturque: *ab iis autem utriſque ſtrictim unitis* ſpiritum nitri, qualis diſtillatione elicitur, conſtitutum eſſe arbitror." p. 43. And, in his recapitulation, "Ex iis quae hactenus dicta ſunt, aliquatenus conſtare arbitror, e quibus ſal nitrum principiis componitur. Nempe videtur idem e ſale triplici conſtitutum eſſe; quorum alterum magis activum ab aere proſapiam ducit, idemque naturam aetheream igneamque obtinet; *ſal hoc Architectus ex materia terreſtri vehiculum ſalinum ſibi excudit, in quo veluti in ſubjecto idoneo hoſpitatur*; vehiculum illud ſalinum *una cum ſale igneo ſibi inſito* ſpiritum nitri conſtituit; qui mox ab ortu ſuo cum ſalibus terrae fixis, ad juſtam maturitatem perductis, congreditur; cumque

que iisdem in nitrum vulgare coalescit." p. 46. And again, "Et ita demum *Mercurius nitro-aëreus* pro furtiva sua indole, sulphuris hostis sui territoria clanculum ingressus, conjuge illud sua salina spoliavit, cui tandem *ipse tanquam sponsae idoneae maritatus, in illius amplexu pro infelici conjugii fato fixus & pene obrutus succumbit.*" p. 51.

Such is the theory of Mayow, in which he has been supposed by some to have anticipated Dr. Priestley in his discovery of oxygen gas, Mr. Cavendish in that of the component parts of nitrous acid, and the ever to be regretted Lavoisier in his theory of acids! Mayow's *spiritus nitro-aëreus* has been very generally considered as oxygen gas; and in my thesis I inserted it as a synonym of dephlogisticated air, not having then read his chapter De Luce, which contains the following passage: Quoad medium cujus impulsu radii lucis transmittuntur, non est credendum illud ipsum aërum esse; siquidem lux etiam in vitro aëre vacuo, admodum intense propagari potest. Qua propter verisimile est, praeter particulas nitro-aëreas particulis aëreis infixas, particulas nitro-aëreas alias iisdem interspersas esse, earumque interstitia quaecunque adimplere. Id quod exinde colligimus, quoniam radii solares etiam in vitro ex quo aër exhauritur, ope vitri ustorii collecti, revera igniscunt. Etenim pulvis pyrius ab iisdem ibidem accendi, & etiam materia sulphurea eorum calore sublimari potest: calorem autem ignemque non nisi a particulis nitro-aëreis in motum concitis oriri, jam antea ostendere conatus sum. Ut videatur etiam *in loco aëre destituto particulas nitro-aëreas existere*; ignemque a radiis solaribus speculi ope, coactis, ibidem conflatum, in eo consistere quod particulae nitro-aëreae in puncto illo in quo radii isti concurrunt, adeo impelluntur, ut eaedem in motum plane igneum concitantur." p. 199. And a little after, "Porro lucem a particularum nitro-aërearum impulsu propagari ex eo confirmari videtur, quod eadem per corpora ea facilius transmittitur, quae maxime obrigescunt, et particulis nitro-aëreis referta sunt; *cujusmodi sunt vitrum* idque genus alia, praesertim vero particulae aëreae, quarum obrigescentia a particulis nitro-aëreis ipsis confertim infixis provenit, prout antea ostendere conatus sum." p. 200. These passages appear to me decidedly to prove that the *spiritus nitro-aëreus* of Mayow is not the *oxygen gas* of modern chemistry; and that, if it be the prototype of any real existence, it must be that of *Calorique*.

But to return again to Dr. Yeats, who in relating Mayow's observations on the formation of acids, writes as follows: "Moreover the rust of iron, which possesses the nature of vitriol, appears to be produced by *the nitro-aërial particles attaching to the metallic sulphur of the iron.*" "In this way he

obſerves, ruſt, or an imperfect vitriol, is produced in the ſame manner as if an acid had been thrown upon the iron. Has he not here anticipated the modern chemiſts in their idea of an oxyd? p. 25." Mayow's words are, " Quin etiam Rubigo Ferri, quae naturam vitriolicam obtinet, particularum nitro-aërearum cum ſulphure ferri metallico congredientium *actione* produci videtur: etenim *particulae ſalinae ferri modo praedicto ad fluorem perductae, particulas ejus metallicas corrodunt ſolvuntque*; ab iis vero utriſque" (that is, the ſaline and the metallic particles) " combinatis, rubigo ſive vitriolum quoddam imperfectum oritur, haud multo ſecus ac ſi ferrum liquore quovis acido oblitum fuiſſet." p. 40. Hence it is evident that Mayow conſidered the ruſt of iron as a metallic ſalt, not a combination of oxygen and iron.

It has been generally underſtood that Mayo conceived his ſpiritus nitro-aëreus to be ſecreted from the air, by the venous blood in the lungs. He appears indeed once to have thought ſo; and we find him, in his Treatiſe de Reſpiratione, expreſſing himſelf as follows: " Et quidem veriſimile eſt *particulas quaſdam indolis nitro-ſalinae*, eaſque valde ſubtiles agiles ſummeque fermentativas *ab aere pulmonum miniſterio ſecerni*, inque cruoris maſſam tranſmitti." p. 301. But in his Diſſertation de ſal-nitro & ſpiritu nitro-aëro, publiſhed ſix years after, he appears to have changed his opinion, imagining the air to be abſorbed by the lungs, and intimately mixed with the blood; and the nitro-aërial particles to be ſeparated from the reſt by the fermenting particles of the blood, wearing down the aërial particles, and depriving them of the greater portion of their elaſticity. " Super hoc aliquandiu ſuſpicatus ſum, particulas nitro-aëreas elaſticaſque peculiari pulmonum contextura e particulis aëreis excuſſas eſſe: verum cum ad rem diutius attenderam, potius viſum eſt, *particulas aëreas in ſanguinis maſſam faceſſere*; eaſque ibidem particulis nitro-aëreis orbari, & proinde vim elaſticam ex parte amittere." p. 136. " Aërem ab animalibus hauſtum, modo ſequenti vim elaſticam putandum eſt. Nempe imprimis ſuppono maſſam cruoris liquorem inſigniter fermenteſcentem eſſe, ut infra oſtendetur. Quandoquidem ergo *particulae aëreae* pulmonum miniſterio, *particulis ejus exaeſtuantibus intime & quoad minima immiſcentur*, fieri contigit, ut particulae aëreae haud ſecus a particulis cruoris ac eaedem ab halitibus fermenteſcentibus in vitro praedicto quoad vim elaſticum imminuantur," (alluding to the experiment in which he extricated nitrous gas in a veſſel containing common air, and in which Dr. Yeats has ſo well explained the final depreſſion of the water,*) ' Nimirum probabile eſt, particulas ſanguinis fermenteſcentes,

* Yeats, p. 52.

scentes, *particulas aëreas iis interpositas atterere, spiritusque nitro-aëreas ex iisdem excutere,* atque eas demum particulis nitro-aëreis et elasticis privatas ad vitam sustinendam ineptas et insuper elatere suo ex parte destitutas fieri." How he gets rid of the remaining particles of air, I do not find. Lower, who, like Mayow and Thruston, adopts the language and theory of Bathurst, as mentioned above, deposits it on the solids, and finally carries it off by the pores of the body. "Si per quos pulmonum meatus *spiritus aëris nitrosus* in sanguinem transeat," says Lower, "eumque copiosius imbuat, a me quaeras, ostende et tu mihi quibus poralis alter *ille spiritus nitrosus qui in nive est*, per delicatulorum pocula transit et aestiva vina refrigerat, quod si vitrum aut metallum spiritui hinc non sint impervia, quanto facilius laxiora pulmonum vasa penetrabit? Denique si fuliginibus et seroso humori exitum non negemus; quidni per eosdem porulos vel similes, *nitroso hinc pabulo* introitum in sanguinem concedamus. Postquam autem *in habitu corporis et viscerum parenchymatis aër rursus a sanguine magna ex parte avolavit, atque per poros corporis transpiravit*, sanguinem venosum illo privatum obscuriorem et nigriorem illico apparere, rationi pariter consentaneum est." *p.* 5, 185, *ed.* 5, *Lugd. Bat.* 1708.

Hence I have been inclined to think, that Mayow gave two theories to the world; the first, in his Treatise on Respiration, which may be called the *saline theory* of Bathurst and Lower, if not of de le Boë Sylvius;* and in consequence of which Haller has placed him among those who held the doctrine of an aërial nitre;† and the latter, in his Tractatus Quinque, which may be stiled the *igeneous theory*; and if Haller had studied it, he would have given him a place among those who held the doctrine of a vital principle in the air. What confirms me in the opinion, that in his first publication he merely adopted the nitrous theory of the day, is his frequent use of the phrase SAL *aëreum*, p. 301, 304, 305, SAL *nitro-aëreum*, p. 306, and "*particulae* NITRO-SALINÆ," p. 305;‡ whereas, in his chapter on the subject of respiration in his Tractatus Quinque, the terms

* Disp. Med viii. n. 77, in oper. p. 34. Praxis Med. lib. c. 21. p. 289.

† Elem. iii. 334, where the marks of reference to the notes *c*, and *c** are transposed. Boerh. prael. ab. Hallero, ii. 214.

‡ It is this theory which Connor makes the object of his criticism in his Diss. de Antris Lethif. 72, published in 1694, twenty years after the appearance of Mayow's Tractatus Quinque! If Connor had read this latter work, he did not understand it, for he says, "Nitrum aëreum *sal neutrum est & salsam de acido fixo particeps.*" Nor does it appear from any thing Dr. Yeats has given us from Wolferstan, that he understood Mayow much better. Collins adopts his second theory in i. 26; but at p. 43 he gives a different hypothesis.

terms he uses are, "SPIRITUS *nitro-aëreus*" and *particulae* NITRO-AEREAE." If you should have an opportunity of examining his *Tractatus duo, prior de respiratione, alter de rachitide*, published in 1668, and which I learn from the Phil. Transf. abr. iii. 80, was reviewed in the Transactions, No. 41, p. 833, I shall be obliged to you to inform me, in what respect it differs from the second edition contained in the Tractatus Quinque, which were reviewed in No. 105, p. 104, as mentioned in the Phil. Transf. abr. iii. 225. From this last work, and from Hall. Elem. viii. 248, 249, I also find that the first edition of *Lower de corde, item de motu & colore sanguinis*, appeared in 1669, the year after Mayow's Tractatus duo, so that it is possible that both works might be in the press at the same time. But at all events, Lower's position respecting the colour of arterial blood was so well established by his own experiments, as not to stand in need of support from any observations to be found in the first publication of Mayow, in which there are no experiments on that subject decidedly his own; for that at p. 299 of the Tractatus Quinque, is evidently Hooke's, which was published in the Phil. Transf. No 28, and of which an account may be seen in Phil. Transf. abr. iii. 66, and in Med. Essays from the Ph. Transf. by Mihles, i. 18. and which Lower himself gives at p. 182, acknowledging himself indebted for it to Hooke.* I therefore join with Dr. Lubbock† in thinking Lower justifiable in not quoting Mayow; I must not however omit to mention, that Mayow quotes several of his cotemporaries, as Willis, Lower, Boyle, Des Cartes, Malpighi, Steno, Glisson, and Thruston with due respect, the latter at p. 43 of the second part of his Tractatus Quinque. But I do not observe that he has cited either

* This experiment was given in the first edition of the Treatise on Respiration, published in 1668, as appears from the citation of Etmuller, in *respirat. hum. negot. c.* 10. § 63 in *oper.* iii. 1879. This ingenious treatise of Etmuller, according to Haller, in elem. viii. 253, was first published in 4to. in 1676, as Dr. Lubbock, probably on the same authority, has already mentioned in your Journal, i. 418. That Etmuller understood the system of Mayow, appears from his ingenious examination of it, which he thus introduces: "Consideratius quidem de sale quodam nitro-aëreo ad vitam sustinendam necessario mentem suam proponit Mayowius de respirat. Licet non minus valdopere adhuc fluctuet. Nam. p. 301, usum *particularum nitro aërearum, quibus ex parte aërem constare* supponit, debitam dicit esse fermentationem in vasis pulmonalibus & arteriis omnibus facere."—"Cum autem haec omnia gratis sint alata, nec rationibus firmis munita; idcirco gratis eadem dimittere possemus, cum assensum nostrum in philosophia naturali non nisi evidentes rationes ipsius materiae de qua agitur crebris cautissimeque captis ac circumspectissime applicatis experimentis fulcitae, nanciscì queant." *c.* 10. § 4, 5, *in Oper.* iii. 1877.

† In Med. & Phys. Journ. i. 419.

either de la Boë Sylvius, or Swammerdam, whose ingenious and experimental dissertation appeared in 1667. Dr. Yeats says, that "Swammerdam maintained that the more subtile part of the air was absorbed;"* but Haller enumerates him among those "qui *ipsum verum qualem ore adducimus aërem de atmosphaera in sanguinem venire* scripserunt,"† among whom also he ought to have enumerated Mayow. The following quotations seem to prove that Haller formed a just idea of the theory of Swammerdam. "Sanguis una cum aëre in pulmonibus dilatatis existens, facillime ab eo ventilari refrigerari at *ob subtilem hic iterum e sanguine egredientem*, (seu ab alio e corde in pulmones moto sanguine expulsam potius, et in aërem denuo ingredientem, imo et ipsum simul inflammentem,) *materiam* condensari, in se cogi, atque tandem *cum aëre miscerì potest*. Quod præsertim eo facilius fieri posse concipimus, quia tunc temporis plurimi vapores calidi atque inutiles, una *cum expulsa subtili materia*, in aërem transeunt, atque illi admiscentur. In ea quae postmodum succedit expiratione, sanguis per pulmones motus, atque *propter subtilis materiae expulsionem, aëriisque sive puri sive aliis infinitis modis alterati admistionem* refrigeratus condensatusque, ex arteriis pulmonalibus per venas, sinistrum versus cordis ventriculum porro propellitur. Imo, thorace se ulterius coarctante, pulmones exactius constringente, atque aërem quaquaversum premente et movente, et una cum fuliginibus seu vaporibus potius ex ipsis pulmonibus eum sanguinem expellente et propellente, *intimius is cum dicto aëre copulatur*." ‡ After giving an account of the farther progress of the blood towards the left ventricle, he adds: "Ita tandem, ob *admistum aërem* expulsosque vapores atque prae cæteris propter reiteratum *subtilioris materiæ* affluxum, ad vitam conservandum, imo ad cor ipsum atque pulmones conservandos et nutriendos, ultimam ac postremam sanguinis adipiscitur perfectionem." What he means by this *materia subtilis*, one of the elements of Des Cartes, will best appear from the following passages. After adopting the acid and alkaline effervescence of the blood of his master De le Boë Sylvius, he says, "Propter illum itaque aestum seu motum, a sibi invicem oppositis non tantum et variis imo contrarie inter se motis agitatisve sanguinis particulis, sed et ob *subtilem materiam* praesertim, *(seu aëris partem tenuissimam per corporum poros facillime penetrantem, atque ex ipso aëre* in pectore ob hanc causam ut credimus semper praesente, a sanguine

* Obs. 103.
† Elem. iii. 320.
‡ De Respiratione, ed. 3, 1738, p. 38.

guine e corde continuo accedente *expulsam*, seu alias compedibus suis liberatam,) copia majori minorive, pro sanguinis quantitate atque conditione, in ipsum continuo erumpentem & ingredientem, sanguis vehementius, vel pacatius agitatur expanditurque." p. 37. How this subtile matter makes its way into the body, he farther explains in treating of the dilatation of the thorax: "Etenim *subtiliorem aliquam materiam* ob nimiam suam subtilitatem, pulmones appulsu suo minime extendere valentem, statim *per carnes in pectus penetrare*." p. 8.

Hence it appears, that Swammerdam, like Mayow, in what I call his second or igneous theory of 1674, introduces the whole of the air into the mass of blood; and as Mayow separates his *spiritus nitro-aëreus*, Swammerdam lets loose his *materia subtilis*. The admirers of Mayow will, perhaps, observe that Swammerdam makes his materia subtilis pass also through the integuments of the body; but here too, I find, an analagous circumstance in Mayow, where, treating of the fœtus in the egg, he says, "Itaque verisimile est particulas nitro-aëreas *per incubentis fotum in ovum trajectas* ab humore ejus albugineo detineri; and a little after, "Ita etiam *particulae eaedem nitro-aëreæ* SUB CALORIS BLANDI SPECIE *ovi liquores subeuntes*, ad fermentationem vitalem motumque animalem in iisdem instituendum, & proinde ad respirationis vicem praestandam, quodammodo conferre videntur." p. 325. Is not the *spiritus nitro-aëreus* another term for the *materia subtilis*?

I am, your's, &c.

Chesterfield, Feb. 20, 1800. JONATHAN STOKES.

On the Vaccine Inoculation; by Dr. Huggan.

[Continued from our last Number, pp. 241—245.]

AS I am perfectly satisfied from the proof already before the public, of a person who has had the vaccine being thereby rendered unsusceptible of variolous infection, I have not thought it necessary to inoculate any of my patients with the poison of the latter disease, having seen several of Mr. Stewart's, on whom the experiment was made, and with it, almost needless to add, the usual effect.

