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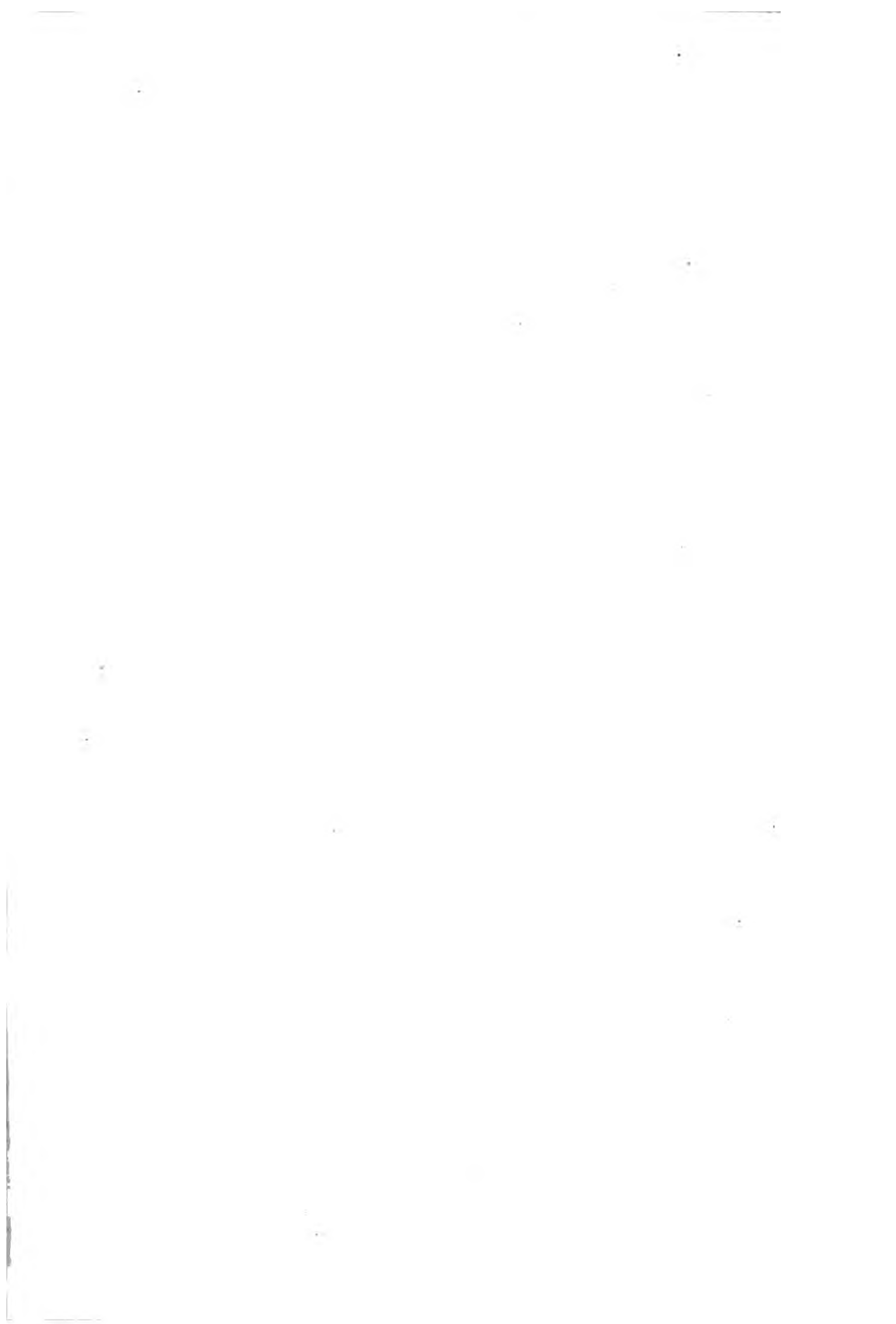
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Per 93.

Per. 15084 e. $\frac{84}{2}$







THE
MEDICAL AND PHYSICAL
JOURNAL;
CONTAINING
THE EARLIEST INFORMATION
ON SUBJECTS OF
Medicine, Surgery, Pharmacy, Chemistry,
AND
NATURAL HISTORY,
AND A CRITICAL ANALYSIS OF ALL NEW BOOKS IN
THOSE DEPARTMENTS OF LITERATURE.

CONDUCTED BY
T. BRADLEY, M. D.
AND
A. F. M. WILlich, M. D.

— Ex medicina nihil oportet putare proficisci, nisi quod ad utilitatem
corporis spectat, quoniam ejus causâ est instituta.

CICERO, *de Inventione*, Lib. I.

VOL. II.
FROM AUGUST TO DECEMBER, 1799.

LONDON:

Printed by WILLIAM THORNE, Red Lyon Court, Fleet Street,
For R. PHILLIPS, No. 71, ST. PAUL'S CHURCH-YARD.



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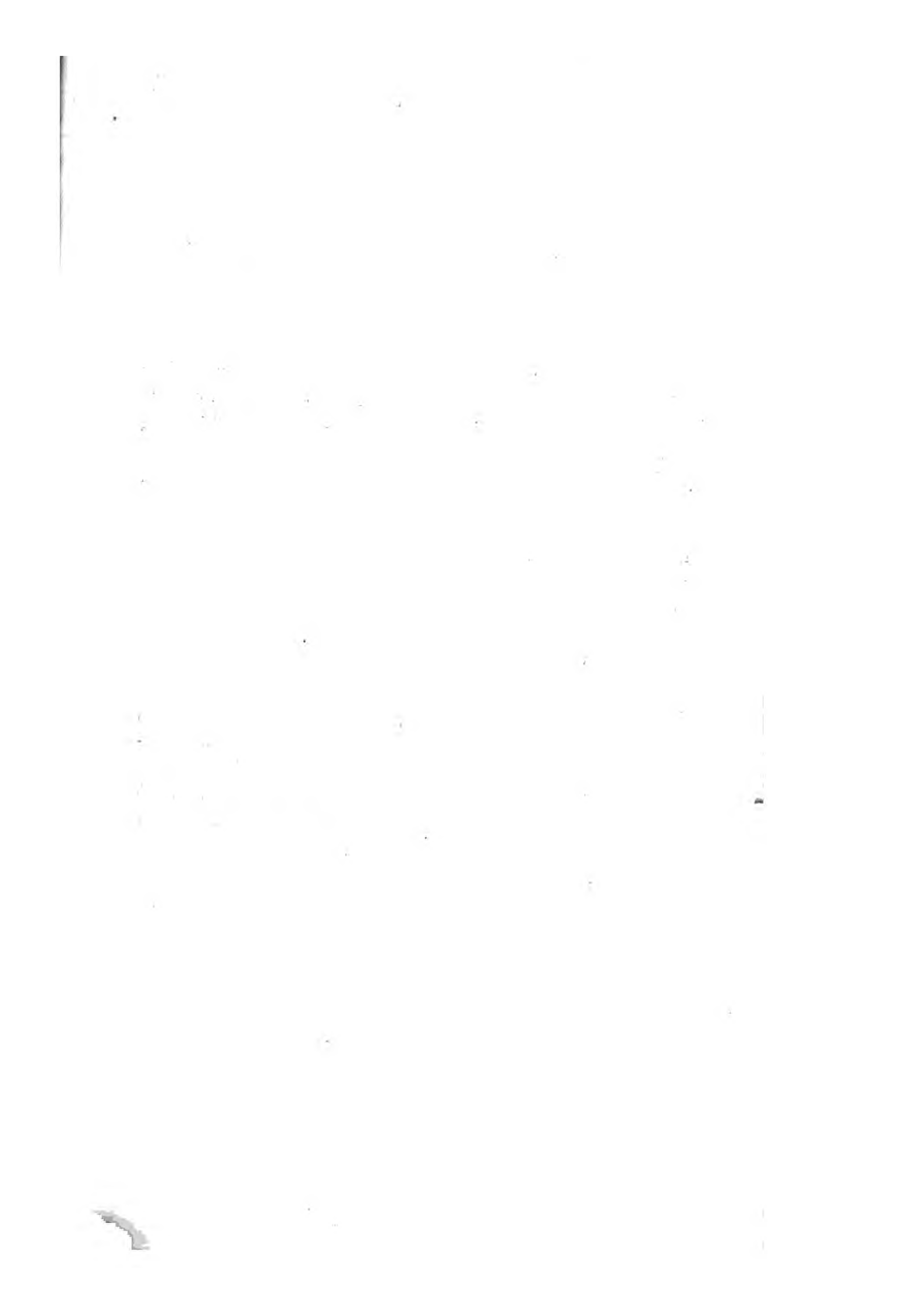
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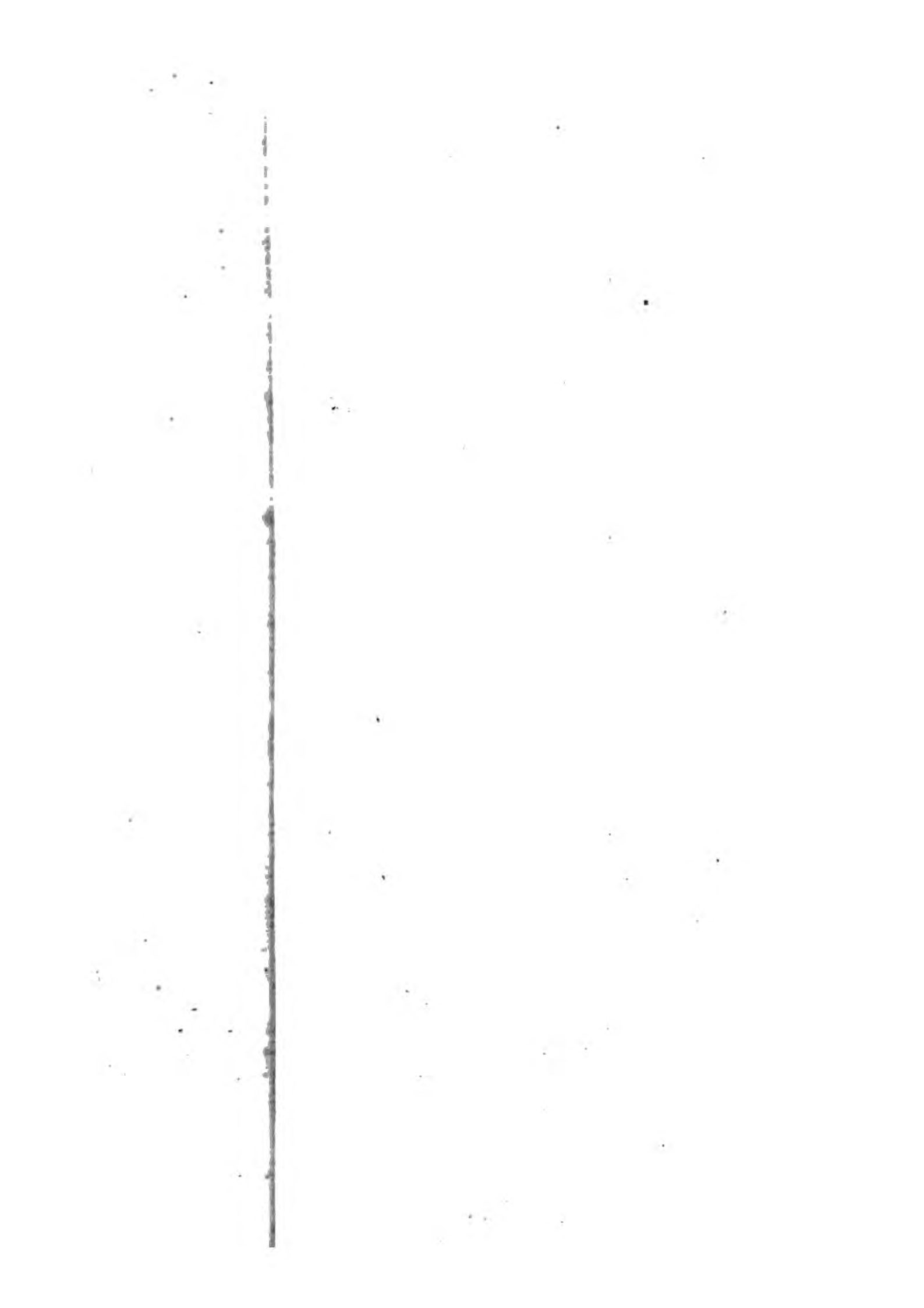
THE Editors have so many opportunities of addressing their literary friends, correspondents, and the public, that the formality of a Preface might well be dispensed with: they are, however, happy to avail themselves of this occasion, to express their sense of gratitude for the numerous and constant proofs of the general approbation with which their labours are received.

The increasing demand for the **MEDICAL AND PHYSICAL JOURNAL**, since the completion of the First Volume, as well as the unprecedented support by original communications, are the most unequivocal testimonies of public sanction.

The **Conductors** of the work embrace this opportunity of assuring the professional Reader, that the frequent hints they have received, concerning the protraction of controversies, and insertion of anonymous communications, shall not be neglected. Indeed, the public mind soon decides on contested points, if at all interested in the inquiry; while the Disputants themselves generally become more and more attached to their original opinion.

DECEMBER 1, 1799.





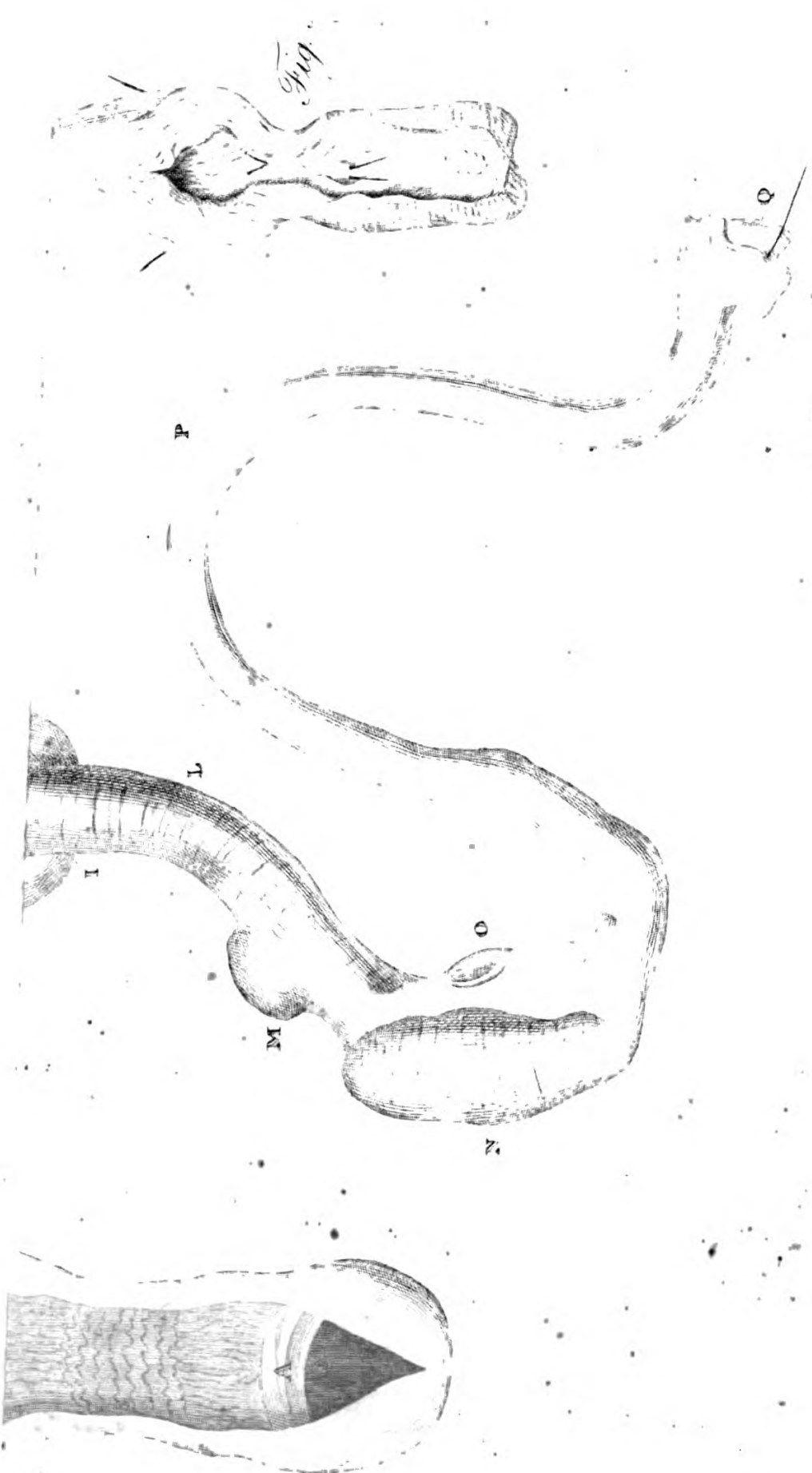


Fig. 2.

THE
Medical and Physical Journal.

VOL. II.]

AUGUST, 1799.

[NO. VI.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF the following description of an hermaphrodite comes within the views of your useful publication, you have my permission to insert it whenever you think proper.

I remain, Gentlemen,

Your's very respectfully,

LEICESTER-SQUARE,

H. LEIGH THOMAS.

July 21st, 1799.

Deviations from the natural structure in animals do not frequently lead to any immediate improvements in the practice of medicine; but they tend to enlarge our knowledge of the animal economy, and may in this way be said to contribute remotely to the advancement of the healing art.

The smaller deviations from the natural structure in man, and in other animals, are very numerous; but even those in the most important organs not unfrequently occur. That species of deviation or monstrosity, called hermaphrodite, has hardly ever been known to happen in the human species; but, in some other animals, as in the bull and the ram, it has been occasionally remarked.

The one which has lately occurred to me, and which I shall now attempt to describe, is very complete in its kind, and is different in most respects from what has been published by Mr. HUNTER, in his book, upon certain parts of the animal economy.

The lamb, the subject of the following description, was not more than two months old; it had the external characters of a ram, as far as is common at that age, except a deficiency of the scrotum; having been purchased amongst a number of others in a public market, no account of it previous to dissection could be procured. Upon opening into the abdomen, the uterus appeared to occupy its usual position, with respect to the urinary bladder and the rectum; the peritonæum was reflected over it in the usual manner, forming its ligaments; the blood vessels (which were afterwards filled with

a coloured fluid) took the common route, and the uterus divided into two horns, which externally had the usual appearance. The Fallopian tubes arose out of them, and terminated in a tortuous, convoluted manner upon the body of a substance exactly resembling the testicle of a ram. The body of the uterus possessed the common rugose structure, but the horns were only lined by a smooth membrane; those glandular bodies which are observable in the perfect uterus being altogether wanting. At the anterior extremity of the fundus uteri, a thick semi-lunar valve passed across, which seemed to correspond to the os tinæ, and hardly allowed a fine probe to pass over its upper edge. The vagina scarcely existed, forming only a short pouch beyond the valve, which was lined by a smooth membrane, without any appearance of a follicular structure.

The testes occupied the place of the ovaria, and were inclosed by the same reflection of the peritonæum which formed the broad ligaments of the uterus; they were of the common size, and in form a little more globous than usual, which perhaps may be explained from their never having been pendulous. The blood-vessels, after being filled with the red injection, appeared to take the usual circuitous route, communicating with those of the uterus; and the lymphatics also seemed to arise, and pass out by the spermatic chord in the usual order. A longitudinal section being made through one of the testicles, its internal structure was precisely the same with what is natural to that organ; and upon maceration in water for a certain time, it put on the usual shaggy appearance formed by the *tubuli semeniferi*. The remaster muscle was wanting, as well as the *tunica vaginalis*; the latter could not be obtained unless the testicle had passed the abdominal ring. The epididymis belonging to each testicle presented the common convoluted structure, and the canal was pervious throughout its whole length, quicksilver freely passing along it from the *vas deferens* to the testicle. The *vas deferens*, after leaving the epididymis, passed down upon the outside of the floras of the uterus, between the duplication of the peritonæum, and opened on each side of the *caput gallinaginis*; the *vesiculæ seminales* lay upon the short pouch corresponding to the vagina, still preserving their relative situation with respect to the urethra; they were of the common size and structure, and their ducts opened into the urethra, along with the *vasa deferentia*, at the usual place. The internal surface of the urethra was studded with pellicles, as is usually the case; the penis too, and the parts immediately connected with it, appeared every way compleat and perfect. The urinary bladder was connected to the uterus by cellular membranes and its peritonæal covering; it had no connection with the vaginal pouch, but was joined to the penis in the common way.

It has been an opinion received amongst many physiologists, that when an animal of a perfect order* is brought forth an hermaphrodite, that it must have been the consequence of a double impregnation, and that such a production will be incapable of propagating its species.

With respect to the birth of the animal above described, no information could be procured, nor can we be more certain with regard to its fecundating powers; but if we may be allowed to form some judgment from the exact resemblance of its male organs (in every essential particular) to those of a perfect ram at the same age, then there does not seem to be any reason, from the structure of the parts, why the animal, if it had grown up, should not have had the natural propensities of the ram. When the testicles are detained in the abdomen, Mr. Hunter considered them as being always imperfect†, but in all those cases which came under his observation, both the size and structure of the testes were evidently defective; but in the present case no deficiency in the size, or deviation from the natural structure was apparent, and their close connection with the Fallopian tubes, by the reflection of the peritonæum, will sufficiently explain the reason why they did not descend into the scrotum. The early death of this animal is to be regretted, for had it arrived at maturity, it might have taught us whether such a species of monstrosity can ever shew partiality for the female, and how far it could have been able to propagate its species. The probability is, that the presence of the uterus, imperfect as it is, would so far have checked or interfered with the natural propensities of the male, that the animal would have shewn little or no partiality for either sex.

EXPLANATION OF THE DRAWING.

FIG. 1st

- A. A. The testes.
- B. B. The spermatic vessels, injected.
- C. C. The epididymis, filled with quicksilver from the vas deferens.
- D. D. The uterus.
- E. E. The horns of the uterus.
- F. F. The Fallopian tubes, terminating in a convoluted manner, and opening upon the testicle on each side.
- G. G. G. G. The vasa deferentia, arising out of the epididymis, and pressing upon the outside of the horns of the uterus.

H. H.

* I only allude to the bull and the ram, not having had an opportunity of seeing any account of the like monstrosity taking place in any other animal.

† Observations on certain parts of the animal economy, page 13.

4 *Mr. Christie's Letter to Dr. Saunders, on Hepatitis.*

- H. H. The vesiculæ feminales of the usual size, their ducts entering the caput gallinaginis, along with the vasa deferentia.
- I. The vagina, terminating in a cul de sac.
- K. The urinary bladder.
- L. The membranous part of the urethra, encircled by a sphincter muscle
- M. One of Cooper's glands.
- N. The bulb of the urethra.
- O. The right crus of the penis, separated from the pubis.
- P. The penis.
- Q. The glans, with a bristle introduced into the urethra.

FIG. II.

The vagina and uterus laid open, shewing the internal rugose appearance usually met with in the perfect uterus.

- A. A broad semi-lunar valve, somewhat corresponding to the ostium.
- B. B. The horns of the uterus lined by a smooth membrane, wanting the glandular bodies constantly found in the perfect uterus.

FIG. III.

The membranous part of the urethra laid open into the bladder, shewing bristles introduced into the oculi gallinaginis; also two other bristles in the ureters.

FOR THE MEDICAL AND PHYSICAL JOURNAL.

Extract of a Letter from Mr. THOMAS CHRISTIE, Surgeon of the 80th Regiment, to Dr. SAUNDERS, New Broad Street, London; dated Trincomale, Island of Ceylon, May 21st, 1798.

“ ON our first arrival at this station, which is accounted one of the most unhealthy in India, we were very sickly: of late, however, we are become extremely healthy, have not many sick, and but few casualties.—During my residence, although short, in India, I have had considerable experience in the endemic diseases of the country, particularly in hepatitis, and have had frequent opportunities of observing, in my own practice, the great justice and accuracy of your valuable remarks on that complaint.

“ As I had for some time the care of the whole garrison here, I had then an excellent opportunity of observing the comparative frequency of the disease, and violence of the symptoms, among the men lately arrived from Europe, the Europeans long in India, and the native troops.

“ I found, that among the men of the 80th regiment, for the first six or eight months, the disease was much more frequent, much more violent in its symptoms, shewed more tendency to suppuration, and was more sudden in its crisis, than with the Company's European troops, who had been long in India, although the latter were the most debauched. Amongst the natives, hepatitis does not so often occur; out of the thousand native troops, I did not, in the course of three months, meet with more than two cases of liver complaints, which is comparatively a very small proportion.

“ The following instance is strongly a proof of your proposition (part 5. sect. 1. chap. 5.), with respect to the propensity of the inflammation to the stomach, causing a constant reaching; it also seems to shew, that all the supposed pathognomic symptoms are not present in every instance of hepatitis: Corporal *POTTER*, of the 80th regiment, a healthy young man, was attacked about the 6th of November, 1797, with symptoms of pyrexia, attended with pain at the pit of the stomach, dyspnoea, and almost constant vomiting. As he had no cough, or affection of the bowels, he was treated as for an affection of the liver, although no tumour or particular pain was observable upon pressure of the right hypochondrium, nor did he complain of the pain extending to the shoulder till within three days of his death, which happened on the 20th of November.

“ Upon opening the abdomen after death, and raising the sternum, I found the liver of its natural size, and in its usual situation, without any adhesions between its convex surface and the abdominal perinæum, so that I began to conceive I had been mistaken in my opinion of the case, till observing the stomach particularly prominent, and some adhesion between it and the concave surface of the liver, I separated these with my fingers, when I found nearly a quart of well-formed pus contained between the stomach and the concave surface of the liver, a part of which latter was corroded, but the rest of that organ, as well as the stomach and other viscera, were in a sound state.