Without presuming to dictate, as I am not at all allowed to do so; from experience I venture to suggest, cold water, applied on lint, so as to keep the part constantly cool, as one of the likeliest means of alleviating the pain from the inflammation

tion of the arm, when that proves troubleſome. This ſymptom is undoubtedly, in a great meaſure, occaſioned by the punctures being made unneceſſarily large, or when a thread is to be made uſe of in the inoculation; it was from this cauſe chiefly, that one of my patients experienced ſo much diſtreſs from the inflammation; none of Mr. Stewart's had it in any greater degree than commonly follows the variolous inciſion, nor any others of my own.

The method of performing this inoculation, from the difficulty that ſome have experienced in being able to communicate the vaccine infection, has deſervedly engaged the attention of medical men. Mr. Ring, with ſome propriety, diſapproves of Dr. Jenner's method, as tedious; his own, though certainly leſs exceptionable, is perhaps, itſelf, not the beſt. (Medical and Phyſical Journal, Vol. II. p. 29.) As the method propoſed by Mr. Ring, ſeems to lean to a theory of the manner in which the poiſon produces the diſeaſe, viz. that by abſorption, and which ſeems to be countenanced by the opinions of moſt writers on the ſubject, I ſhall take the liberty of briefly ſtating a few reaſons, why it does not appear to be juſt.

The power of the abſorbents, in the healthy ſtate of the body, and when their own action is unimpaired by general or local diſeaſe, is, as has been repeatedly proved, doubtleſs very great. Individually, however, their motion is apt to become irregular, or to be ſuſpended entirely, in conſequence of external violence, or local diſeaſe. The action of theſe veſſels, like that of the heart and blood veſſels, being entirely independent of volition, is, like theirs alſo, liable to be affected by any ſudden or violent agitation of the mind; thus, the ſaliva of a man in a fit of anger becomes viſcid, and his mouth dry; and alſo, when a perſon faints from fear, or any other depreſſing paſſion, we obſerve ſeveral parts of the body to be covered with a cold clammy moiſture, which is occaſioned by the abſorbents, (whoſe motion is thus become retrograde) diſgorging their contents, like the ſtomach, whoſe motion is often inverted alſo at the ſame time. The aſſociated action of the parts, compoſing the ſanguiferous ſyſtem, being evidently greater than that of the lymphatics, yet from the irregular or ſuſpended action of a few of the ſmaller blood veſſels, there is no obvious change in the circulation; of courſe, the function of abſorption will not be affected at all by the ſimilar occurrences in a few of the abſorbents.

When a vein, which in its ſtructure, as well as in its functions, reſembles an abſorbent, is wounded, it either becomes paralyzed, and the blood, by its own gravity, eſcapes from the wound, or its motion is inverted, and the blood flows backward; this latter circumſtance ſometimes proves ſo troubleſome

in great operations, that ſurgeons are obliged to ſecure the bleeding veins as well as the arteries.

The lachrymal ducts, when their extremities are inflamed, loſe their power of motion, and the tears flow over the cheeks.

Now, in inoculation, the neceſſary puncture, or ſcratch, muſt be made with a light hand indeed, if one or more lymphatics, (provided any of them are in the way) are not wounded; hence, it may be preſumed, that they will either be deprived of the power of motion, or that it will be inverted. If, however, any of the matter be left behind in inoculation, a circumſtance not at all neceſſary, it will be waſhed out immediately by the blood, which, in but rare inſtances, does not iſſue from the puncture.

Independent, however, of all reaſoning, this opinion ſeems to be fully refuted by the celebrated Mr. Hunter's deciſive experiment, of cutting out the inoculated part of a patient's arm, after the ſpecific inflammation had commenced, thereby preventing the conſtitutional diſeaſe.

As it is probable, therefore, that the power of action of ſuch lymphatics as are wounded in inoculation, or become inflamed by "continuous ſympathy," and whoſe canals ſeem thereby to be obliterated during the formation of the primary puſtule, is ſuſpended, if not entirely loſt, the matter will not likely find an inlet into the body through this channel.

If, however, it could be proved to a certainty, that the vaccine, (as well as the variolous) virus, muſt neceſſarily be carried through the maſs of circulating fluids,—why have recourſe for that purpoſe to an operation, which, in its conſequences, frequently becomes ſo diſtreſſing to the patient?

We have aſcertained the power of the abſorbents to be ſo great, as to take up not only ſuch animal ſecretions as hog's lard, &c. but even groſſer ſubſtances, as, opium, metallic calces, &c. and from whence we may fairly conclude, that they poſſeſs an equal power over matter of finer or more minute component parts, as the virus of either of theſe two diſeaſes, and which may eaſily be applied in ſuch forms, as to be abſorbed with certainty, eſpecially as it is admitted, that "a very ſmall quantity of moſt morbid poiſons," (as the variolous, vaccine, &c.) "however much diluted by the fluids of the human body, or by ſimple water, is as capable of exciting diſeaſe, as matter containing the poiſon in its moſt concentrated ſtate." (Medical and Phyſical Journal, Vol. I. p. 452.) But the fact is, that neither the variolous, nor vaccine diſeaſes, can be excited in this way; nor is it eaſy to imagine, how the blood can become ſuſceptible to the action of any poiſon, unleſs, indeed, we dream with Mr. Hunter about its poſſeſſing vitality, &c.

When

When mercury, ſulphur, &c. are conveyed into the body by friction, we obſerve, that they are thrown out again almoſt immediately by the common excretories. What proof is there to the contrary, that any poiſon, or other foreign matter, is leſs inoffenſive with reſpect to the human fluids, or that it can be retained for a greater length of time?

The moſt ſatisfactory explanation of the manner in which the vaccine (as well as the variolous) virus, produces diſeaſe, is, that it acts primarily and ſolely upon the nervous ſyſtem, and in conſequence of which only it is, that any change in the ſtate of the blood takes place. The ſpecific inflammation of the part to which the poiſon is applied, conſtitutes, we ſuppoſe, the firſt or introductory link of that catenation of motions which it is the peculiar property of that poiſon to excite. Hence, in inoculation, a ſlight puncture, made with the point of a lancet, ſo as to wound a ſentient extremity, is all that is neceſſary, of which the moſt unequivocal proof is, the flowing of the blood. This is the method which I have always followed, and have ſeldom failed in this way of communicating the infection. The inſertion of a piece of thread, impregnated with matter, in the arm, is a very uncertain method of inoculating.

The ſtate of the matter is another circumſtance deſerving attention; Dr. Pearſon directs it to "be taken from the arm of a patient, and immediately applied in its fluid ſtate," and that we "muſt not wait for ſuppuration, and, indeed, if that comes on, the matter cannot be depended upon."——"The matter is in an efficacious ſtate from the eighth to the eleventh day generally." * Though I have not always failed, when I have not had it in my power to avail myſelf of theſe hints, yet, from the little experience which I have had in inoculation with vaccine matter, I am fully convinced, that they cannot be too ſtrictly complied with; as from inattention to the ſtate of the matter, ſome of my patients did not ſicken before the eleventh or twelfth day, and on the arm of one of them, the ſpecific inflammation did not commence before the ninth. That the matter may not loſe any of its active properties, it ſhould be preſerved in a vial quite dry, and cloſely ſtopped, or in hydrogen or nitrogen gas, as Dr. Pearſon recommends. The inoculation, though from the ſimple manner in which it can be performed, appears ſo trivial a circumſtance, yet, it may occaſionally be of the laſt importance to the feelings and ſafety of an individual, as well as the reputation of the ſurgeon, that

* In a letter which I had the honour of receiving from Dr. Pearſon.

it be performed ſo as to inſure the infection taking place. A patient of mine was inoculated twice by means of a thread inſerted into each arm, without effect, and a third time by puncture; on the following day the ſmall-pox appeared.

D. C. ſeventeen months old, was inoculated by puncture, with vaccine matter taken from a puſtule in the ſtate of ſuppuration, and dried; on the ſixth day the firſt inflammation had not ſubſided, on the ſeventh it was leſs, and on the eighth had almoſt entirely diſappeared. He was again inoculated (25th Dec.) with recent matter, in its fluid ſtate; on Saturday the infection had evidently taken place: that evening the child, who had been ſeemingly unwell the day before, was taken very ill, and on Sunday the ſmall-pox appeared, of the confluent kind; on Monday, the puſtules in each arm, from the inoculation, coming forward; on the 31ſt day they contain matter; the child's body is covered with petechial ſpots; not a hope of his recovery is entertained. It will, perhaps, in general be found, that if the firſt inflammation continues beyond the fifth day, the infection will not take place. Now, from the event of this caſe, as the child is ſince dead, which might, perhaps, have been prevented, if the matter uſed in the firſt inoculation had been taken earlier from the patient, and in a more fluid ſtate, as the child was not unſuſceptible of the diſeaſe, the propriety of Dr. Pearſon's ſuggeſtions on this part of the ſubject will appear evident. I am,

GENTLEMEN,

Your moſt obedient ſervant,

A. HUGGAN.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS a conſtant reader and well-wiſher of the Medical and Phyſical Journal, I beg leave to tranſmit to you the incloſed letters. If you think they are of ſufficient importance to be made public, do me the favour to give them a place in it as ſoon as you have room. From a peruſal of them, you will perceive I had ſtrong doubts of the efficacy of Cow-pox Inoculation, as a ſubſtitute for Small-Pox, till I received Dr. Jenner's anſwer to the caſes I ſent him.

His gentleman-like letter removed all my doubts, and I have again reſumed the practice.

The facts which have preſented themſelves to my obſervation,

tion, hitherto, enable me to say, without hesitation, that I am convinced that the Cow-pox Inoculation will supersede the Small-pox. However, as too much evidence cannot be had upon a point of so much consequence to the community, I feel desirous that every circumstance relative to the appearance and effects of variolous virus afterwards should be made known; and for these reasons, I trouble you with the letters, having the Doctor's permission to do it. In the country, where Small-pox only now and then makes its appearance, it is a matter of the utmost magnitude to have the point at issue determined, that individuals may embrace the opportunity of avoiding a most dreadful malady, by a secure, efficacious, and inoffensive preventive. I am,

GENTLEMEN,
Your very humble servant,
J. SHORTER.

Bloxham,
Feb. 17, 1800.

To Dr. JENNER.

SIR,

MANY months since I perused with pleasure your publication on Cow-pox. The novelty and importance of the subject, urged me to inquire farther into it; and I collected several instances that favoured the plan, and others which seemed to discourage it.

From these I selected four cases, two of which very strongly substantiated your observations, and two others which, in my judgment, made equally strong against them. These I communicated to Dr. Pearson in a circumstantial manner, who very politely answered my letter, and cleared up many of my doubts; he also kindly sent me some matter on thread, with which I have inoculated several patients, all of whom had the complaint with no other appearances than on their arms only, excepting in one instance, where one of the patients shewed me a very fine pustule with pus in it, on the thigh, exactly resembling the Small-Pox.

Having an opportunity of trying the effect of variolous virus on two persons who had passed through the Cow-pox, I gladly embraced it, thinking it might tend to convince my mind of the great advantages which your tract informed me were to be derived from Cow-pox.

The result so far exceeds any account that I have noticed, and appears to me so necessary to be known, that I have taken the liberty of submitting it to your consideration; and until I am fully satisfied, I shall desist from proceeding in the practice of inoculating for Cow-pox.

The

The two perſons on whom I made the trial were reſpectable and intelligent, and made ſenſible obſervations on the different appearances of their arms after inoculation. One of them kept an account of himſelf and family from the time of being inoculated with Cow-pox matter, which I ſhall have occaſion to allude to in my relation of their caſes.

William Barrett, Joſeph Barrett, and Ann Barrett, of Adderbury, adults, were inoculated with Cow-pox matter (by Mr. Joſeph Lamb, late a pupil to Mr. Pole, ſurgeon, London) about the middle of laſt June, and went regularly through the complaint. Some time after their recovery, Joſeph expoſed his perſon in the company of a woman with a full crop of Small-pox on her, and received no harm. William was alſo inoculated with variolous matter without effect; however, William ſubmitted to a ſecond trial; and Ann was inoculated at the ſame time. On the 7th of December I inoculated them both with matter on thread, taken only the day before. They ſoon were ſenſible of ſome effect from it. The firſt twenty-four hours they felt ſmarting and itching in the inciſions; and on removing the threads, they obſerved them moiſt. There was little farther to be perceived till the 4th day, when inflammation was evident on William's arm, ſufficient for me to have aſſured him, if he had not had the cow-pox, that I ſhould have been poſitive he had received the infection. Ann's arm appeared very doubtful. From this day to the 7th, the inflammation was progreſſive; and on examining the arms, a puſtule preſented itſelf on Ann's, with matter in it, on the inoculated part; ſhe alſo informed me, that *this day ſhe was very unwell, was feveriſh, and had a tendency to ſickneſs.* William's arm was alſo more inflamed than on the 4th day; the inciſion had a riſing appearance, and felt hard, and towards the lower part there was a puſtule juſt appearing; but he had not the leaſt indiſpoſition this day, or any ſucceeding one. On the 9th day, William called on me, and informed me, that on the 8th he had obſerved matter in the puſtule on his arm; but when I inſpected it this day, it had the uſual aſpect of Small-pox juſt declining: he alſo told me, that the puſtule on Ann's had diſcharged matter on the 8th day; but that on this day, it appeared to be dying, and all indiſpoſition gone.

On the 12th day, I ſaw them both again; Ann's arm had *inflammation, which extended almoſt from the ſhoulder to the elbow,* and ſo painful and ſore that ſhe applied an emollient poultice to it; the inciſion now had a large ſcab on it, and there was on the bend of the arm a ſort of blighted puſtule.

Ruminating on theſe appearances for a moment, I could not but perſuade myſelf ſhe had certainly received the variolous infection,

fection, and I frankly told her ſo; William's arm alſo retained conſiderable inflammation and hardneſs about it, nearly as much as I have obſerved when ſmall pox puſtules have appeared. One thing, however, I muſt not omit mentioning, that neither of them were ſenſible of the leaſt ſtiffneſs, fullneſs, or ſoreneſs in the axilla all the whole time; and from this day nothing remarkable occurred.

I have obſerved in the courſe of my practice, in ſeveral inſtances, that the Small-pox eruptive fever has come on with vaſtly leſs inflammation in the arm; and I am ſo perplexed to aſſign a cauſe for ſuch unuſual appearances after Cow-pox Inoculation, that I muſt beg you to ſatisfy me before I proceed farther in the practice; and rely on your goodneſs to anſwer the following queſtions:

Did the variolous virus affect the ſyſtem? or was it merely local?

Do you conceive it poſſible to have conveyed the Small-pox from the puſtule on the inoculated part? or was it poſſible that infection could have been conveyed in any manner, even by the cloſeſt intimacy?

Has any ſimilar caſe occurred in your extenſive practice?

Thus far, Sir, I have treſpaſſed on your time and patience; but I hope the importance of the ſubject will plead my excuſe. I remain, SIR,

Yours, reſpectfully,

Dec. 25, 1799. JOHN SHORTER, Surgeon,
Bloxham, near Banbury, Oxon.

To Mr. SHORTER.

SIR,

I am much obliged to you for your obſervations on the Cow-pox; and am the more pleaſed with them, as they convince me you have watched its progreſs with an attentive and ſcrupulous eye. However, I muſt at once obſerve, that the caſes you adduce, *in my opinion*, do not in the leaſt militate againſt the ſafety of the Cow-pox as a preventive of the Small-pox. Pray recollect how ſeldom we find the ſkin inſenſible to the action of variolous matter in thoſe who have previouſly gone through the Small-pox; the Cow-pox leaves it in the ſame ſtate. The patients you mention were not inſenſible to the local action of the variolous virus; and in one of them, it ſeems, a very extenſive cuticular inflammation was excited. Now, Sir, allow me to aſk, Can you be ſurpriſed (when you conſider the ſympathetic connection that exiſts between the ſkin and the ſtomach, and conſequently the whole conſtitution) that an inflam-

mation

mation ſo extenſive as to reach from the ſhoulder to the elbow, ſhould occaſion ſome degree of nauſea, and other affections of the body?

The conſtitution, you may be aſſured, gave every reaſonable proof of reſiſting the action of the Small-pox virus completely, the inflammation only occaſioned the diſturbance; even the lymphatic glands of the axilla were inſenſible of its action: but this, indeed, is no teſt.

A caſe, ſomewhat ſimilar to that of the woman you mention, occurred lately in this neighbourhood. A girl, about eighteen years of age, was inoculated with Cow-pox; ſhe had the uſual puſtule on the arm without feeling the leaſt conſtitutional ſymptom. Some medical people, who knew the hiſtory, ſuppoſed they could, for a certainty, give her the Small-pox by inoculation. She was inoculated, at different periods, in ſixteen different points.