“ I have made a point of opening every person who has died of the liver-complaint, while under my care; and amongst the men of the 80th regiment, who were lately arrived from Europe, I did not find one out of twelve instances in which suppuration had not existed in some part or other of the liver. Suppuration, I have every reason to believe, is not near so frequent amongst the natives, or Europeans who have been long in the country; and, indeed, amongst the men of the 80th regiment, who have now been above fifteen months in India, I find that already the disease puts on a different form, becomes less frequent, more slow in its progress, and shews much less tendency

tendency to run into suppuration. On my first coming here, I had originally sixteen or seventeen men in the hospital with hepatitis—I have now seldom more than six or seven, and have not lost a man from the complaint for the last two months, although we are now stronger in men than we were at that time, having been reinforced with drafts from some old regiments. From the mode of recruiting the army here, it seldom happens that the care of so many Europeans (about 800), just arrived in India, falls to the charge of one person, at one time; I therefore thought that these few remarks, as they relate to Europeans lately arrived in India, might be acceptable to you.

“ There are many marshes, and much brush-wood in the vicinity of the fort; the atmosphere is moist; and most of the diseases here are those of debility—to which I find the private men, as living worse, are much more subject than the officers. The fever-complaint has, however, I think, attacked a greater proportion of officers than men.

“ I ought to observe, that the fever-complaint is a familiar phrase in India for hepatitis; from inadvertency of making use too often of that indefinite term; but I always mean hepatitis, both of the acute and chronic kind.

“ In agues, which are very frequent here, I have had an opportunity of making a comparative trial of the pale red, and yellow bark, and from my own experience, have not the least hesitation of giving the preference to the last.”

FOR THE MEDICAL AND PHYSICAL JOURNAL.

Additional Facts and Observations relative to Opium applied externally, so as to be absorbed by the Lymphatics.—By M. WARD, Surgeon to the Manchester Infirmary.

HAVING endeavoured to excite the attention of medical practitioners to this interesting subject*, it appears to be a duty incumbent upon me, to communicate any farther cases or observations which may have occurred to me, tending either to elucidate or extend the practice.

The following, I trust, will not be deemed entirely unworthy their attention.

June 7, 1799, John Jackson, at 53, was admitted into the Infirmary, with a simple fracture of the tibia and fibula of the left leg. An eighteen-tailed bandage, moistened in aq. litharg. acetat. comp. was applied, and the limb was

* See the Medical and Physical Journal for July.

was placed on its outer side, with the knee bent. He was unusually loquacious whilst we were reducing the fracture. A low diet and a laxative medicine were prescribed.

June 11. He has had very little sleep last night, and was found this morning in a maniacal state, lying across the bed without any of the bandages upon his leg. He talks incoherently: his tongue is white, and his countenance flushed: pulse 108 and soft. Circular rollers steeped in aq. lith. acet. co. were applied upon the limb; and as soon as a strait waistcoat could be procured, he was placed on his back, and his leg was confined in a fracture box, of such a construction as to allow his knee to be in a bent position, and the limb to be raised. His leg was secured in the box, and the potus acid. vegetab. directed to be drank ad libitum.

June 12. He found means in the night to extricate himself from the strait waistcoat and has been so noisy the two last nights, as to disturb the patients in the neighbouring wards: he never ceases talking; generally mutters to himself; but sometimes is extremely noisy: his eyes are blood-shot, a constant tremulous motion prevails in every part of his frame; his tongue and gums are much furred (the former has brown streaks upon it); pulse 120.

Ry. Amon. præp. gr. xv; pulv. cort. Peruv. scrup. i; tinct. opii gutt. v. syrup. sacchar. drachm i; aq. cinam. drachm ii; aq. pur. drachm vi.—
M. s. haust. quarta quaque hora sumend. in effervescent. cum suc. limon. recent. un. fs.—Contin. potus.

I visited him again at nine in the evening. He had taken two draughts. The tremor and delirium had not abated; I therefore directed the following liniment to be rubbed into the inside of his right thigh immediately, and to be repeated in four hours, unless sleep was procured:

Ry. Opii pulv. subtil. drachm fs. camphor: gr. iv. adip. suil: scrup. iv. ol. olivar. drachm i. M.—*

June 13. He slept well the whole of the last night, the tremor is gone and he is easy, composed and rational: his thirst is abated; but his tongue continues white: appetite good, pulse 88.

The strait waistcoat was taken off: he has no complaint left, except a slight mazes in his head. Two portions of liniment, each containing half a drachm of opium, were applied.

He has been harassed with a great variety of incongruous ideas since the delirium came on; but that which seems to have made the strongest impression is, his imagining himself to have been conveyed with incredible velocity,
from

* This formula seems to be absorbed with more ease, than any other I have yet tried but $\frac{3}{4}$ of lard and $\frac{3}{4}$ of oil is sufficient, where the opium does not exceed a scruple, and so in proportion.

from one eminence to another. It will be unnecessary to continue the journal regularly. It did not seem safe at once to discontinue the opium: one portion of liniment was therefore rubbed in every night for three or four times; but each portion contained a smaller quantity of opium than the preceding.

On the 14th, in the morning, his pulse was 92 and regular; in the evening 80, 15th 84, 16th 76, 17th 84, 19th 80. Before the first portion of opium was applied, his pulse fluctuated between 100 and 120. July 4. His leg is as straight and as firm for the time, (28 days) as any fractured limb I ever saw, which is surprising, considering how restless he has been.

The mania has returned at intervals since the 20th ult. and he has taken two grains of opium every night lately, with apparent advantage; but has often been confined since the 20th, by the waistcoat in the night, and liberated in the day time. His appetite has been insatiable since the 18th. ult. Only one person has visited him since his admission, and she is ignorant of his previous history. He says he never was insane before.

To guard against the indiscriminate application of opium externally, by absorption, in delirium accompanied with fever, it may be proper to observe, that in a recent instance of typhus, where petechiæ, a livid appearance of the eschar, occasioned by a blister, stupor, and an involuntary discharge of bloody urine, had taken place, and the patient had been delirious and had had very little sleep for some time, a scruple of opium was rubbed into one thigh (15 grains had been rubbed in six hours before, and ten grains twelve hours before, without producing any sensible effect). The next day the patient was affected with coma, which went off in about 24 hours.

The stupor and putridity which prevailed in the system before the opium was employed, were probably amply sufficient to account satisfactorily for the occurrence of this symptom; but still, the external application of opium, except in small quantities, when there is any tendency to coma, seems likely to be ambiguous, if not hurtful in its effects.

Mary Caldwell did not seem to derive any material advantage from a continuance of frictions with opium; they were therefore discontinued; but they enabled her to leave off taking the pulv. ipecac. comp. which could not be accomplished till she had recourse to them. Since that time she is become an home patient to the Infirmary, and was no better the last time I heard of her.

Dr. PERCIVAL informs me, that since his last communication to me, he has tried the external use of opium in a chronic dysury, and in a case of the stone in the bladder, with very considerable ease to the patients, and without producing the vertigo, head-ach, and obstinate costiveness, which the internal use of laudanum had before occasioned. He has suggested to me the following experimental inquiries.

1. What is the smallest quantity of unguent required for combination with the opium, so as to render it readily admissible into the body? To ascertain this point, might tend to facilitate and shorten the operation of inunction.

2. Would the oleum e pedibus bovinis, or neats' foot oil, which, being remarkably lubricating, may be supposed to pass readily into the pores of the skin, be a commodious vehicle for the opium?

3. Would opium, combined with the yolk of an egg, gain a readier admission into the body, than with an oily substance?

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS I am extensively engaged in the medical application of electricity, if any observations I should be enabled to make should be deemed worthy of insertion in your Miscellany, I shall be happy to transmit to you, for your next, and every subsequent Number, the cases which occasionally come under my care.

I remain, Gentlemen,

Your most obedient,

No. 10, Leicester street, Leicester-square.

C. H. WILKINSON.

As my opinions of the influence of electricity on the human frame are, in some respects, different from those generally entertained, previous to entering into any investigation of its medicinal powers, I shall beg leave to premise a few general observations.

All fluids yet known, except air and oil, contain more or less electricity, and will freely admit its ingress, as well as egress. As the human body is principally constituted of fluids, it is replete with electricity, and sensible of the least disturbance. A person insulated, giving a spark of electricity, communicates not identically the same portion he received from the machine, but an equal quantity, forced out of his body, by the impulse of that he received from the conductor. When thus connected with an electrical machine, a man becomes a part of the conductor—participates of the intensity—and equalizes with the whole.

Upon this consideration, we must regard the human body as a substance, throughout which electricity is diffused: such being the case, there can be no further addition; but an adequate portion will either be transmitted to some conductor, or form an electrical atmosphere round the body.

Obedient to the same general laws by which fluids are governed, the electric matter, upon any impulse, moves in that direction where it meets with the least resistance; and, being an elastic fluid, the force of the impulse will be in the inverse cubic ratio of the distance of any part from the line of direction.

If a person takes a very gentle shock, he only experiences an uneasy sensation at the tip of his fingers; if the shock is a little stronger, he feels it about his arms; if stronger, it agitates his body.

It is very easy to comprehend why we should experience the electrical sensation at the extremities, when connected with the Leyden phial.—The quantity of electricity entering the body has in that part to overcome the resistance of the electricity inherent in the fingers; from the fingers the impulse is transmitted through the body: the fingers which are in connection with the negative side of the bottle, in passing out, have to overcome the resistance of the egress.

In proportion as the impulse is more violent, its effects will be more extended.

In the human body, we can either increase or diminish the natural quantity of electricity, or disturb the relative situation of the whole.

The human body, like all conducting substances, is never found to possess in different parts, different stages of electricity, so as either, by a partial excess or diminution, to constitute a disease; hence the idea of equalizing the principle of electricity in the human frame, is unsupported by any logical experiment.

Electricity, unless from the impulse of shocks, or the irritation of sparks, never, either in a positive or negative state, influences the pulse; although KRATZENSTEIN, SAUVAGES, GERHARD, and CAVALLO assert the contrary. Their experiments were not very correctly conducted: it was accurately tried by the following gentlemen, viz. Drs. DEIMAN, VAN MARUM, VON TROOPSWYK, and CUTHBERTSON, with the powerful apparatus at Haarlem; the pulse of no one was in the least influenced either by negative or positive electricity. I have frequently tried myself, as well as others, in health or indisposed, yet have never observed any increase in the circulation.

The effect of electricity is by disturbing the natural quality inherent in any part of the human frame, and by thus altering the action of that part, inducing certain changes.

That such changes may be conducive to health, it becomes requisite for the administrator of medical electricity, to well ascertain the seat of the complaint, and to know the different sensibilities of the different parts, and the effect of electricity upon them.

There are many complaints which would be considerably aggravated by the imprudent use of electricity, and a great number of other affections which could no ways be benefited by this important agent, unless carefully applied.

If we were to apply electricity to the region of the diaphragm, in the same manner we would to a rheumatic affection of the extremities, what prostration of strength would be the consequence! That exquisitely sensible septum, by such an action, would be deranged in its functions, and respiration for a time impeded; it would not be again restored till the lungs were distended by a sighing inspiration, and the disturbance soothed by a flood of tears.

So in paralytic affections, in any derangement of the nervous system, to produce any good effect, the impulse must be made on the source of the complaint. In the palsied extremity, to apply electricity to the foot alone, no advantage could arise; we ought in this, as in every other case, to attend to the source of the disease before we can afford the wished-for relief.

Internal medicines are principally confined in their actions to the stomach—some few can be communicated to the lungs; to all other interior parts we possess no power of determining any particular medicines, unless electricity be regarded as such. This principle we can direct in whatever manner we please. The muscles, ligaments, or even solid bones are, as it were, capacious vessels, affording easy transmission to this fluid; and, as we can regulate its power at pleasure, we are thus in possession of an active, penetrating principle, by which we can produce a variety of actions in different parts.

It is a law in the animal economy, that two different actions cannot exist in any one part of the human frame at the same time; when the natural action is any ways altered, it will be removed by inducing another that will counteract it. We ought to be extremely careful that the action we induce be exactly proportionate to the nature of the derangement. If a part affected should be in a state of great irritability, or should labour under any violent inflammatory action, these complaints would be aggravated by electricity. In all those cases which appear to be connected with diminished powers of life, as in dull, deep-seated, obtuse pains, or any interruption to the functions

of

of the nervous system, or by the increase of any secretion, electricity is frequently beneficial.

Electricity must be regarded as a medicine whose properties are not as yet well ascertained, and whose effects on different constitutions not as yet determined;—such require the united observations of many individuals, before its influence on our organization can be properly known. On this account, those cases where it fails should be particularised, as well as those where it succeeds. Such is the plan I shall presume to adopt with whatever cases I may send for insertion to the Medical and Physical Journal.

CASE I.—*Hydrocele cured by Electricity.*

About eight months ago, a gentleman applied to me respecting an hydrocele, with a view of trying electricity. The testis was enlarged, and apprehended to be so diseased, that any operation for its radical cure was no ways advisable. For two months I tried the effects of the electricity, without producing any other alteration than a diminution in the size of the testis; the dropsical accumulation appeared in some respects to be increased. He permitted me to puncture the scrotum with a small trochar. On the day after this operation, electricity was again had recourse to—a half-pint bottle, the electrometer at three-eighths of an inch. Shocks of this intensity, beginning at fifty, and gradually increasing to two hundred, were daily sent through the affected part: in the course of two months, the testis was reduced to the same size with the other. Electricity was suspended: no further tendency to accumulation has appeared.

N. B. Whenever the machine is not particularised, it is to be understood that a two-foot plate machine of Cuthbertson's was made use of; when any other size or form is employed, such will be particularised, as such very materially influences the intensity.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the fifth Number of your Journal for July, p. 509, I observe that you notice musk, and sal cornu cervi volatilis, in equal proportions, as a new and efficacious remedy in sphacelus, particularly in that species of it “which is accompanied with convulsive symptoms, and has arisen from local external injury;” and you refer to a treatise on that subject, supposed to have been written by a Mr. C. WHITE, of York.

Permit

Permit me to acquaint you, that you have been misinformed relative to the author of the treatise alluded to; Mr. C. WHITE, of Manchester, having first promulgated to the world an account of that remedy in the year 1790, in a pamphlet entitled "*Observations on Gangrenes and Mortifications, accompanied with, or occasioned by, convulsive spasms, or arising from local injury, producing irritation.*"

Mr. White, however, was not the discoverer of the efficacy of musk and volatile salt in such cases, for the merit of the discovery is due to the late Dr. DARBEY, who casually hit upon it, in the treatment of a patient belonging to one of the other surgeons of the establishment, while he resided at the Manchester Infirmary, in the capacity of apothecary and house-surgeon.

In the same year in which Mr. White published his pamphlet, and very soon after its publication, Dr. Darbey graduated at Glasgow, and he made choice of this subject for his thesis, the title of which is "*Dissertatio Medica quædam de moschi et salis alk. volat. usu in febre nervosa et gangrena proponens.*"

Since that time, musk and volatile alkali combined, have been a good deal used in gangrene and sphacelus, by some practitioners resident in this place, and I suppose with success, as the practice is still continued; but as I have found the bark to answer very generally in gangrene and mortification, I have had no experience of it myself.

I have been induced to send you this communication, in consequence of your remark, that "the effects of this medicine are stated to be such as deserve the greatest attention of practitioners; but we do not find that it has been generally employed, unless by foreign practitioners, who speak of it in the highest terms of commendation;" and also to do justice to the memory the real author of the discovery, the history of which I have often heard him relate.

MANCHESTER, July 22d, 1799.

W. SIMMONS.

STATE OF DISEASES IN LONDON.

Account of Diseases in an Eastern District of London, from the 20th of June, to the 20th of July.

ACUTE DISEASES.		No. of Cases.	
Typhus	-	-	3
Quotidian	-	-	1
Measles	-	-	3
Scarlatina	-	-	2
Acute Rheumatism	-	-	3
CHRONIC DISEASES.		No. of Cases.	
Cough	-	-	4
Dyspnœa	-	-	5
Cough and Dyspnœa	-	-	6
Asthma	-	-	2
Phthisis Pulmonalis	-	-	5
Pleurodyne	-	-	2
Hæmoptoe	-	-	1
Hydrothorax	-	-	3
Ascites	-	-	5
Cephalalgia	-	-	3
Apoplexy	-	-	2
Hemiplegia	-	-	3
Epilepsy	-	-	1
Vertigo	-	-	4
Epistaxis	-	-	3
Dyspepsia	-	-	6
Vomitus	-	-	2
Gastrodynia	-	-	8
Enterodynia	-	-	6
Amenorrhœa	-	-	4
Menorrhagia difficilis	-	-	2
Chlorosis	-	-	3
Hæmorrhoids	-	-	2
Calculus	-	-	1
Dysuria	-	-	6
Fluor albus	-	-	7
Scrophula	-	-	5
Hysteria	-	-	3
Palpitatio	-	-	2
Hypochondriasis	-	-	3
Chronic Rheumatism	-	-	11
Gout	-	-	1
PUERPERAL DISEASES.		No. of Cases.	
Dolores post partum	-	-	3
Enuresis	-	-	1
Mastrodynia	-	-	8
Abcessus Mammarum	-	-	2
INFANTILE DISEASES.		No. of Cases.	
Ophthalmia	-	-	3
Ophthalmia purulenta	-	-	2
Aphthæ	-	-	9
Convulsio	-	-	2
Tooth rash	-	-	2
Rachitis	-	-	2

The measles which have lately occurred, have proved a slight disease, so that in some instances the patient has hardly required any medical assistance. The fever has been very inconsiderable and the different catarrhal symptoms have been just sufficient to characterize the disease. The eruption has made its appearance at the time and has gradually disappeared, in some cases, without leaving any considerable degree of pneumonic affection. This termination does not always take place in the disease, when it is in other respects favourable; so that a caution is necessary against too soon taking it for granted, that all consequences of the disease are over, when it has gone through its regular stages. It has sometimes been observed that, where the disease has been of the milder kind, the succeeding symptoms of the inflammatory and pneumonic affection have been very severe, and have produced consequences that have ultimately proved fatal.

In the treatment of this disease the antiphlogistic plan must be observed. In some cases the free use of the lancet has been necessary; though in others this necessity has been superseded by administering the cooling purgatives and antimonial remedies, and observing a strictly antiphlogistic regimen. The cough may be palliated by demulcent remedies, to which, if there be not much fever, opiates may be added. Where the use of the lancet has been dispensed with, the application of leeches to the chest has sometimes been found an expedient practice, and a blister applied to the sternum has relieved under the prevalence of cough and difficult respiration.

Aphthæ in children have lately been more than usually prevalent, and in some cases, have proved very obstinate. This disorder is very common, and very well known by those who have the care of infants. It appears on the lips, the tongue, and different parts of the fauces, in little white specks; which in some cases unite so closely as to form a kind of crust, covering the whole inside of the mouth and throat.

The first crop is sometimes succeeded by a second: this, though it may sometimes take place in the natural course of the disease, is often occasioned by an early and injudicious attempt to remove the crust by some topical applications. To keep the bowels open by gentle laxatives, and to correct the acidity which frequently prevails, by the testaceous powders, is perhaps the most proper plan of treatment.

Diseases admitted as In and Out-Patients under the care of the Physicians of the Westminster Hospital, from the 20th of June to the 20th of July.

Typhus	-	-	-	1	Gastrodynia	-	-	5
Synochus	-	-	-	7	Hooping Cough	-	-	1
Hepatitis	-	-	-	1	Hypochondriasis	-	-	3
Measles	-	-	-	1	Hysteria	-	-	2
Amenorrhœa	-	-	-	4	Hydrocephalus	-	-	1
Asthma	-	-	-	2	Impetigo	-	-	2
Asthma	-	-	-	1	Itch	-	-	7
Colic	-	-	-	1	Jaundice	-	-	1
Cough	-	-	-	8	Leucorrhœa	-	-	1
Diarrhœa	-	-	-	1	Phthisis	-	-	3
Dysuria	-	-	-	1	Quinzey	-	-	1
Dyspepsia	-	-	-	3	Rheumatism	-	-	12
Dysentery	-	-	-	2	Struma	-	-	2
Enterodynia	-	-	-	3	Urticaria	-	-	1
Erysipelas	-	-	-	1	Vomiting	-	-	1

As pectoral complaints, tending to phthisis pulmonalis, have been very frequent during the last and the preceeding month, trials have been made of the lichen Icelandicus. An ounce is boiled in a pint and a half of water
down

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down to a pint; and two ounces of this decoction are taken three times a day. It does not appear to possess any antiphthical virtues superior to other vegetable mucilages, but it fits pleasantly on the stomach, and is gently laxative, if not boiled too long.

T. B.

List of Diseases from the 20th of June to the 20th of July; being the Result of the Public and Private Practice of a Physician at the West End of the Town.

ACUTE DISEASES.		No. of Cases.	
	No. of Cases.		No. of Cases.
Scarlatina Anginosa	- - - 7	Melancholia	- - - 3
Measles	- - - 6	Chorea	- - - 1
Small-pox	- - - 2	Hysteria	- - - 1
Chicken-pox	- - - 1	Diarrhoea & Bilioous vomiting	18
Hooping-cough	- - - 2	Dyspepsia	- - - 11
Contagious malignant Fever	3	Gastrodynia	- - - 10
Acute Rheumatism	- - - 7	Enterodynia	- - - 6
Catarrh	- - - 5	Devonshire Colic	- - - 2
Ophthalmia	- - - 3	Chlorosis and Amenorrhœa	4
Inflammatory Sore-throat	- 3	Menorrhagia	- - - 5
Aphthous Sore-throat	- - - 4	Abortus	- - - 2
Pneumonic Inflammation	- - - 1	Fluor Albus	- - - 5
Inflammation of the Bowels	- 2	Dysfury	- - - 3
Peritoneal Inflammation	- - - 1	Renal Ischuria	- - - 7
Hæmorrhagy from the Bowels	2	Enuresis	- - - 1
Hæmorrhagy from the Lungs	7	Tabes Mesenterica	- - - 6
Renal Hæmorrhagy	- - - 1	Dropsy	- - - 9
Epistaxis	- - - 2	Scrofula	- - - 5
Synochus, or Summer-fever	6	Worms	- - - 3
Child-bed and Milk-fever	3	Rickets	- - - 3
Febrile Diseases of Infants	9	Jaundice	- - - 4
Hectica	- - - 6	Scirrhus of the Liver	- - - 1
		Scirrhus of the Uterus	- - - 1
		Stone and Gravel	- - - 3
		Itch and Prurigo	- - - 7
		Lepra	- - - 1
		Scaly Tetter	- - - 2
		Lichen	- - - 2
		Impetigo	- - - 1
		Eczema	- - - 1
		Ecthyma	- - - 3
		Porriago	- - - 2
		Acne	- - - 2

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you think the history of the following cases not unsuitable to the design of your very useful publication, I beg the favour of you to insert it.

I am, Gentlemen,

Your very humble Servant,

July 6th, 1799.

THOMAS DENMAN.

CASE I.—In July, 1798, I was desired to visit a lady, of whose case I received this account:—

On June the 10th, she had been delivered of a dead child, between the seventh and eighth month of her pregnancy, when she suffered very acute pain in the extraction of the *placenta*, which was thought necessary. For several days previous to her delivery she had a considerable degree of fever, and much general uneasiness over the *abdomen*, for which she was bled, and took some cooling and quieting medicines. On the 12th (the second day after her delivery), she had a strong and violent rigor, succeeded by very severe pain in her left side, near the spine of the *ilium*, and fever, which continued for several days, when her milk (before secreted) entirely disappeared.

Though the pain and fever were abated, they never entirely left her; and after another rigor on the 19th, with an increase of fever and pain in the part first affected, her friends were alarmed, and a physician of eminence was desired to see her. He prescribed what the situation and circumstances of the patient seemed to require, and she was much relieved. There were, however, frequent exacerbations of fever; the pain of which she originally complained never entirely left her, and was sometimes violent. It was now perceived she had no power of moving her left leg or thigh, and she herself was sensible of a deep-seated swelling on the left side of the *abdomen*, though it could not be discovered by her attendants. A blister was applied to the whole of the pained side, and after some days farther attendance, the physician withdrew, recommending her to go into the country, and encouraging her to hope that, as she recovered her strength, her complaints would leave her. She was also advised to use as much exercise as she could, and accordingly attempted every day to walk with a crutch, and the help of her nurse; but every attempt gave her excruciating pain, and she was daily sensible of losing, instead of gaining strength.

I first saw her on the 28th of July. As there was an evident fulness on the left side of the *abdomen*, with much pain on pressure, loss of appetite, and other symptoms of fever, from some degree of which she was, in fact, never entirely free, I directed three or four leeches to be applied to the part affected, and to be repeated every other day, and such medicines as were likely to abate the fever, to keep the bowels gently open, and to moderate the pain. She was somewhat relieved by these means, and as she was very weak, I tried the *bark*, and some other tonic medicines, from which she did not apparently receive any benefit. From the contraction and wasting of the limb, and from the other circumstances before recited, thinking it probable that an abscess had begun to be formed in some part of the cavity of the *abdomen*, I requested to have a consultation, and Dr. BAILLIE was called in. After a mature deliberation on all the preceding circumstances, and the present state of the patient, it seemed most reasonable to think that an abscess was forming in the *psoas* muscle. Small doses of *cicuta* in the saline draughts were prescribed, and a soft plaister with *opium* was applied to the side; the case of the patient seeming to admit of little other relief than some alleviation of her suffering. In the middle of *August* she returned to her house in town, not in any respect amended in her general health, and she suffered more from her local complaints.

In a few days after her arrival in town, the pain being much increased, she went into the warm bath, and on the following day she was suddenly relieved by discharging a very large quantity of purulent matter, mixed with her urine. This was considered as a proof that an abscess had been formed, and discharged into the bladder, probably by means of an adhesion which had taken place, and a subsequent communication between this and the part first affected.

She continued to go into the warm bath for a few days, but suspecting that she was weakened, and feeling herself very much fatigued by it, she relinquished it altogether. At this time her medicines were changed for some of the milder turpentine, in small doses, and still suffering considerable pain, opiates were given, and repeated as the case required.

When there was the greatest quantity of purulent matter discharged with the urine, and sometimes I think there could not have been less than four ounces at a single evacuation, she suffered the least pain; but when there was a suspension of the discharge, the pain was always most severe.