Chagrined (very unwarrantably) at the diſappointment, a deeper puncture than before was made in one of her arms, I ſuppoſe through the cutis, ſo that the variolous matter came in contact with the cellular membrane. The conſequence was dreadful; an inflammation was excited, and ſpread to ſuch an alarming height, that mortification was expected. The girl, of courſe, was very ill, but no puſtules appeared. A boy of my own, who had been inoculated with the Small-pox, and reſpecting whoſe ſafety I had ſome doubts, was again inoculated with variolous virus. His arm inflamed very extenſively, and he became unwell. Two years afterwards, he was a third time inoculated, and the ſame appearances again took place in his arm, which were ſucceeded by boils about his ſhoulder. Similar inſtances are upon record in great abundance, and others which are ſtill more ſtriking.

Theſe general obſervations, I preſume, have anſwered your queries ſatisfactorily; however, I will with pleaſure reply to them in the order in which they ſtand.

To the 1ſt.—The variolous matter was, doubtleſs, the cauſe of the local affection of the arm; which affection diſturbed the ſyſtem. That the conſtitution was unſuſceptible of its ſpecific action, was evinced by the general hiſtory of the caſe.

To the 2d.—The matter generated in the arms of your patient was undoubtedly variolous, and would certainly have communicated the Small-pox by inoculation, and probably by its effluvia. This is exemplified by the puſtules on Small-pox nurſes, which contain a perfect Small-pox virus. Theſe puſtules appear on ſome women as often as they expoſe themſelves to the diſeaſe in a malignant ſtate. A caſe in illuſtration of this fact, is introduced into my ſecond Treatiſe on the Variolæ Vaccinæ.

To

To the 3d.—I don't recollect any case in my own practice, where the inflammation on the arm became so extensive on the application of the variolous matter after the Cow-pox.

Before I conclude, I must take the liberty of putting one question to you. Are you quite certain that your lancet* did not pass through the cutis, (which in some subjects is very thin) and that the variolous virus did not touch the cellular membrane?

The occurrence of one circumstance that you have communicated to me, I cannot help regretting; which is, the woman being told that she had the Small-pox: for I declare to you, I would not wish for a stronger case of the powers of the Cow-pox, in securing the system from the Small-pox, than those you have laid before me.

I remain,

Berkeley, Gloucestershire,
Dec. 29, 1799.

Your obedient humble servant,
EDW. JENNER.

To the Editors of the Medical and Physical Journal.†

GENTLEMEN,

THE following case having been noticed in the public papers, I have sent you a statement of the facts for your valuable Publication.

Lieut. Wynn, of the 17th foot, was landed at this place from the Helder, Nov. 3, with a wound in his side; and by the active benevolence of Major General Lennox,‡ placed immediately in a comfortable lodging, under the care of Mr. Melling, who has been surgeon to the garrison here upwards of forty years, with the able assistance of his very attentive partner Mr. Craven, and under the direction of a physician, with whom the General would have intrusted himself had he been in similar circumstances.

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* Having been in the habit of inoculating many years, I presume I must have known it, had my lancet passed through the cutis; the reader will therefore, I trust, believe it did not. J. S.

† We received the following interesting case from a gentleman at Hull, which, we conceive, well merits the attention of all Surgeons in the Army and Navy. EDIT.

‡ The uncommon attention which this gentleman has always paid to the wants of the soldier under his command, has made him deservedly beloved by the army.

Mr. W. had been a fortnight at sea in bad weather, was extremely emaciated, very agitable and dyspeptic, having kept nothing upon his stomach whilst on board. He complained of slight cough, pain in the chest, and the region of the left kidney, but had no dyspnœa, and could lie on either side; his pulse was quick, and he was costive. He related that he had been wounded on the 2d of October, and he suspected by a grape-shot, for the party he commanded was within reach of a fort.

On examination after the accident, it appeared that the ball had entered the thorax by breaking the second false rib on the left aside about the centre; but the surgeons at the Helder were not able to find the ball, nor to ascertain how far, or in what direction, it had penetrated; they however observed, that the flame of a candle was affected by the air as it passed in and out of the chest during respiration.

As soon as possible after he landed, every thing prudent was attempted in order to discover the ball; but it was not thought justifiable to comply with the earnest wishes of the patient, and to lay open the chest for the purpose of making a search into that cavity under the present circumstances.

The wound continued for some weeks to discharge a very large quantity of fœtid matter at every dressing; but during the night of the 24th, he was suddenly seized with a violent fit of coughing, and he expectorated a very large quantity of the same fœtid matter as the wound had hitherto discharged, which tasted, he thought, of iron; in the morning the wound was perfectly dry. A consultation was held to determine what ought to be done; but as there was no clue to guide the operator, it was recommended to Mr. W. to wait with patience, till further information could be obtained, either from swelling, fixed pain, or other definite circumstance, which should point out the true situation of the ball.

The Medical Board having thought proper to send down Dr. Hunter to be surgeon to the sick and wounded Russians about that time, this gentleman requested permission to see the case; it was his opinion that the wound should be enlarged, and that further search should be made for the ball: but the objections to such an operation not being less than before, those who had hitherto constantly attended him, could only consider this as a matter of experiment. Accordingly, Dr. H. himself undertook the operation: having enlarged the wound betweeen two and three inches, obliquely forwards and downwards, he examined it; but not being able to find the ball, nor any sinus that might lead to it, he concluded that the ball had not penetrated into the thorax, but had rebounded, and that the present inordinate spitting should be considered as phthisis. This opinion, however,

ever, was never for one moment assented to by those who had hitherto devoted their time and attention to the case, full of confidence that at one time or other, an abscess might discover the ball; Mr. Craven continued his daily attentions, and his physician advised the same general plan of supporting the patient.

On the night of Dec. 11, the cough stopped as suddenly as it had begun; and on taking off the dressings, matter poured out of the wound, from a small opening near its lower edge; the probe was carefully introduced into this new aperture, and the ball was discovered lying within the thorax, close to the broken rib, towards the spine, between two and three inches from the fracture, and rather below the external opening.

Mr. W. was very impatient to have it extracted by the gentlemen present; but as Dr. H. was not there at the time when the ball was discovered, the operation was fixed for the next day. Two large incisions were made by Dr. H. (who undertook to extract the ball); and having introduced the forceps between the ends of the broken rib, he succeeded in laying hold of it, but could not get it further than the opening formed by the fracture, the ball receding from the forceps into the cavity every time force was employed to draw it through. On the arrival of further assistance, a portion of the broken rib was immediately advised to be removed, in order to give room for the ball to pass; this was accordingly done. Upon again bringing it forward, the opening was still found less than the ball, and that the forceps, (intended only for a leaden bullet) could not sufficiently grasp and retain their hold of the ball, to extract it; a lever was therefore introduced behind the ball, and it was forced out by that means.

Notwithstanding Mr. W. was upwards of half an hour under the operation, which he bore with uncommon fortitude, he had no untoward symptoms, except diarrhœa; no cough of any consequence, no inflammation of the pleura; the wound healed to all appearance as well as if placed in any other part of the body; and when he left this place, which he did on March 1, in apparent health and high spirits, there remained only a very trifling opening, probably occasioned by a small exfoliation of the rib. After the operation, the flame of a candle applied to the wound was affected by respiration.

The ball is of cast-iron, and weighs three ounces and a half.

I am,

GENTLEMEN,

Your's, &c.

A. B.

A Concise History of the Principal Discoveries in Anatomy.

[Continued from our last Number, pp. 256—261.]

VAROLI, next to MASSA, described the first pair better than his predecessors, whom he justly reprobated for having entertained so imperfect an idea of the olfactory nerves. He traced their origin to the sulcus of the interior lobes of the brain, stated their use to consist merely in conveying the sensation of odours, without contributing to the secretion of the humours from the ventricles of the brain; but he furnished us with no faithful drawing of this nerve.* Next to him PICCOLHUOMINI represented this first pair with tolerable exactness.†

§. 36. With regard to the optic nerves, we shall observe that EUSTACHIUS was the first, after GALEN, who could claim the merit of having explained in the best manner, by engravings, the origin of these nerves from their *thalami*, on each side of the septum, and between the *crura medullæ oblongatæ*.‡ The credit therefore is not due to VAROLI, who ascribes to himself the discovery of the thalami nervorum opticorum in the year 1570; and the account of his controversy with other anatomists, who were unable to trace, according to his directions, the origin of these nerves, is no less singular.§ FABRICIUS likewise accurately describes their origin from the vicinity of the corpora quadrigemina, and between the crura medullæ oblongatæ.‖ The decussation of the optic nerves, which had been denied by GALEN, also occasioned a very careful investigation in the sixteenth century. VESALIUS particularly informs us of observations having been made, which prove that, after the loss of sight on the right eye, the nerve of that side had been found weak and corrugated, not only as far as its union with the nerve on the opposite side, but also behind its connexion to the thalami of the right side.

VESALIUS therefore, as well as most other anatomists of this century, adopted the opinion of no decussation, but only an approximation of the nerves, or an entire union of their medullary substance, without impeding their course and disposition: consequently the nerve originating from the right side of the thalami, was said to proceed to the right, and that coming

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* *Varol.* de nerv. optic. f. 9. a.—Anatom. lib. i. c. 5. p. 23.
† Anatom. praelect. p. 263.
‡ Tab. xvii. fig. 4. *(M M.)* particularly fig. 6. *(O P.)*
§ De nerv. opt. f. 13. a. b. ‖ De oculo, p. 193.

ing from the left, to extend to the left eye.* A complete union of the medullary substance, without decussation, was admitted by STEPHANUS,† COLUMBUS,‡ BAUHINUS,§ and VAROLIUS;‖ but a mere approximation only, by FABRICIUS.¶

With respect to the structure of the optic nerve, the ancient authors erroneously believed it to be tubular, and asserted that the use of this cavity consisted in conducting the *spiritus visorius* to the eye. This error was probably occasioned by a similar observation on the central artery; it was rectified in the earlier part of the sixteenth century. We are told by BERENGAR, that he has bestowed great pains in detecting the canal in the optic nerve, but almost constantly without success. Once indeed he observed a cavity in the optic nerve of a swine; when he says, "*ipsi nervi nempe erant concavi, sicut vena seu arteria.*" it likewise appeared to him as if a vacuum existed in the interior part where the optic nerves are connected; but in the optic nerves of man not the smallest cavity could be found, either on one or the other side of their union. The porosities in these nerves, he concludes, must therefore, in all probability, not be much larger than those of others, as the *spiritus visorius* is so very subtle and penetrating. The substance of the optic nerves is, according to him, soft and medullary.** VESALIUS, who examined the optic nerve not only in different animals, but also in a man immediately after his decapitation, was equally unsuccessful in discovering any cavity, not even in the place of their union.†† PUTEUS, however, asserted that these pori were visible in the optic nerves of cattle;‡‡ yet VESALIUS maintained that the optic nerve was merely of a fibrous structure, and ironically ascribed it to his want of attention, that he had hitherto been unable to discover those pretended pores.§§ In this he also was seconded by FALLOPIUS,‖‖ and COLUMBUS.¶¶ Yet both these authors asserted that the optic nerves were of a porous, or rather loose structure, in order to admit the free access of the *spiritus visorius*; and DU LAURENS even affirmed that they consisted of a spongy substance.*** COITERUS assures us, that the optic nerve was composed of mere fibres, and consequently could not

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* *Vesal.* lib. iv. c. 4. p. 366.
† *Stephan.* p. 293.
‡ Lib. viii. c. 3. p. 358.
§ Theatr. p. 648.
‖ Anatom. lib. i. c. 4. p. 14.
¶ De oculo, p. 239.
** *Berengar.* f. 452. b.
†† Lib. iv. c. 4. p. 366.
‡‡ Apolog. f. 92. a.
§§ De radic. chyn. p. 660.
‖‖ Obs. p. 402.
¶¶ Lib. viii. c. 3. p. 358.
*** *Laurent.* lib. iv. c. 16. p. 276.

not be of a tubular nature.* Nevertheleſs, the old hypotheſis was maintained by three of the moſt celebrated authors of the ſixteenth century, who, as has already been obſerved, were miſled by the appearance of the central artery, to admit a hollow form of the optic nerve. EUSTACHIUS declares he has, at innumerable times, ſubmitted the cavity of the optic nerve to the inſpection of ſceptics, and thereby ſilenced their doubts.† ARANZI maintains that, in the eyes of ſubjects recently deceaſed, he could, without the leaſt difficulty, introduce a needle into the cavity;‡ and GUIDI§ ſays, that he has clearly obſerved a cavity at the iſſue of the optic nerve into the retina, though it could not be farther traced in its progreſs. Finally, FABRICIUS doubts the exiſtence of ſuch a hole, but will not give a deciſive opinion upon the ſubject.‖

§. 37. The origin of the third pair of nerves was accurately pointed out by VAROLIUS¶, who traced it from the medullary cluſters of the cerebrum, with extremely cloſe and often united fibrils. VESALIUS improperly delineates its courſe and extenſion, when he pretends that its ramifications proceed to all the muſcles of the eye.** COLUMBUS corrected this error by allowing two muſcles, the rectus abduſcens, and the obliquus ſuperior; but, at the ſame time, he committed another, when he believed that this nerve extended alſo to the temporal muſcle, and that the ſympathy ſubſiſting between the eyes and the temples, may thence be explained.†† FALLOPIUS very juſtly cenſured COLUMBUS for this miſtake;‡‡ who, in diſſecting the *ganglion opthalmicum*, was miſled to follow its progreſs from the branches of the third pair, which aſſiſt in forming this ganglion, through the lachrymal nerve to the profound nerve of the temporal muſcle (from the third branch of the fifth pair), and thus to conſider the latter as a continuation of the third pair. FALLOPIUS, at the ſame time, corrected the error of VESALIUS, and ſhewed that thoſe two above mentioned muſcles of the eye were not influenced by this nerve. But VESALIUS did not manifeſt, in his anſwer, that degree of confidence which the accurate demonſtrations of FALLOPIUS amply deſerved.§§

§ 38

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* Tab. oculor. p. 87.
† Oſſ. exam. p. 205.
‡ Obſ. c. 21. p. 73.
§ *Vid.* lib. iii. c. 1. p. 80.
‖ De oculo. p. 238.
¶ De nerv. optic. f. 13. b.—Compare *Laurent.* hiſt. anat. lib. xi. c. 8. p. 928.
** Lib. iv. c. 5. p. 367.
†† Lib. viii. c. 3. p. 359.
‡‡ Obſ. p. 402.
§§ Exam. obſ. Fallop. p. 803.

§ 38. The fourth pair, or the pathetic nerves, were apparently known to ACHILLINI, when he traced from the posterior part of the brain a new nerve, never taken notice of before his time; described it as very thin; and believed that it terminated in the eyebrows.* He was probably misled to form this last erroneous conjecture, by having observed that the pathetic nerve frequently unites with the first and principal branch of the fifth pair. It does not at first appear, whether VESALIUS was acquainted with this nerve; he assigns to his third (or what is at present considered as the fifth pair) a double root, one very tender, and the other very solid.† The tender root is, according to him, so distributed, that we may be induced to conclude it to be the first chief branch of the fifth pair;‡ but the principal objection is the pretended origin of this tender root, which is said to arise from the posterior part of the brain, where it extends to the spinal marrow; this nerve, it is farther maintained, does not combine with what is strictly called the third (or the present fifth pair), and we may therefore justly consider it as a separate nerve. He would not, however, venture so far as positively to defend this last proposition, on account of the established order. The same assertion cannot be applied to the first and principal branch of the fifth pair. The account given by FALLOPIUS, relative to the pathetic nerve, is worthy of observation, viz. that it was described by VESALIUS under the name of the tender root of the third pair; but he attributed to it too many ramifications,§ and that VESALIUS in his reply acknowledged himself to have stated this ramification beyond its natural course.‖ Hence we may infer, that VESALIUS has accurately seen the origin of the nerve, and traced it to a connection with the first of the principal branches belonging to the fifth pair, but afterwards confounded it with the latter. FALLOPIUS was the first, who with due precision called this nerve the *eighth*, and stated its origin to be behind the posterior corpora quadrigemina, and its distribution only to the obliquius superior of the eye. EUSTACHIUS has likewise given a representation of it,¶ but has mentioned it rather obscurely.** COLUMBUS denominates the same nerve the *ninth*, and undeservedly assumes the merit of its discovery.†† GUIDI has adopted the description given by FALLOPIUS.‡‡

§. 39

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* *Achillini* annot. in Mundin. p. 13. † *Vesal.* lib. iv. c. 6. p. 367.
‡ *Meckel.* de quinto pare. f. 5.
§ *Fallop.* obs. p. 403.—Compare *Morgagni.* ep. anat. xv. f. 45. *Sömmerring* de basi encephali. f. 51. ‖ *Vesal.* exam. obs. Fallop. p. 803.
¶ *Eustach.* tab. xvii. fig. 2 *(M M N.)*
** Oss. exam. p. 205. "Nervus, qui prope nares exoritur."
†† Lib. viii. c. 3. p. 365. ‡‡ *Vid.* lib. iii. c. 1. p. 83.

§ 39. The hiſtory of the *fifth pair*, evinces, in the moſt ſtriking manner, that neurology, the moſt difficult part of anatomy, has, by very ſlow degrees, and many deviations from the true path, arrived at its preſent ſtate of perfection. In the deſcription of this pair, as attempted by BERENGAR, we meet with much confuſion: he divides it into two ſingle nerves, which, according to the example of the old ſchool, conſtitute the third and fourth pair. From his third pair, the firſt branch deſcends near the *carotis*, along the vertebræ of the neck, through the diaphragm, into the abdominal viſcera. BERENGAR has probably, in this inſtance, purſued the ramus profundus of the nervus Vidianus, which combines with the intercoſtal nerve, as well as with the laſt mentioned nerve itſelf. The other branches of his third pair proceed to the eyes, the noſe, the temporal muſcles, thoſe of the face, and combine with his fifth, or the facial, nerve. The fourth nerve of BERENGAR is evidently our common trunk of the Vidian and palatine nerves.* The deſcription of VESALIUS is rendered the more intricate, as he at the ſame time examines what is now called the fourth pair, while he conſiders the common trunk of the Vidian and palatine nerves as a particular nerve, by the name of the fourth. He divides his third pair of nerves into a ſoft and a firm portion; the former proceeding with four branches to the forehead, the upper jaw, the muſcles of the lips, and to the temples. VESALIUS has probably not paid ſufficient attention in diſſecting this branch, but traced its ramus lachrymalis to the temples, which, however, are ſupplied by the ſecond branch of the fifth pair. The ſecond and third principal branches he calls the thick portion of the third pair, but ſeparates from it, as has been before obſerved, the common trunk of the Vidian and palatine nerves. The diſtribution of the thick portion is correctly ſtated, except the infraorbital nerve, which has been omitted. The nervus lingualis, which he derives from the firm portion, is, in his opinion, the peculiar nerve for regulating the ſenſe of taſte.† MASSA deſcribes the fifth pair by the name of the fourth, fifth and ſixth.‡ But the deſcription of FALLOPIUS is more correct. He divides our fifth, or his third pair, into three branches, and the firſt main branch into two, either entirely excluding the lachrymal branch, or deriving it from the *naso-ocularis*. The latter, according to him, unites in its ramifications with the optic nerves; though his opinion be not altogether conformable to truth. He is

* *Berengar.* commentar. in Mundin. f. 456. b. 457. a
† *Veſal.* lib. iv. c. 6. p. 367. ‡ Introduct. p. 79.

is well acquainted with the maxillaris superior, and its passage through the maxillary bone. He supposes detached branches to proceed from the buccinatorius to the fauces. This mistake arose probably from the circumstance that the buccinator muscle is connected with the cephalo-pharyngeus. He represented very correctly the cord which the temporal nerve forms round the arteria meningea, as well as the nervus *temporalis superficialis*.* COLUMBUS adheres to the division adopted by FALLOPIUS;† yet he separates, first, the *massetericus*, (like PALETTA,‡) from the fifth pair of ours, and calls it the eighth. GUIDI has more distinctly described the common trunk of the Vidian and palatine nerves, in commemoration of which the pterygoideus has been called nervus Vidianus.§

§ 40. The *sixth pair of nerves*, which is so important by its combination with the intercostal nerve, was, to our knowledge, first discovered by EUSTACHIUS, who gave a precise account of its origin, progress and union with the intercostal nerve.‖ The more minute division which VESALIUS makes of the fifth pair, cannot (in the opinion of Professor Sprengel) be considered as a sixth pair; but, guided by EUSTACHIUS, several anatomists have correctly pointed out its combination with the intercostal nerve. FALLOPIUS, however, has, without mentioning this combination, accurately described its ramification to the abductor oculi.¶

As the *acoustic nerve* not only combines through a loose cellular membrane with the *facial nerve*, a common canal in the os temporis from the cranium, proceeds along with it, forms the chorda tympani, and likewise supplies several muscles of the auditory organ; it is a very pardonable error that the two nerves were at those times considered as branches of one common trunk,** which went by the appellation of the *fifth* pair. On this occasion, the distribution of the acoustic nerve was usually not attended to, while, on the other hand, the facial nerve was the more fully described. VESALIUS gives a brief,

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* *Fallop.* obs. p. 403, 404.

† Lib. viii. p. 365.—It would appear as if Columbus described what is now called the sixth pair of nerves, under the name of the eighth. This is likewise asserted by Pfeffinger, in his work "De Structur. Nerv. sect. 2. § 21." But on a more accurate investigation, we shall find that his description may, with more propriety, be applied to the *massetericus*.

‡ *Paletta* de nervis crotaphit. et buccinator. in *Romer.* delect. opuscul. vol. i. p. 113. s.

§ *Vid.* lib. iii. p. 81.

‖ Tab. xviii. fig. 1. 3. 5. *(o.)* particularly fig. 2. *(ZZ. ξξ.)*

¶ *Fallop.* obs. p. 405.

** *Berengar.* f. 457. b.—*Vesal.* lib. iv. c. 8. p. 368.

but tolerably correct account of its union with the second branch of the fifth pair, its distribution to the muscles of the auditory organ, and its subsequent grand ramification to all the muscles of the face. EUSTACHIUS, indeed, still believes that the facial nerve is a branch of the acoustic nerve, though he likewise is at the same time, acquainted with the three portions of the latter, and has observed the connection of the chorda tympani, which proceeds from the facial nerve, with the nervus lingualis (from the third branch of the fifth pair).* In this instance also, FALLOPIUS was a more accurate observer than all his cotemporaries. He was convinced that the facial nerve formed a peculiar pair; but that he might not appear singular, he maintained the old division.† Although VAROLI discovered the origin of the acoustic nerve in the medullary ganglion,‡ *(pons Varolii)*, and PICCOLHUOMINI found the roots of the fifth pair in the fourth ventricle of the brain;§ yet the latter discovery rather applies to what we at present call the acoustic nerve, and the former may be referred to the facial nerve. From the union of the lingual nerve with the chorda tympani, VAROLI explained the phenomenon that deaf persons are commonly also subject to the loss of speech.‖

[To be continued.]

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* *Eustach.* de audit. organ. p. 136, 141 —Tab. xviii. fig. 1. *(RTZ.)* and fig. 3. *(T.)*—Compare *Coiter*, p. 99.—*Ingrass.* comm. in *Gal.* de oss. p. 9.

† Obs. p. 405.—Compare *Coiter*, p. 104.

‡ De nerv. optic. f. 4. a.

§ Anatom. praelect. p. 300.

‖ Anatom. lib. i. c. 7. p. 31.

HINTS

HINTS AND IMPROVEMENTS

IN THE PRACTICE OF

MEDICINE, SURGERY, AND PHARMACY.

On the Medicinal Effects of the Salt of Tartar in Puerperal Fevers, &c.

[Concluded from our laſt Number, pp. 264—267. [

Observation VI.

THE female Cit. Vitry, twenty-eight years of age, of a very ſtrong and muſcular conſtitution, experienced a violent fright on the fourth day after her delivery. An acute fever, attended with delirium, ſoon ſucceeded. The patient was greatly agitated, being tormented with the moſt diſtreſſing reveries. Her breaſts ſunk, the abdomen became diſtended and painful, and the lochia were ſuppreſſed. The only means employed were the application of a dozen leeches to the vagina, the carbonat of potaſs, ſome compoſing draughts, and after the ſixth day, purgatives. Theſe remedies ſpeedily produced the beſt effects, and the cure was completed between the twentieth and twenty-fifth days.

Observation VII.

In the month of March, 1789, the female Cit. Parquin, twenty-ſix years of age, robuſt, and of a good conſtitution, met with great vexation immediately after her delivery. Cit. Guinot, who was called in on the fourth day, found the patient labouring under the following ſymptoms: her breaſts were ſoft, the region of the uterus was painful and tenſe, irritation over the whole abdomen, ſuppreſſion of the lochia, violent head-ach, attended with delirium, acute cough, harſh voice, ſharp and quick ſpeech, great difficulty of breathing, wild and ſparkling eyes, inflamed face, and a ſmall, quick, and contracted pulſe. The application of leeches, the uſe of the carbonat of potaſs, topical applications to relax the abdomen, clyſters containing a drachm of ſoap in each, the white electuary of the Pharmacopœia, with three drachms of pectoral ſyrup and twelve grains of carbonat of potaſs, an aperient and pectoral diet drink, with purgatives towards the termination of the paroxyſm, gradually calmed all the above ſymptoms, and by the

tenth day a cure was effected. The carbonat of potaſs was occaſionally continued the ſucceeding fortnight.

Observation VIII. and Last.

In the year 1784, the young female, Cit. Gey, of a ſtrong conſtitution, was, in conſequence of a ſudden alarm, attacked on the third day after her lying-in with an acute fever and an extraordinary head-ach. Her ſkin was parched and burning; the tongue arid, ſucceeded by frequent ſtartings of the tendons; and ſhe had an inceſſant and convulſive cough. Her breaſts were ſoft and wrinkled, the lochia ſuppreſſed; the abdomen, and particularly the uterine region, were much diſtended and painful. Cit. Guinot preſcribed a decoction of barley with ſyrup of violets and nitre, a white electuary, with two drachms of ſyrup of poppies and ten grains of potaſs, of which half a ſpoonful was to be taken every half hour; and emollient fomentations and clyſters, of the ſame ingredients, were ordered three times a day. He directed fifteen leeches to be applied, which produced a good effect. On the fifth day, the ſymptoms had conſiderably abated. The phyſician then preſcribed two clyſters daily, compoſed of two drachms of bark and one drachm of the carbonat of ſoda. Beſide theſe, he directed ſoap to be added to the emollient fomentations; and after the patient had been purged on the fourteenth day, ſhe was ſpeedily reſtored to perfect health. She continued, however, to uſe the carbonat of potaſs for a fortnight after, with a view to prevent a relapſe.

In 1790, the ſame woman became ſubject to a ſimilar diſeaſe, and was treated in a ſimilar manner. On the ſixth day of the treatment, the ſymptoms having almoſt diſappeared, ſhe experienced a ſudden change, which was attended with very painful ſtitches in the ſide, copious ſpitting of blood, a violent cough, and an ardent fever. Two bleedings in the arm, pectoral drinks, the white electuary, with the ſyrup of poppies and emollient clyſters, allayed this new attack in the ſpace of ten days. At this period the patient was ſeized with a ſtupifying delirium, and became ſubject to paralyſis of the left ſide. Cit. Guinot applied on the paralytic arm and thigh ſome well camphorated bliſters, which were dreſſed with the ointment of ſtyrax and althea. The joints were rubbed with volatile ſoap, and the patient was ordered to take a ſpoonful of a draught compoſed of one ounce of ſyrup of caryoph. and ſix grains of ammoniac, in ſix ounces of water, and in the intervals an infuſion of balm and ſyrup of orange flowers was ordered. After uſing theſe remedies for ſeveral days, the fever abated, and ten grains of carbonat of potaſs were added to each pint of barley water, of which the patient drank three chopins in twenty-four hours.

houſs. She was farther directed to apply clyſters prepared with ſoap wort and half a drachm of the carbonat of ſoda, and on the twenty-fourth day to take a purgative. In the courſe of five weeks ſhe was completely cured, and recovered the uſe of her limbs.

The ſalutary effects reſulting from the uſe of the carbonat of potaſs in puerperal fevers, appear to be ſufficiently proved.

In the year 1771, M. Tiſſot, in his Eſſay on the diſeaſes of people in general, propoſed as a remedy for metaſtaſes of the milk, the oil of tartar (the carbonat of potaſs in a liquid ſtate,) in doſes of from twelve to fifteen or even twenty drops, three or four times a day, to be taken in a ſmall quantity of water, broth, or gruel; a remedy from which he frequently obſerved the beſt effects to reſult. Van Stichel, a phyſician of Bruſſelles, in a ſmall work entitled "Reflections on the acute diſeaſes of women in child-bed, their nature, cauſes, and treatment, in the Auſtrian Netherlands," printed in 1789, and which deſerves to be more generally known, when ſpeaking of this medicine, which he had adopted on the authority of Tiſſot, expreſſes himſelf in the following terms:

"Although I have coincided in opinion with the greater number of practitioners, with reſpect to the variety of acute diſeaſes of women in child-bed, I have not been ſucceſsful in their treatment. But ſince I am convinced that neither inflammatory nor putrid fevers, nor nervous affections, exiſt on ſuch occaſions, and being well perſuaded that every acute fever which intervenes in women recently delivered is primarily induced by a fullneſs of the milk, or at leaſt that the fever is complicated with this cauſe, and conſequently ought to demand the principal attention of the phyſician, I have been more ſucceſsful in my treatment of ſuch diſeaſes."

With an intention to correct the aceſcence of the diffuſed milk, and to prevent its ultimate coagulation, Van Stichel preſcribed the purified oil of tartar per deliquium, from one to three drachms daily, in four ounces of diſtilled elder water, ſweetened with two ounces of honey, to be taken by a table ſpoonful, either alone, or mixed in a pint of ſtrong infuſion of elder flowers, and two or three ounces of honey.

With this remedy alone, after he had, according to his uſual practice, excited abundant perſpiration, and encouraged it for ſeveral days, he often cured the moſt violent puerperal fevers.

"Others," adds the author, "have met with the ſame ſucceſs by ſimilar means, among whom is M. Van der Belen, Doctor of Medicine in the Univerſity of Louvain, who, in a letter dated October 3, 1787, expreſſes himſelf on this ſubject in

in the following words: "I have succeeded so well with your alkaline mixture in puerperal fever, that I can easily dispense with any other remedy, and I need not even have recourse to ipecacuanha, whatever praise it may otherwise deserve."

Cit. Allan, our colleague, has several times employed this remedy: I have myself had occasion to apply it with advantage, and we have observed the best effects from the carbonat of potass combined with bark, when the fever was of the remittent kind. This combination would be particularly useful in complicated cases of the puerperal with that of the gaol fever.

In extolling the method proposed by Cit. Guinot, we are far from wishing to depreciate the merit of that we have derived from the celebrated Doucet. But whatever success the latter may have been attended with, it can only be depended on when ipecacuanha has been given on the first attack of the disease, and even then it has sometimes proved ineffectual. Hence it is of advantage to introduce into medical practice another remedy, the efficacy of which is confirmed by a great number of experiments, and which may, in all cases, be usefully combined with that proposed by Doucet, as it will prove of great service when the latter has not been timely administered, or when it has failed to produce the desired effects.

Chronic Dysphagia, which originated from a ravenous Appetite.

By Dr. HAGSTROM.

[From the New Transactions of the Royal Academy of Sciences at Stockholm. Vol. XIX. 1798.]

In the year 1797, a gardener died suddenly in the 62d year of his age, in consequence of a violent colic. This man was of a spare habit and thin appearance; he had always been afflicted with such a ravenous appetite, that he consumed as much food as four other persons, and nevertheless complained of insatiable hunger. He had frequently been subject to the colic and a violent heartburn, and three or four years previous to his death, he was confined to his bed for six months by a similar disease, attended with constant vomiting. For several years towards the latter period of his life he could take only liquid food, administered by spoonfuls. Dr. Hagstrom attended him for three years; but without being able to perform a cure. On dissecting the body after death, the lungs, liver and heart, were in a perfectly sound state; but the stomach was of a monstrous appearance, being three times the usual size. It contained from three to four quarts of matter resembling the yolk of an egg, when boiled hard and cut into small pieces, while it was extremely pungent and acid. In the mesentery were two small indurations, scarcely the size of a common pea. One part of

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the œsophagus was so indurated and constricted, that a goose quill could with difficulty be introduced. The parietes of this callous cylinder were half an inch thick, and its length measured about two inches. The author is of opinion, that the distention of the stomach and its atonic state originated from the uncommon voraciousness of the patient; and there not being a sufficient quantity of the gastric juice to dissolve the food, the ingesta had assumed such corrosive properties as readily produced the colic and heartburn; particularly as the œsophagus had been muc ulcerated by frequent vomiting.

Some Observations on the dangerous Effect of cutting the Hair during the Convalescence from Acute Diseases. By Cit. LANOIX.

[From the Bulletin of the Philomathic Society, No. 1, Germinal, 5th year of the Republic. April, 1797.]

THE Author of this Memoir informs us, that if any natural emunctories are formed on the hairy part of the head, towards the decline of slow nervous fevers, it is of the greatest importance to preserve these canals, and particularly not to cut the hair, which defends these parts from the injurious access of the air.

Two women, in a very convalescent state, whose hair had been cut on their recovery from a putrid malignant fever, died soon after this imprudent action. A third owed her preservation to her youth and the energy of her constitution.

Cit. Lanoix has added to these facts some reflections, by which he endeavours to prove, that when the cutting of the hair is attended with fatal consequences, they must be ascribed to this circumstance, that the crisis directed by nature towards the head, is impeded, and, as it were, arrested in its progress. Considering the hair as proper organs of secretion which are sympathetically connected with the brain, and that they do not possess the property of conducting caloric, he concludes that they must be important parts in promoting the crisis in diseases, and that consequently they ought to be preserved; because Nature should rather be assisted than disturbed in the measures she adopts, with respect to an organ so essential to the process of life.

On the Effect of the Extract of Belladonna, applied to the Eyes previous to their being operated for the Cataract.

DR. REIMARUS of Hamburgh, a corresponding member of the Philomathic Society, has observed, that on pouring into the eye a few drops of the extract of belladonna, dissolved in water, a temporary paralysis took place, during which the pupil was uncommonly dilated, insomuch that the iris became almost

moſt inviſible. In conſequence of this remarkable phenomenon, he has propoſed this remedy with a view to prepare the eye for the operation of the cataract.