In the beginning of September, a swelling of a considerable size, with an evident fluctuation in it, was discovered on the inside of the thigh, without any appearance of inflammation or redness of the skin, as if the fluctuating
matter

matter had been formed there; and, by a careful examination, the course by which the fluid had descended from the groin to the thigh, could be readily traced. The swelling gradually descended till it came very near the ham, varying in size, according to the position of the limb and body, and the patient thought she could distinctly perceive both the descent and rise of the fluid.

The night-sweats, and other hectic symptoms, were now extreme; but, after a trial of the bark, and other medicines of that class, which disagreed, she for many weeks took no medicine whatever, except small doses of *opium*, when the pain was violent, and some gentle laxatives when she was costive. She was allowed to drink porter at her meals, and at any other time, without restraint, when she wished for it, and always considered herself not only supported, but very much refreshed by its use.

In October she kept her bed altogether, unable to move, or help herself in any position, and frequently suffering much pain. I then proposed a consultation with Mr. CLINE, the surgeon of the family, to consider the propriety or expediency of making an opening in the tumour in the thigh, and by giving it an inferior vent, to prevent the matter from returning into the *abdomen*. Mr. Cline did not then think it justifiable to make an opening in the tumour, and I readily acquiesced in his opinion.

At the latter end of this month, she was reduced to a state of extreme weakness, and exceedingly emaciated, but her appetite, which had never entirely left her, now began to improve. The tumour in the thigh daily lessened, and soon disappeared altogether; as did the quantity of matter discharged with the urine, till that also entirely ceased. In November she frequently voided small quantities of blood with her stools, and at the latter end of that month her health and strength were considerably improved. There was also about this time a return of some power of moving her limb; she soon became able to walk with crutches, the infirm leg being supported in a stirrup; and she had a return of the *menfes*, which had not before appeared since the time of her delivery.

On the 20th of December she was lifted into the coach for the benefit of taking the air, and her health might at this time be said to be restored, as she had no complaint, and though weak and emaciated, was every day sensible of amendment.

In the beginning of the year she again proved with child, and went on to the full period of pregnancy, when she was safely delivered of a healthy boy; having recovered before the time of her delivery the perfect use of her

her limb. She now walks, and performs all the offices of life with her accustomed ease, and has not the least remaining token of the complaint from which she had so severely suffered.

CASE II.—The following statement of the case of a lady, was given me by Mr. Thomas, a very respectable surgeon at *Tunbridge Wells*; who had attended her from the commencement of her illness.

This lady, who had had several children, was brought to bed in *January*, 1798; and had perfectly recovered her health. She menstruated regularly till the following *June*, when she became sensible of a pain in the right side of the *abdomen*, near the groin, which, though not violent, prevented her from lying with ease, or sleeping on that side. About the middle of *January*, 1799, she was suddenly seized with a violent pain in her bowels, tension of the *abdomen*, and much soreness on pressure, accompanied with vomiting, constipation, and frequent faintings. These complaints were relieved chiefly by glysters and gently purgative medicines, but not entirely removed without many repetitions of them. Before this attack, she had been much weakened by profuse discharges of blood from the *uterus*, and about ten days after, she suffered very violent pain in the lowest part of the back, seemingly near the extremity of the *sacrum*, which joins the *os coccygis*, extending to the loins and across to the hips, especially the right, and down that thigh. The slightest pressure on the *sacrum*, or hip, brought on excruciating pain in all the neighbouring parts, which continued for several minutes after the pressure was removed. This pain was considered as the *sciatica*, and it was relieved by the warm bath, and the occasional use of opiates. By a return of uterine hemorrhage, every six or eight days, together with loss of appetite and want of rest, she became extremely weak, irritable, and emaciated. On every return of uterine hemorrhage, the pains in the back were much increased, as they also were by the evacuation of a costive stool, for which reason glysters were daily injected. She never had much difficulty in voiding her urine, but frequent inclination to do it; yet there never was in it any distempered appearance.

About the middle of *February*, she could bear to be turned from her back to her side, but at those times she felt as if some heavy substance was contained in the *abdomen*, which shifted its place as she was turned. After a confinement of six weeks to her bed, the painful symptoms were mitigated, she was able to sit in a chair, with her feet raised high and her knees drawn up, but she was soon obliged by the pain in her back, to return to a recumbent position; nor was she able to suffer her right leg to approach the ground or bear the least weight upon it.

Her

Her health and strength however gradually improved, and in *March* she was able to move and walk a little, but instead of her former complaints, there was great tension and pain above the *ossa pubis*, and the whole hypogastric region was full and hard, but not sore to the touch, except on the right side, where the hardness was first perceived. One day about this time, while she was in the warm-bath, she discovered a large and hard tumour, extending to the right side of the navel, the increase of which was so rapid, that in the course of a few days it occupied the whole *abdomen*. She was then freed from pain in all the parts contained in the *pelvis*, could turn herself in bed, and lie on either side, and not only move her legs, but walk much better. She frequently after this had slight shivering fits, and a sense of coldness down her back, followed by restlessness and feverish heat, especially in her hands and feet in the evening, which went off with a free perspiration towards morning. Her pulse was at all times very quick.

Though one or more stools had been regularly procured every day, an immense quantity of hardened faeces, of a large volume, were now discharged for three or four successive days, by which her size was much lessened. She was soon after able to bear a journey to *London*, her friends being solicitous that the nature of her complaint should be ascertained, as there had been various opinions and representations made of it, by different gentlemen who had seen her in the country.

On Sunday, *March* 31st, I visited this lady, and as it seemed of principal importance to discover in the first place, the seat and nature of her disease, it was necessary to be particular in my inquiries and examination. The whole *abdomen* was distended by a circumscribed tumour, evidently connected with, and springing from the right side, near the groin, thence extending across, and high up in the *abdomen*. This tumour, though not perfectly uniform over its surface, was distinctly circumscribed, and I thought I could perceive an obscure fluctuation in it. I could also feel an angle of the tumour in the posterior part of the *pelvis*, by which the *os uteri* was projected so high, and so far forwards, as to be almost beyond my reach, as is the case in a retroversion of the *uterus*. I could also ascertain that she was not pregnant. I did not therefore hesitate to give my opinion, that it was a dropsy of the ovarium; and by supposing this, early in the disease, to have dropped low down in the *pelvis*, and, afterwards to have risen according to its increase, all the symptoms which had occurred in the course of the disease, could be satisfactorily explained.

Having represented my opinion to the patient and her friends, though I could give but little hope of the disease being cured, I freed them from the fear and solicitude of any immediate danger.

The following draught was the only medicine I advised.

R γ Flor. Chamæmel. pulv. gr. xv.
 Rad. Rhei pulv. gr. v
 — Zingiber. pulv. gr. iij.
 Aqu. Ment. fativ. unc. ij m. f. Haustus
 Sumat ter quottidie.

On the following day, she informed me that after suffering considerable pain in the bowels, she had had four or five copious motions, and that after every motion, she was sensible of her size decreasing. The motions were unusually offensive, and, before they came away, the desire to expel them was unnaturally urgent and painful. On examining them, I found that they almost wholly consisted of a gelatinous fluid, with many streaks of blood, and with little or no mixture of fæces.

The same medicines were repeated.

On *Tuesday*, after several other motions of the same kind, the distention of the *abdomen* was lessened more than one half, and instead of feeling weakened by the evacuations, the patient felt herself very much relieved, and cheered with the prospect of a speedy recovery. She took a sufficient quantity of nourishment, and continued the same medicine.

On *Wednesday*, I had nearly the same account of the number of motions, and of the gradual decrease of the swelling of the *abdomen*, which was now in fact wholly gone, except that I could feel the small tumour formed by the cyst, in which the fluid had been contained.

On examining this day *per vaginam*, the *os uteri* was found to be descended into its proper situation, and no tumour whatever remained in the cavity of the *pelvis*. The patient in short felt, and considered herself as well, in which sentiment I encouraged her; concluding in my own mind, that, in consequence of preceding inflammation, an adhesion had taken place between the cyst of the tumour, and some part of the intestine, probably the *rectum*, the adhering portion of the bowel had given way, and, by that opening, the contents of the tumour had been evacuated.

At my request this patient stayed in town for a month, at the end of which time I saw, and examined her again; but I should not then, either from the state of her health, or any thing I could discover, have suspected her ever to have suffered from any such complaint as that I have been describing.

OLD BURLINGTON-STREET,

July 6, 1799.

FOR

FOR THE MEDICAL AND PHYSICAL JOURNAL.

Three Cases of Inoculation with the Variolæ Vaccinæ.

[Communicated by R. REDFEARN, M. D. Lynn, Norfolk.]

CASE I.

ON the 20th of March, 1799, a boy named RIPPEN, aged three years and a half, being rather of a gross habit of body, was inoculated under my direction by Mr. CRAWFORTH, jun. surgeon, with vaccine matter, which I had received the day before from Dr. PEARSON, of Leicester-square, London. A small incision was made upon the left arm, in the usual place of inoculation for the variolous infection; into this was inserted a piece of thread, thoroughly impregnated with the aforesaid matter, moistened with steam, and secured in a proper manner with sticking-plaster, and also a bandage to prevent its removal.

Monday, March 25th, being the sixth day after inoculation, upon removing the bandage and sticking-plaster from the incision, it appeared to be elevated, and in a state of inflammation, attended with small irritated eminences in its vicinity; but no constitutional illness from this local action had hitherto supervened. However, the following day, being the seventh after inoculation, upon re-examining the inoculated part, the inflammation and swelling were found to be much increased. A small flat vesication was also observed in the centre of the inflamed part, the boy being now seized with fever, viz. rigors, flushings of the face, quick pulse, head-ach, skin hot and dry, and accompanied with considerable languor and drowsiness. Those febrile symptoms continued during the four following days (the 27th, 28th, 29th, and 30th of March), being eleven days after inoculation, and five from the commencement of the fever. At this period, an eruption appeared upon the face, hands, and back, although not more than forty pustules were found upon the whole surface of the body.

Monday, April 1st (being the thirteenth day), the eruption had increased in size, but not in quantity. On the appearance of the pustules, the fever subsided, and two or three very fine circular, elevated, flat pustules were also observed near the inoculated part, exhibiting to the eye so beautiful a polish, that a piece of thread was thoroughly impregnated with matter taken from them, and reserved for future inoculation.

Friday, April 5th (the seventeenth day), the eruption in many parts of the body seemed to be dying away, and a polished dark brown spot was visible in the middle of the pustules. The inoculated part was much contracted in
size,

24 *Dr. Redfearn, on Cases of Inoculation with the Variolæ Vaccinæ.*

size, and a flat brown incrustation was observed in its centre. In all other respects the boy appeared to be perfectly well.

CASE II.—A girl, aged eleven months, labouring under dentition, unweaned, and rather of a delicate conformation, was inoculated in a similar way as the preceding patient, on the 20th of March, and with a piece of the same thread, impregnated with vaccine matter, as before described.

Sixth day, Monday, March the 25th, the inoculated part was a little inflamed and tumid: no pain of the axilla, and free from every symptom of constitutional indisposition.

The eighth day, Wednesday, March 27th, the inflammation upon the inoculated part was rather more increased, comparatively with its appearance, than on the sixth, and some slight febrile action was also obviously manifest.

On the eleventh day, March 30th, an eruption appeared upon the face, neck, hands and legs, extending itself also over the whole surface of the body, and the patient was extremely restless and uneasy.

Sixteenth day, April 4th, the fever vanished soon after the commencement of the eruption. The latter now assumed a pustular form, and was perfectly analogous to the variolous disease. The palpebræ were quite closed, the eruption being in every respect as copious as generally happens in the uninoculated small-pox.

Seventeenth day, April 5th, the pustules were advancing rapidly to a state of suppuration, and appeared upon many parts of the body to be very circular, prominent, and full of matter. The palpebræ were not so much closed as on the preceding day.

Twentieth day, Monday, April 8th, on many parts of the body the pustules were dying away, particularly upon the face; and a dark, brownish spot, of a horny contexture, and glossy hue, was observable upon their apex. They were, indeed, so remarkably distinct and beautiful on the lower extremities, that I was induced to have a drawing taken of them by Mr. BUTCHER, of Yarmouth, an eminent portrait and landscape-painter.

CASE III.—Monday, April 4th, a girl of the name of PARTRIDGE, aged three years and a half, and of a full habit of body, was inoculated with matter taken from the boy, Ripper, on the thirteenth day of the disease, as has been already mentioned in the first case.

On the sixth day after inoculation (April 6th), there appeared a redness round the edges of the incision upon the inoculated arm, but no elevation or swelling

swelling was observable. The patient remained free from every symptom of fever.

Seventh day, April 7th; the edges of the inoculated part were rather more inflamed than on the preceding day. The patient complained of head-ach, chilliness, and flushings, with other symptoms of fever, manifestly arising from absorption of vaccine matter into the system, from the inoculated part. No pain of the axilla.

Tenth day, April 10th, the fever had continued since the seventh day, but in so slight a degree, that the child ran about the house as usual, making little or no complaint. However, at this period of the disease, being ten days after inoculation, and four from the commencement of the fever, a few eruptive spots were observed upon the face and hands, not more in number than five or six. When this took place, the fever almost immediately subsided; these spots made little progress in size, and died away in the course of a few days, having a darkish scab in their centre, as they evidently had contained nothing but lymph.

The three preceding cases of the cow-pox have been inoculated a second time with variolous matter, taken from the human system, and a greater quantity was introduced than is usually done on such occasions: but no morbid action, either local or general, ever commenced. Their arms were examined with the greatest attention on the seventh, eighth, tenth, and twelfth days after the variolous matter was inserted, yet the least discoloration of the incisions could not be perceived; and on the last-mentioned day they appeared to be quite well, and the incisions were perfectly healed.

Remarks on the Cow-Pox.

[Communicated by Mr. JOHN RING, Member of the Corporation of Surgeons.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE introduction of the cow-pox into practice, as a substitute for the small-pox, at present engages a considerable share of the attention of medical men. Permit me, therefore, to insert in your very valuable publication, a few remarks on that disease.

Great praise is due to Dr. JENNER, for this improvement; and while I join in paying a just tribute of applause to his merit, I sincerely hope, that

that the preventive he proposes will prove successful, and at length exterminate one of the most dreadful scourges of the human race.

Of those whom I have inoculated, or seen inoculated, with vaccine matter, few have had any considerable eruption, and those few were inoculated with matter, which there is reason to believe was not taken from the original pustule on the arm; a circumstance which Dr. WOODVILLE has proved to be of great consequence in this disease.—The rest scarcely appeared to labour under the least indisposition, except what arose from the inflammation of the arm; and even that was not worse than in cases of inoculation with variolous matter.

I have seen, at the Medical Society, a letter which was received by Dr. Jenner from a surgeon in the country, giving an account of his having inoculated above a hundred persons, with vaccine matter sent him by Dr. Jenner; and that only two or three had any pustules, which were few, and confined to the arm.

That eruptions, in this disease, are not peculiar to the metropolis, as Dr. Jenner supposes, other instances prove, besides those recorded by Dr. Woodville. The only two patients inoculated by me, who had many pustules, resided at Kensington till after the eruption had taken place; and the only one besides, whom I have seen, at Highbury place. A physician of Bath informed me, that he had inoculated two, both of whom had eruptions; and it is a little remarkable, that the matter of all the patients above mentioned came from a practitioner, who was in the habit of taking it from the secondary pustules; a circumstance which I have carefully avoided.

The success of the practice has, on the whole, been such as to gratify every reasonable expectation; especially if allowance be made for the error of taking the matter from an improper pustule; an error easy to be avoided in future. Had all the patients inoculated with vaccine matter at the Small-pox Hospital, by Dr. Woodville, been in the house, and under his immediate care, it is probable his first report would have been still more favourable: but even from that, I should not hesitate to prefer the vaccine to the variolous disease.

In the short time which has elapsed since I began to write these remarks, I have heard of two families, plunged in the deepest affliction by the inoculated small-pox; while, on the other hand, only one solitary instance is on record, of the cow-pox proving fatal; and we have reason to believe, from Dr. Woodville's subsequent report, that even that unfortunate event would not have happened, if the disease had then been as well understood as it is at present. Be that as it may, I hope no practitioner will in future inoculate

late with any vaccine matter but what is taken from the original pustule, unless he thinks proper to inoculate himself. I deem it also a duty, in this age of experiment, to caution medical men not wantonly to expose the lives of their fellow creatures to any unnecessary danger; and not to inoculate with one kind of matter, till another has produced its final effect.

That two morbid actions cannot take place in the body at the same time, may pass uncontradicted in the schools, but not in the field of experience. One case of a complication of the small-pox and the measles, was read before the Medical Society; and others I could prove by the most respectable testimony.

DOCTOR MOSELEY, in his treatise on Sugar, lately published, expresses a suspicion, that the cow-pox, can only render the habit insusceptible of the small-pox "*for a time.*"—This is refuted by volumes of evidence, and a cloud of witnesses.—He says, "Inoculation has disarmed the small-pox of its terrors."—This is refuted by the whole world.

He asserts, that "accidents in the inoculated small-pox are uncommon." Would to God experience did not disprove that assertion, and convince practitioners in general, that no care, no skill ever did, or ever can, tame that dreadful hydra—the small-pox!

He tells us, "We all know, from experience, that disease, properly treated, leaves nothing after it injurious to the constitution."—That we do not all know it, is certain: if Dr. Moseley has been so happy as to discover the secret, I hope his humanity will prompt him to disclose it.

It is well known, that the small-pox, whether natural or insidious, is one of the most common causes of scrofula; and my experience leads me to believe, that the absurd custom of giving cathartics after this and other eruptive disorders, by debilitating the habit, augments their tendency to produce that horrid disease.

Dr. Moseley tells us, "he wishes not to discourage inquiry," and admits, that "the object well deserves it;" yet, with some degree of inconsistency, he adds, that he wishes "to guard parents against suffering their children becoming *victims to experiment.*"—My wishes are not less ardent than his:—he wishes to prevent children from becoming victims to *experiment*; I wish to prevent them from becoming *victims to the small-pox.*

Dr. Moseley intended his eccentric remarks, which are introduced rather mal-a-propos in a Treatise on Sugar, as an antidote for what he calls the *Cow-mania.*—He himself seems to labour under the *Cow-phobia.*—He asks, if
any

appears in no respect inferior to the preceding ones: it contains about forty articles of original communications, among which the following appeared to us particularly connected with practical utility:—

I. A case of hydrophobia, by WILLIAM GAITSKELL, surgeon.

The internal and external use of oil was tried in this case, without success: the patient, however, is said to have lived to the eighth day from the appearance of hydrophobia, which is nearly double the usual time.

V. This article contains an account of the efficacy of the Zanthoxylon, both externally and internally applied.

The following account of the tree and its uses is supplied by Mr. W. CHAMBERLAINE, surgeon, F.M.S. and secretary to the Medical Society:—

“ A botanical account of the Zanthoxylon, with an accurate drawing of it, and the history of several cases in which it had succeeded beyond expectation, Dr. Harris assures me, he committed to the care of a confidential friend, to be delivered to me for the purpose of being laid before the Medical Society; but the ship by which these articles were sent was captured.

“ The part used is a powder from the bark of the root of a tree, which, from specimens of the root now in my possession, and from every other document, appears to be that called Prickly Yellow Wood, or Yellow Hercules, much used for making the heading of sugar hogsheds, for bedsteads, and many other purposes in Jamaica; it is a tall, straight tree, easily distinguishable from all others, in appearance not greatly dissimilar to our ash; the bark of the trunk is thickly beset with prickles, which, in the young trees, are pointed, but obtuse in the more aged. The wood is of a very bright yellow colour, whence its name *Zanthoxylon*. The flowers, which bear some resemblance to the cassia fistula, are succeeded by a pod, flattish, and not much unlike in shape and size to a man's thumb; this pod is at first green, then red, and lastly turns black when ripe, and contains three or four compressed seeds.

“ It is called by BROWNE*, *Zanthoxylum foliis oblongis obovatis pinnatis et leviter crenatis; floribus racemosis, caudice spinoso, ligno subcroceo.*

“ Dr. Harris, by a former ship, sent me a small box of the powder, which I have had opportunities of trying in three or four cases of very bad ulcers of the legs. In the first I had attended the patient from January to July, with very little success; but, on changing the dressings for the powder of Zanthoxylon, an almost immediate alteration took place; the wound was quite healed up by the end of September, and the patient has continued ever since perfectly well.

“ My

* Nat. Hist. Jamaica, Sect. 4. *Pentandria Pentagynia.*

“ My second patient had been in an hospital six weeks in May and June, and was discharged cured, but the ulcer soon after broke out again, and continued to increase to the extent of five inches and a half in length, and four in breadth, which were its dimensions when I was first called to look at it; I ordered that it should be fomented, and after washing it with milk and water, sprinkled the powder liberally all over the surface of the ulcer, and covered the whole with plantain leaves, rejecting all greasy ointments. This was persisted in twice a day, and a cataplasm of bread and milk laid over all, at each dressing. Internally she took hydrarg. cum sulph. et nitr. āā gr. xv. bis die. In a week the ulcer was less than half its former size, looked perfectly clean, and put on every appearance that could be wished for, and soon became perfectly well.

“ A poor woman had one of the worst ulcers I ever saw; she was very much reduced through want of sleep, from the excruciating pain caused by the ulcer, which she suffered night and day, without intermission. I gave her some of the Zanthoxylon powder, and instructed her how to use it. In five days she walked to my house, and was able to come every morning to be dressed. I gave her no medicines, and enjoined no regimen, but the leg was perfectly healed by the application of the Zanthoxylon alone, in a month, and she now follows her business of a laundress, no vestige of any ulcer remaining, except a little redness.”

On the Efficacy of the Zanthoxylon.

By THOMAS HENEY, M. D. of *St. David's*, in the *Island of Jamaica*.

[Communicated by JOHN HARRIS, M. D. of Kingston, Jamaica, C. M. S.]

Read JANUARY 20th, 1794.

To Dr. HARRIS.

“ DEAR SIR,

St. David's, Sept. 12, 1792.

“ I REGRET that the limits of a letter will not give you a minute account of the success of my experiments with the Zanthoxylon. The first intimation of its virtues I owe to you; and at the same time witnessed its surprising efficacy in the case of Mr. G——n's hæmatocèle. However strong my reliance on your account of it at that period, and on the conviction of my own senses in Mr. G——n's case, yet the deceptions practised in the world by the exaggerated accounts of the *cicuta*, the *flammula jovis*, the *arnica*, the *digitalis purpurea*, and others, by authors of no inconsiderable name in the medical world, had infused so large a portion of the sceptic through my medical creed, that I determined nothing less than repeated *autopsia* should convince me. I therefore instituted my experiments with as unprejudiced and candid a mind as ever a son of Hippocrates did. I must sincerely own, I lost sight of the warning of that great master, “ Experimentum periculosum; ” but never of the preceding text, “ Judicium difficile,” until, by repeated experience, I had the fullest conviction of its efficacy in numberless cases, and principally those I shall mention.

“ You

“ You well know how difficult it is to bring the foul ulcers, to which the unhappy children of Africa are in this climate subject, to such a condition as promises a speedy cure, particularly such as are attended with loss of substance, and how frequently we are obliged to have recourse to the unpleasant use of escharotics, to remove those fungous excrescences which the habitual nastiness of the Negroes, and the irritation of insects (which in tropical countries inhabit every broken particle of animal and vegetable substances), produce. To remedy the inconveniences arising from these causes, I determined to make trial of the Zanthoxylon, in manner and form as we had done in Mr. G——n’s case. I therefore laid aside the tinctures of myrrh and guaiacum, Hungary water, phagædenic water, lime water, and every other usual application, and commenced the use of the Zanthoxylon, by bathing the ulcers with the decoction of that bark, and intermixing it with the dressings.

“ For the purpose of more minutely ascertaining its efficacy, I confined the patients thus treated in the same place, with others whose ulcers were of the same date and condition, and whom I treated with the lotions, dressings, and poultices in common use.

“ In addition to the external use of the Zanthoxylon, I ordered a couple of ounces of its bark to be boiled with the sarsaparilla, in lieu of the lignum vitæ, for their drink.

“ The ulcers of my Zanthoxylon patients, in the course of a few days, invariably threw off the sloughs, and other foul appearances, and exhibited healthy and well-coloured granulations beneath, discharging laudable and well-conditioned pus. Their co-patients, whether treated with mild emollient applications, or with stimulant dressings, exhibited in their several situations such slow appearances of amendment, as finally urged me to use the Zanthoxylon to all.

“ A Negro woman; who had been affected for many years with several large phagædenic ulcers, from the mid-thigh to the ankle, was put under my care. A fetid, sanious discharge, together with fungous, and almost gangrenous excrescences, had given to the ulcerated surface so horrid an appearance and stench, as was highly disgusting to every one who saw or approached it, and intolerable to the wretched patient herself.

“ For six weeks after the first inspection of the ulcers, escharotics, warm stimulating dressings, tight bandages, were tried to no purpose. In place of these I commenced the use of the Zanthoxylon, by bathing the sores with the decoction, intermixing the powdered bark in the dressings, and giving the bark in decoction, in the place and proportion of the lignum guaiacum; the events answered my expectations, the discharge soon acquired the condition of laudable pus; well-coloured granulations, in the happiest form, appeared, and saturnine ointments finally effected the cure in eight weeks. Numberless were the experiments made by me and my assistant subsequent to this, in similar ulcers, with equal success.

In every instance, however, of venereal taint in yaws, or crab yaws, I found it ineffectual, prior to the use of mercurials.

“ I some time ago mentioned to you a few successful experiments, made with a view to determine its anti-febrile qualities, by administering it in the same scope and indication as the Peruvian bark. Repeated trials have, however, since that period, convinced me, it is much more inactive than that celebrated febrifuge, unless its virtues are sharpened by the addition of some neutral salt or alkaline; then it really exhibits virtues little inferior to the China-China, and is unattended with the inconveniences usually experienced from the latter. This I account for by supposing its resinous parts to be rendered more readily miscible with the aqueous juices, by the addition of the salt.

“ Another most singular quality the Zanthoxylon possesses in an eminent degree, which I presume you are unacquainted with, and to the knowledge of which I was accidentally led. A short account of the discovery will best explain it, and, at the same time, indirectly argues this salutary plant not to be a native of Jamaica.

“ Mr Crofdale purchased two negro wenches in the beginning of the present year; the younger of whom, at different times since, has been afflicted with a dry belly-ach, or colica pictonum. About two months ago she was seized with it in so dreadful a degree, that every effort to remove the spasmodic constriction of the bowels, and procure some motions, proved ineffectual. To no purpose were emollient fomentations, anodyne, or cathartic glysters, mild and drastic purges, castor oil, and ultimately, blisters to the abdomen, applied. That horrid symptom, a vomiting of the excrements, commenced, and banished every ray of hope. In this situation she desired to have her sister with her, who, on seeing her deplorable condition, signified a wish of giving a nostrum communicated to her by their mother, and employed to cure herself, on a similar occasion, in Africa. I readily complied with the request. In the course of two hours, she returned from the woods with the root and flowers of some plant, pounded together in a calabash. Two spoonfuls of the expressed juice of this she gave her sister twice, at an interval of two hours each. The first effect of this was a tranquil, profound sleep, of twelve hours duration, during which the pulse and breathing gradually returned to the natural state; after this, all sense of pain, and every bad symptom, disappeared, and no other inconvenience did she experience, save debility, and slight soreness, from the passing of the purgative medicine, which came away especially during the course of the following day. The sister was observed to boil the ingredients (after expressing the juice) in a large quantity of water, and give it on the following day as common drink. No reward or menace could induce her to discover the plants, until stratagem brought it to light. We induced another negro to dissemble a similar complaint, and prevailed with the wench to seek for, and prepare the same

cure; in complying with this request, we had her so narrowly watched, as to discover the secret to be the fresh root of the zanthoxylon, in its infant state, intermixed with the saffron-coloured flower of the wild sage; which last I have since found to contribute nothing to its virtues. Having procured some of the sappy and smallest roots of the young trees, and expressed the juice, I began the experiment of its qualities on myself, at tea-spoonful doses. From the first of these, I found no other effects than an unusual flow of spirits. By continuing the dose, drowsiness, nausea, head-ach, and, at length, sleep ensued; from which I however awoke next morning perfectly refreshed, and had three copious easy motions. I preserved some of the juice with rum, and some with syrup. These preparations, as well as the juice, I have frequently since that period administered in complaints of the bowels (so frequent among the African race and their progeny) with every wished-for success. On the estate of Mrs. O'Bryan, an old man of eighty years, was lately seized with convulsive fits every hour, in every character similar to epilepsy, which continued, without intermission, twenty-four hours. To him, on being sent for, I immediately gave a wine-glassful of the juice preserved in rum; the fit which succeeded the first glass was unattended with strong convulsions, and the second was little else than a comatose state; after which, a sound sleep of ten hours removed every appearance of disorder, except lassitude.

“ This last mentioned anti-spasmodic virtue the Zanthoxylon loses by being dried and powdered, its narcotic qualities being dissipated with the moisture of the plant.

“ These are the chief remarks my opportunities and leisure have hitherto enabled me to make on the Zanthoxylon. I shall continue to give it every candid and fair trial, and, from time to time, will send you the results of my experiments. Some other vegetables have fallen under my inspection from negro information, and I have really found much satisfaction from their use. My botanic information is too limited to attempt their description; yet, as soon as I learn it, you shall also know them and their virtues.

“ I remain, dear Sir,

“ Your obliged humble Servant,

“ THOMAS HENEX.”

VIII. Several cases of the lithontriptic power of the muriatic acid, when exhibited in doses of ten to twenty drops or more in a glass of water, three times a day, are given by Mr. COPLAND.

IX. Experiments on the external use of the tartarized antimony, by B. HUTCHINSON, surgeon.

In these experiments Mr. Hutchinson observed, that when the palms of the hands were washed with the solution of emetic tartar, it produced a soporific

nific effect, and increased the secretion of the skin and bladder. The quantity washed in was from five to fifteen grains, at bed-time,

By washing in fifteen grains night and morning, for ten days, a most obstinate tertian was cured, but the patient complained of *constant sickness*, after the second day of using it.

No mention is made of any eruption being produced by it in this instance; in several others the usual eruption is mentioned, and the production of nausea.

XIII. Contains an excellent account of the Harrowgate waters, by Dr. GARNETT, for the analysis of which we are obliged to refer to the volume itself.

(To be continued in our next Number.)

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE discussion of a question, involving in its solution a large portion of the fate of mankind, challenges the attention of every one; and surely the ingenious Dr. BEDDOES is entitled to much applause, for the *industry*, which he has exhibited, in his attempts to obviate the fatality of *phthisis*; we ought not, however, to venerate any opinion, though it spring from brilliancy of talent, unless it possess the solid supports of observation and experiment. For several years, I too have attended closely to the origin, progress, and method of affording relief in *phthisis pulmonalis*. My feelings having been almost daily arrested by the melancholy ravages of this disease, I became anxiously solicitous to alleviate its most distressing symptoms. In the prosecution of my inquiries, I have endeavoured to set aside the influence of every preconceived opinion, and to unfetter myself from the tenets of the schools. I can with confidence assert, that my sole ambition has been, to arrive at a knowledge of the truth. I have to lament much that I have not approached nearer to the object of my pursuit.

It is, however, to be expected, that some additional information upon the subject of *phthisis*, should be the fruit of the now prevailing passion for speculation; and there can be no pretence for saying, that the success of the *old practice* ought to supersede the employment of *new remedies*, in the treatment of a disease, which destroys, annually, *eighty thousand* of the inhabitants of this island. My papers on *phthisis* have long been in a state nearly ready for the press, and I have kept them back, that I might be able to appreciate

appreciate the merit of some of the fashionable medicines: the *Digitalis* ranks high in this list.—Upon the supposed action of *Fox-glove*, I shall make no comment; but merely give a brief detail of a few cases, in which I have lately administered it; and if it be consistent with the plan of your undertaking, I have it in contemplation to furnish your repository with additional cases of *phthisis*. In the execution of this design, I shall give a display of those means, which I have found most effectual, in alleviating, *palliatively* or *radically*, the symptoms of the disease.

I am, Gentlemen,

With respect,

BRADFORD, YORKSHIRE,

July 9th, 1799.

Your's obediently,

GEO. MOSSMAN.

CASE I.

May 19th: J. S. aged 40, previous to his indisposition, was a strong, athletic man. In January last he performed a long journey in a very rainy day, and sat in his wet clothes to a late hour; the following day he was seized with symptoms of *pneumonia*. For a fortnight he refused to have medical aid; at the end of that period, however, he was persuaded to lose some *blood*, and afterwards to take an *emetic*; but without any apparent relief. Since that time he has taken no medicine; he is now in a state of considerable emaciation, and seems approaching to the last stage of *phthisis pulmonalis*. His pulse is about 120; and there is very constantly an exacerbation of fever towards night, accompanied with excessive heat and thirst, till a profuse perspiration taking place about two or three o'clock in the morning, produces a temporary solution of an exquisitely formed *beſtic*; colliquative sweats and diarrhœa, alternate with each other. His appetite still remains pretty good, more especially in the morning. His cough is almost incessant, and is attended with a purulent expectoration. He has frequently had a slight hæmorrhage from his lungs, which was very generally followed by a sensation of much soreness in his chest. He can lie down with ease upon his left side, but if he attempt to lie upon his right side, or his back, he is immediately assailed by a sense of suffocation. I enjoined him to live on *milk and eggs exclusively*; and ordered a large *blister* to be applied to the *sternum*. I also prescribed a grain of the *digitalis* to be taken four times a day, with ten drops of the *barytes muriata*.—When his cough was very teazing, he had continual recourse to the use of the *trochisci glycyrrhizæ cum opio*. For several weeks, he scrupulously adhered to the regimen, and to the plan of treatment above recommended, without any *permanent* advantage; the *blister* only, seemed to relieve the *dyspnœa*, and the *troches* his cough. His pulse, in frequency, became subject to
great

great irregularity; on the same day it often beat from 90 to 130 strokes in the minute. From the time of his taking the *digitalis*, he complained of an unusual heaviness and drowsiness; and in ten days afterwards he felt much nausea, and a tendency to vomit.—These were the only striking phenomena which I could perceive during the exhibition of the medicines already mentioned. The progress of the disease was certainly not arrested for a single day. He is now confined to his bed, and it is probable, that a very short period, indeed, will terminate his sufferings. It ought, however, to be observed, that the repeated application of *blisters*, and the occasional use of the *troches*, have very powerfully assisted in smoothing the passage.

CASE II.

May 21st. C. G. a soldier, aged twenty-one, was seized with symptoms of *pneumonia*, about three months ago. He was with his regiment, and what remedies were employed to procure relief, I know not; but when he became my patient, he laboured under every symptom of a well-marked *phthisis pulmonalis*. He was enjoined the same regimen, and had the same remedies, which are recommended in the preceding case; and with effects, almost precisely similar;—he died about a week ago.

CASE III.

May 25th. M. B. aged thirty, was safely delivered of a healthy child, about Christmas last, and recovered remarkably well. A few weeks afterwards she was seized with symptoms of *pneumonia*; for which she took little or no medicine. Her pulse is 150;—her other symptoms are strongly characteristic of common cases of confirmed *phthisis*. With the exception of *blistering*, I prescribed for her the same remedies which I employed in the two foregoing cases.—A *diarrhœa* occurred previous to the exhibition of any medicine, and continued for a few days, during which, her pulse sunk from 150 to 120; but whether from the effects of the *diarrhœa*, or from her medicines, I cannot say:—the *digitalis* seemed to produce sickness and nausea. She took it very regularly for three weeks; and at the end of that period, finding no relief, she abandoned the idea of recovery, and refused further medical aid. She is since dead.

CASE IV.

May 25th. M. H. aged twenty-two, was seized with a cough, dyspnoea, and pain in the left side, accompanied with a considerable degree of fever. She was then in the fifth month of pregnancy, and employed no means to obtain relief. The symptoms thus neglected, continued to increase, till every symptom of a well-marked *phthisis* was sufficiently apparent. On the 29th of April she was safely delivered of a healthy child.
During

During the first fortnight she appeared to do extremely well; but at the end of that period, every *phthisical* symptom recurred with additional violence, I prescribed as in case the first. She expressed a very strong desire to live, and for several weeks, with much fortitude and much exactness, she scrupulously adhered to the plan recommended to her; but, except that her cough was in some measure relieved by the *troches*, she found no perceptible effect from her medicines.—She is still living.

CASE V.

June 14th. J. M. aged nineteen, of a *phthisical* habit, has been for two years past, occasionally afflicted with a bad cough, accompanied by a purulent expectoration. After raising a heavy weight yesterday, he was suddenly seized with a vomiting of blood. He continued, at intervals, during the evening and night, to discharge blood, sometimes in the form of dark-coloured *coagula*, and sometimes of the appearance of *pure arterial* blood. I saw him to-day at noon, he complained of extreme weakness, of soreness in his chest, and his breathing was rather difficult; his pulse was feeble, and 140. It was not easy to ascertain the quantity of blood lost, but it must have been from two to four pounds. I prescribed the *digitalis*, in the dose of a grain every two hours, followed by a weak solution of *magnesia vitriolata*. After he had taken a few doses of the medicine, the hæmorrhage returned no more. When I saw him last, (a week after the attack) he appeared to be in a state of convalescence.

(To be continued.)

[In laying the following *Memoir* before our Readers, we have not the smallest intention of rendering them any signal information, but they will thereby have an opportunity of comparing the state of Medical Surgery in France, with that of England.]

A Memoir containing Observations on the Medicinal Properties of Oxygen.

By *Cit. FOURNIER*, sen. Surgeon of the First Class, to the Armies of the Republic, First Surgeon to the Military Hospital, and Member of the Society of Medicine of Brussels, and of the Lyceum of Arts at Paris.

(Read to the Medical Society of Paris, the 17th Thermidor, 6th Year.)

OCCIDIT QUI NON SERVAT.

CITIZEN ALYON has rendered an important service to the healing art, in establishing, by authentic experiments, the medicinal properties of oxygen.

The

The author has, with great ingenuity, explained how this principle of animal existence may be usefully employed in different diseases, in the treatment of which, the means of cure formerly employed were mostly disagreeable to the patient, sometimes uncertain, and liable to produce distressing consequences.

He has explained to those who are not entire strangers to chemical processes, that mercury probably acts in venereal affections only by the oxygenation which it acquires in its different preparations, previously to its being administered.

We already know that, under whatever form mercury is employed, it is indebted for its anti-syphilitic virtue, to the oxygen with which it is combined.

But what we are still ignorant of is, how the oxygen alone can counteract the venereal virus, and other diseases, for the cure of which the specific hitherto used was mercury.

Struck with this remarkable fact, announced by ALYON and GIRTANNER, I wished to be convinced of its reality by a series of experiments. Certain of the safety of this medicine, I did not hesitate to introduce it in my practice; and its success has fully answered my expectations.

Among several observations I have selected, I shall lay before the Society a few which will be found interesting.

Citizen L. about 40 years of age, consulted me for relief in pains of the bones, which afflicted him extremely, and prevented him from sleeping. As this man had lived with a woman who was so shockingly affected with the venereal virus, that it had caused her death, I did not doubt that the pains of my patient were the symptoms of this cruel disease. I twice ordered refreshing diluents, and the domestic baths, as preparatives for the mercurial treatment to which I had resolved to submit him. After he had bathed six times, there appeared between the prepuce and the gland two large and deep chancres. The antiphlogistic regimen to the use of which the patient had been accustomed, was probably the reason why the chancres were not attended with great inflammation; but they were nevertheless extremely painful, and gradually increased in size. I prescribed purgatives, and proposed mercurial treatment, to which he obstinately refused to submit, being apprehensive of experiencing the fate of the woman before alluded to, whose life mercury could not save. In another instance, I would have administered the anti-syphilitic robe of LAFFECTEUR, from which I have witnessed astonishing effects, in cases where mercury had proved abortive. But ex-
cited

cited by an ardent desire of trying whether oxygen was really worthy of the estimation in which it was held by Alyon, &c., I took this opportunity of prescribing it. I daily gave the patient a drachm of pure nitric acid in two pounds of water, and he had only taken this drink eight days, when the chancres, which were broke and had produced an ichorous and abundant suppuration, cleansed, became red, and began to cicatrize.

On the twelfth day the chancres disappeared; the patient was then purged. The pains of the bones still continued, and he was as much troubled with them now as formerly. I increased the dose of the acid to a drachm and a half a day: soon after the pains began to diminish, and the patient was able to move his right arm with ease, which he could not do before. His sleep gradually returned, and by the thirtieth day the cure was completed. The patient took a cathartic, and continued the daily use of the nitric lemonade, which had been increased in strength to two drachms in three pounds of water, since the 25th day. He left off drinking it on the thirty-eighth day, when an abundant salivation took place, which was subdued by a purgative, and twice warm bathing. The patient was then perfectly cured, and has since continued in good health.

Citizen G. twenty-four years of age, of a humid and sanguine constitution, after an impure connection, was infected with a virulent gonorrhœa. This was the first accident of that nature he had met with. The local inflammation was considerable, and consequently accompanied with acute pain. I advised him to drink plentifully of dog-grass and marsh-mallow roots; I also bled him freely, and ordered the warm bath. As the discharge was thick, and mixed with blood, and his urine in small quantity, and voided with difficulty, I prescribed pills composed of Venice soap, camphor, nitre, and rhubarb, and also an anodyne emulsion every evening.

These remedies produced the effect I expected; the pains abated, the discharge became abundant, and acquired a proper colour and consistence.

Some time elapsed before the patient called on me again; and either from his inattention to a proper regimen, or from the disease having acquired a more virulent character, he was afflicted with a considerable inflammation in his eyes, accompanied with a great degree of fever. The violence of this symptom, and the sudden disappearance of the gonorrhœal discharge, impressed me with an idea, that his case was venereal. I adopted baths, bleeding, collyria of zinc; plasters made of bruised lintseed, the whites of eggs, and vitriolated zinc, were applied to the parts affected, as also a decoction of dog-grass, acidulated with tartaric of potash and antimony, and one ounce

of sulphat of magnesia to each pot. I also applied eight leeches to the lower eye-lids, which were much swelled.

All these means appeared to have a salutary effect; but I had scarcely began to congratulate myself, when the virus, which before was fixed in the eyes, was suddenly translated to the bend of the right knee, which became swelled and painful. I opposed this new Proteus by vegetable diet, once bleeding, baths, purgatives, and emollient and resolvent cataplasms. The swelling and pain now began to decrease, when a violent thunder-storm, which was approaching, excited the curiosity of the patient, who placed himself at a window, to observe the flashing of the lightning.

This imprudence had nearly cost him his life, for suddenly his ophthalmia re-appeared with greater violence than before. I had recourse to the same general means which I had formerly employed with success, and the inflammation again ceased, but the patient became almost blind. The cornea of each eye was dull, and the iris contracted very little, when opposed to candle-light. I ordered a large vesicatory to be applied to the nape of his neck, with a view to prevent the amaurosis, as well as to cause a discharge of the morbid matter, which again threatened to return to the knee.

I now prescribed oxygen (about this time the oxygen had just taken effect on the patient mentioned in the preceding observation). I gave him four scruples in three pounds of water daily. The discharge from the urethra soon returned, but more moderately than formerly, and the suppuration of the vesicatory continued.

The eighth day after the application of the oxygen, a purgative was given. No other symptoms intervened on the knee, and the ophthalmia assumed a convalescent appearance. The cornea of both eyes still continued rather dull, but the action of the iris was restored. On the twentieth day the ophthalmia was entirely cured, but the eye was painfully affected by light. The running from the urethra, which now resembled semen, announced the destruction of the virus.

At this stage of the disease, the patient was ordered to take another cathartic, which was repeated on the thirtieth day, when I conceived him to be cured. He continued the use of the nitric lemonade till the fortieth day, when it was discontinued, as was also the vesicatory. Several laxatives completed the cure, and for a month the patient has enjoyed a perfect state of health.

At the moment I now write, I attend an officer, who has for several years been afflicted with venereal tetter on his upper lip, nose, and forehead; these

tetters appeared in the form of disgusting pustules, and were exceedingly troublesome. Either in consequence of his natural obstinacy, or by the hardships which attend a soldier's life, the patient had unsuccessfully tried various mercurial and other preparations. He at length applied to me; I advised him to drink the nitric lemonade, made with a drachm of acid to two pounds of water, and directed him to wash the tetters every evening with the oxygenated pomatum, described by Alyon. By this treatment, which was scarcely continued twelve days, two purgatives, and several bathings, the eruptions entirely disappeared, and the patient, supposing himself to be cured, had discontinued the medicines for the last ten days; but I advised him to recommence them, apprehensive that the cure was not yet perfect. I may venture to assert, that he will be completely cured, provided he follows my directions for another fortnight—the time I believe to be indispensable to eradicate so inveterate a virus, which had so long resisted the best combination of remedies.

I have already observed, in several venereal cases, the good effects of oxygen, exhibited as an auxiliary to mercury. Several distinguished practitioners of this city, have made successful trials with this remedy; and one of them informed me of the following interesting fact, which is decisively in favour of oxygen.

A young man twenty-two years of age, was attacked from his infancy with a scorbutic humour (*humeur dartreuse*), over his whole body, his hands and face excepted; and several physicians had unsuccessfully prescribed venesection. The practitioner who communicated this observation to me, after having prepared his patient by general remedies, employed the nitric lemonade, and directed him to rub every evening, a certain part of his body with the oxygenated ointment; after this treatment had been pursued forty days, assisted by purgatives and bathing, the young man was completely cured. Thus has oxygen produced effects in this short lapse of time, which the usual medicines could not accomplish during twenty years.

The following is a fact of a different nature, which is not less interesting:

A very delicate child, tormented with a colic, which produced frequent convulsions, had attained the age of two months, when a severe catarrhal affection deprived its mother of her milk. The infant was fed with spoon-meat, and a variety of panadas which were substituted for its natural aliment. At the end of six days it was seized with hoarseness, which, on account of the frequency, abundance, and crudity of its stools, was deemed alarming. The next day a wet-nurse was sent for, in hopes that human milk would be the most efficacious of all remedies. The diarrhoea continued, and the
child

child did not appear to suffer pain, but seemed more exhausted at every stool. All the usual remedies were administered without effect. Let it suffice to observe, that the assistance of art was not neglected, when my esteemed friend, Professor Кок, aided me with his advice in the treatment of this infant. On the fifth day all our hopes were at an end, and at five o'clock in the evening, the patient was at the last extremity. It had such a copious stool that I thought it would have expired through exhaustion. All the symptoms of death were manifest in its countenance; it could only just breathe; and it passed the night without being able to suck or swallow any thing; it no longer voided urine. The next morning, Kok and myself conceived the child was at the point of death; the pulse was irregular, slow, debilitated, and almost imperceptible, the belly inflated, (*météorisé*) the cornea dim, the eye filled with purulent matter, the face pale and hippocratic, the extremities chilly, and a fetid and gelatinous matter issued from the mouth and nostrils. Kok undertook the melancholy task of announcing to an affectionate mother, that we had no hopes left of saving her infant. She proposed to re-animate the child, who could no longer swallow any thing, by anointing its lips with excellent Muscadel wine; we consented to this: and at that moment an idea struck me, at which I have since had much reason to rejoice.

I hastened to peruse the work of Alyon, on the properties of oxygen; I had read in the collection of the Medical Society of Paris, a memoir by their secretary, SEDILLOT, junior, in which he gives an account of cases of rheumatism, cured by frictions with acetic ether on the parts affected; and, as I am often afflicted with this tormenting disease, I had provided myself with some of this liquid from Paris (the application of which I had successfully prescribed to a lady contracted by chronic rheumatism). I recollected that acetic ether is one of the pharmaceutical preparations, in which oxygen is in a free state, and consequently, as this ether is of a very sedative and not stupifying quality, it appeared to me to be a proper application for the child, which had just experienced a paroxysm which lasted six minutes; during which, the suspension of the pulse and respiration, induced us to suppose that it was dead. The acetic ether could only restore the almost extinguished irritability, and stimulate the vital principle; and as we apprehended that every minute would be its last, I thought there could be no risk in administering a remedy, which, according to the latest analysis, could not prove hurtful. I put a drachm in the same quantity of Muscadel wine, and frequently applied this mixture to its mouth and throat with a feather. After the expiration of several hours, I perceived the pulse increasing, and that the child was not insensible of the application, which excited irritability, when introduced into
its

its mouth, and that it was soon enabled to swallow a few drops of this mixture. I redoubled my assiduity till six o'clock in the evening, during which time the infant swallowed two drachms of the ether, when a happy change took place. It is worthy of remark, that in the space of six days, the effects of the disease had been so violent, that the child had fallen into a complete marasmus. I have already observed that it suffered little, and during twenty-five hours of the paroxysm, it had no convulsions, which may be attributed to the colics which had preceded. In the course of the twenty-five hours it uttered some feeble cries, though not often; it neither had stools nor made urine; but at six o'clock at night it began to cry oftener, and louder; and it had a stool more loose than the former; from these appearances, I inferred that the remedy had taken effect, and began to entertain hope. I put one ounce of syrup of poppies and a drachm of the extract of Peruvian bark into four ounces of strong beef broth, and administered this mixture in a glyster; it immediately ejected one half, and a second injection was given, which it retained twelve hours; the instant the glyster was given, an abundant discharge of urine took place. I immediately ordered the child to be put to bed, and gave it ten drops of the *acetic ether* in a teacup full of strong beef-tea. My joy and surprise cannot easily be imagined, when I saw it swallow this mixture! I repeated the drink several times, and its pulse increased gradually; its extremities acquired a gentle degree of heat, which rapidly increased, and at ten o'clock at night, a violent fever was manifest by its pulse, which beat 150 times in a minute; and at this period, a profuse perspiration took place over the whole of its body, particularly the head. I suspended the administration of acetic ether, which having produced the happy change I have just described, could no longer be of utility; and confined myself to the moistening of the throat with beef tea. At two o'clock in the morning the fever abated, the perspiration ceased, and this crisis was succeeded by sleep. The child did not awake till six o'clock, when the glyster of the preceding evening operated, which was replaced by another of the same composition. At eight o'clock the wet-nurse having presented it the breast, it took it with avidity, but it could suck but little, in consequence of its weak state.

During the two following days, the child had an almost continual sleep, which was interrupted only by the stools, amounting to twelve or thirteen in number. As soon as it had had one, I injected the glyster before mentioned, to which I added the yolk of an egg, with a view of strengthening and nourishing the patient, and of giving tone to the intestines. The breast and a cup of the broth, in which I put some syrup of bark, were taken alternately, from which its little disordered stomach experienced good effects.

For the last two days, the child has appeared fresh coloured and easy, and as if it had just awoke from a long sleep.

The matter which filled its eyes, and which had dried, caused much pain before it could be removed; notwithstanding which, those organs, to my great astonishment, have remained uninjured.

This child is now four months old, it possesses the strength and intellect of one of six months, and enjoys perfect health. It has never since suffered the smallest indisposition, and is lively and thriving.

Is the preservation of this child to be attributed to Nature alone, or to the oxygen? All that I have above related, induces me to attribute it principally to the latter cause, as I have seen it operate in a sensible manner; and to it I decidedly attribute this almost miraculous restoration.