Dr. GRASSMEYER, a ſucceſsful oculiſt at Hamburgh, has actually employed this expedient in his practice, with uncommon advantage. The above-mentioned effect on the eye is produced within half an hour after the application of the remedy, ſo that by the extreme dilatation of the pupil, the practitioner was enabled to commence the operation at the cornea, and proceed to the capſule of the cryſtalline lens, without fear of hurting the iris. In ſhort, the paralyſis effected on the retina, prevents the dreadful conſequences which a ſudden admiſſion of light might probably occaſion. *Ibid.* No. 3, 5th year.)

Extract from a Memoir by Cit. Sabatier, Profeſſor at the School of Medicine in Paris, relative to the Amputation of the Arm at the Articulation.

IN latter times many improvements have been made reſpecting the method, as well as the means, employed in the amputation of the joint. Ingenious inſtruments have been invented by the moſt celebrated practitioners, for ſtopping the violent flux of blood in amputation, and preventing hæmorrhages, which generally prove fatal. This operation is even at preſent allowed to be ſo dangerous, that it ought never to be performed except in the moſt deſperate caſes. Some diſeaſed affections of the os humeri, and certain fractures cauſed by gun-ſhot wounds, oblige us, however, frequently to have recourſe to the inſtrument. In the preſent memoir, Cit. Sabatier propoſes to ſubſtitute another operation, which, by preſerving the limb, and reſtoring its power of motion, does not expoſe the life of the patient to ſo much danger. He then endeavours to prove, in four obſervations, that this operation is practicable, and that it is often partly accompliſhed by Nature alone. The firſt of theſe obſervations is inſerted in the 2d volume of the *Academie de Chirurgie*, by BOUCHER, who has extracted ſeveral pieces of bone from the articulation of the ſcapula and humerus. The ſecond obſervation, by Cit. THOMAS, ſurgeon at Pézénas, is the following: A little girl, four years of age, after recovering from the confluent ſmall-pox, was afflicted with an abſceſs, which opened ſpontaneouſly, and ejected a portion of the os humeri, of the length of 0,04, without the perioſteum, and deprived of the epiphyſis that formed its articulary head. It ſeparated after thirty days, without the aid of art. Cit. Thomas then began to extract the portion belonging to the articulation, and the wound

wound was healed in the courſe of a month. The arm was not ſenſibly diminiſhed in length; and this patient, when fifteen years of age, had ſo far recovered the uſe of it, that ſhe was enabled to continue her uſual occupations as a ſervant. Some time after ſhe had the misfortune to be drowned, and a variety of circumſtances intervened, which prevented Cit. Thomas from learning what change the bone had undergone.

A third obſervation, very ſimilar to that above related, was communicated to the London Medical Society, and afterwards publiſhed in a ſeparate work, under the title of "Chirurgical Obſervations," by Mr. White of Mancheſter. But in this caſe the effect of Nature was not waited for. The humerus was amputated a ſecond time. Four months after, the patient was diſcharged from the hoſpital, cured; his arm was not diminiſhed above 0,03; its form was unaltered, and he uſed it with as much ſtrength and agility as that which had not been injured.

The fourth obſervation is by Cit. VIGAROUX, ſurgeon at Montpellier. It is recorded in a memoir preſented to the Academy of Chirurgery, in the year 1774. The operation which this ſurgeon performed is of the ſame nature as that of Mr. White; but it was performed too late, and the patient died in conſequence of a metaſtaſis.

In theſe different obſervations, where the head of the humerus was detached from the corpus oſſis in conſequence of diſeaſe, and where there was luxation, the amputation was eaſily performed; but in a caſe of caries or exoſtoſis, which may require an amputation of the arm at the joint, this operation becomes more difficult, and requires other modes of proceeding. The following is the reſult of Cit. Sabatier's method of operating, after a great number of trials on dead bodies.

The patient being ſeated on a chair, two inciſions are made on the anterior and ſuperior part of the arm, each 0,10 long, at the diſtance of 0,05 longitudinally, and united below in the ſhape of a V. The integuments, and that part of the deltoides muſcle, which ſhould be comprehended in the inciſion, being removed, the elbow muſt be drawn behind, after which all the tendons of the muſcles ſhould be cautiouſly cut at the circumference of the capſule, together with three-fourths of the anterior parts of that membrane. The head of the bone ſhould then be expelled through the wound, by cutting the attachments of the pectoralis major, the rotundus major, and the dorſalis magnus. The amputation of the bone muſt be compleated, by paſſing behind a thin paſteboard, yet ſufficiently ſtrong to guard the muſcles from the

action of the ſaw. An able aſſiſtant ſhould place his finger upon the ſmall arteries, to prevent too great a loſs of blood. For the ſake of precaution, another aſſiſtant ſhould compreſs the humeral artery, by means of the inſtrument invented by Camper, viz. by ſupporting a thick compreſs between the coracoid proceſs, the humeral extremity of the clavicle and pectoralis minor, or by another apparatus, ſuch as that propoſed in one of the French Journals of Medicine for the year 1765. The patient having been dreſſed after the operation, muſt be put to bed.

Cit. Sabatier concludes this memoir, by relating a cure, performed in conſequence of a treatment analogous to what he propoſes, and which he has ſince obſerved in the 64th volume of the Philoſophical Tranſactions, by JACOB BENCK, ſurgeon at Newcaſtle.*

"We may here be permitted," add the Editors of the Bulletin, "to take notice of the reſults of experiments on the ſame ſubject performed upon dogs, at the School of Medicine, by Cit. Chauſſier, and which he has announced in his public lectures. The whole head of the femur was removed by the ſaw. The regenerated part of the bone recovered its rotatory motion, over the hip bones, although the limb remained a little ſhorter. This operation was not accompanied with any diſtreſſing ſymptoms. *Ibid.* No. XXXIV. *Nivoſe*, 8th year.

On the Chemical Analyſis of Vegetables. By Dr. HERMBSTÆDT, *of Berlin.*†

[Continued from our firſt Volume, p. 506.]

On the Separation of Mucilage from Vegetable Bodies.

Pure mucilaginous matter is found in very few vegetables, in a ſeparate ſtate, as it is uſually intermingled with gum. In order to ſeparate both ingredients carefully from each other, the plant ſubmitted to analyſis muſt be treated preciſely according to the method already pointed out on a former occaſion;‡ the dry maſs thus obtained,§ ſhould previouſly be weighed with great

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* We have not been able to find this Caſe in the volume here mentioned. EDIT.

† We have at length received the continuation of theſe valuable papers, which we are happy to lay before our readers, without farther delay, as we are in poſſeſſion of the whole. EDIT.

‡ Vide the proceſs for ſeparating gum, as ſtated in our Journal, Vol. I. pp. 504, and fol.

§ Ibid. p. 505,—8.

great accuracy, and then diſſolved in the ſmalleſt poſſible quantity of pure water. Into this ſolution, vitriolic acid diluted with an equal quantity of diſtilled water ſhould be dropped by ſmall portions: by theſe means the mucilage will ſoon be reduced to a coagulated ſtate, while the matter of gum will remain unchanged. When no farther coagulation takes place, the whole maſs is ſuffered to ſtand at reſt, that the ſeparated mucilage may depoſit itſelf on the bottom of the veſſel, where it acquires a gelatinous conſiſtence. The ſupernatant clear fluid ſhould then be carefully decanted, but the mucilaginous reſiduum muſt be evaporated to dryneſs by a gentle heat, till it becomes of a conſiſtence ſimilar to horn.—To determine the relative proportion of mucilaginous matter exiſting in a certain vegetable, there is nothing farther required than to deduct the loſs which the whole maſs has ſuſtained, by balancing it againſt the actual weight of this horny reſiduum.

On the Separation of Albumen from Vegetables.

As the albumen of dried vegetables acquires ſuch a degree of hardneſs, that it can neither be diſſolved nor ſoftened by water, it is an almoſt indiſpenſable requiſite to chooſe the vegetables in a freſh and ſucculent ſtate, in order to effect its ſeparation. The various ſpecies of grain however, and fruits of the pulſe kind, make an exception to this rule; becauſe in theſe, the albumen is protected againſt complete exſiccation, by its intermixture with other conſtituent parts: in theſe alſo the ſeparation of the albumen muſt be accompliſhed by a very different proceſs.

We ſhall firſt point out the method of analyzing freſh and ſucculent vegetables, with which the operator proceeds in the following manner:

1. A determinate quantity of freſh plants is accurately weighed, then bruiſed in a ſtone mortar, and the ſap properly expreſſed. The woody reſiduum is macerated in cold water, the whole maſs well ſtirred, and the fluid part again expreſſed and mixed with the former. The whole liquor is then expoſed to reſt for ſeveral hours, that the fibres in the other foreign particles may fall to the bottom; a clear fluid is then decanted, which contains the albumen mixed with other ingredients.

2. The whole liquor is next poured into a tin kettle, or a glaſs retort, and expoſed to a heat of 70 degrees of De Luc, or 190 degrees of Fahrenheit. In this temperature, all the albumen coagulates, and appears on the ſurface of the fluid, like a connected plaſtic matter.

3. After the whole has been ſuffered to grow cold, the remaining liquor at length becomes perfectly clear. It is then

filtered through blotting paper previouſly weighed, and the albumen left on the paper is purified from the adhering foreign particles, by frequent affuſions of cold water; it is afterwards dried, and its weight determined by the ſcale.

By this method we may diſcover the proportion of albumen in a freſh plant; but in order to aſcertain this proportion likewiſe in a dry plant, it is only neceſſary to compare the relative weight of vegetables in a freſh and dried ſtate; thus, for inſtance, if eight ounces weight of a freſh plant ſhould produce 120 grains of albumen, and if eight ounces of a freſh plant ſhould be equal to two ounces in a dried ſtate, it follows that one pound of the dry plant will contain 960 grains of albumen.

On the Separation of the Albumen from the various Species of Grain and the leguminous Seeds.

To determine the quantity of albumen contained in various kinds of grain, and the leguminous ſeeds, the following proceſs ought to be adopted:

The ſubſtance under experiment is firſt reduced to the fineſt powder, a certain quantity of it is weighed, and mixed into a ſolid paſte with cold water; which paſte is then tied up in a cloſe piece of linen, and immerſed in cold water, where it is kneaded with the hand, till the repeated affuſions become no longer turbid, but remain perfectly clear.

By this ſimple proceſs the farinaceous ingredients, as well as the gummy and ſaccharine particles, combine with the water, while the albumen remains on the linen, and exhibits a light grey, tough, and elaſtic ſubſtance. In this ſtate it ſhould be perfectly dried, and its weight properly aſcertained.

On the Separation of the Caoutchouc, commonly called Gum Elaſtic.

This elaſtic matter is a conſtituent part of various vegetable productions, though it is of all gum-reſinous ingredients the moſt difficult of ſeparation. If it be intermingled with ſome of the reſinous ſubſtances, ſuch as the gum maſtich, it may thence be obtained tolerably pure, by a previous digeſtion and ſeparation of the reſinous part with the aid of rectified ſpirit of wine. It may be ſeparated with equal facility from the different ſpecies of miſſeltoe,* by waſhing it in water, with which

* M. THIELEBEIN, a German chemiſt, has firſt proved, in "CRELL's *Neueſten Entdeckungen der Chemie*," Part VII. p. 58, that the glutinous part of the miſſeltoe is perfectly analogous to the elaſtic gum; a fact which he has confirmed by experiments.—Is it not probable that this ſubſtance, in general, conſiſts of a combination of vegetable mucilage with the aſtringent principle, or matter?—The reader is requeſted to compare this problem with the ſubſequent obſervations relative to the ſeparation of the aſtringent matter—in our next.

which it readily combines. But the process of extracting the caoutchouc is attended with much greater difficulties in those vegetables where it is mixed with gummy and saponaceous ingredients; yet here likewise the operator will succeed in the attempt, if he proceeds in the following manner:

1. A certain quantity of a plant ascertained by weight, is repeatedly digested in alkohol and water, till the fibrous and woody residuum imparts neither taste nor colour to the mixture: these solvents deprive the vegetables, under experiment, of every other ingredient, except the caoutchouc, which remains undissolved.

2. The residuum, after being dried, ought to be strongly digested with four or six parts of rectified petroleum, which dissolves the elastic gum, and leaves the fibrous part of the vegetable at the bottom of the vessel.

3. The liquor obtained by expressing the whole through linen cloth, should be left to settle for several days, after which the clear fluid is poured off, and mixed with a third part of water; this mixture ought to be distilled over in a retort, where the caoutchouc matter remains in the residuum, forming a tough, elastic mass—the weight of which may be determined after it has been completely dried.

On the Separation of Wax from Vegetables.

If we are induced to believe, either from external appearances, or more correctly from a previous examination, instituted according to the directions formerly given,* that a vegetable body contains matter of wax, we may adopt for its separation the following most convenient method:

1. The substances under experiment must be previously freed from all other ingredients which are soluble in water and alkohol; the residuum is then mixed, either with six times its weight of caustic ammonia, or strongly digested in a weak lixivium of caustic-natron. These fluids combine with the matter of wax, and render it soluble in its present watery medium.

2. The liquor thus obtained is carefully cleared from the residuum, then filtered, and afterwards a diluted sulphuric acid is dropped into it, while it is incessantly stirred till the acid predominates in the mixture. The matter of wax, which by this treatment is separated in the form of a pale yellow powder, should be completely edulcorated in water, and melted over a gentle fire: it will now appear in its pure form, so that its weight may be determined accordingly.

[To be continued in our next Number.]

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* See the first Volume of this Journal, p. 298. H.

Miscellaneous Intelligence.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

I SHALL esteem it a favor, if you will insert the following article in your valuable Work; and am,

Southwell, Nott.
Mar. 8, 1800.

Your obedient humble servant,
BENJ. HUTCHINSON.

Dr. Soemmering, of Frankfort on the Mayne, having read the Life of Mr. Charles Darwin in my *Biographia Medica*, (in which a passage is quoted from an ingenious Thesis on Hectic Fever, by Dr. Cappe, of York) thinks himself ill used in being accused of publishing a falsity, by saying in a Treatise of his on Diabetes, that Mr. Charles Darwin, had not, in fact, made the experiments on Pus and Mucus, for which the first prize medal was alloted to him at Edinburgh, but that he wrote those experiments from imagination;—Dr. Soemmering, in a letter which I lately received from him, asserts that he was so informed by Mr. Fyse, and hopes the passage alluded to in my Biographica Medica, may be contradicted in some respectable publication, or otherwite omitted in a future edition of that work.

I have therefore troubled you with this account, but beg to add, that Dr. Cappe of York, and Dr. Ryan of Dublin, repeated Mr. Charles Darwin's experiments, and found similar results with those described by him; and also, that Dr. Soemmering must still continue the propagator, though not the inventor, of the assertion in his treatise on Diabetes. This circumstance cannot reflect any credit on the very ingenious German physiologist, as the contrary facts ought to be established by repeated experiments, not by hearsay evidence.

Messrs. TENNANT and PEARSON having announced that they had succeeded in obtaining carbon by decomposing the carbonat of lime by means of phosphorus, the Society, in consequence of this assertion, requested Citizens VAUQUELIN and BRONGNIART, in conjunction with their Secretary, to repeat this experiment. Cit. BRONGNIART shortly after read a Memoir on the theory of the different affinities of oxygen with carbon, phosphorus, and with the phosphoric and carbonic acids combined

combined with alkalies; in which he proved, that the fact announced by the Engliſh phyſicians was founded on experience. The members of the Society, charged with this commiſſion, conſequently preſented a conſiderable quantity of carbon obtained from the decompoſiton of the carbonats of lime and ſoda, by means of phoſphorus.—*Rapport General des Travaux de la Société Philomatique de Paris*, An. vi. p. 51.

Cit. BRONGNIART read a Memoir to the Society, on the characters to be adopted in deſcribing mineral ſubſtances. He applied ſimple characters to each of the great diviſions of this kingdom, and marked the ſpecies and varieties by particular additions to theſe ſigns; ſo that they preſent a ſyſtematic diviſion very analogous to that adopted for mineralogical ſcience, and the fertility of which, in all their poſſible variations, ſurpaſſes that of all natural ſubſtances known in the mineral kingdom.—*Ibid.* p. 82.

The ſame member read ſome paſſages from his Journey to the Alps, in which he had inſerted ſome obſervations on the natural hiſtory and œconomy of thoſe countries, and on the manners of their inhabitants. He reſted his deſcription of the ſpecimens which contributed to confirm his opinion on the origin of ſeveral rocks which compoſe this chain of mountains, particularly on that of a porphyroidal pudding *(pouding porphiroide)*, which he conſiders as primitive, that is, of a formation coeval to that of the cryſtallization of the mountains called primitive. Theſe pudding ſtones are contained in perpendicular banks, alternating with thoſe of a micacious ſchiſtus, without being intermixed with other rocks. He obſerved, that in their compoſition the angles of the ſchiſtus are ſcarcely obtuſe, while thoſe of the quartz, which is comparatively very hard, almoſt uniformly appear as if they were rolled.—*Ibid.* p. 83.