Such are the observations which I respectfully submit to the Medical Society; on this occasion, I have no other ambition than to second the zeal which it constantly employs, for the progress of the healing art, and the good of mankind. My work does not display the ornaments of style and elegance of erudition, it only has the merit of precision, and the most scrupulous adherence to truth. Enthusiasm ought not to form a part in the character of the physician, because it is seldom consistent with truth. It is with a design of rendering homage to the latter, that I shall here give my opinion on the gastric juice, which has been so much extolled as the means of introducing medicinal substances into the human body. In consequence of the invitation given to practitioners by the Society, in its "*Recueil Periodique*," to establish, by experiments, the efficacy of the means proposed by BRERA, I have attempted to administer different remedies by this process. Opium produced no effect. I have given the (*diagredium*) (cammony as well as the resin of jalap (of which a dose of 15 grains was a purge) a drachm for each dose, unless the patient was much affected; and I applied frictions, sometimes to the stomach and sometimes to the abdomen, without success. The antimonial tartar had the same effect, taken at about 6 grains for a dose. The corrosive sublimate, administered in frictions on the extremities of three venereal patients, one of whom had a bubo and chancres at the penis, and the other two had chancres only, had the desired effect.

Thirty grains were sufficient for each time of friction. But, is it by means of the gastric juice that this remedy succeeded? Would it not have had the same effect if it had been introduced into the absorbent vessels, incorporated with hog's lard or any other proper vehicle? This is what I maintain in the affirmative, as the result of my experiments,

At the time I made these trials at the Military Hospital at Brussels, where I was surgeon in chief, Dr. DUVAL, my colleague at the same hospital, made similar trials among his febrile patients, without better success. He observed that the bark left, during some minutes, a lively colour, accompanied with heat, on the part of the stomach or abdomen to which it had been applied. He seemed to think that squills, given in a triple dose, had in one particular instance increased the quantity of urine.

After having made experiments on the gastric juice of several herbivorous animals, and the human saliva, with no better success, we have rejected that doctrine, the supporters of which are, without doubt, under illusion.

Extract from a Series of Observations communicated to the Society of Medicine at Paris: By Cit. MICHAEL CHRISTOPHER LOMBART, First Surgeon at Retbel.

THOUGH several similar observations are to be found in the works of art, the society were of opinion, that the following ought to be published, because medical facts, in general, present particular shades, which in some degree differ from each other. We sometimes also meet with complications, which render an operation either very difficult or unsuccessful, if the surgeon does not instantly distinguish, whether he ought to avail himself of the resources of art or nature. It must be acknowledged that Citizen LOMBART has properly attended to the indications which occurred in the cases of which he gives us an account.

OBSERVATION I. *On the good Effects of Compresses moistened with cold Water, and applied immediately to tumefied Intestines, in the operation for Hernia.*

A woman, thirty-five years of age, suffered during thirteen days from a strangulated abdominal hernia, situated two inches below the umbilicus, and laterally one inch from the *linea alba*; this hernia was of long standing, and succeeded an abscess which took place in the epigastric region. Every means had been unsuccessfully tried, to assuage the pain and reduce the parts. A quack, who was consulted as the last resource, applied to the tumour a heating amulet, which increased the complication of symptoms. The tumour, which was of an extraordinary size, represented the form of a hat; its surface was covered with *phlyctenæ*; a perpetual hiccup greatly tormented the patient. Such was the state of things, when, on the twelfth day, Citizen Lombart was called in. Finding the patient in a desperate state, he wished to decline
his

his assistance, when the patient earnestly requested that the operation for hernia might be performed; which he determined to comply with on the following night, being the thirteenth of the disease. He first made an incision from the xiphoid cartilage to the umbilicus, and was obliged to make the crucial incision to discover the intestinal sac; the intestines were extremely inflated; the abdominal aperture through which they passed, much distorted; the edges rather callous; he made incisions above and below, to lessen the contraction; but with all his attempts he could not succeed in reducing the intestinal sac.

Citizen Lombart remained in uncertainty how to accomplish the reduction, when the patient asked for a glass of cold water to allay the hiccup, which was increasing, and did not a little impede its reduction. This demand of the patient struck the operator with the idea, of applying to the intestinal sac compresses moistened with cold water; notwithstanding the length of time the strangulation had continued, there was not the least change discoverable in the intestines. A few moments after this application, a borborygmus announced a disposition in the parts to return to their proper situation. In fact, this reduction was made with great facility, the patient's wound was dressed, and she was confined to the care of Citizen GUNTELOT; the symptoms in a short time abated. Ten days after, an abscess took place at one of the corners of the wound, the cause of which was attributed to the stimulating amulet which had been applied a few days before the operation. The tumour was afterwards opened, since which the patient has gradually got better, and, on the twenty-seventh day after the operation, was completely cured.

OBSERVATION II. *Distortion of the abdominal Viscera, and particularly of the Liver, occasioned by the long continued use of Whalebone Stays.*

The female Citizen REMONT, twenty years of age, wore from her infancy, according to the custom then prevalent, a pair of light whalebone stays; she constantly experienced insupportable pains and uneasiness. In vain she complained of the disagreeable sensations she experienced; her parents paid no attention to her distress, and she was compelled to be thus encased till she was nineteen years old, at which time she was married. Her shape, nevertheless, was not in the least deformed. Wishing to take advantage of the liberty which her new state afforded her, she laid aside her whalebone stays, but soon became subject to such violent fainting fits, that she was incapable of taking the least exercise; which symptoms she was subject to almost every evening when she undressed herself; they had continued for several years, the cause of which was attributed to the constraint she had been under in the day time, by being obliged to wear tight-laced stays.

A physician who was consulted, attributed the cause to the sudden change of her confined dress. He advised the young lady to loosen her stays by degrees: she followed his advice.

Notwithstanding these precautions, she continually experienced a dull pain in the right hypochondrium, which was attributed to the vapours: she had three children, and attained the age of eighty years.

When she was seventy-nine years old, her pains became insupportable, and changed their place. A most voluminous tumour settled in the region of the left iliac, the contents of which appeared schirrous: baths, emollients, and solvents were administered: the disease did not make less progress in her bowels. At this time I was consulted, adds Citizen Lombart, and after the recital I heard from the patient, of what she had suffered in the course of her life, through tight clothes, I imagined that the viscera, having been continually in a constrained state, particularly before she arrived at the age of nineteen, might possibly be displaced. I suspected the liver to be the seat of the tumour, and communicated this idea to my partner, who observed, I was mistaken, as the liver is generally situated in the right hypochondrium, and the tumour appeared in the left iliac region; which, besides, the patient not having an icteric complexion, one could not reasonably suppose this viscus affected. From that time I did not see the patient, who became yellow in a few days, and shortly after died. I was requested to open her, which I performed in presence of the family-physician of the deceased, and my friend TELINGE, correspondent of the Society.

On opening the abdomen, we found the region usually occupied by the liver deprived of its appendages: the ligaments, which were entangled, and not distinguishable, had formed adhesions, the diaphragm appeared depressed, the liver had descended into the pit of the left iliac, and adhered to the viscera; the gall bladder was empty, its partitions met together, the cystic and choliodoc canals apparently obliterated, the duodenum had changed its place, the peritonæum was tuberculous, and intimately connected with the liver; the whole presented an ununiform mass. An incision into this tumour caused a great quantity of pus to be discharged. Having introduced my finger into the opening, I withdrew from thence a very large stone. The whole mass having been separated, I divided it into two parts: we discovered a capsule in which were contained nine biliary calculi, of a cubic form, and different sizes. The fluid was extremely thick, and presented the shape of a gizzard; its internal surface was of a white colour.

OBSERVATION III. *Abscess of the Liver.*

A woman of Bertoncourt, near Rethel, was suddenly attacked with dull pains in the right hypochondrium, and remained two years in this suffering state, without cessation from her rural labours; the pains then became so
acute,

acute, that she was obliged to keep at home; a surgeon who was called in, discovered a tumour, on which he ordered emollients to be applied; the fluctuation being manifest, he made an incision, which caused a discharge of a great deal of pus and some biliary calculi; on the following days the patient discharged, at different times, a great number of concretions of different sizes; the wound soon after cicatrized, and the woman was able to resume her customary occupations.

Six years after, the complaint returned, but with less severity; the surgeon who had formerly attended her being dead, I was consulted. I found a tumour of the size of a hen's egg; I opened it, and a small quantity of ferous pus was discharged, together with a biliary calculus of the size and form of a French bean. I used detergent injections; some time after, the ulcer partly cicatrized; but there still remained a little fistulous hole, which at various intervals discharged matter. At length, being assured that no foreign body remained in it, I cauterised the fistula with the lunar caustic, some days after which, the cure was completed.

OBSERVATION IV. Account of the discharge of an Insect from the Nose.

Citizen Charles B****. was afflicted in his infancy with violent pains in his head, which were often accompanied with convulsive and debilitating symptoms. These disorders were attributed to the presence of worms in the stomach, or intestines. Vermifuges were prescribed, but without affording any relief. Paroxysms of pain took place at different intervals. The growth of the patient was nevertheless not retarded. When he attained the age of puberty, his parents designed him for the church, but he was not admitted to the degrees, because he was considered as epileptic, on account of the frequent recurrence of violent spasms, to which he was subject, at various times. He preferred the army, and from this new employment seemed to derive real benefit; till the age of thirty-two, he did not experience any violent crisis, but then became in some degree familiarised to his complaint. At the same time he laboured under so severe a nervous disorder, that a door suddenly opened, or shut with force, occasioned the most violent spasms; his mind was so much affected, that the least anxiety or disappointment threw him into convulsions. He consulted me in the year 1790, and informed me of the means he had been advised to adopt till the present time, all of which he had tried without success. I was not more successful than my predecessors in the directions I gave him.

An old woman advised him to take snuff, or some other sternutatory; he complied with her advice, and this remedy occasioned frequent sneezings, after which he discharged from the nose a living insect, a kind of caterpillar,

of a dirty white colour, which had fifteen rings; its legs were covered with hair. Citizen B. has since been totally relieved from his head-ach, but still remains afflicted with nervous symptoms.

I sent this insect to VICQ D'AZIR, who has given it a place in his collection. I have not been informed what use he has made of the observation.

[The French Editor remarks, that he intends to continue the series of observations in his next Number.]

Extract of the Notes subjoined to the Translation of Dr. Reid's Essay, on the nature and treatment of Pulmonary Consumption:—By F. L. DUMAS, Professor of the School of Medicine, at Montpellier.

THOSE subjects who have lungs liable to an excessive irritability, whether natural or acquired, labour under a sort of phthisis, the particular character of which is a spasmodic irritation in the pulmonary organs, or in the membranes which surround them; whence a quick and habitual contraction results, which strains and dries the parts, so as nearly to tear the parenchyma, or which at least hardens them sometimes into scirrhusities, or tubercles, the formation of which is almost generally a prelude to the total decomposition of their substance. This kind of phthisis, peculiar to persons who have long been subject to nervous and convulsive coughs, who experience frequent attacks of the dry asthma, and are habitually exposed to respire metallic, irritable, and corrosive vapours, is indicated by a dry and sonorous cough, which is not followed by a free expectoration. The texture of the skin is closed, gross, and rather contracted, the voice harsh, the respiration constrained, the sensibility increased, the pulse hard, and like the vibrations of a stretched cord; nervous symptoms of vapours are apparent, which promote the continuance of the general symptoms, common in all consumptions. Examples of that species dependent on nervous irritation, are to be found in the works of MORTON, WILLIS, VOGEL and BAGLIVI, &c. Morton, vol. 1. book 3. chap. iii. Willis, Pharmac. Rat. Sec. 1. chap. 6.

Pure or dephlogisticated air, or oxygen gas, recommended by some physicians in the treatment of certain kinds of consumption, would be absolutely deleterious, and productive of dissolution, in the species under consideration. I believe I may assert, upon the authority of experience, that the continual use of such air would introduce into the lungs that acute degree of irritation, which

which often gives rise to tubercles, or to the ulcerous state of which this disease is the result. I have, with some attention, continued the experiments made with this view on animals, and I am convinced that, when submitted for some length of time to the impression of oxygen gas, the lungs become irritated, inflamed, grow red, and suppurate, which is the cause of consumption. I shall now give an account of some experiments I have made on living animals, which no other person ever before attempted.

I took a dog, of middle size, in a perfect state of health, and placed him under a large receiver, from which the atmospheric air was expelled, and which was filled with oxygen gas. I adapted two tubular syphons to the receiver, and had a cock fitted to the tube, which I could open and shut at pleasure. I used one of the syphons to discharge the air impregnated with oxygen gas, as it became foul by the respiration of the animal, the other opened into the receiver, to renew, when requisite, the quantity of oxygen gas which had evaporated, so that by means of my two syphons, I was enabled to keep the air in the receiver pure, and to preserve in it at all times the same quantity of oxygen. My apparatus thus prepared, and the dog put under the receiver, previously filled with oxygen, I let him remain in this atmosphere, which he respired without any addition of air, during the space of six hours. At the expiration of this time, the respiration appeared to be accelerated, and the animal began to show signs of uneasiness. I then withdrew him, and placed him in an atmosphere better adapted to his nature. In the evening I repeated the same experiment, which I did constantly twice a day till the 28th, when his lungs ceased to move with their usual facility. I found it necessary to shorten the time of the experiment, and I could not continue it fifteen days longer without the greatest difficulty. At this time the animal had almost entirely lost the power of breathing and howling; his respiration became sonorous, weak, and painful; the sounds of his voice were hoarse and stifled; his eyes appeared dim and languishing; he suddenly shed a great quantity of hair, particularly from about the breast; he lost his flesh very rapidly; and perceiving in him all the symptoms of an approaching consumption, I resolved to kill him, and open the thorax, to examine the state of his lungs, and ascertain what I had before suspected. The cavity of the breast being laid open, I found its right side filled with an acrid serosity, containing much coagulated blood. The serous humour, when thrown upon live coals, evaporated in the air, except a pellicle which appeared in the form of a bladder. The coagulated blood appeared of a fleshy consistence, similar to that of the pleuritic sarcoma, and was situated near the superior part of the lungs, corresponding with the bronchiæ. The bronchial vessels also appeared distended; the pleura likewise lightly adhered

to the lungs, particularly in their inferior part, which was at the same time caked in all the adjacent parts; this membrane was red, swelled and inflamed. The lungs, which were reddish and intersected with little tears, had acquired a considerable hardness, as happens to those organs which have remained a long time inflamed. I perceived in the bronchiæ a small wound, the hard and callous edges of which indicated it would soon have degenerated into an ulcer. The anatomical inspection of those parts, no longer let me doubt that the oxygen had given an irritable impresson to the lungs, from whence had resulted all the ordinary symptoms of consumption.

I wished to try the same experiment again, and had fixed upon the time when I was obliged to attend to other occupations, which prevented me from effecting it; but it was my intention to resume it, with variations, as soon as I should have the least leisure. This consumption, depending on an acute irritation of the pulmonary organs, would doubtless be accelerated by an active and more powerful method of exhibiting the gas. Riding, which SYDENHAM has so much recommended, the active resolvents, the sulphur, brought into notice by Dr. SIMS, myrrh, bitter plants, bathing, and kino, are so many poisons, which, in cases of this nature accelerate death, that might be prevented by proper remedies. It is needless to observe, that the use of emetics, or small doses of ipecacuanha, and consequently the method of Dr. REID, bring on the same dangers, and ought to excite in us similar apprehensions.

If the lungs are afflicted with weakness, or such a deep atony as to be unable to perform their functions, suffocation is to be apprehended, and a collection of matter which forms tubercles, and produces another species of consumption, of which the essential cause will be a radical nervous weakness of the lungs. This languishing organ, becomes at length incapable of acting; the absorption and exhalation which ought to be made by it, are diminished; the blood does not receive the necessary quantity of oxygen, that vivifying principle, that *pabulum vitæ*, which seems destined to unite the principles of the blood, and to repair the elements of the muscular fibres; the sanguification remains imperfect, vitiated, and only exhibits a pale and weak blood, which, not participating in the digestive assimilation, cannot furnish the body with a sufficient degree of nourishment; the limbs grow dry and fall into consumption; the lungs remain inert, and are unable to eject the matter exhaled; a certain quantity of this matter, retained by the defect of a proportionate secretion, accumulates in the lungs, from whence it returns to the general passages of circulation, and occasions a hectic, pulmonary fever. This species of consumption is manifest from a dry and lean state of the body, the dilatation of the cellular membranes, a pale-

ness,

ness, debility, hoarseness of voice, softness of the skin, frequent and difficult expectoration, an œdematous state of the extremities, lassitude, languor, enervation of the whole body, &c.

Hereditary consumptions commonly have symptoms similar to the latter species, and nothing contributes to produce them so much as respiring for a long time in a thick, gloomy air, loaded with miasmata, or vitiated by the combination of some deleterious gas. I have begun a series of experiments on this subject, from which I can at present only produce those which confirm the effect of the carbonic acid gas on the lungs, which leave no doubt of the existence and nature of the consumption which it occasions.

I placed two dogs, under two receivers, filled with carbonic acid gas, and contrived in such a manner that I could introduce, when necessary, a certain quantity of pure air, so as to make it the longer respirable, and likewise to prolong the pernicious impression on the organs of the two animals. They remained under these receivers till they began to shew signs of uneasiness, and I then only withdrew them that I might again submit them, at a future time, to the effects of the deleterious gas. I alternately placed and withdrew them several times in the same day, and repeated the same experiments alternately every day, during the space of six weeks. These animals became by degrees incapable of respiring such an atmosphere. One of them, whose lungs would not receive the deleterious gas, died under an experiment. The other I killed, as soon as he manifested signs of weakness. I observed, before their death, that they both experienced a difficulty of respiration, a weak and hoarse voice, foamed at the mouth, and their whole body appeared considerably emaciated. I opened the body of the first, and examined particularly the organs of the chest. I found the lungs adhering to the pleura of the left side; the other parts of the lungs which remained free were filled with a lymphatic and serous matter, in which floated several shreds of gelatinous, or rather membranous substances. The lungs were covered with black spots; they were of a pulposus texture; their size had decreased so that they were scarcely equal to those of an animal just born. I perceived clots of blood deposited at the orifice of the pulmonary vessels: the other cavities were perfectly found.

The lungs of the second animal only exhibited a multiplicity of adherences, and I clearly perceived that I had let him perish before the gas had sufficiently operated. I intend to repeat my experiments with azotic gas.

The method of Dr. Reid, which is capable of giving a tonic impression to the lungs, would, in this species of consumption, possess all the advantages which are derived from other renovating, and strengthening remedies.

An Historical View of Surgery, in the Sixteenth Century.

[Extracted from the original German of Professor CURTIUS SPRENGEL'S "*History of Medicine, founded on authentic Documents:*" • Vol. III. Sect. X. p. 457, & seq.]

§ 1. THE art of surgery is unquestionably a branch of medicine, and its vicissitudes must therefore, in every respect, be similar to those changes which medicine has successively undergone: this observation is amply confirmed by the events which took place in the sixteenth century, after the revival of all the sciences. The first surgeons of this century were almost unanimously blind followers of *Abu'l Kafem*, and of *Guy de Chauliac*; they dreaded chiralurgical operations, and endeavoured to supply their want of dexterity by increasing the number of cataplasms and ointments. A few of the more expert surgeons occasionally attempted difficult operations, but their learned brethren could not be easily convinced of the advantages attending them. The Gothic taste still prevailed in the construction of chiralurgical instruments, which were so complicated and artificial, that the principal difficulties were thus rather aggravated than diminished.

§ 2. Innumerable instances might be produced, from which it would appear, that the learned surgeons of this century very seldom attempted to perform difficult operations; and that these were generally intrusted to ignorant barbers, or itinerant pretenders. A few of the most striking facts will sufficiently illustrate this assertion. When King Matthias, of Hungary, was wounded in a battle against the Moldavians, in 1464, the arrow remained so closely fastened in the wound, that none of the royal surgeons could extract it. The King therefore issued a proclamation, in which he offered riches and honours to the surgeon who would repair to his court, and heal the wound.

Four years elapsed before any adventurer appeared. At length, *John of Dockenburg*, a surgeon from Alfatia, ventured to undertake this task; he travelled to Hungary, saved the King, and was loaded with extraordinary rewards.

The most celebrated physicians and surgeons of Italy, such as *Job. de Vigo*, *Job. Bapt. Sylvaticus*, and others, left the great operations of lithotomy, trepanning, and the extraction of the cataract, to itinerant operators; and among these we find an Italian family named *Norseni*, of Milan, particularly celebrated for a century past, on account of their successful operations for the stone. Even in the fifteenth century, an operator of that family made a journey to France, where he taught his art to *Germain Colot*,

• See the Account we have given of this important work in our first Volume, p. 83.

Colot, a surgeon of that country.—This ingenious pupil impatiently waited for an opportunity of performing his first operation. At length, in 1474, such an opportunity occurred, when a criminal of Meudon (others say of Bagnolet), for robberies committed in the woods, was condemned to die. Happily for the art of surgery, this delinquent was afflicted with the stone; but the historians do not mention whether it was in the kidneys, or in the bladder; it is, however, probable that it was in the latter.

The French surgeons represented to King Louis XI. that, if this experiment on the criminal were permitted, and should terminate successfully, it would be the means of saving the lives of many unfortunate individuals, and delivering them from their torments. The King granted the request, and Colot performed this famous operation so successfully, that the convict was restored in a fortnight, and consequently obtained a full pardon.

But what method the courageous Colot adopted in this operation, we cannot learn from the imperfect accounts given of it by his contemporary writers, *Troyes*, in his "*Cronicle Scandaleuse*;" *Comines*, in his "*Memoires*;" and *Villaret* and *Garnier*, in their "*Histoire de la France*," vol. xviii. p. 124.—It is, however, reasonable to suppose, that he employed the high operation, because he mentions, among other circumstances, the reduction of the intestines, and the suture of the abdomen.

John Lange, who had studied in Italy, and likewise benefited by the instructions of *Job. de Vigo*, declares, that he had never seen the trepan applied by this celebrated surgeon. On his return to Germany, he caused an instrument to be made, to which he gave the pompous name of *trepanum abaptifson*, and exhibited it in an assembly of German surgeons and physicians. These, full of astonishment, exclaimed, "Langi Doctor! frustra queris in Germania abaptista; non enim chirurgorum instrumenta nobiscum, sed campanæ et pueri baptizantur." One of the company facetiously remarked, that even surgical instruments might, with more propriety, be baptized in Rome, where his holiness the Pope had fixed his residence.

§. 3. Several branches of surgery, however, were particularly cultivated, and thus gradually arrived at a more improved state. Of this description is chiefly the treatment of *gun-shot wounds*, which could not be derived from the Arabians and Saracens, but which was a new and original effort of this century; and hence the theory and treatment of these wounds were liable to many subsequent changes.

Hieron. Braunsebwieg, surgeon at Strasburg, towards the end of the fifteenth century, treated gun-shot wounds in a manner exactly similar to that of wounds

wounds arising from poison- He introduced a tent made of bacon into the wound, and administered the theriaca internally, with a view to expel the virus. Joh. de Vigo endeavoured to explain the danger attending gun-shot wounds, partly from the round figure of the bullet, partly from the (apparent) fearing of the part, which it was supposed always took place, and partly from the poisonous qualities of the bullet and the powder.

According to this erroneous opinion, he proposed two distinct remedies; first, to moisten the wound, to alleviate the effects of combustion; and second, to dry, and, as it were, exsiccate the virus. Vigo previously cauterised the gun-shot wound with an intention to destroy the poison; or he applied the Egyptian ointment, and sometimes very hot oil. After this he directed a liniment of fresh butter, in order to resolve the scab formed over the wound; he also recommends a digestive ointment, composed of the oil of turpentine, and the yolk of eggs, to assuage the pain.

Alphonf. Ferri, of Faenza, formerly surgeon at Naples, and afterwards physician to Pope Paul III. likewise maintained, that gun-shot wounds were of a poisonous nature; an opinion which he had conceived from having observed the sudden effect of contusion produced by the passage of a bullet through the air, which frequently occasions sudden death, and which, in its fatal effects, is similar to mephitic vapours. He likewise treated gun-shot wounds with a caustic of his own invention, which consisted of corrosive sublimate, vitriol, and litharge. Although he was the first who considered the extraction of the bullet as indispensable to the cure of gun-shot wounds, yet he did not enlarge the wound at all, but extracted the bullet with an awkwardly-contrived instrument, which he called *Alfonfinum*. He further maintained, that the bullet may even be left in the body, without danger, as there are examples that it has remained there for twenty years, without detriment. His advice of keeping gun-shot wounds very clean is little to the purpose, as it obviously proves that he did not understand the distinction between pus and sanies.

By the endeavours of *Paré* and *Maggi*, the theory as well as the treatment of gun-shot wounds were much improved. It is uncertain which of these two reformers we are principally indebted for these improvements. *Paré* himself owns that he is under very great obligations to the Italian surgeons, and hence it has been justly conjectured that *Maggi* must have been his teacher.

It was this ingenious practitioner who, by actual experiments, succeeded in controverting the erroneous opinion, that gun-shot wounds are connected with combustion: "The bullets," says he, "are not hot when expelled from
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from the barrel of a gun; they do not set the wadding on fire, and hence, their burning effect is merely chimerical. Nor is there any poison in gun-powder, as none of its constituent parts possess a poisonous property." Both the theory and practice relative to gun-shot wounds, have been considerably improved by this excellent surgeon: he extended the wound by *dilatatoria*, usually prepared of the gentian-root, and he carefully extracted bullets, as well as small shot.

He generally applied mild remedies, especially the oil of roses; he severely censured the frequent cleansing of wounds; and if bones be fractured, he does not advise to extract every splinter, but rather to apply the expulsive bandage. Maggi likewise recommended amputation in all those cases where sphacelus is the consequence of a wounded artery. In such a case, he made the incision in the healthy part, and caused parts of the integuments to hang down over the cutaneous muscles, in order to cover the stump with them afterwards.

§. 4. Paré endeavoured to introduce in France the treatment of gun-shot wounds, established by Maggi, in Italy. He, at the same time, confuted the opinion of the poisonous nature of gun-shot wounds, together with the idea that they ought to be treated in a manner similar to burns; while he deprecated the use of hot oil, formerly recommended by Vigo, and proposed, in its place, the very opposite, namely, the suppurating remedies prescribed by Maggi. In hydropic swellings, that frequently accompany gun-shot wounds, Paré particularly recommends the expulsive ligature, and also the Egyptian ointment. A celebrated Italian surgeon, *Job. Bapt. Carcano-Leone*, of Milan, Professor, in Pavia, likewise defended the theory maintained by Maggi.

Botalli, who wrote a treatise on gun-shot wounds, controverted the opinion, that they should be treated like injuries arising from the external application of poison, or from burns; and he consequently treated them as mere contusions. Above all, he extracted the bullets, but left the splinters of bone in the wound, till they were extruded by the expulsive ligature. In the writings of *Fallopianus*, we also find an ample detail of the ideas of Maggi and Paré.—*Felix Würz*, an excellent German surgeon, justly deprecated the numerous artificial instruments then used for the extraction of bullets; he condemned the setons, or strings anointed with lard, to which the pretended poisonous matter was supposed to adhere, and censured the use of all fat substances and ointments for burns in the cure of gun-shot wounds. He observed in every respect the antiphlogistic regimen, and applied externally honey, and dilatatoria made of gum tragacanth.—We

58. *Prof. Sprengel's History of Surgery, during the xvith Century.*

meet with similar principles, in *Guillemeau*, who insists particularly on the dilatation of the wound, and the speedy extraction of the bullet.—*Fran. Ranchin*, chancellor, at Montpellier, modified, in a slight degree, the idea conceived by *Botalli*; since he considered gun-shot wounds as simple wounds which are complicated with contusions, and contended that they were not to be treated as simple contusions.

§. 5. The induration of the prostate gland; the warts in the urethra; and the application of bougies against this complaint, excited great attention about the middle of the sixteenth century, particularly in Spain.—*Philipp*, a surgeon, of Lisbon, pretended to be the inventor of bougies, and travelled through all Europe, with a view to acquire riches by their application. Indeed, *Franc. Diaz*, Professor at Alcala de Henares, seriously considers him as the inventor, but, improperly calls *Philipp* an apothecary, and farther informs us, that a Portuguese merchant, *Alonso Diaz*, had likewise travelled in the character of a charlatan, and applied these bougies under the assumed name of *Romano*. Yet this assertion was contradicted by *Amatus*, of Portugal, who assures us, that he had been well acquainted with surgeon *Philipp*, whom he had taught the application of bougies in Lisbon, in 1541, being the same year in which the Emperor undertook the expedition against Tunis; and for the truth of this fact, he produces the evidence of three Portuguese contemporaries: at the same time he ingenuously confesses that he himself is indebted for the knowledge of this remedy to his teacher, *Prof. Aldarette*.

This narrative possesses the greatest share of probability, so that *Amatus* ought, at least, to be considered as the chief promoter of this remedy.

Andr. Laguna, of Segovia, a learned, and very experienced physician, who, in the Spanish war in Flanders, and other campaigns, had made many valuable observations, was one of the first who wrote on that disease, and its new remedy, a treatise entitled "*Andr. Lacunæ methodus cognoscendi et extirpandi excrescentes in vesicæ collo carunculas*," 12mo. Romæ, 1551. *Portal*, the French medical historian, however, is much mistaken, when he maintains that this essay of *Laguna* appeared so early as the year 1535. Nor was the work of another writer on the same subject, "*Ferrus de caruncula in Uffenbach, thesaur. chirurg.*" published earlier than the year 1551. The latter ascribes the induration of the prostate gland, to the deposition or collection of mucus, suppuration, and gonorrhœa; he employs first emollients in injections, afterwards bougies with verdigrease, frequently even arsenic with unslacked lime, and lastly healing and cicatrizing remedies.

Ckrift. de Vega, in his work, "*De curatione caruncularum*," 4to. Salamant.

1552, generally follows the prescriptions of Ferri; but *Amatus Lusitanus*, in his "*Curat. medicin. cent.*" iv. cur. 19, p. 337, properly limits and defines the cases in which strong caustics might be applied, and seriously speaks of the fatal consequences attending the use of white lead, which Laguna had recommended for injections.

Franc. Diaz, in his treatise on the same subject, published at Madrid, in 1588, in the Spanish language, likewise advises the indiscriminate use of caustics, and the uninterrupted application of bougies, in order to prevent any new concretions: and in cases where the usual *specillum cereum*, or wax taper, was insufficient, he recommends the use of leaden rods, or triangular needles, for the extirpation of warts.

§. 6. The doctrine of *lithotomy* was considerably improved in this century, by the invention of two different methods of operating, namely, the *great*, and the *high operation*. It has already been mentioned, that *Germain Colot* undertook a successful operation for the stone, in the fifteenth century, and probably by the high operation: but it does not appear that learned surgeons had imitated this method, till an obscure practitioner at Cremona, *Job. de Romani*, in 1525, began to adopt what is commonly called the high operation: he taught it to *Mariano Santo de Barletta*, a surgeon at Naples, who described the particulars of it in a separate treatise, published at Venice, in 1543, wherein he professes to have been a pupil of *Joh. de Romani*. It is probable that previous to this time no other method of operating was practised than that known under the name of the smaller apparatus, which can be employed only on children under fourteen years of age. In some rare instances which are related by *Benivieni* and *Cbrist. de Vega*, particularly in women, the stone had been found in the urethra itself, in which cases it could be more easily extracted. But, since that period, the passage was cleared by the application of the gorget, by means of which the forceps could be introduced into the bladder. *Mariano Santo* made use of the following apparatus: he first employed a curved sound, which he introduced into the urethra so as to direct the point to the left side; he expressly cautioned the operator against the incision into the perinæum, and is therefore unjustly censured for having attempted the incision in the middle. His sound was excavated, and he performed the incision in the direction of the groove; then introduced the sound, and along with it the conductors, and afterwards the gorget, which, according to its original construction, terminated in a blunt point; and lastly, he extracted the stone with the forceps, and removed the remaining particles of it, as well as the gravel or sand, by means of the lithotomical spoon. By the application of the blunt dilator, the parts were necessarily lacerated, and the wound occasioned by this laceration could not be healed
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without great difficulty. Hence *Le Dran* endeavoured to improve upon this method, especially by making an incision through the prostate gland and the bladder with his guarded knife (*couteau en rondache*); and the immortal *Schmucker*, of Berlin, was uncommonly successful in using the great apparatus for lithotomy in that improved state.

Mariano Santo communicated his method to *Ottavian de Villa*, who practised surgery at Rome, but afterwards travelled in the character of an operator. Among other countries, he visited France, where he became acquainted with *Laurent Colot* (probably a descendant of *Germain Colot*), who was instructed by him in his peculiar manner of operating. By his successful operations, Laurent soon acquired great reputation; in consequence of which Henry II. of France called him to his court, and patients from most countries in Europe resorted to Paris, in order to obtain relief from his skilful hand. But our lithotomist carefully concealed his art as a secret, so that it exclusively became the inheritance of his sons. *Paré*, in his "*Oeuvres*," liv. xx. ch. 8. p. 477, cites two instances, demonstrative of the fortunate success of their operations. Philip Colot, who was either a son or a nephew of Laurent, adopted two assistants, namely, *Severin Pineau*, and *Gyraud*, because he was no longer able to perform the operations. Pineau received orders from the King to instruct ten other surgeons in this useful art; but the royal mandate was not complied with. It is further asserted, that he published a description of his method in a particular work, but it has never come to light. At length, a later descendant of this family, *Franc. Colot*, described the whole of the operation in a pamphlet, entitled "*Traité de l'operation de la taille*," p. 74, et seq.

[To be continued in our next Number.]

A concise History of the principal Discoveries in Anatomy.

[Extracted from the Original German, of Prof. CURT. SPRENGEL'S "*History of Medicine*," Vol. III. Sect. XI. p. 503, and fol.]

§. 1. NO century has ever been so productive of great and interesting discoveries; in none has the knowledge of the human body increased so rapidly; and there never was a time in which so great a number of the most enlightened minds were emulous to improve anatomy, that highly important and necessary branch of human knowledge, as during the 16th century, the period of which we here treat.

Convinced of the importance of that department, Prof. SPRENGEL avows that he has, for several years, devoted a principal share of his attention to
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this branch of medical history; that he has, during that time, pursued the most industrious study of the anatomical writers of the sixteenth century; and hence he concludes, that this section of his work cannot fail to be highly interesting to the scientific reader. But in order to combine brevity with a perspicuous arrangement, the learned Professor previously gives the literary accounts of the most celebrated anatomists of the sixteenth century, and afterwards states their different discoveries, in scientific order.

§. 2. Among the anatomists of that century, *Vesalius* is perhaps the most illustrious, or at least the most celebrated, and unquestionably the first who powerfully opposed inveterate prejudices, as well as that implicit adherence to *Galen*, while he discovered, and, without hesitation, exposed the errors of the Greek author. Hence originated an important epocha in medical science; and it will appear in the course of this inquiry, from various individual instances, that the influence of his reformation, on his contemporaries, as well as the subsequent writers, was considerable and permanent. The anatomists who lived previous to his time, made indeed several valuable discoveries, and partly described nature as she really is, without imitating the erroneous representation of *Galen*, but they still considered it as an unwarrantable boldness, to contradict that great, and, in their opinion, incomparable writer. Under such unfavourable circumstances, this science could make but little progress, till the immortal *Vesalius* appeared, who successfully broke the fetters of prejudice, and above all things earnestly recommended the study of nature.

Gabriel Zerbi is the earliest anatomist of the sixteenth century, and his work "*Anatomia corporis humani: fol. Venet. 1502,*" is written throughout in the manner of *Mondini*, inasmuch that it is scarcely conceivable, how the pre-eminent performance of *Vesalius* could appear in the short interval of forty years after that inelegant work. *Zerbi* was a native of *Verona*, and filled the academical chair for some time at *Verona*, and afterwards at *Rome*. Having been guilty of a criminal action, he was obliged to fly to the Turkish dominions, where he met with an unfortunate catastrophe. Having performed a palliative cure on a bashaw, he was pursued, apprehended, and cut to pieces by the servants of the despot.

Alexander Achilini was attached as much as *Zerbi* to the method and the prejudices of *Mondini*, while he combined with them an intolerable scholastic verbosity. He was professor at *Bologna*, and is known in medical history by his disputes with *Pompanazzi*, in which he professed the principles of *Averrhoës*. His book, entitled "*Achillini annotationes anatomicæ in Mundinum:*" fol. Bonon. 1522, contains, however, a variety of interesting observations, together with ample proofs that the author has diligently dissected

dissected human bodies. The same remark applies to *Nicolaus Massa* whose work "*Anatomiae liber introductorius*," 4to. Venet. 1559, is not destitute of original observations, while it likewise affords instances to prove the author's adherence to the prevailing prejudices of the age.

Nor is *Job. Winter of Andernach*, an author of great merit, and he has according to the testimony of his pupil, *Vesalius**, little, if at all, applied himself to the study of nature. In his work entitled "*Anatomicarum Institutionum*," lib. iv. 8vo. Basil. 1536, some discoveries are recorded, which he certainly has not made.

Andr. Laguna, of whom we have already made honourable mention in the fifth sect. of the preceding History of Surgery, is the author of an anatomical manual, entitled "*Andr. Lacunæ anatomica methodus*," 8vo. Paris. 1535, a work written in a strange metaphorical style, yet not entirely void of original facts and remarks.

§. 3. *Jacob Berengar de Carpi* deserves to be recorded as a worthy predecessor of *Vesalius*. He was Professor at Bologna, from the year 1502 to 1527; and it is related of him, as a remarkable fact, that he gave the first anatomical demonstrations on the body of a hog, in the house of *Albert Pio*, Lord of Carpi, and that he had subsequently dissected upwards of one hundred human subjects. He stands also charged with having performed dissections on living human bodies; a charge which the vulgar are apt to bring against every zealous anatomist. His great and numerous discoveries justly obtained the distinguished approbation of *Fallopia*, one of the most competent judges, who appreciated their value in his "*Observationes Anatomicae*," p. 365.

Jacob du Bois, or *Sylvius*, the teacher of *Vesalius*, has likewise made many important discoveries, although he was involved in violent disputes with his pupil: by some authors (*Riolan. antropogr. lib. i. c. 5. p. 29.*) he is considered as the first restorer of anatomy in France, because he dissected human bodies instead of those hogs, in order to give his anatomical demonstrations from the former. He was probably the inventor of injections, as he first mentions them in his "*Ifagoge Anatomica*," p. 66. But his great predilection for the ancient writers misled him to the most palpable errors. In general, he was an accurate observer; but whatever *Galen* had differently described, he considered as a deviation from the natural state, and frequently had recourse to the absurd idea, that human nature was degenerated, and that therefore many things were found different from what they were when

Galen

* "Tot mihi modo sectiones infligi cupio, quod illum in homine aut in alio bruto (præterquam in mensa) tentantem vidi."—*Vesal. de radic. chyn. epist. p. 675.*

Galen described them. Of his injustice to Vesalius we shall find in the progress of this inquiry several remarkable instances.

§. 4. The great and comprehensive mind of *Andreas Vesalius*, whose name no friend of anatomy will pronounce without veneration, is an ornament of the German nation, although he was born at Brussels. He studied in Löwen and Paris, under Sylvius, where he frequently, with no small danger, gratified his insatiable desire of anatomizing. He afterwards served as physician in the Imperial army, but soon retired to Italy, and began, first at Padua, to teach anatomy with uncommon reputation, so that he had, at times, five hundred pupils. He also resided at Bologna and Pisa, till he published his large and immortal work, in consequence of which, he was called to the court of the Emperor CHARLES V.—He was likewise appointed first physician to PHILIP II. his son and successor to the imperial crown; and among other successful cures, he healed Don Carlos of a dangerous wound in the head. At length, Vesalius travelled into Palestine, and died on his return, after having been shipwrecked on the island of Zante.

The greatest merit of Vesalius indisputably consists in his criticisms on Galen's assertions; and although he has been censured for having sometimes purposely mis-interpreted the text, he has nevertheless, in most instances, successfully disclosed the errors of Galen, and shown how inconsistently former anatomists had proceeded, in blindly following the precepts of that author. It were much to be wished, however, that the reproaches with which he loads the Greek physician, for having placed too much reliance on the dissections of animals, might not be equally applicable to Vesalius; for we shall find in the sequel, that his observations are frequently liable to similar objections.

Vesalius acquired another great advantage over his predecessors, by having, with the assistance of the celebrated artists, *Tizian*, and *John of Calcar*, furnished the first accurate and finished anatomical representations drawn from nature. Yet he found frequent cause of complaint against those artists, because the delineation of the parts of the human body had not for them sufficient interest. It has been said, that his were the first faithful copies made from nature; for the drawings which *Leonardo da Vinci* had executed for *Marc. Ant. della Torre*, were not published, but scattered after the death of the latter. Nor have the plates been preserved which the immortal *Michael Angelo Buonarrotti*, a great adept in anatomy, had engraved with his own hand.

§. 5. The attention which the work of Vesalius excited, was conformable to the expectations formed of this magnificent performance. The succeeding anatomists now endeavoured either to defend the authority and supposed infallibility of Galen—they proceeded on the road of discovery pointed out by Vesalius—or they were blind imitators and copyists of what he and his great predecessors had stated in their works.

Among the most zealous partisans of Galen's anatomical system, we find principally *Franc. Puteus*, of Vercelli, who published, in 1562, his "*Apologia pro Galeno*, 8vo. Venet." in which he studiously and earnestly endeavours to prove, that Galen had actually dissected human bodies. He at the same time expresses the singular wish, that no discoveries whatever might be published, which tend to diminish the authority of his beloved ancients; but that all such pretended discoveries should be deposited in a public edifice, as was the case in the temple at Cos, in order to ascertain their respective merits, by an accurate and impartial investigation *. He is probably not always in the wrong, when he, in a variety of instances, disputes the accuracy of representation in the plates of Vesalius; yet the blame in such cases attaches more justly to the artist than to the author. Vesalius defended himself against *Puteus*, under the assumed name of *Gabr. Cuneus*; but this apology has not obtained the approbation of impartial judges, because this great writer too frequently repeats his arguments in that essay. He likewise complains of the enmity he experienced from *Job. Dryander*, Professor at Marburg, who made Mondini's Manual the text-book in his anatomical lectures, and was a faithful follower of this inferior writer. Dryander began his academical instructions in 1535, since which period public dissections have been performed in that university. The representations of the parts of the human body which he annexed to this work, entitled "*Anatomia pars prior*," 4to. Marb. 1537, are as rough and unfinished as the drawings published in the work of *Lewis Levasseur* (*Vassæus*), of Chalons-sur-Marne, whose compendium consists chiefly of extracts from the writings of Galen.

Charles Etienne, of the celebrated family of the *Stephani*, and who was himself the director of a printing-office, and professor of anatomy at Paris, has

* If all modern professors of anatomy were compelled to submit their discoveries and improvements to public scrutiny, before they be permitted to claim their share of merit in new or renewed discoveries,—it would be an excellent means of preventing many unnecessary disputes, as well as useless verbosity, in their lectures and performances; and the time thus wasted might be beneficially employed in more luminous demonstration.

has indeed made many useful discoveries, and several interesting observations; but his adherence to Galen frequently prevented him from discovering the truth, and he was consequently unacquainted with various particulars ascertained prior to his time. The drawings given in his work, under the title "*Stephanus de dissectione partium corp. hum.*" Fol. Paris. 1546, were vindicated in a French treatise on the origin and progress of Surgery, by *Stephen de la Riviere*.

§. 6. *Bartholom. Eustachius*, of Sanseverino near Salerno, Professor in Rome, and first Physician to Cardinal d' Urbino, whimsically combined the most profound anatomical knowledge with the most implicit adherence to the principles of Galen. It is but too obvious from his writings, how frequently his submission to Galen revolted against reason and experience, which, it is to be regretted, were but too often slighted. But notwithstanding this unfavourable circumstance, Eustachius has acquired great and permanent merit by uniting the comparative anatomy of animals with that of the human species; a subject which has been carried to a high degree of perfection in his excellent writings, called "*Eustachii Opuscula.*" 8vo. Lugd. Bat. 1707. His plates "*De renum structura,*" c. 16. p. 44. which were engraved during his life time, in the year 1552, but were considered as lost for a century and a half, till the Pope at length made a present of them to his physician, *Lancisi*, who first published them at Rome, in 1714, are lasting monuments of his anatomical knowledge and skill. They were subsequently republished at Rome, in 1740, by a surgeon named *Cajetan Petrioli*, who edited them with a jargon of unintelligible "*Riflessioni*;"—and soon afterwards the world was presented with the excellent and classical edition of these plates, published by *Albinus*, at Leyden, in 1744 and 1761; and the Commentaries by *Martin*, printed at Edinburgh, 8vo. 1740.—The intention of Eustachius, in the elaborate publication of his anatomical tables, has been very accurately ascertained both by Martin, and the great physiologist, Haller, namely that he did not wish to represent all the parts of the human body in their natural order, but had purposely exhibited his own delineations in such a manner as to enable anatomists to correct by them the assertions of Vesalius, and at the same time to represent the discoveries peculiar to Eustachius in a more conspicuous light. These tables frequently afford the best documents for deciding the controversies then especially prevailing; and it is remarkable, as has already been noticed by Albinus, that most of the drawings are taken from young subjects. But there is contained in them an inexhaustible stock of new discoveries and observations, the most important of which will be hereafter recorded.

§. 7. Several anatomists learnt from Vesalius the free method of investigating old prejudices, and consequently again endeavoured to improve upon, and to supply the deficiencies in the observations made by this great writer, whether in point of accuracy in the description of parts, or in the precision of the concomitant explanations; many of his successors, however, did not treat him with the deference due to his talents, as they wished to acquire reputation by undervaluing his merits: while others observed in their writings that degree of delicacy which the greatness of his mind, as well as the integrity of his intentions justly demanded, and consequently rectified his errors, and improved upon his ideas, with modest and philosophic reserve. Among the latter we may principally place *Job. Bapt. Cannani*, Professor in Ferrara.

It is much to be regretted that, of his work on the muscles, an outline only has been transmitted to posterity, the drawings of which were executed by the celebrated artist, *Hieron. Carpenfis*. Of all medical works this is perhaps the scarcest; and Prof. Sprengel availed himself of the copy extant in the Electoral library at Dresden,* from which he has extracted the most important observations; as will appear in the sequel of the present inquiry.

Another author, named *Job. Phil. Ingrassias*, in a work entitled "*Ingrassias in Galeni libr. de ossibus commentar.*" fol. Panorm. 1603, improved upon the discoveries of Vesalius in osteology, and treated on the bones of the human body with an accuracy and attention to the smallest minutiae, which affords almost complete satisfaction.—But the egoistic *Realdus Columbus*, of Cremona, a pupil of Vesalius whom he succeeded in the academical chair, at Padua, though he afterwards resided at Rome, did not treat his great master with becoming deference. His work "*De re anatomica,*" lib. xv. 8vo. Francof., 1593, is a testimony of his unbounded egotism, a desire of innovation, and neglect of simple truth; while it must be allowed that he has made many valuable discoveries, and that, from his great experience, having dissected sometimes fourteen subjects in the course of

* This work is entitled: "*Musculorum humani corporis picturata dissectio, per Job. Bapt. Cannanum, Ferrariensem Medicum, in Barthol. Nigrifoli, Ferrar-patricii, gratiam nunc primum in lucem edita est.*"—There is no year nor place of printing mentioned in the title-page; the whole is comprised in a few sheets text, and twenty-seven plates in Quarto; and on the title-page are written the words: *Sum Andrea Aurifabri Vratis lau. Doct. 1545. Venetiis.*—Besides Haller, no modern anatomist or medical historian has inspected this work; and it is supposed, that there exist only three copies of it.—Prof. Sprengel publicly acknowledges his obligations to the Aulic Counsellor *Adelung*, the great German philologist, and First Librarian at Dresden, by whose liberality he obtained the loan of that scarce book.

of one year, he was eminently qualified to become the commentator of Galea and Vesalius.—In the dissections of living animals, he first made use of dogs in preference to hogs, which were usually employed by his predecessors.

A man of a different character, and more splendid talents than either Vesalius or Eustachius, was *Gabriel Fallopius*, who combined the most profound erudition with the most amiable modesty and impartiality; he was thoroughly acquainted with the structure of the human body; his style is manly and didactic, equally remote from verbosity and obscurity; in short, he was a man whose illustrious example has been productive of so many beneficial consequences, that our historian, Professor Sprengel, on account of all these superior qualifications, is inclined to pronounce Fallopius the first anatomist of the sixteenth century. He was a native of Modena; had studied in Padua, under Vesalius; afterwards obtained a prebendary in Modena, from whence he went upon extensive travels into France and Greece, and successively filled the anatomical chairs of Ferrara, Pisa, and Padua. From a passage in his work, entitled, "*De tumore præternatur.*" c. xiv. p. 632. it appears, that the anatomists of those times, when they were in want of subjects, applied to the government of the country, with a request to obtain the bodies of criminals, whom, in such cases, the anatomists destroyed, as Fallopius says, *in their own way*, that is, by a proper dose of opium, and then undertook the dissection.

§. 8. The individual discoveries by which *Jul. Cesar Aranzi* is known in the anatomical world, we shall have occasion to point out more minutely in the sequel: he wrote a work, entitled, "*Arantius de humano factu cum observationibus,*" 4to. Venet. 1595. He as well as *Constantin Varoli*, Professor at Bologna, and physician to the Pope, investigated more minutely the discoveries of *Vesalius*, and has furnished us with many useful remarks. His work, entitled, "*De nervis opticis epistola;*" 8vo. Patav. 1573, contains abundant proofs of this assertion; and he was the first who has, more minutely than his predecessors, examined the formation of the brain, together with the insertions of the nerves.—In like manner did *Job. Bapt. Carcano Leone*, Professor at Pavia, endeavour to correct the occasional mistakes committed by Vesalius and Fallopius, in his Treatise, "*Anatomia;*" libr. ii. 8vo. Ticini, 1574, where he particularly complains, that anatomists too frequently attempt to apply the results drawn from the dissections of animals, to the appearances noticed in the human body.

The name of *Volcher Keyser*, of Groeningen, deserves an honourable place in the history of anatomy, on account of his work published in

1574, at Nürnberg, under the title "*Coiteri externarum et internarum corporis humani partium tabulæ atque anatomicae exercitationes observationesque variæ.*" He had studied under Fallopiæ, Eustachius, Rondelet, and Aldrovandi; prosecuted his anatomical inquiries for several years, at Nürnberg, where he cultivated comparative anatomy with uncommon ardour and success, after having been previously engaged as physician in the war against the French, and has transmitted to posterity many excellent and valuable observations on particular parts of the human body. With similar regard, we must mention *Salomon Alberti*, of Naumberg, Professor at Wittenberg, who is known by an useful Compendium, entitled, "*Historia plerarumque partium humani corporis,*" 8vo. Witteb. 1601; a work which is not destitute of interesting observations.

Lastly, *Hieronymus Fabricius*, of Aquapendente, deserves to be recorded in the list of eminent anatomical observers. He was a worthy pupil and successor of Fallopiæ, whose great example he followed, in explaining, from the comparative anatomy of man and animals, the functions of the human body. In his excellent work, entitled, "*Fabricii opera omnia anatomica,*" fol. Lips. 1637, he has presented us with many important discoveries.

§. 9. Among the less eminent promoters of anatomical study, or those who are chiefly reputed as compilers and imitators, *Job. Valverde de Hamusco* deserves the first place; he wrote a work on the anatomy of the human body, in the Spanish language; which was printed in 1560, folio, at Rome, where it was likewise translated into Italian. This large book is, with a few exceptions, chiefly to be considered as an extract from the writings of Vesalius.

An anatomical compendium, not unlike the last mentioned, was published by *Guido Guidi*, a native of Florence, who caused the plates of Vesalius to be re-engraved, and described the parts throughout in conformity to this model. Similar works have been transmitted to us by *Felix Plater**, and *Caspar Bauhin*†, Professors at Basle. The latter justly claims the additional merit of having collected all synonymous anatomical terms, and invented new and appropriate names for the parts discovered in the human body: by this useful work, much confusion has been prevented which would have been inevitable, if one anatomist had continued to call a muscle the first, which another called the second. Bauhin, however,

* *De partium corporis humani structura et usu.* fol. Basil. 1583.