Cit. HALLE made a report to the Society, on a caſe of ſimple idiopathic atrophy. The ſubject of this obſervation was a young female, who died at the age of 25, in conſequence of a conſiderable waſting, without any apparent cauſe. She had been cachectic from the fifth or ſixth year of her age; at ſeven ſhe had a ſlight menſtruation, but which did not continue long; at fourteen the catemenia commenced, and from her ſeventeenth to her twenty-firſt year they gradually diminiſhed, at which period they entirely ſtopped, and ſhe became progreſſively leaner till the time of her deceaſe; though ſhe was enabled to follow her uſual employments, without obſerving any difference in her evacuations. Her complaint terminated without any other

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ſymptoms than laſſitude, weakneſs, and an inclination to ſleep. On opening the body, the ſkin appeared to adhere to the bones. The abdomen was depreſſed, and almoſt touched the vertebrae; and no appearance of fat could be obſerved either in the epiploon or the meſentery. On raiſing the ſkin of the groin, he perceived ſeveral white and dry threads, reſembling nerves, with tumefactions not unlike the nervous ganglions. It was evident that theſe were the lymphatic veſſels which had changed to that ſtate. The cavity of theſe veſſels appeared completely obliterated, as the uſual traces of them were no where perceptible, nor could thoſe of the lacteals be diſcovered. No cauſe could be aſſigned for this ſingular diſeaſe, unleſs it were attributed to long continued and oppreſſive mental affections, which were carefully concealed.—*Ibid.* p. 128.

Cit. CUVIER read a Memoir on the circulation of the blood in ſuch animals as have this fluid of a white colour. After having taken a view of the different combinations eſtabliſhed by Nature, with reſpect to the organs of circulation in the various claſſes of animals, he obſerves, that thoſe which have white blood are provided but with one order of veſſels, conveying only a ſimple lymph. He founds his argument particularly on the immediate communication of thoſe veſſels with all the cavities of the body, and obſerves, that as the inteſtinal canal paſſes through the heart of ſeveral of them, the chyle which tranſudes immediately into that organ, is ſufficient for the ſupply of the body.—*Ibid.* p. 137.

The ſame member read a Memoir on the manner in which nutrition apparently takes place in inſects. From the opinions of ſeveral authors, as well as from his own obſervations, he has aſcertained that the dorſal veſſel of inſects is not a heart, and that it poſſeſſes no branch which can ſerve for the purpoſe of circulation. The author aſſerts, that inſects are provided with no other veſſels than the trachea, that the nutritive juice paſſes only through the inteſtinal canal, and that all the parts derive their aliment from ſimple ſuction. He alſo obſerves, that the ſecretory organs of inſects do not form ſolid glands, ſuch as are found in all animals that are provided with a heart, but that they conſiſt of iſolated and ſpongy tubes; and, finally, that the whole organization of this claſs of animals is diſpoſed, as if they had neither heart nor blood veſſels.—*Ibid.* p. 138.

Prof. HERMBSTAEDT, of Berlin, has lately made the important diſcovery of ſeparating the mineral alkali, or ſoda, from common ſalt, by a very cheap and expeditious proceſs. The

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King of Prussia, not insensible of the great advantages to be derived from this new method of obtaining so valuable and useful an article of commerce, has consequently established a chemical manufactory at Schoenbeck, where that commodity is produced in the great way, at the expence of the Crown.

Dr. BOUVION, a physician of some eminence in Strasburg, has written to Paris to obtain all the medical assistance that science can afford, with a view to stop the further progress of an epidemical disorder which has broken out in that city very lately, and which he confesses to have been treated hitherto, by the faculty of the place, without success. The ravages of it are described to be great, and afflicting to humanity. It manifests itself by an angina of a malignant nature, complicated with a scarlet fever; it particularly attacks young persons between the age of eighteen and twenty-four. The tables of the meteorologists of Strasburg have been consulted by the medical gentleman, without deriving any satisfaction as to the cause of this deplorable occurrence. The period when the disorder is fatal, is not so regular as in many endemical and epidemical diseases.

The Elector of Saxony has issued orders for erecting a Chemical Laboratory, and an Institution for the instruction of students in midwifery, in the Universities of Leipzig and Wittenberg.

The Botanical Society of Nuremberg has been revived by the exertions of Count Sternberg, after having ceased for several years to hold its meeting.

Mr. JOHN BELL's Treatise on Wounds has been translated into the German, with remarks and additions, by Dr. J. G. F. Leune, Leipzig, Bohemia.

Domestic Intelligence.

Dr. BATTY will begin his usual Course of Lectures on the Theory and Practice of Midwifery, and on the Diseases of Women and Children, on Monday, April 7th, at half past ten o'clock in the morning, at his house, No. 6, Great Marlborough Street.

Dr. WILLICH has in the press, the third Edition of his "Lectures on Diet and Regimen."

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Principles of Modern Chemiſtry, ſyſtematically arranged by Dr. FREDERIC CHARLES GREN, *late Profeſſor at Halle in Saxony. Tranſlated from the German; with Notes and Annotations concerning later Diſcoveries, by the Tranſlator, and ſome neceſſary Tables. Illuſtrated by plates.* 8vo. Vol. I. pp. 448. and ſix plates. Vol. II. pp. 487. a double plate of the modern chemical characters, a variety of uſeful Tables, and a copious Index. Price 18s. 1800. *London.* Cadell and Davies.

At length, we have the ſatisfaction to announce the appearance of this ineſtimable work, in an Engliſh dreſs. * The celebrated author, whoſe memory will ever be dear to the friends of chemical ſcience, has beſtowed a conſiderable portion of his active and uſeful life on the improvement and completion of this elementary Treatiſe, which, independent of his other works in various branches of learning, aſſigns to him an honourable place among modern writers.

We fully agree with the tranſlator, that the preſent volumes compriſe an elaborate and ſatisfactory abſtract of the author's "*Syſtem of Chemiſtry*," which appeared in 1794 at Halle, in four large volumes—the moſt complete and ſyſtematical work ever publiſhed on this ſcience.

Without entering into an inveſtigation of the theory which the learned author has adopted in Natural Philoſophy, we ſhall in this place only obſerve, "that, in the Syſtem of Chemiſtry above mentioned, he did not ſo much adhere to the old *phlogiſtic ſyſtem*, as was objected by ſome, but rather that he has framed a ſyſtem of his own, which he called *ecclectic*, though he there explains every phenomenon, not only according to his own doctrine, but alſo *hiſtorically*, according to that of both the *phlogiſtian* and *antiphlogiſtian* philoſophers.—To that ecclectic ſyſtem the author adhered till his death; but the reader is requeſted to obſerve, that in the preſent work Dr. Gren has merely ſtated the grounds of his favourite chemical creed, and continued throughout the reſt to explain all the phenomena treated of according to the *modern antiphlogiſtic ſyſtem*, in the ſtricteſt ſenſe."

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* Vide our Journal, Vol. I. pp. 206 and 514.

We have extracted this declaration from the translator's instructive preface, in which he also gives an account of his labours, to render this work as extensively useful as the present state of science will admit. With this laudable intention he has, 1. Studiously retained the references in the paragraphs, or rather increased their number, in order to assist the recollection of the reader. 2. He has added, in notes, all such discoveries and improvements made since the German publication of this work, as come within the compass of an elementary treatise. 3. The *new nomenclature* of the French chemists has, with a few judicious variations, been preferred, tho' at the beginning of the work the *ancient terminology* has purposely been employed; yet, after having explained every particular substance and its constituent parts, the new names are successively introduced, and then, for some time, both have been promiscuously used, so that, towards the latter part, the preference has almost uniformly been given to the new nomenclature. 4. The most necessary and useful chemical instruments are represented in six elegant engravings, by the masterly hand of Lowry, and a seventh plate is added to the second volume, exhibiting a sufficient number of specimens of the new chemical symbols, progressively from the primitive and simple to the compound. 5. The industrious editor and translator of this work has farther enhanced its value by an appendix rarely to be met with in similar attempts; as it contains *Tables of Affinities*, the new *Chemical Symbols*, the *specific and absolute Gravity of Bodies*, the comparison of *Fahrenheit's* with *Reaumur's* Thermometer, the former *French Weights and Measures*, as well as the present *Metre*, *Litres*, and *Grammes*, together with those of the English—to which he has added a small *Chemical Library*. The whole is concluded with a copious *Alphabetical Index*, to facilitate occasional reference, and chiefly intended to serve as a compendious Dictionary of both the old and new Nomenclature.

We refrain from saying more, with respect to this important elementary work, whose author is sufficiently known to our readers, than that the ingenuity of the editor, and the liberality of the publishers, are equally conspicuous.

Elements of Chemistry; comprehending all the most important facts and principles in the works of Fourcroy and Chaptal; with the addition of the more recent chemical discoveries which have been made known in Britain and on the Continent; and with a variety of facts and views, which have never before been communicated to the world. Intended for the use, not only of those who study Chemistry with those professional purposes to which this study is commonly preferred, but also for farmers, manufacturers, dyers, and the other artisans of the Chemical Arts in general, &c. By Robert Heron. octave. About 700 pages. Price 12s. 1800. London, Longman and Rees.

The Author's aim, in the composition of the present work, appears pretty evident from this circumstantial title, as well as the preface: He affirms that the *phlogistic theory* is still lurking, not

only in the very best works of the French chemists, such as those of FOURCROY and CHAPTAL, but "that it triumphs in the chemical writings of most of those *great men*, the STOLIDISSIMI (we apprehend the STAHLIANS) of Germany," He farther censures the *unscientific confusion of arrangement* prevailing in all former systems of Chemistry, except only the "Philosophy of Chemistry," by Fourcroy; while he endeavours to account for this confusion, and to present the world with an arrangement more *scientific* and *logical*, of which the following is an outline:

"The *simple* substances," says Mr. Heron, "at least those which have not been hitherto decomposed, are considered so many distinct CLASSES: *Compounds*, in which two or three of these simple substances exist in union, are regarded as ORDERS: the *compounds* of those compounds constitute GENERA. Subordinate to these are the SPECIES; which are, of course, made up of VARIETIES; and these, of INDIVIDUALS."—"In the whole, he cannot but hope, that the arrangement he has followed will be found to be not only the *most scientific*, but *by much* the best adapted to *open up* the science of Chemistry to the easy intelligence of the Reader's mind."

We shall not, in this place, attempt to investigate and *duly* appreciate Mr. Heron's claims to originality; for, besides his new arrangement, he has also advanced *a new theory of the earth*; and while he charges Dr. Beddoes and others with a considerable portion of *empiricism* (p. xxii. of the Preface) he informs the reader, that in his book he has endeavoured to DEMONSTRATE, that *in all the functions of the animal powers*, whether in health or sickness, there intervenes between the agency of *mechanism*, and *mechanical causes*—and that of *vitality*—a CHEMICAL AGENCY, the thorough knowledge of which can alone enable us to establish the foundations of true medical science. This doctrine is ENTIRELY NEW in medicine. If true, it is of infinite importance. Of all the applications of chemistry, it must prove the most beautiful and the most interesting. It cannot but confer new dignity on chemical science; since it exhibits it in this new relation to the principal utilities of human life. That the *general truth is fully demonstrated*, the author entertains the strongest confidence: That he may have erred in some of those particular details into which he has attempted to follow it—"is *exceedingly* probable. He cannot but hope, that by the truly candid and philosophical physician, he will be owned to have *opened up* a new path for medical investigation, which, in preference to almost all others, deserves to be instantly and diligently explored," pp. 22 and 23 Preface.

Far from wishing to discourage new adventurers on so arduous and obscure a path of inquiry as that ventured upon by the author of these "Elements;" we would always recommend to writers a certain degree of modesty, and deference to the opinions of others, even on those occasions where our predecessors have obviously erred. No medical reader, we apprehend, will be regulated by the fanciful conjectures of those whose study is to censure, and not to correct or improve; to demolish the old fabric, without erecting a

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new one; because they are little concerned about the stability and solidity of the superstructure, provided they succeed in broaching new theories, or new fancies:—whether such suggestions be of practical utility, or calculated to explain a single fact in Nature, does not appear to be *their* principal object.

To justify these well-meant remarks, we beg leave to refer the reader to the work before us, viz. pp. ii, iii, vii, ix, x, xii, &c. of the Preface. In tracing, however, the merits and originality of Lavoisier, Mr. H. appears to have made a very important discovery. He informs us, "that he has found, even in Spratt's History of the Royal Society, an account of a *Theory of Combustion*, not merely akin to that of *Lavoisier*, but precisely, identically, indubitably the same; a theory supported by the indication of a train of experiments, not less ample than that of the French chemists. It is *not possible* that this Theory, and the experiments indicated for its support, should have been unknown to the French Academicians. It is astonishing that its existence, and its coincidence with that of Lavoisier, should not have been sooner popularly pointed out."—We are not prepared to examine this extraordinary coincidence; but we trust that our correspondents, who have taken considerable pains to ascertain the claims of Mayo and other chemists, will not fail to inquire into the merits of this curious subject, and favour us with the result of their researches.

In the *fourth Appendix* to this work, of which there are no less than *five*, Mr. Heron endeavours to prove, that "*lime is oxygen in a concrete state*," while he informs us, that, "*A Dr.* MITCHILL, of New York, amidst some *very inaccurate* chemical notions, has, *with great justice*, represented the use of lime-stone in paving the streets, in building, &c. as tending to prevent the infection of the yellow fever, and of whatever other diseases originate in a deficiency of gas-oxygen. But it is impossible that *lime* should, by any of its other known qualities, accomplish such an effect,—unless by an insensible conversion of it into *gas-oxygen*."

A Continuation of Facts and Observations, relative to the Variolæ Vaccinæ, or Cow-Pox. By EDWARD JENNER, M. D. F. R. S. F. L. S. &c. 4to. London, pp. 42. Law, &c.

WE cannot introduce these Facts and Observations better than in the words of the Author.

"Since my former publications on the Vaccine Inoculation, I have had the satisfaction of seeing it extend very widely. Not only in this country is the subject pursued with ardour, but from my correspondence with many respectable medical gentlemen on the Continent, (among whom are, *Dr. De Carro*, of Vienna, and *Dr. Ballhorn*, of Hanover,) I find it is as warmly adopted abroad, where it has afforded the greatest satisfaction. I have the pleasure, too, of seeing that the feeble efforts of a few individuals to depreciate the new practice, are sinking fast into contempt beneath the immense mass of evidence which has risen up in support of it.

"Upwards of six thousand persons have now been inoculated with the

the virus of Cow-pox, and the far greater part of them have since been inoculated with that of Small-pox, and exposed to its infection in every rational way that could be devised, without effect.

"It was very improbable that the investigation of a disease so analogous to the Small-pox, should go forward without engaging the attention of the Physician of the Small-pox Hospital in London.

"Accordingly, Dr. Woodville, who fills that department with so much respectability, took an early opportunity of instituting an Inquiry into the nature of the Cow-pox. This Inquiry was begun in the early part of the present year; and in May, Dr. Woodville published the result, which differs essentially from mine in a point of much importance. It appears, that three-fifths of the patients inoculated were affected with eruptions, for the most part so perfectly resembling the Small-pox, as not to be distinguished from them. On this subject, it is necessary that I should make some comments.

"When I consider that out of the great number of cases of casual inoculation immediately from cows, which have from time to time presented themselves to my observation, and the many similar instances which have been communicated to me by medical gentlemen in this neighbourhood; when I consider too, that the matter with which my inoculations were conducted in the years 1797, 98, and 99, was taken from different cows, and that in no instance any thing like a variolous pustule appeared, I cannot feel disposed to imagine that eruptions, similar to those described by Dr. Woodville, have ever been produced by the *pure, uncontaminated Cow Pock virus*: on the contrary, I do suppose that those which the Doctor speaks of, originated in the action of variolous matter, which crept into the constitution with the vaccine. And this I presume happened from the inoculation of a great number of the patients with variolous matter (some on the third, others on the fifth day) after the vaccine had been applied; and it should be observed, that the matter thus propagated became the source of future inoculations in the hands of many medical gentlemen who appeared to have been previously unacquainted with the nature of the Cow-pox.

"Another circumstance strongly, in my opinion, supporting this supposition, is the following: The Cow-pox has been known among our dairies, time immemorial. If pustules then, like the variolous, were to follow the communication of it from the cow to the milker, would not such a fact have been known, and recorded at our farms? Yet, neither our farmers, nor the medical people of the neighbourhood, have noticed such an occurrence."

The Author next adduces a number of circumstances and communications from various practitioners, tending to confirm the preceding opinions. He concludes thus:

"This Inquiry is not now so much in its infancy, as to restrain me from speaking more positively than formerly on the important point of Scrophula, as connected with the Small-pox.

"Every practitioner in medicine, who has extensively inoculated with the Small-pox, or has attended many of those who have had

had the distemper in the natural way, must acknowledge that he has frequently seen scrophulous affections, in some form or another, sometimes rather quickly shewing themselves after the recovery of the patients. Conceiving this fact to be admitted, as I presume it must be by all who have carefully attended to the subject, may I not ask, whether it does not appear probable that the general introduction of the Small-pox into Europe has not been among the most conducive means in exciting that formidable foe to health? Having attentively watched the effects of the Cow-pox in this respect, I am happy in being able to declare, that the disease does not appear to have the least tendency to produce this destructive malady.