† *Institutiones anatomicae.* 8vo. Basil. 1592.—*Ejusd. Theatrum anatomicum.* 4to. Francof. 1621.

ever, has made no peculiar discoveries; nay, he even claimed *Varoli's* cuts representing the brain, as his original design, though he had not the least title to their relative merit.

Job. Posthius, of Gemmerheim, in the Palatinate, a pupil of *Rondelet* and *Joubert*, and afterwards physician to the Bishop of Würzburg, and the Elector Palatine, published some supplements to the Manual of Columbus, which have been annexed to the edition of this work published by Professor Sprengel.

Two other, but very indifferent anatomical writers of this century should be mentioned, namely, *Archangelo Piccolbuomini**, of Ferrara, and *Andr. Du Laurens* †, of Arles. The former was Professor at Rome, and lost his reputation by neglecting the discoveries of his predecessors, making consequently many erroneous observations, giving incorrect drawings of the parts he had observed, and introducing much confusion in anatomical science. Du Laurens was an extremely unaccomplished man; yet, notwithstanding his ignorance, he was made Chancellor of the University of Montpellier ‡, first physician to the court of France, and Dean of the Medical Faculty at Paris. His work below quoted, is a compound of superstitious, misconceived, and ill-applied principles, while it bears striking evidence, that he has not made proper use of the great discoveries then extant, of his predecessors as well as his contemporaries.

[In our next Number we shall resume this historical sketch, and communicate the most important discoveries themselves, in systematic order.]

* *Piccolbuomini anatomica praelectiones.* fol. Rom. 1586.

† *Laurentii historia anatomica.* 8vo: Francof. 1602.

‡ *Primrose*, in his Treatise, "*De vulgi erroribus*," lib. i. c. 2. p. 4, relates of him, that the University above-mentioned would not acknowledge him as their chancellor, till he had obtained the immatriculation, and defended as many public theses as were prescribed by the various degrees necessary to the appointment to that elevated situation.

HINTS AND IMPROVEMENTS
IN THE PRACTICE OF
MEDICINE AND SURGERY.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I AM happy in having it in my power to communicate another instance of the efficacy of the *nitrat of silver*, in the cure of *epilepsy**; and I make no apology for presenting 'one solitary case', as I think every particular, however minute, respecting the cure of this formidable disease, is worthy of attention. The following are extracts from more copious notes on the case.

May 21st, 1799, A. W. a woman, thirty-six years of age, of a strong, robust habit, has been for four years affected with fits, which, though at first less frequent, have for some time past been scarcely absent for two days together, and yesterday she had three very severe fits. Her general health is tolerably good, except that her appetite is impaired. As, according to her account, a variety of medicines had been tried without success, I resolved immediately to begin the use of the *nitrat of silver*, of which she was ordered to take half a grain, twice a day, in the form of a pill.

24th. Had a fit yesterday, as severe as usual: feels no uneasiness from the pills.—Continues the pills, but the dose increased to a grain and a half a day.

30th. Has had no fit: no uneasiness from the pills: complains of costiveness.—Continues the pills; and the belly kept open by the use of the common pill.

June 10. Catamenia have this day appeared—says that formerly the fits were more frequent and severe at that period: no return of the fits; appetite much improved.—Continue.

28th. Has had no return of the fits. Has this day returned to the country, to all appearance perfectly cured; but she is to continue the use of the medicine for some time.

Should there be any relapse, or if any other cases occur, where I have an opportunity of employing the medicine, I will not fail to communicate to you the result.

I am, Gentlemen,

Your obedient Servant,

ARBROATH, SCOTLAND,

PAT. MUDIE.

June, 29th, 1799.

Historical Facts relative to the Cure of Consumption.

In our first volume, p. 290, and foll. and 384, we have announced a new method of treating pulmonary consumption, which was first proposed by Drs. DRAKE and FOWLER; we have also given a concise account of the principles, or the rationale, on which this method was founded, and expressed some doubts, whether the *digitalis* acted as a specific remedy in these cases, or merely produced the effects common to other mild emetics.

We

* See our Journal, No. II. p. 184.

We are still inclined to embrace the latter mode of accounting for its action on the arterial system, and in justice to a sensible writer, FRANCIS FULLER, the author of the "*Medicina Gymnastica*," printed in 1705, we think it our duty to quote a passage from this work which, although not strictly in point, and perhaps involving erroneous principles, evidently points out the method of treating pulmonary consumption in a manner nearly similar to that lately proposed by Drs. Drake and Fowler, and seconded by Drs. BEDDOES, MOSSMAN, and other modern practitioners.

"From these considerations" says FULLER, "of the great safety with which we bear vomiting, though it seems so troublesome while it lasts, I am convinced that it may be accounted for after the same manner as gymnastic effects are; besides that the (temporary or momentary) rising of the pulse upon stimulating and irritating the fibres of the stomach, and the excessive pressure and shock of the glands of several parts with the other phenomena of vomiting, show that it does partake of the nature of an exercise: and it is a great happiness for the individual, that the Author of Nature has allotted such secondary uses of the stomach, diaphragm, and other parts employed in vomiting, that they should not only serve to throw up what is disagreeable, but strengthen the whole economy in that very act. And here it will be allowed, that the irritation of the ventricle does rise and strengthen much; and I cannot but think I may venture it as worthy the consideration of the best judges of these matters, whether, when we use emetics, we ought to rest our expectations upon a few momentary efforts, when we see nature will bear the carrying on of the same measures so much longer; that is, whether it would not be more expedient, in some cases, to give our safe and gentle emetics in lesser quantities than we do, viz. so as to make a person sick, but not to a degree sufficient to make him throw up the contents of his stomach and when that quantity of the medicine has passed off after that manner, like an alterative, to repeat the same dose, and so continue on that sickness for several hours, without raising it to that degree, as to force the person to vomit above once or twice in all the time. This, I say, I think is worth consideration, and may be of singular advantage in some cases of consumption, and in hysteric cases, when we do not give vomits to cleanse the stomach only. For, by this means, we can alleviate nature very much, and procure a just diaphoresis, when perhaps, by the best of cordials, we may only create a colliquation, and after this manner the springs will be wound up more gradually; when, if the emetic passes off with strong efforts and quick, after the usual manner, we give nature only a filip, the effects of which are soon over.---I would not be here understood as if I would put this in practice; I do not pretend to authority sufficient for such innovations; I only presume to offer these things by way of problem; and one of my stature may sometimes happen to start a hint which those who are taller in wisdom and understanding may cultivate and improve to perfection."

The same author, in a preceding part of his work aforementioned, treats more at large of Consumption; and though his diagnosis, prognosis, and method of cure, are equally imperfect, yet he justly censures the copious use of balsamics and other unctuous internal medicines, which were then much in vogue, while he strongly recommends the use of the *coles-foot*, *synogloss*, *liquorice*, (without the addition of sugar) and the *comfrey*s.---On a future occasion, we intend to resume this important subject, which appears to us far from being exhausted. We shall here cite only two other passages, from which it will appear that consumption, about a century ago, was perhaps as common and fatal as it is at present; and that equitation, first recommended by the illustrious SYDENHAM, was then considered as the almost only specific in that dreadful disease.

"I might now proceed farther," says Fuller, "to consider in what degree of this distemper riding will be beneficial, whether any thing is to be expected from it, in the second and last state of it; but this would be to

run out beyond my design of brevity; I shall only take notice that it is no rare thing to meet with consumptions, without any fever, or any reason to believe an ulcer in the lungs, or perhaps so much as tubercles, but a continual hectic, and a precipitate waste of nature by the direful acrimony and ill quality of the serum, as Dr. BENET, in his "*Theatrum Tabidorum*," observes, page 109—"Tabidorum languor sine pulmonum aut visceris cujuslibet corruptelâ tacitâ vi obrepens Anglis infestissimus est, et nisi primis obdiderit remediis (quod rarissime evenit) funestus. In this case I cannot but be of opinion, that riding, well managed, would be serviceable, though undertaken very late, if there is any tolerable measure of strength left to put it in practice.

"I must here again repeat, that when I speak of riding, I understand the habit of riding, the want of which distinction has made it ineffectual to many a patient; he that in this distemper, above all others, rides for his health must be like a Tartar, in a manner always on horseback, and then, from a weak condition, he may come to the strength of a Tartar. He that would have his life for a prey, must hunt after it, and when once he finds his enemy give way, must not leave off, but follow his blow, till he subdue him beyond the possibility of a return. He that carries this resolution with him, will, I doubt not, experience the happy effects of the good old direction, *recipe caballum*; he will find that the English pad is the most noble medium to be made use of for a recovery from a distemper, which we, in this nation, have but too much reason, by way of eminence, to stile *Englisb*."

On the use of the Belladonna, in Cases of Mania.

In the sixth Number of the "*Journal der Erfindungen*" &c. printed at Gotha, we meet with two cases communicated by Mr. KÆUFER, Surgeon at Naugardt, in Pomerania, who gives a favourable account of the speedy and good effects of the belladonna, in that species of mental derangement which is frequently the consequence of epilepsy. He does not, however, mean to insinuate, that this remedy will be of service in all similar cases; but he maintains that in the following two cases it has manifestly been attended with beneficial effects; on which account he recommends it to the attention of practitioners.

CASE I.—A lady fifty-six years of age, was first attacked with epileptic fits, when her menstruation ceased, at the age of forty-eight; but as the paroxysms were of short duration, and did not return oftener than once in three months, the advice of several physicians whom she had consulted, as well as their prescriptions, were not regularly attended to; after a violent attack of epilepsy, which was followed by all the symptoms of insanity, Mr. Kæufer was called in: he found her complaining of pain about the pit of the stomach, and the tongue entirely covered with mucus. These symptoms induced him to prescribe emetics, which were from time to time repeated, as they always evacuated much mucus and bile. In the intervals she was directed to take a weak solution of tartarum tartarifatum for her common drink; and with a similar intention antimonium tartarifatum dissolved in water was added to her beverage. These medicines produced a diarrhœa in which large quantities of black, pitch-like, and very offensive feces were evacuated. At the same time the head was bathed in cold water, and the feet were once a day placed in a decoction of mustard seed; but this method of cure, though continued for three weeks, was not attended with any good effects. The author then had recourse to the use of camphor, which is strongly recommended in such cases by MUTZEL and LOCHER: this likewise aggravated the disorder, and the patient became still more delirious. After having continued the last remedy, together with bathing the head and feet in the manner before stated, Mr. Kæufer resolved upon trying

trying the *belladonna*, which has been frequently and successfully used by MUNCHE (the German Willis), who has lately written, and published several volumes, on the powerful and beneficial effects of this substance, particularly in cases of mania.

Mr. Kæuffer administered *thirteen grains* of the leaves of belladonna, reduced to powder; a dose which produced a profound sleep of thirty-six hours, the patient having had scarcely any sleep during the preceding four weeks. This uninterrupted long sleep, in which she was insensible of being removed from one bed to another, was rather alarming; so that at length the eye-lids were forcibly opened, and while the patient was moderately shaken, a candle was held to the eyes, both pupils of which were much dilated; this expedient, however, had the desired effect of awakening her. During the first half hour after her profound sleep, she spoke rationally, but soon again relapsed into fits of insanity, and uttered incoherent language.

After having taken a second dose, consisting of *ten-grains* of the belladonna, she again fell asleep (it is not stated for what length of time); and after awakening, she found herself in the complete possession of her intellectual powers, and soon enabled to leave her bed.—Six months after this recovery, the patient was again attacked with epileptic fits, accompanied with symptoms of mania; but one dose of ten grains of the belladonna was then sufficient to remove the disease, and she has continued well since that period.

CASE II.—Another lady, forty-five years of age, who had likewise been afflicted for several years with epileptic fits, was in a similar manner deprived of her understanding, after a violent paroxysm. Three doses of the belladonna, each containing ten grains, and administered in the space of thirty-six hours, restored her senses; although emetics, purgatives, and cold baths had been previously used, without affording any relief. The sleep of this patient, however, did not continue long, as a profuse perspiration succeeded, which, in the present instance appeared to be critical.

It is with some regret we must, on this occasion, observe to our readers, that medical cases, in general, are so imperfectly stated in foreign Journals, that we seldom meet with accurate pathological descriptions: the illustrious examples of Hippocrates and Sydenham are, alas! every day more neglected; the diagnosis, that *essential* part of medical knowledge, is at present in so despicable a state, that the indications of cure appear to be derived from the shelves of an apothecary's shop, or the scraps of memorandums and common-place books, rather than from an accurate and methodical inquiry into the nature and seat of diseases, the peculiar constitution of patients, their habits, temperaments, and the particular circumstances connected with the origin of the affection.—Although we are well convinced of the difficulties which present themselves to the practitioner, in forming just and correct indications, when he is called in, as is generally the case, on a sudden emergency, to a patient dangerously circumstanced; although we know, that it is often difficult to institute, in the first and second attempt, such an inquiry into all the particulars of the case, as will lead him to a complete knowledge of the disease; yet we are firmly persuaded, *that the present is exactly the time*, which renders it highly desirable and necessary, that some more effectual and systematic means ought to be adopted, in order to check those deviations from the Hippocratical method of inquiry, and to remedy the baneful effects which they will and must ultimately produce, in the practical department of medicine.

With this intention we have already, in our first Volume, p. 180, inserted a proposal for improving the practice of medicine, by the introduction of Clinical Tables; and as there appears to be but one voice respecting the

obvious utility of a *methodical* description of diseases, we shall endeavour, at some future opportunity, to furnish the *junior* part of our readers with a systematic view of the different particulars to which the medical practitioner ought to direct his attention in the examination of patients, as well as in forming a just and accurate diagnosis of diseases. W.

Cæsarean Operation.

We are sorry to announce as an article of Medical Intelligence, another unsuccessful case of the Cæsarean Operation, which has been lately performed in the Lying-in Hospital at Manchester. We had occasion in our former Numbers to take notice, that the propriety of performing this operation had again become the subject of discussion in that place, and that the controversy appeared to be conducted with a degree of personal asperity. On this account we were unwilling to enter into the merits of the case, leaving the matter where it stood before. We felt the more disposed to do this, because there is not any instance recorded within our knowledge in this country, in which the Cæsarean Section has not proved fatal to the mother. With a view therefore to the preservation of the two lives, it has in this country invariably failed; and we have understood that where the woman's life was otherwise not endangered, it has been generally determined to lessen the bulk of the child's head*.

The circumstances which have come to our knowledge respecting this unfortunate operation are, that the woman had been delivered in former labours by the crochet, several times; at the latter end of the last month she was again taken in labour, and removed into the Manchester Lying-in Hospital, where the operation was performed by Mr. Wood, in the presence of the other medical and surgical attendants. The child was extracted alive. During two days succeeding to the operation, hopes were entertained of the mother surviving, but on the third she died.

It is impossible, considering the nature of the operation, the violence done to the constitution by a large penetrating wound through the parites of the abdomen and the uterus, to attribute her death to any other cause; we must suppose that this operation was undertaken with the best intentions, but its failure ought to be recorded, that in future it may not be repeated, except under circumstances where the life of the woman could not be preserved by any other mode of delivery, unless it should be considered (which we believe has never been the prevailing sentiment in England) that the life of the child ought to be preserved at the expence of the life of the mother.

We should be glad to be favoured with a more particular account of this case. As the woman died, the body was most probably examined after death, and the dimensions of the pelvis have been distinctly ascertained, so as to determine whether she could have been delivered in any other way.

We should be also desirous of information, whether her deformity had existed from her birth, or had been occasioned by rickets.

Miscellaneous Facts and Remarks.

We have the satisfaction to announce to our readers, that the experiments lately made on the external use of tartarized antimony, by Mr. HUTCHINSON (of which we have taken notice in a preceding part of this work),
are

* Dr. Osborn's Essays on the Practice of Midwifery.

are fully confirmed by several of our medical friends, who have prescribed a solution of emetic tartar, in the same proportion as directed by Mr. H. On wetting the palms of the hands with a sponge dipped in the solution: drying them at the fire, and repeating the lotion, or friction, the effect was almost immediate, so that the patient soon fell into a profound sleep.

As the beneficial and extensive consequences that are likely to result from this important discovery, must interest every medical practitioner, on account of the superior advantages this remedy possesses, over the *internal* use of opiates, which so frequently are productive of mischief, in plethoric and irritable individuals, as well as in every instance where the *primæ viæ* are either already loaded with, or yet liable to obstructions,—we earnestly solicit farther communications on this interesting subject. We hope that our obliging correspondents will direct their attention principally to those cases of mania, incipient phthisis, hypochondriasis, hysterics, &c. where the nervous system is, as it were, unhinged, inasmuch that the introduction of medicines by the stomach appears to be counteracted, and their usual effects frustrated, by the irregular action, or preternatural re-action of the nerves.

In the '*Journal der Erfindungen, &c.*' No. 6, we meet with a letter from Dr. CONSRUCH, of Bielefeld, who assures us that, in *fistulous ulcers*, arising from a scrofulous cause, he cannot recommend a remedy more effectual, and affording more permanent relief, than the common red snail of the gardens, (*Helix pomatia* Linn.) externally applied alive, to the ulcerated part, and repeated once a day. The Doctor mentions three cases in which the snail thus used was attended with the most desirable effects, by healing ulcers of that description in the course of ten days or a fortnight: he also states that this simple remedy, has long been employed by the common people of Germany, with the best success, in a similar manner, externally, on tetters and other scorbutic eruptions. The manner in which the healing powers of the snail operate on external ulcerations, Dr. Consruch, endeavours to explain from the gentle stimulating, agglutinating properties of animal jelly; and he farther observes that similar remedies have formerly been recommended by physicians in various diseases of the skin, by directing patients to use a decoction of calve's-feet.

In the "*Annales de Chimie*," No. 89. p. 214, M. HEBER, of Berlin, affirms, that he has been enabled to obtain a very efficacious tincture of antimony, by mixing with alcohol the liquid tartar, digested in vitrified antimony. To this article the French editor subjoins the following curious remark: "When we see remedies so violent, and at the same time so uncertain in their preparation, daily reproduced under new forms, and admitted into the *Materi Medica*, we cannot form a very favourable opinion of the philosophy which has hitherto enlightened that science."

BRUGNATELLI, the Italian chemist, remarks in the same Journal, No. 80, that he has for some time employed, with great success, the acidulated carbonate of lime, in calculous affections.



MEDICAL AND PHYSICAL
I N T E L L I G E N C E,
 (Original and Selected.)

IN the 87th Number of the "Annales de Chimie," we met with a curious paper by Cit. WELTER, on some particular matters discovered in animal substances, when treated by the nitric acid. Cit. W. having made an experiment with the nitric acid on silk, with a view to expel the oxalic acid, was surprized at the end of the process, when he did not find the smallest particle of it, but obtained an unknown salt, of a soft nature, and the colour of gold, which, on being touched with a piece of burning charcoal, exploded like gunpowder. The following is an account of the whole process.

On one part of silk, he poured six parts of the common nitric acid, to which he added a small quantity of concentrated nitric acid. The mixture was left standing for two days, and then distilled. He mixed what had passed into the receiver with what remained in the retort, and put the whole on a filter. The oxalic acid crystallized sooner than he wished, and he again put the whole into the retort, together with the water which had been used to cleanse the filter. He made one part of the water pass over by distillation, and attempted to crystalize the residuum, but did not succeed.

He then put the residuum into the retort, with what was left in the receiver, and distilled it again. At length, having several times repeated the same series of operations, he obtained an acid liquor, containing small granulated crystals, and reduced nearly to the weight of the silk employed.

This liquor, when submitted to different experiments, did not afford the smallest trace of the oxalic acid; it was yellow, and left a stain of that colour upon the fingers: it communicated to white silk a beautiful yellow, which was not affected by washing it in water.

To saturate this liquor, he mixed some chalk with it, and finished the saturation by the addition of lime; on examining it again, he poured on it some alcohol. An apparently gummy matter was separated from it, which was kept separate. The alcohol was spread over the water and evaporated. A yellow substance remained, with the solutions of nitrat and muriat of lime. Having at length decomposed these salts by the carbonate of potash and separated the carbonate of lime, the filtered liquor was emptied into a receiver, and placed in a sand-bath. The next day he found gilt crystals adhering to the sides of the receiver as fine as silk, which detonated like gunpowder, and which, if properly managed, would have produced the report of a musket. The smoke of this explosion resembled that of burnt resin.

This gilt salt was soluble in water and alcohol; and it crystallized in a cold temperature.

The oxygenated muriatic acid, poured on the solution, destroyed the yellow colour, and rendered it of a milky appearance.

The sulphuric acid being poured on the crystals, afforded the smell of nitric acid. The muriatic acid occasioned a precipitate of small whitish and micaeous crystals, volatile in fire, and emitting a smoke of a bitter taste. This smoke was inflammable, and burnt like the essential oils.

He made experiments on new silk with the nitric acid, and after having obtained

obtained by different trials, some crystals of the oxalic acid, he poured some of the weak nitric acid upon the residuum, which thickened to the consistence of honey; and after having somewhat heated the mixture, to dissolve the whole of it, he let it rest for two days. He then found more of the oxalic acid crystals, and some other granulated crystals of a yellowish colour, extremely bitter, and without the least acidity, which dissolved the saliva, and left yellow spots on the tongue. They were volatilized by fire, and not affected by the concentrated nitric acid, which only discoloured them; but plunging them in water was sufficient to make the colour return.

After having saturated with potash a small portion of the nitric acid, combined with this substance, he evaporated the mixture, and found that the residuum took fire like the silky salt before-mentioned. Hence the author imagined, that this last compound was a triple salt, composed of nitrat of potash, combined with the yellow substance, which he called *animal bitter*.

The crystals of this yellow bitter, when viewed sideways, appeared like octaëders, the two opposite ends of which were truncated; there then remained square rectangular plates, the edges of which were cut by a plane on two sides. As animal substances become yellow by bringing them in contact with the nitric acid, he endeavoured to draw the bitter from raw beef, but found it combined with another substance, unchangeable, like the former, by the nitric acid. This combination was soluble in the concentrated nitric acid, and was separated by water in the form of a yellow powder, which retained its colour when exposed to the air, and might perhaps be useful for painting.

What led him to presume that the yellow powder alluded to was composed of the bitter and another new substance was, that by dipping a sponge in the nitric acid, he obtained this latter substance, which was colourless, soluble in the concentrated nitric acid, the same as the preceding powder and was precipitated by water like the former; he also found that the bitter was particularly eager to combine with animal substances, and by what means its colours were fixed.

The author here observes, that each of the experiments were only made once; and not knowing to what particular circumstances of his pursuit he should attribute these new results, he preferred detailing the whole.

He concludes with remarking, that the bile, perhaps, owes its colour and bitterness to what he calls *animal bitter*.

Cit. BRUGNATELLI, in a letter to Van Mons, inserted in the 87th Number of the 'Annales de Chimie,' informs us that he has lately obtained a great quantity of a *peculiar resin*, by distilling the nitric acid with indigo. The solution of this new substance in alcohol has a deep yellow colour, which stains the skin and nails, and cannot be discharged by water. Brugnatelli calls this substance the indigoferous resin; and adds that it may be useful in some of the arts, especially as about one half of the indigo may thus be converted into resin.

In another part of his letter Brugnatelli states, that he has caused the mercury in the thermometer to sink to thirty degrees below the freezing point, by a mixture of the muriat of lime with snow. If the cold should become more intense, he hopes to be enabled to apply this artificial cold to the most important purposes.

On the *inflammation of Ethers by means of Acids*, the same author communicates the following experiment:—Having poured upon two ounces of the

the purest alcohol an equal quantity of the nitric acid, and added, two minutes after, the same proportion of the common sulphuric acid, at two different times, there first arose from this mixture a white vapour, which was succeeded by a very lively ignition, similar to that which takes place after pouring nitric acid on spirits of turpentine. At the same time a red vapour was evolved with nitrous gas, and the copious fumes were condensed by the cold of the atmosphere. These fumes filled the laboratory with an odour not unlike that arising from ether.

He repeated this experiment in close vessels; and, in order to succeed more completely, he introduced into a tubulated retort, two ounces of the purest alcohol, and the same quantity of the nitric acid, having adapted to the retort two receivers with long orifices. After closing the apertures, he covered the receivers with cloths dipped in cold water, the temperature of which was only one degree above zero. He then introduced the sulphuric acid into the retort, constructed so that not the smallest bubble of gas could escape. The effervescence and combustion were very great; after which the first receiver contained a portion of the original mixture, which had been expelled from the retort by the violent effervescence: in the second he found the nitrous ether, which was slightly acid; and on the surface of this liquor a greenish oil was formed, which emitted a very agreeable aromatic odour.

On pouring the sulphuric acid upon nitrous ether, an effervescence took place, similar to that which arises from the decomposition of an alkaline carbonat, by means of a mineral acid. The ether obtained from sulphuric acid, when employed instead of the alkohol used in the first experiment, produced a violent combustion. Brugnatelli intends to continue these experiments, and to communicate the result of them to the public.

In the 87th Number of the "Annales de Chimie" are inserted some observations on the muriatic acid, being the result of various experiments made by Cit. TASSAERT, with a view to effect the decomposition of that substance.

The author was induced to undertake these experiments, by reading a quotation from a work published by M. GIRTANNER, in which he remarks, "that the muriatic acid abounds in the mineral kingdom; in sea-water it is found combined with lime, magnesia, and soda, as well as rock-salt, and with soda alone. Hitherto the constituent parts of this acid were unknown, and it is only from analogy we conjecture that oxygen forms a part in its composition; but I have at length succeeded in decomposing it into hydrogen and oxygen." From a series of eighteen experiments, which Girtanner made with different substances, to effect the decomposition of the acid, he gives the following result, namely, "that water bears the same relation to the muriatic acid which air does to the nitric acid; and it may be readily conceived why the former is so abundantly contained in sea-water. The muriatic acid cannot exist, otherwise than in a gaseous state, in the temperature, and under the pressure of atmospheric air: and in order to condense it, we are obliged to employ water with which it readily combines."