"The scepticism that appeared even among the most enlightened of medical men, when my sentiments on the important subject of the Cow-pox, were first promulgated, was highly laudable. To have admitted the truth of a doctrine, at once so novel and so unlike any thing that ever had appeared in the annals of medicine, without the test of the most rigid scrutiny, would have bordered upon temerity; but now, when that scrutiny has taken place, not only among ourselves but in the first professional circles in Europe, and when it has been uniformly found in such abundant instances, that the human frame, when once it has felt the influence of the genuine Cow-pox in the way that has been described, is never afterwards at any period of its existence assailable by the Small-pox, may I not with perfect confidence congratulate my country and society at large on their beholding, in the mild form of the Cow-pox, an antidote that is capable of extirpating from the earth a disease which is every hour devouring its victims; a disease that has ever been considered as the severest scourge of the human race."

Observations on the History and Cause of Asthma; and a Review of a "Practical Enquiry on disordered Respiration, in a Letter to Dr. Bree, the author of that work. By G. Lipscomb, surgeon at Birmingham, &c. &c. 8vo. pp. 108, price 3s. London, Johnson.

This work will doubtless be read by many practitioners, and by many who, perhaps, will be no less pleased with the manner than with the matter of it. With respect to our own simple taste, we have no hesitation in confessing that we should have preferred the flavour of the dish, if there had been less pepper and vinegar in the sauce.

The Chemical Pocket-book, or Memoranda Chemica; arranged in a compendium of chemistry, according to the latest discoveries, with Bergman's Table of single elective attractions, as improved by Dr. G. Pearson, &c. By James Parkinson, 12mo. pp. 230, London, Symonds, &c.

The increasing importance of Chemistry in numerous branches of science, must render a well arranged compendium of its principles, a valuable and acceptable present to the public. The well known skill, accuracy, and industry of the author of this compendium

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are sufficient, independent of our own approbation on perusal, to justify our recommendation of it to all students in chemistry. It is, literally, *multum in parvo*. We notice an obvious inaccuracy, not mentioned in the author's list of errata, which occurs at page 34, line 3, "triangular octoedrons of a prismatic figure," &c. *read*, irregular octoedrons, &c.

An Essay on the Nature and Connection of Heat, Electricity, and Light. By A. ANSTRUTHER, Esq. of Madras, Barrister at Law. 8vo. pp. 61. London, Murray and Highley, &c.

THE questions, respecting the source and origin of caloric; the quantity of caloric contained in the direct solar rays; the sudden change of temperature which takes place during hail storms; and the destination and reproduction of that heat which is evolved during the condensation of vapour into rain or hail, are involved in much obscurity. It is the object of this ingenious Essay to answer these questions; and though we are not convinced that the author has entirely succeeded in his attempts, we think him intitled to the apology, "Magnis tamen excidet ausis."

A Short Introduction to the Knowledge of Gaseous Bodies. By Dr. A. N. SCHERER, &c. translated from the German; 8vo. pp. 110. London, Treppas, &c.

THIS may be considered as a compendious Text-book of the learned Professor's Course of Lectures, on the first Principles of Chemistry, read to a popular audience; similar to the courses delivered at the Royal Institution in Albemarle Street. We are well assured that the lovers of Chemistry will not fail to peruse this short pamphlet, independent of our recommendation.

Elements of Botany, illustrated by Engravings. By JOHN HULL, M. D. &c. in Two Vol. 8vo. pp. 700. Manchester, Dean. London, Bickerstaff, &c.

THE first volume contains an elaborate introduction to the Linnæn system, with a very extensive explanation of Botanical terms, illustrated by plates, natural orders, indices, and an alphabetical dictionary, which includes the systems of other Botanists.

The second vol. contains an enumeration of all the genera of British plants, and an explanation of several designs for a natural order, with the necessary indices. We consider this second volume as the best pocket companion for the Tyro, in Botanical excursions, that has fallen under our notice.

Ideen zu einer Philosophie der Natur. Ideas, or Outlines towards a Philosophy of Nature. By F. W. J. SCHELLING, 8vo. Two volumes. *Leipzig*, Breitkopf and Härtel.

IN this profound work we discover a spirit of inquiry, which pursues its aim with peculiar energy, and in its progress affords many

many luminous views of the surrounding, though remote objects; but which may, with more justice, be called original, than fundamental.

In the Introduction, the author proposes the different problems which ought to be solved by a Philosophy of Nature. The existence of Nature, that is, of the whole experimental world, should be derived from principles, and thus would be established a scientific system of physics. But we are accustomed to conceive a determined series of phenomena, as a necessary consequence of causes and effects; and all our experimental Sciences, Natural Philosophy, and even History itself, are founded upon these conceptions. A series, or succession of ideas, however, is a something, the possibility of which exists only in the representing capacity of the mind; our choice, therefore, is limited to the following alternative: *Either*, we maintain that things exist externally to us, independent of our representations; and in such case we explain the necessity with which we represent to ourselves a determined series of things as a mere illusion, by denying that the succession takes place in the things themselves; *or*, we admit, that the phenomena themselves, together with the idea of succession, originate in our representations alone; and that so far only the order in which they follow each other is truly an object of sense. The former assertion leads to the most absurd system that ever existed, so that the second method alone can be admitted. Here, therefore, in the absolute identity of the mind within us, and in Nature without us, the great problem must be solved, how such a thing as Nature can possibly exist externally to us. Nor is there any other practicable method of solving the question. For we do not require to know, how a Nature has originated which is external to the human mind; but our object is to discover only how we have acquired the idea of such a Nature; and this not merely respecting the manner in which we have spontaneously or arbitrarily conceived it, but the reasons why, and how it constitutes the original and necessary basis of every thing that has yet engaged our attention, when reflecting on the existence of that Nature.

We have, in the preceding paragraph, given our readers a specimen of the reasoning adopted in this metaphysical work: we presume, however, it will be more satisfactory to them, when we point out its general contents, together with some new opinions and illustrations peculiar to the author.

In the first volume, M. Schelling treats of the combustion of bodies, of light and heat, of air, electricity, and the magnet.

In the second volume, the author makes such reflections as relate more to the System of Nature in general than to particular phenomena. He endeavours to derive the principle of attraction and repulsion from a different and more profound source than Newton's innate powers of matter; for, in the opinion of the former, it is the condition of the possible existence of matter itself; or rather, that matter consists of nothing else than those powers, when conceived in opposition to each other.

The Philosophy of Chemistry, discussed in the Seventh Chapter, as an experimental science, the object of which is to inquire into the qualitative difference of matter, and the respective attraction and repulsion arising therefrom, lead the author to conclude, that all qualities of matter solely and exclusively depend upon the intensity of their original powers.

Alexander Monro's Abbildungen, &c. Alexander Munro's Description of the Bursæ Mucosæ of the Human Body, translated into German and Latin, with improvements and additions: By Dr. J. C. Rosenmuller, Director to the Anatomical Theatre at Leipzig; folio, with 15 plates; price 10 dollars. Leipzig. Breitkopf and Hartel. 1800.

This work is not a mere Translation of Dr. Monro's book, which was published at Edinburgh in the year 1788, but an edition improved throughout, and containing such a number of new discoveries and illustrations, as to give it a title amongst the original works of science. Not only the anatomy of all the Bursæ Mucosæ is here explained, but also the Physiology and Pathology. The doctrine of the Bursæ Mucosæ, upon which we were hitherto only in possession of some fragments (among which the original work of Monro is to be reckoned), we find here delivered in a systematical order, which connects it with the other doctrines of Anatomy, that have already been treated according to the same method.

Besides the plates of Monro, which have all been corrected according to comparisons with the real subject, so as to render them much more intelligible than those of the original, Dr. Rosenmuller has added engravings of the bursæ mucosæ of the head and trunk, which were not known to Monro, when he first published his work. Thus the whole system of these organs is completed, and presented to the reader in one connected view.

The text of Monro has no less undergone a thorough revision and new elaboration. All the Bursæ Mucosæ, which he has only cursorily mentioned in the explanations annexed to his plates, are here accurately examined and described. The descriptions of several Bursæ discovered by the author, which were hitherto unknown to anatomists, are added, and the accounts given by other authors of their own investigations into this subject are inserted in their proper places. The physiological disquisitions, into the nature of the secretion performed by these organs, and the well-arranged enumeration of the diseases to which they are subject, their causes, diagnosis, and indications of cure, with which Dr. R. has enriched his work, render it the most complete and instructive treatise extant upon the subject.

The first Section contains a complete catalogue of all the treatises that have hitherto appeared upon the Bursæ Mucosæ, arranged according to the order of their publication. The plates are correctly engraved after Dr. Rosenmuller's own drawings.

A Cursory

A curſory View of the Treatment of Ulcers, more eſpecially thoſe of the Scrophulous, Phagedenic, and Cancerous Deſcription, with an Appendix on Baynton's new Mode of treating old Ulcers of the Leg. By RICHARD NAYLER, Surgeon to the Glouceſter Infirmary. pp. 180. London, Kearſley.

THIS pamphlet is written with perſpicuity, and contains obſervations on reſt, and horizontal poſition,—on internal remedies,—on conſtitutional complaints accompanying ulcers of the leg,—on the ſymptoms of ulcers, and on topical remedies. When ſpeaking on fomentation, the author juſtly remarks, that "the degree of heat is a circumſtance not often attended to, but the practice too commonly followed, is that of applying it as *hot* as the patient can bear." This the author obſerves, muſt be frequently very injurious. "It is probable, that the irritable ulcer would be particularly liable to ſuffer by it, for the degree of heat, acting as a violent ſtimulant, muſt, of courſe, be diſadvantageous where every thing ſtimulating is contra-indicated."

As a dreſſing for large ulcers, the author recommends the uſe of tow in preference to lint, as being more *previous* to the matter diſcharged from it; but we truſt that his cenſure on the mode of dreſſing ulcers in the London Hoſpitals is much too general to be correct. "As the application of dreſſings, and of the bandage, as far as the *manner* of doing them is concerned, uſually falls under the management of gentlemen, ſcarcely yet initiated in chirurgical buſineſs, it is too common to ſee them haſtily, and of courſe, inadequately, performed; and it is particularly unfortunate, that the hurrying way in which ulcers are dreſſed in the London Hoſpitals affords the ſtudent ſo few opportunities of convincing himſelf, how eſſential to the cure of an ulcer is a *deliberate, neat, and ſyſtematic* way *of applying the neceſſary remedies.*"

The author proceeds with obſervations on ulcers, in the production of which the conſtitution participates,—the ſcorbutic, the venereal, the ſcrophulous, the phagedenic, and the cancerous ulcers. On the laſt ſpecies, when it attacks the uterus, the author hazards a conjecture, which, whether true or not, deſerves our ſerious conſideration. "Is there not a probability that the practice of ignorant midwives, of dilating the mouth of the womb during labour, by which it may be fairly preſumed laceration ſometimes happens, is among the cauſes which occaſion cancer?"

In the Appendix, the author differs in opinion with Mr. Baynton, as to the modus operandi of his invention, and thinks "the application of the auxiliary remedy, cold water, of almoſt equal importance with the principal, and he heſitates to admit its claim to *uniformity of ſucceſs*, even in the *faireſt* caſes that can occur for the experiment," although he allows it to have had an *ample ſhare* of ſucceſs in various caſes under his care at the Infirmary.

Plain and uſeful Inſtructions for the Relief and Cure of Ruptures, &c. By J. EDDY, M. S. D. pp. 40. Symonds, London.

MR. Eddy is a truſs maker, and reſides at No. 43, Dean-ſtreet, Soho, where he profeſſes to cure Ruptures by his *Patent Perizoma!*

Botanique pour les Femmes, &c.—Botany for the Ladies and Amateurs of Plants; by R. J. G. Ch. Batsch, M. D. Professor at Jena; with 101 coloured figures; translated from the German into French, and augmented with Notes and other Additions, by J. E. B***, Associate of the National Institute in France. Paris and Strasburg, 7th year. 8vo. 198 pages.

The translator has not only given a faithful translation of this work, but has often found himself under the necessity of developing the author's ideas, of illustrating them by examples, and sometimes of embellishing them in a more gay or sentimental style, in order to prove that he never lost sight of the sex for whose amusement the work is chiefly adapted. M. Batsch wrote for Germans, who do not always require an embellishment of words, but wish a serious work to be treated with gravity. C. B. conceived, that in writing for French females, he ought to adorn the work with the charms of imagination, and even borrow, without affectation, the language of the passions.

Lettres du Docteur William Kentish, *Neveu de Smellie, au Cit.* Baudelocque, *&c.*—Letters from Dr. William Kentish, Nephew of Dr. Smellie, to Cit. Baudelocque, relative to some Passages in his Treatise on Midwifery. Paris, in the 8th year.

Those who profess a liberal impartiality in the study of midwifery, will, with great satisfaction, read the discussions entered into by the author, with a view to excite attention to some errors which, in his opinion, have escaped Cit. Baudelocque.

Non licet inter vos tantas componere lites.

We shall only observe, that if the criticisms contained in these letters are not the most accurate, they are couched in a free and delicate language.

Besides, many theoretical and practical points are here much better illustrated than in any other work of the kind. It is from this motive we recommend their perusal to all accoucheurs.

N. D. Riegels *Philosophiæ Animalium, Fasciculus primus, de Erinaceo, &c.*—Riegels' Philosophy of Animals. Fascicle 1, on the Hedge-hog, detailing its organs of digestion, chylification, secretions from its parts of generation, its osteology, muscles, instinctive powers, &c. and with various Physiological Problems. Copenhagen, 1799. 12mo. 32 pages.

In the Introduction, the author gives an historical account of the knowledge of the ancients in zoology, and of the works written by them on this subject; he developes some principles established by Aristotle, and defends this author against some attacks made on him by Bacon. He then proceeds to a description of the *Hedge-hog*, and begins with enumerating the organs of digestion and chylification, those

thoſe of generation and of life; he then treats of the oſteology of this mammiferous animal, of its manners, inſtinct and ſenſes.

After having ſtated what is already known of the hedge-hog, he concludes with ſome problems relative to that animal, and a few obſervations on the uſe we make of it in medicine and common life. M. Riegels intends ſucceſſively to treat in the ſame manner on rats, the phocas, the mole, the frog and lizard, the ſwine, the ſheep, the hare, the fowl, the duck and the gooſe, the crow, the dog, &c. He likewiſe intends to point out the different uſes of each of theſe animals. This firſt faſciculus is alſo ſeparately ſold under the title of *Scrutatio anatomica-philoſophica de Erinaceo, auctore* N. D. Riegels.

Gerardi Vrolik, *Oratio de Viribus Vitalibus, &c.*—An Oration, by Gerard Vrolik, on the vital and conſtant Powers obſervable in every organic Subſtance; delivered in November, 1798, upon the occaſion of inveſting the Profeſſorſhip of Anatomy, Phyſiology, and the Obſtetric Art, at the Athæneum of Amſterdam, 1779. 4to. 44 pages.

In this ſpeech, delivered with the view of obtaining the chair of anatomy, phyſiology, and midwifery, in the College at Amſterdam, M. Vrolik treats of a truly intereſting ſubject, perfectly correſponding with the ſciences he teaches. It would appear almoſt impoſſible for the author entirely to exhauſt this vaſt matter within the narrow limits of a ſpeech; he has not been able to give more than a ſhort outline of his plan, and briefly to treat on its principal heads; in which he has proved to his auditors, that time has not allowed him to enter more largely into his ſubject.

An Inquiry into the Symptoms and Cauſes of the Syncope Anginoſa, commonly called Angina Pectoris; illuſtrated by Diſſections. By C. H. Parry, M. D. &c. 8vo. pp. 169. Price 4s. Bath, Crutwell; London, Cadell and Davis.

We are much pleaſed to obſerve, that a diſeaſe ſo recently diſtinguiſhed by practitioners, ſo obſcure in its ſymptoms, and ſo fatal in its progreſs, ſhould have excited the attention of a phyſician ſo capable of illuſtrating its pathology.

Dr. P. in the Introduction, informs his readers, that "The ſubſtance of the following Eſſay was originally read to a Medical Society in Glouceſterſhire. This little Society conſiſted of the following perſons: Dr. Hickes, of Briſtol; Dr. Jenner, of Berkeley, in Glouceſterſhire, well known to the public by his ingenious paper on the Cuckoo, and by his original communications on the important ſubject of the Cow-pox; Dr. Ludlow, of Corſham; Mr. Paytherus, of the Adelphi, London; and the Author of theſe pages."

Dr. P. then details a number of caſes mentioned by other authors, and ſeveral which had fallen under his own notice and that

of

of the gentlemen just mentioned, with the appearances on dissection. From these data he gives the following enumeration of

SYMPTOMS.

"The first symptom is an uneasy sensation, which has been variously denominated a stricture, an anxiety, or a pain, extending generally from about the middle of the sternum across the left breast, and, in certain stages of the disorder, usually stretching into the left arm, a little above the elbow. In some few examples, the pain, stricture, or anxiety, is in a certain degree felt also across the right breast; and occasionally, though I believe rarely, has extended itself to one or both wrists.

"The pain which I have described occurs in paroxysms, and, in the early periods of the disease, is seldom produced without some apparent cause, such as walking, particularly up hill or up stairs, against the wind, or in a quick pace. On these occasions, the patient feels as if persisting in the exertion would produce a total suspension of the powers of life. He therefore stands still, or turns from the wind; on which the uneasy sensation soon vanishes. We are told of one patient, who appears to have been, in other respects, a man of unusual firmness of mind, that he had the resolution to continue walking, and that he found the pain go off after it had affected him from five to ten minutes. This sensation in the breast often admits of temporary relief from the evacuation of wind by the mouth, and is altogether so free and distinct from any difficulty of breathing, that patients during the paroxysm make a deep inspiration with the utmost ease, and, in some instances, appear to be fond of sighing deeply, and of retaining their breath. In some cases, it is either conjoined with an unequal pulse, or affects persons who are subject to that symptom. In other cases, the pulse has been habitually so little changed, as to lead to the opinion that the heart in no respect primarily suffers. But whatever may be the state of the pulse as to regularity, I believe we shall always find it become more or less feeble according to the violence of the paroxysm.

"In the slighter cases, and in this first stage of the disorder, the fit seldom comes on but from the exertions which I have mentioned; and as it is probable that experience of their mischievous effects will cause these exertions to be as much as possible shunned, patients will continue many days, and sometimes weeks, without any attack of the disease. It has been observed, that paroxysms are most apt to occur from walking after a meal. In general, they are not excited by exercise on horseback, or in a carriage, or by some short and partial, though strong, exertions of the body itself, as in talking, laughing, coughing, or vomiting. They have been by some thought to occur most frequently in the extremes of hot and cold weather; but, in many instances, there has been no perceptible difference in this respect.

[To be concluded in our next Number.]

The

*** *The following valuable Report, which will in future be regularly continued, was received this Month too late to appear in its proper Place.*

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

The District, in which the Patients of the Finsbury Dispensary are visited, comprehends the Parishes of St. James and of St. John, Clerkenwell; of St. Luke; of St. Saviour within and without; of St. Bartholomew, the Great and the Less; the Liberties of the Rolls, and of Glass-House Yard; the Town of Islington; the Parishes of St. Pancras, of St. Andrew Holborn, and of St. George the Martyr, Queen's-square. This Tract of Ground may properly enough be termed a North-Western District of the Metropolis.

LIST OF DISEASES, &c. from Feb. 20, to March 20.

	No. of Cases.
Continued Fever	15
Catarrhal Fever	3
Scarlet Fever	7
Aphthous Sore Throat	3
Pneumonia	3
Peripneumonia Notha	4
Erysipelas	1
Hæmoptysis	3
Rheumatism	4
Dysentery	2
Pulmonary Complaints without Fever	54
Dyspepsia	8
Asthenia	11
Chlorosis and Amenorrhœa	7
Menorrhagia	3
Leucorrhœa	3
Nephralgia Calculosa	3
Hysteria	2
Hypochondriasis	2
Cephalæa	4
Enterodynia	2
Diarrhœa	11
Constipatio	2
Intestinal Hæmorrhagy	2
Physconia Abdominalis	3
Dropsy	6
Gout	2
Paraplegia	1
Hemiplegia	1
Pulmonary Consumption	5
Urinæ Incontinentia	1
Hooping Cough	3
Infantile Fever	4
Mesenteric Fever	2
Chronic Cutaneous Diseases	9

The periodical account of diseases, thus offered to the Public, is not intended as an exact epitome of the state of epidemics, whether of the acute or chronic kind, which prevail throughout the whole of the metropolis. The different circumstances of the rich and poor occasion a striking diversity in their diseases: while, by cleanliness and a free circulation of air, by a generous diet, warm cloathing, and a dry and comfortable habitation, the one class escape the effects of febrile and other contagions, and neither feel the debility of want nor the inclemency of winter; a plain and scanty meal, earned by the sweat of the brow, a hardiness of constitution, and a mind little agitated by care, exempt the other, though not in an equal degree from the disorders which luxury, indolence, and mental anxiety entail on their opulent, and apparently more enviable, neighbours. A fashionable physician attending on the rich, and another in the same district, and at the same time, visiting

ing the sick poor, would present lists of diseases widely different: gout and hysteria might stand foremost in the one; contagious fever and dysentery in the other. It is to be lamented, however, that from the sedentary life to which a great portion of the poor in large cities are subjected, and from the universal and excessive use of tea, and particularly of spirituous liquors, which prevails amongst them, a considerable number of complaints, which were once almost peculiar to the rich, are now superadded to those which more especially attend a state of poverty; so that the report of the diseases of the lower class may, in too many instances, be regarded as a general specimen.

It is well known, that an acute disease is often epidemic in one part of an extensive city, while in another few or no traces of it are to be found; that frequently it does not, till after a considerable time, spread itself universally; or perhaps, after a partial extension only, it becomes extinct, leaving many parts wholly untouched by its influence.

It is obvious also, that of many kinds of epidemics, a small proportion of cases only fall under the notice of medical practitioners. This observation applies particularly to those diseases of the poor which are of short duration, or are mild in their nature. Hence, in a public dispensary, it is found, that the cases of measles, of scarlet fever, and of hooping-cough, bear not the same ratio to the actual prevalence of those complaints, as the cases of most other diseases which occur in similar practice. It may be noticed also, that an instance of small-pox is rarely to be met with at a dispensary, owing probably to the general use of inoculation, and to the establishment of a small-pox hospital.

Notwithstanding these circumstances, however, it is presumed, from the example of similar reports lately presented to the public, that such an one as that now proposed to be given may afford some useful information respecting many epidemic diseases, both chronic and acute; such, for instance, as of fevers, pneumonia, dysentery, diarrhœa, rheumatism, catarrhal affections, &c.

Were a certain number of physicians, in different parts of the metropolis, as well those who belong to medical charities, as those who are engaged in extensive private practice, to unite in publishing periodically the result of their observations, an accurate and comprehensive view would then be regularly obtained of the state and progress of all the diseases which prevail throughout London; and there is good reason to believe, that from such a plan, well conducted, a body of evidence might, in no long time, be produced, which would elucidate many obscure and intricate points relating to epidemic diseases. That it would, in the mean time, prove an useful guide to practitioners in general, no one who is acquainted with the influence of epidemic disorders on each other will venture to deny.

The most important class of diseases, enumerated in the foregoing list, is that of continued fevers. Under this term are comprehended the typhus and synochus, in their different degrees and varieties

rieties, whether arising from contagion, or from cold and other debilitating causes. Fevers, we are happy to say, have, for some time past, been gradually declining, both as to the frequency of their occurrence, and the malignity of their symptoms. The number of cases during the months of October, November, and December, of the last year, were to those which have happened since the beginning of the present, nearly in the proportion of four to one.

The accurate description of the fever which prevailed at the latter end of the autumn in another quarter of the town, (inserted in the Medical Journal for November) accords in general with the symptoms of that which occurred within the same period in the Finsbury district; there were, however, some circumstances of distinction. The latter was decidedly of a less malignant nature; for, of between fifty and sixty cases, which fell under the observation and treatment of one of the physicians, in October and November, three only terminated in death; whereas, in the former, the proportion of fatal cases was as one in four,—ten out of forty-one having died. In the latter also, a distinct crisis was seldom or ever observable, the signs of amendment shewing themselves in the most gradual manner, so that it was difficult to mark the exact time of their appearance. These signs for the most part were, the patient becoming composed, and falling into an easy and refreshing sleep, after a state of watchfulness and irritation; his expressing himself to be more comfortable in his general feelings; the eyes and countenance resuming their natural aspect; the edges of the tongue beginning to look clean; the pulse becoming stronger, more steady, and less frequent; a diminution of the heat of the skin, and a return of its usual softness. Of these beneficial changes, sometimes one, sometimes another, gave the earliest notice of recovery; but the first ray of hope was generally reflected from the eyes, and the features of the face.

The most common period of the termination of this fever was the end of the second week, or about the fourteenth or fifteenth day. In a few cases, the disease was protracted to an unusual length, in one of which, an universal yellowness of the skin, pain about the region of the liver, and violent vomitting, twice occurred; at first during the third week, and the second time at the end of the sixth, when it proved fatal. The patient, who was a woman rather advanced in life, there was reason to believe, had been addicted to habits which particularly injure the hepatic system. In several, the disease terminated within the first week: in the greater part of these, there had been an opportunity of administering an emetic soon after its commencement. The decided power of emetics, in cutting short the fever, or in rendering it more mild in its symptoms, was strikingly exemplified in a variety of instances. A state of watchfulness and irritation was more than usually common, and proved exceedingly distressing. During the first stage of the fever, it was seldom removed, and often aggravated, by remedies, particularly by opium. This medicine, however, about the middle or end of the second week, was employed with the very best effects, espe-

cially when given in doſes not exceeding a quarter of a grain, repeated at intervals of about five or ſix hours. In one caſe, the *tinct. opii*, with a ſuitable quantity of *linim. ſaponis*, was rubbed on the legs and thighs, and was ſucceeded by profound ſleep, after it had been adminiſtered internally, without any ſoporific operation whatever. In ſome patients there were excruciating pains of the limbs, ſo that they cried out as though they had been affected with acute rheumatiſm. In ſome alſo, eſpecially about the beginning of November, there were conſiderable aphthous ulcerations in the throat. A cough was a moſt common attendant, and not unfrequently was ſo violent and harraſſing as to require particular attention. In a few, pneumonic inflammation ſupervened, forming a combination of ſymptoms, than which there are few more embarraſſing to the phyſician, in the hiſtory of acute diſeaſes. To abate the inflammation in theſe circumſtances, it is ſeldom that more powerful means are admiſſible, than the application of leeches and bliſters about the thorax. The cautious uſe of antimonials and opiates may be joined to that of demulcents and diluents, and a gentle emetic may ſometimes be had recourſe to with advantage, if there be not too great debility. Perhaps calomel, in alterative doſes, joined with opium, as recommended by Drs. Hamilton, Duncan, and Wright, is here eſpecially indicated. In one caſe, which ended favourably, it was tried to the amount of about 5 grains in forty-eight hours, joined with a ſmall quantity of opium and antimonial powder. What was its preciſe effect, or whether it had any effect at all in removing the inflammation, could not be determined from a ſingle inſtance, when other means, as bliſters and an emetic, had alſo been employed.

The bark, although it did not appear poſitively hurtful, was certainly attended with no advantage in the early ſtage of the diſeaſe; in the latter periods, however, it was manifeſtly uſeful in ſupporting the ſtrength, and apparently in accelerating the extinction of the fever.

The waſhing the body with cold water was tried on a few patients, in ſome of whom it ſeemed to bring on ſevere catarrhal ſymptoms, and it was very unpleaſant to the feelings of others; it was preſcribed only when there was a preternatural degree of heat, an increaſed action of the arterial ſyſtem; circumſtances pointed out by Dr. Currie as demanding and rendering ſafe its adminiſtration. Bliſters were not employed, except for the relief of topical affections.

The fever, as it has prevailed during the preſent month, has aſſumed the character of the typhus mitior.

It is not wonderful, that, of all diſeaſes, thoſe affecting the organs of reſpiration ſhould ſtill continue the moſt numerous, when it is conſidered how much they are influenced by the ſenſible qualities of the atmoſphere, which for a long time paſt have had a peculiar tendency to produce them.

Of the caſes of ſcarlatina, noticed in the liſt, four were ſucceeded by anaſarca, which yielded with difficulty to the remedies employed. The patients were children.

A diarrhœa

A diarrhœa has lately been very common, and has ſupervened on many other diſorders, both chronic and acute.

The caſe of paraplegia occurred in a delicate girl, between thirteen and fourteen years of age, without any obvious cauſe. It took place in the night during ſleep; on awaking from which, ſhe found herſelf totally deprived of the power of motion, with ſome diminution of ſenſation in the lower extremities. At the expiration of a fortnight, on awaking again from ſleep, ſhe was agreeably ſurpriſed at being able to get out of bed, and walk about the room. She has been ſimilarly affected three or four times within the laſt two years. During the complaint ſhe is low-ſpirited, and loſes her appetite; her bowels alſo are remarkably torpid.

W. W.
J. R.

NEW MEDICAL PUBLICATIONS IN MARCH.

Annals of Medicine for the year 1799; by ANDREW DUNCAN, Sen. M. D. and ANDREW DUNCAN, Jun. M. D. 8s. bds. Robinſons.

The Efficacy of Perkins's Metallic Tractors, exemplified by a Number of Caſes on the Human Body and Horſes, from the firſt literary Characters. With a Diſcourſe, in which the Attempts of Dr. Haygarth to detract from the Merits of the Tractors, are fully confuted. By B. D. PERKINS, A. M. 1s. Johnſon.

A brief Hiſtory of Epidemic and Peſtilential Diſeaſes, with the principal Phenomena of the Phyſical World, which precede and accompany them; and Obſervations deduced from the Facts ſtated; by NOAH WEBSTER, 2 vol. 8vo. 18s. boards. Robinſons.

Inſtitutions of the Practice of Medicine, by Jo. BAPTIST BURSERIUS DE KANIFELD. Tranſlated from the Latin by WM. CULLEN BROWN. (5 vol. 8vo.) Vol. I. 8s. boards. Robinſons.

NEW MEDICAL PUBLICATIONS IN FRANCE.

Diſſertation, &c. An Anatomico-Chirurgical Diſſertation on Fractures of the Neck of the Femur. By A. RICHERAND, M. D. Member of the Philomathic Society at Paris, &c. &c. Paris. Meguignon.

Bibliographie Analytique de Medicine, &c.—Analytico-Medical Library; or a Journal compiled from the beſt new works in Latin or French, on the ſubjects of Clinical and Prophylactic Medicine and Hygiene. By LAURENT BODIN. Two numbers of this work are publiſhed, forming together two ſheets in 12mo.

Liſte Chronologique, &c.—A Chronological Liſt of the Works of the Phyſicians and Surgeons of Bourdeaux, and of thoſe who have practiſed the Curative Art in that City; with Annotations, and an Elegy on Pierre Deſault, M. D. By J. TOURNON, M. D. Member of the Medical Society at Bourdeaux, &c. a Pamphlet of 47 pages, 8vo. price 1 franc, 50 centimes; publiſhed at Bourdeaux by F. Pellier Lavalle.

Revolution de la Medicine, &c.—Revolution in the Science of Medicine, or the Regeneration of the Curative Art; containing a new

new doctrine on animal organisation and disorganisation, preferable to the ancient systems, and shewing the necessity of a reformation in several essential points of theory and practice. By Citizen LEBESCHU, M. D. 2 vols. Paris, Meguignon.

Experiences sur le Galvanisme, &c.—Experiments on Galvanism, and on the general irritation of the muscular and nervous fibres: Translated from the German of Frederic Alexander Humboldt: By J. F. N. JADELOT, M. D. In one volume 8vo. 600 pp. price 6 francs. Paris. Fuchs.

Observations, &c.—Observations on the Cæsarian Operation, successfully performed, with the description of a new method of performing it: By Cit. JAQUES ANDRE MILLOT, Manmidwife, 38 pp. 8vo. Paris, Croullebois.

Tableau Methodique, &c.—Methodical plan of a course of Medical Natural History; in which are combined and classed the principal mineral waters of the Republic; the places from which they proceed are likewise stated, as also their temperature, the substances they contain, their virtues, uses, &c. &c. which have never yet been given in any medical work. By BERNARD PEYVILHE, Professor of Medical Natural History in the School of Medicine at Paris 1 vol. 8vo. near 600 pp. price 7 francs in boards. Paris. Widow Panckoucke.

Instruction, &c.—Rules for the practice of inoculation for the small-pox; to which is added, an Essay on the nature and treatment of that disorder, extracted from the Lectures of Cit. PORTAL, Professor of Medicine at the College of France: By Cit. SALMADE, M. D. Senior Surgeon at the National Hospital for Invalids, &c. &c. Paris. Merlin.

[*The List of New German Publications in our next.*]

*** On account of the numerous new Articles in the present Retrospect, the conclusion of "*Prof. Göttling's Manual of the Theory and Practice of Chemistry*," from p. 189 of Number XII. and "*Prof. Schmid's Philosophic System of Physiology*," from p. 283 of our last, shall be concluded in the next Number.

To CORRESPONDENTS.

We have received Communications from Dr. Vage; Mr. Dunning, Mr. Wagstaffe, Mr. Blackburn, Mr. Lipscomb, R. H. &c. which shall be duly attended to.

ERRATA.

P. 233, l. 25. previous to the words "I have in the first place to observe," we are requested by the Author of that paper, to insert the following preamble to the paragraph:

"With respect to the transatlantic doctrine of this disease being always, or for "the most part, directly excited by the application of nitrous, azotous, or according "to the *Mitchillian* nomenclature, *septous acid gas*, and to the assertion of its being "cured by alkalies," I have, &c.

P. 266, l. 11, from the bottom; and p. 267, l. 7, from the top, for *acidulated* read *sharpened*.—P. 267, l. 1, of the Note, dele the comma after "ejusdemque."

P. 269, in the last paragraph, and in next page, l. 6, for Æthiops *mineral*, read Æthiops *Martialis*.