Tassaert asserts, that Girtanner has too hastily formed these conclusions, and that he has thus been led into error; for he first observed that he had obtained the muriatic acid deprived of water, and at the end of his experiments he assures us, that this acid can exist only in a gaseous state, unless it be combined with water.

After detailing several experiments made by him in the laboratory of the Mineral School, Tassaert endeavours to refute some of those made by Girtanner,

Girtanner, and concludes with the following remark, "that we ought still to consider the muriatic acid as a simple body, as we have not yet discovered the means of decomposing it."

Dr. CARRADORI supposes it no longer doubtful, that nocturnal birds of prey digest vegetable substances. It appears from his experiments, that such birds may be kept alive and nourished on vegetable food, although they seem to have a natural aversion to it; hence Carradori endeavours to explode the erroneous opinion; that the gastric juice of these birds was homogeneous only with animal substances.

This assertion, as well as the experiments of Carradori, that carnivorous animals receive nourishment from plants, derives additional evidence from the discovery made by FOURCROY, relative to the existence of gluten, albumen, and jelly, in vegetable bodies.—See the "*Annales de Chimie*," No. 86. p. 171.

The same author communicates some new experiments and observations on the respiration of frogs and fish, from which he concludes, that aquatic frogs are under the necessity of respiring, in order to preserve their life. He observes, that these animals, if kept under water, lived much longer when the vessels containing them were left open, than when they were shut; and that their existence was long or short, in proportion to the extent of the water in which they were taken. If the water was covered with a thin surface of oil, they lived but a short time; and when placed in pure oil, they died in forty minutes.

The author also wished to ascertain, how far water is necessary to support the life of these animals. He remarks that frogs, immersed to the neck in water, died in one third less time than those which were kept dry.

When fish were inclosed in the receiver, which was in part filled with air, it was observed, that they did not consume any of this elastic fluid. *Ibid.* No. 86.

As BERGMAN, and most other chemists, have considered the oxalic acid as a re-agent on lime, BRUGNATELLI has endeavoured to shew the error of that opinion, by several experiments, in which the presence of lime has been ascertained by all other known re-agents, the oxalic acid excepted.

In a mixture of lime-water with a solution of the muriat of barytes, the oxalic acid did not produce the least precipitation; but lime-water yielded a precipitate on mixing this solution with the oxalic acid:—the same result was observed with the nitrat of barytes.

The acidulated phosphat of lime, obtained by the decomposition of bones in the sulphuric acid, readily imparted its base to the oxalic acid; but upon adding a small quantity of sulphuric acid to this acidulated salt, a portion of lime was precipitated in the form of sulphat, and the remainder of this earth had not the least attraction for the oxalic acid: notwithstanding which, the potash and ammoniac afforded an abundant precipitate.

The nitrat of lime was precipitated by the oxalic acid; but this acidulated nitrat, or even with an excess of the acid, did not undergo any change.—The acidulated muriat of lime, as well as the acidulated tartaric of lime, gave similar results; and the same took place with the acidulated sulphat of lime, although the alkalis separated the lime from all these salts.

Several other acidulated salts of the same earth were not in the least acted upon by the oxalic acid. *Ibid.*

Dr. CARRADORI, in his 15th volume of the "*Annali di Chimica*," gives a description of a very convenient apparatus for impregnating liquids with the carbonic acid; and we have only to regret that he has not furnished us with a more perfect and satisfactory account:—This apparatus consists of a cask bound with iron hoops, and large enough to contain about four pails; no more than two thirds of that vessel should be filled, and a communication established between it and a glass bottle, which contains powdered marble and sulphuric acid. An aperture should be made in the upper end of the cask, into which a curved tube is introduced, to carry off the superabundant gas. The author assures us, that with this apparatus a person may in less than half an hour, saturate any quantity of water in proportion to the carbonic acid disengaged.

VAN MONS, who has extracted this article from the aforementioned work of BRUGNATELLI, observes on this occasion, that several other methods have been lately proposed for the saturation of water with alkalies, and the carbonic acid; but that an essential improvement might be made on the apparatus proposed by the indefatigable chemist of Pavia, namely, by conveying the decomposing acid on the carbonate of lime, by a slow infiltration; which might be effected by passing the communicating tube transversely over a funnel adjusted to the mouth of the receiver. By this contrivance, a regular and gradual disengagement of the gas will take place, none of it will be lost, and the access of atmospheric air prevented; which, by mixing with the gas disengaged, necessarily retards the saturation.

It is worthy of remark, that the difficulty of procuring, in Italy, glass vessels provided with more than one neck, first induced the author to adopt the apparatus here described. The saturation may be greatly facilitated by employing a simple gasometer in conducting this process. *Ibid.*

In a Memoir of DESCHEMET, on the irritability inherent in the stamina of the flowers of the sorrel-thorn (*l'épine-vinette*), we meet with the following remark, "that this irritability by which the stamina, on being slightly touched, incline nearly two inches, appears to be destined by Nature for the purpose of promoting the act of generation. *Ibid.*"

PIERRE SMITH has, in the 94th volume of the Literary Journal of Naples, communicated some experiments which lead to the conclusion, that the muscular parts of living animals, when wounded or stimulated, have the faculty of separating a humour similar in its effects to the gastric juice, and acting on animal and vegetable substances in the same manner as this juice does on the aliment taken into the stomach.

The author imagines, that the chyle is a solution of vegetable and animal substances in the gastric juice; and that the pus is a species of chyle, composed of the same juice and animal substance in a sphacelated state. His proofs in support of these assertions, are uniformly founded on the property which this sub-cutaneous humour possesses, of coagulating milk and dissolving animal and vegetable substances. Dr. CARRADORI however is of opinion, that these proofs, being deduced from properties common to a variety of bodies, and particularly sweat, are not satisfactory: and he rationally remarks on the supposition, if the juice alluded to possess all the properties attributed to it by M. Smith, that animals ought to derive nourishment from the introduction of alimentary substances under the skin.—"I have preserved," says he, "for several days, the life of a robust man (who, in consequence of a wound in the throat, could not take any nourishment), by
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causing different parts of his body to be rubbed with a sponge dipped alternately in wine and strong broth." *Ibid.*

M. VON MUSSIN-PUSCHKIN has requested M. Von. Crell, the editor of the German "Annals of Chemistry" to make some experiments on what he called the combination of the muriatic with the sulphuric acid; from which he promised himself very interesting results. The French editors of the "Annales de Chimie" remark, on this subject, that they have formerly complied with a similar request of the learned President of Petersburg, and found that the two acids did not manifest any new properties by their union; but, when the mixture was made with the acids in a concentrated state, the sulphuric acid, on account of its uncommon attraction for water, displaced and expelled the muriatic gas which was condensed by its dissolution in this liquid. When equal parts of the two acids were used, and the mixture was made with the whole mixture at once, the effervescence became so strong, and the disengagement of gas so considerable and instantaneous, that the liquor overflowed the highest vessels, and not the smallest trace of the muriatic acid could be discovered in the mixture. A small quantity of caloric only was disengaged during this process, by which it is manifest, that the base of the muriatic gas consumes, in a great measure, that which is disengaged from the water, by the sulphuric acid. *Ibid.*
No. 88.

Professor LOWITZ thought it practicable to reduce, by partial and gradual disoxygenation, such vegetable acids as contain much oxygen, to the state of those which are less oxygenated: he hoped, by the same means, to convert the acetous acid into the oxalic, and the latter into the tartarous acid, &c. With this intention, he boiled the acetous acid concentrated by cold, with phosphorus, but did not succeed in the experiment.

M. MUSSIN made similar experiments, but with no better success. It appeared that the acids parted only with a portion of their oxygen to phosphorus, in order to re-absorb it from the atmosphere. This obstacle, however, it would not be very difficult to surmount, but that disoxygenation could not be attended with the transition of the vegetable acid through its different modifications hitherto known: for the particular states of its composition do not depend less on the different proportions of its component elementary parts, than on those of its oxygen. Hence the acetous acid, by the addition of a new portion of oxygen, or by the action of the concentrated sulphuric acid, undergoes a change in the proportion of its elementary principles, hydrogen and carbon; and it is not changed into a more oxygenated acid, but into a new acid, which ought to be distinguished, in the nomenclature, by a particular name. *Ibid.*

KASTELEYN has lately observed that, in a solution made of the muriatic of potash and the carbonat of soda, one or the other of these salts may be crystallized at pleasure, according to the temperature in which the lixivium is kept. Below 15° of Réaumur, the muriatic forms crystals; above that temperature, the carbonat crystallizes.

The author remarks, that he has already shown, that the acids of these two salts change their bases in different temperatures. *Ibid.* No. 89.

M. HULSENKAMP has lately published a Latin dissertation on ether, obtained from the sulphuric acid; of which the following is an extract:

Professor Driessen, of Groningen, having made experiments on ether, by treating it with the nitric acid, to discover the presence of the sulphuric acid, after the manner of Scheele, obtained a considerable quantity of crystals of the oxalic acid. Hence he concluded, that the precipitate which the Swedish chemist found formed in this ether, by means of the nitrat of barytes, was not the sulphat, but the oxalite of that earth. This observation confirms what he (Hulfenkamp) had formerly remarked on the possibility of converting the whole of a given quantity of alcohol into oxalic oxyd by distilling this liquor several times over with the nitric acid, though the oxyd was mixed with a small quantity of nitric and acetous acid.

The French editor observes, that if Scheele is mistaken in his method of demonstrating the presence of the sulphuric acid, or rather of sulphur imperfectly oxygenated in ether, M. Hulfenkamp has likewise been deceived in his turn, and is far less excusable, as he has mistaken the precipitate, formed during the inflammation of a mixture of ether, alcohol, and a solution of the nitrat of barytes, for the real sulphat of barytes. This precipitate should rather have been called the carbonat of that earth, formed from the nitrat of barytes, from which the acid is decomposed into its principles, while it yields its oxygen to the hydrogen and carbon of the ether and the alcohol. The acid which resulted from the oxygenation of the carbon of these liquids, by uniting with the precipitated barytes, rendered this substance insoluble in water.

In an extract from a Latin dissertation on various chemical and pharmaceutical preparations, by M. TIEBOL, we find the following experiment worthy of notice:—The author precipitated, with the muriat of mercury, the whole quantity of that metal contained in a solution made by the nitric acid. Three parts of mercury, and one and a half parts of pure aquafortis, were gradually heated to the boiling point, in a tubulated retort, on the top of which he had fixed a thermometer. After two hours and a half, twenty parts of water were added to this solution, which was then precipitated with a lixivium made of the muriat of soda. M. Tiebol examined the supernatant liquid, by the test of the ammonia, and did not obtain any precipitate. The muriat, however, which was formed in this process, weighed 0.06 less than the mercury employed.

KASTELEYN has also made the curious observation, that the martial flowers of ammoniac, though very pale, when exposed to the rays of the sun, acquire a deep orange colour, which they lose again in the shade. Enclosed in a phial, after they have attracted the rays of light, these flowers retain all the vivacity of colour before acquired: the effect in these cases appears to be produced by the alternate disoxydation and re-oxydation of the iron. *Ibid.*

M. WURSER gives an account of the economical employment of nitric acid in Pickel's manufactory at Würzburg; where the manner of re-oxygenating this acid, when decomposed by copper, attracted the whole of his attention. The nitrous gas disengaged in the solution of copper is introduced into receivers containing water and filings of that metal. This gas, by its contact with atmospheric air, is re-oxygenated, dissolved by the water, and again decomposed by the copper. *Ibid.*

The same chemist makes the following remark on the preparation of *Hahneman's soluble mercury*. "It is immaterial whether the mercury is precipitated by the ammoniac, or by either the vegetable or mineral alkali, or even by lime. The result, after washing and edulcorating the solution is uniformly
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an oxyd of a dark-brown colour, or mercury in an almost reduced state.

The great point to be attended to, is, to have a certain criterion for the comparison of colour. As this mercurial preparation is much used in Germany, Kasteleyn advises the operator, not to expose mercurial preparations to the disoxygenating influence of light. *Ibid.*

LEONHARDI, the German translator of Macquer's Chemical Dictionary, has lately published an essay "*On the reconciliation between the theories of phlogiston and oxygen.*" VAN MONS remarks on this occasion "that this is a puerile attempt at a mixed theory, behind which the German chemists have entrenched themselves after their defeat.*" *Ibid.*

Prof BERGMAN, of Leyden, has lately discovered a test for ascertaining whether cotton be adulterated with an admixture of wool; by submitting it to the action of oxygenated muriatic acid, which bleaches the cotton, while it imparts a yellow tinge to the wool. By similar means he has been enabled to distinguish, with accuracy, the medullary substance of the brain from that of the nerves, and to trace the latter even to their most hidden origins. *Ibid.*

As the solution of caoutchouc, or elastic gum, is an object equally deserving the attention of the chemist and the medical practitioner, we shall extract a few passages relative to this subject, from SAINT FOND'S "*Travels into England and Scotland, &c.*" of which an English translation has lately been published.—The author, in a conversation with CAVALLO, applied to that learned philosopher for an explanation respecting an article inserted in Macquer's Chemical Dictionary, which has given occasion to several strictures that appeared on the assertions of that celebrated chemist, relative to the method of dissolving elastic gum in ether.

It is certain, said Saint Fond, that vitriolic ether, as it is usually prepared, does not dissolve elastic gum. But on the death of Macquer, of whose chemical cabinet I became the purchaser, I found three small decanters, in one of which there was elastic gum, perfectly dissolved in ether. The other two decanters contained some likewise, which appeared to be partly dissolved; but it was precipitated to the bottom, in a state a little thicker than turpentine, and was found incapable of mixing with the ether in the bottle. That which contained the elastic gum in a state of perfect solution, had a label with this inscription, in the hand writing of Macquer: "*Elastic gum dissolved in ether, sent from London.*" I mentioned this, to be informed whether you know any one in London who has employed ether in dissolving caoutchouc, and what were the ingredients used in addition to it, or the preparation which it received.

"You could not have addressed yourself," replied Cavallo, "to one who is able procure a more complete answer to your questions than myself. We shall go this morning to visit the workshops of some artists; and as the person who discovered the process for dissolving elastic gum is in our way, we shall give him a call; hence your wishes shall be very soon gratified."

I accepted his offer, and in about an hour afterwards we went to the house of Mr. WINCH, an apothecary who received us politely, and told me that he was the person who had addressed to Macquer at Paris, a bottle of elastic gum well dissolved in ether, and that in a letter to the French Chemist, he assured him

* We humbly advise Cit. Van Mons to make himself better acquainted with the latest chemical writings of GREN, RICHTER, GOETTLING, HERNESTADT, in the original, and he will, we do but not, there learn, that this defeat is not greater than that of one hypothesis may boast over another. W.

him that the ether did not contain the smallest mixture. Macquer, who found the elastic gum in perfect union with ether, of which the transparency was not in the least altered, and who, on examining the ether, found it totally free from any extraneous substance, sincerely believed that pure ether was the real solvent; and notwithstanding his succeeding but imperfectly himself, though he employed the best ether, he probably persuaded himself that what he used was still insufficiently rectified.

"I did not, indeed," said Mr. Winch, "send him an account of the process which I used, but it is nevertheless true, that the ether is unmixed, and that the whole depends on a very simple preparation.

"Cavallo, who is the friend of Mr. Winch, said, that he intended to perform the experiment the next day, at his own house, and that I should be a witness of it. It consists in the following process:—A pound of good vitriolic ether is taken, and put into a bottle, capable of containing about four pounds of any common liquid. On this ether are poured two pounds of pure water. the bottle is then stopped, held with the mouth downwards, and strongly shaken. in order to mix the two liquors. On discontinuing the shaking, the ether soon swims uppermost; the bottle is still held in the same position, and cautiously opened, keeping the thumb on the mouth of it. The water is by this means easily let off, and collected in a vessel below. The same operation is repeated two or three times, with new quantities of water, until the sixteen ounces of ether are reduced to about five ounces. It is this purified remainder that is found to be the most perfect solvent of elastic gum, which is thrown into the ether, after being cut into small pieces. It begins to swell in a very short time; the ether penetrates it, and appears to act slowly on it at first; but at the end of five hours, or longer, the liquor is saturated, and remains transparent. If there be a surplus of elastic gum, it subsides to the bottom, which on being taken out of the bottle, may be moulded into any form, and will preserve its elasticity.

"To shew how the part which is completely dissolved is to be applied to use, I shall describe the method employed by Cavallo, to form a tube of elastic gum.

"A small cylinder of pipe clay is first prepared, of the diameter and length of the intended tube. It is not necessary to bake it, but simply to let it dry.

"The ether, saturated with gum, is poured into a case of glass, or tin, which should be a little longer than the clay cylinder; this is filled up to the brim.

"The operator then plunges the whole length of the clay pipe into the ether, withdraws it suddenly, lets it remain for an instant in the air, re-plunges it anew, and repeats the operation in proportion to the intended thickness of the tube; for each immersion and evaporation produces a small coating.

"This being done, the clay cylinder, covered with elastic gum, is plunged into a vessel of water; the mould of clay is there speedily dissolved, and the gum remains in the state of a perfect tube.

"This method of dissolving and using elastic gum is ingenious, and in one respect resembles that employed by the natives of America, who form all their works in elastic gum, on moulds of clay. It may be objected, that the process with ether is too expensive. The objection holds good with respect to ordinary purposes; but the elastic gum has been so usefully employed in surgery and some other arts, that there are circumstances in which expence ought to be of no consideration. The process for making ether is besides so simplified, that it is not half so dear as it was formerly.

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I should not forget to mention, that the water used in purifying the ether ought to be preserved, because a part of the ether mixed with it may be recovered by distillation."

Good Bougies and Catheters have long been a desideratum, in the treatment of strictures in the urethra, and for evacuating the urinary bladder.

W. SMYTH, of Tavistock-street, Covent Garden, has lately discovered a metallic composition, which unites the flexible property of lead to the white lustre of silver. From this excellent composition, Mr. Smyth manufactures his "*Metallic Bougies, solid and hollow, as well as his flexible metallic catheters, for males and females.*" He recommends them with a degree of modesty, deserving much praise, *for the cure of strictures only*; while he very properly remarks, that a *temperate regimen* ought to be observed during their use. For want of room we refer the reader to the printed directions given by the inventor.

We understand from a Correspondent, that there is now preparing for the press, at Edinburgh, a work entitled, "*A free and impartial inquiry into the present state of medical knowledge; together with a comparative view of the systems of Cullen, Brown, and Darwin, comprehending a body of information respecting the rise and progress of the healing art, from its earliest dawn, down to the present time.*"—By ALEXANDER CAMPBELL, Esq. author of "*An Introduction to the History of Poetry in Scotland,*" &c.

We have not been deficient in inquiries among our friends, respecting the success, or failure, of the *Metallic Tractors*, but have not hitherto been so fortunate, as to obtain any satisfactory account on either side. We shall therefore be much obliged to any of our Correspondents, who will favour us with authentic information on the subject.

In the "*Journal der Erfindungen,*" No. 6, we find a short account of the extraordinary effects of the *Extractum Taxi*, which has lately been introduced into practice by several physicians in France. The best account of this remedy, as well as an accurate chemical analysis of it, and several remarkable facts establishing its medicinal virtues, have been given by Dr LODER, in his Inaugural Dissertation, entitled "*De Taxo baccata, Linn.*" 4to. 1794.—According to this writer, the extractum taxi is a narcotic remedy, and should be given, in doses from one or two grains, dissolved either in water or spirits. The dose may be gradually increased, whence this powerful remedy has proved uncommonly efficacious in curing obstinate tertians (after the *material cause* was removed, says the humoral pathologist) rheumatisms, epilepsy; and amenorrhœa. All these assertions are corroborated by histories of cases, and it is to be hoped that repeated experiments will confirm the efficacy of this new remedy.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Remarks on some of the Opinions of the late Mr. JOHN HUNTER, respecting the Venereal Disease; in a Letter to JOSEPH ADAMS, M. D. By HENRY CLUTTERBUCK, Surgeon. 8vo. pp. 72. 1s. 6d. London. Booley.

THE author states the opinions of Mr. Hunter, which he proposes to examine in this manner, viz.

“ The following, I believe, are the chief points of Dr. Hunter’s doctrine of the venereal disease.

“ 1. That the venereal poison, being taken into the system, becomes universally diffused, and contaminates at once, all the parts which are susceptible of the venereal action; and that it is soon afterwards expelled the system, along with some or other of the excretions.

“ 2. That the parts contaminated do not immediately go into venereal action; but that they acquire a new state or condition, and which is termed by him, a *disposition to take on the venereal action.*

“ 3. That *disposition* once formed in a part, necessarily goes on at some future period, to *action.*

“ 4. That mercury cures *venereal action*, but does not remove the *disposition* previously formed, and which is not yet come into action.

“ 5. That although mercury does not destroy the *disposition* already formed, yet that it prevents it from forming.

“ 6. That although the *disposition* continues, it does not go into *action* during the use of mercury.

“ 7. That the *action* having once taken place, goes on increasing without wearing itself out.

“ 8. That parts once cured never become again contaminated from the same stock of infection.

“ 9. That the matter of the secondary ulcers is not infectious.

“ 10. That the venereal action is as soon destroyed in a large chancre as in a small one, the mercury acting equally in all its parts.

“ These are the outlines of a doctrine, which, by its ingenuity and originality, has deservedly attracted a very considerable share of the public attention, and laid the foundation of a practice, in many respects different from that which had before generally prevailed.

The first opinion which our author examines is, the distinction between *disposition* to venereal action, and the *action itself.* If this opinion had been merely connected with the speculative pathology of syphilis, it would probably have passed unnoticed; but when the very important practical inference is drawn from it, by so high an authority as that of Mr. Hunter, viz. *that it is the actual disease alone which is curable, and not the disposition,* it becomes of importance to inquire into its truth.

Mr. Clutterbuck combats this opinion, on the ground that the contamination produced by the poison, called *disposition*, is actual disease, though not obviously syphilis: and since diseases are more easily cured in their commencement, or during their formation, than when formed, he would conclude, *a priori,*

priori, that the *disposition* is at least as curable as the disease. This, however, is only opposing opinion to opinion. Mr. Clutterbuck next proceeds to state the arguments and experiments which support his side of the question. Our limits do not permit us to give long extracts, but the following argument appears to us to carry much weight with it.

The parts of the body successively attacked are commonly in this order; viz. the throat, the skin, the bones. Now as all these are allowed by Mr. Hunter to be contaminated at the same time when the virus is absorbed, it ought to follow that each of these parts will in every instance become affected, which is contrary to experience: for, according to Mr. Hunter's doctrine, if the patient applies mercury on the appearance of a venereal sore throat, while there are no other symptoms, he can only expect to cure the throat, but the blotches and nodes being only suspended for a time, will certainly appear afterwards, when the mercurial action ceases. As this, however, is far from being always the case, we must infer that mercury cures the *disposition* to blotches and nodes, as well as the ulcers of the throat.

In a subsequent part of the pamphlet, Mr. Clutterbuck adduces several facts in opposition to Mr. Hunter, respecting the innocence of the matter of secondary ulcers; the disease wearing itself out, &c.

The work contains a number of instructive cases, and many practical observations on the treatment of lues, well worthy the attention of practitioners.

A Case of Diabetes, with an historical sketch of that disease: By THOMAS GIRDLESTONE, M. D. 8vo. 112. pp. (Price three shillings) 1799. London, Robinsons.

In the preface to this work, the author acknowledges the obligations he owes to Dr. Rollo, and Mr. Cruikshanks, for the annexed case of Diabetes.

"But" says he, "amidst the multiplicity of the correspondents of Dr. Rollo, he seems, by his publication on diabetes, to have overlooked some parts of my letters to him, concerning my former patient Capt. M., and certainly did not rightly understand in what manner Capt. M. had been for three months under the care of a surgeon and physician, *without the circumstance of increased urine being known* to them; it is but justice to Mr. Penrice, the surgeon, and myself, that that part of the retrospect of Capt. M's case, which has been omitted by Dr. Rollo, should precede the detail of my present diabetic case." p. ii.

Subsequent to this intimation Dr. Girdlestone gives a concise statement of the treatment adopted by Mr. Penrice, as well as himself, together with the preceding symptoms, and the gradual progress of the disease, in the case of Capt. M. Our limits do not admit of inserting the interesting particulars stated in the preface relative to the afore-mentioned case, as well as that of another patient, who was likewise cured by a strict adherence to animal diet.

The author has given an historical sketch of diabetes, together with an account of the various remedies prescribed by physicians, from Aretæus, Galen, and Avicenna, down to the present day. He has interspersed this sketch with a variety of classical and apposite quotations. After having reviewed the theories of this disease, maintained by ancient and modern practitioners, particularly those of Doctors Cullen, Home, Rollo, Rutherford and Bree, he gives the following diagnosis:

"Though the etymology of the word diabetes may admit of every immoderate discharge of urine being called diabetes, yet, by the definitions of a number of writers, it seems to be justifiable to reject all those cases of immoderate

derate discharges of urine, as diabetes, which are not accompanied with thirst, and to state the diagnostics of this disease to be great thirst and shrinking, and dryness of the skin, with increase of saccharine or insipid-tasted urine. A great quantity of urine in diabetes is often observed, when the thirst, shrinking, and even saccharine urine have been detected. And, as there is reason to believe, that the *phymosis** is often the only symptom which has excited the attention of the patient, that symptom, with the sensation of heat in the urethra, on making urine, ought to be noticed in the nosological definition of this disease." pp. 2 and 53.

Dr. Girdelston concludes with a "Postscript," which we deem of sufficient importance to lay before our readers: "Since these sheets were printing, my friend, Dr. Lubbock, has detected two more cases of diabetes, by the affection of the prepuce. One of these patients was first an out-patient, and afterwards an in-one, in the Norwich hospital. This patient was of about fifty years of age, and naturally of a lean habit: his gums were sore, his prepuce affected, his urine sweet, and its quantity, alternating with a discharge by the bowels, varied from ten pints in the twenty-four hours to half a pint. Dr. Lubbock put the patient upon a diet of animal decoction, cold meat and milk, and gave him small doses of opium, which plan mitigated the diabetic symptoms. The Doctor tried also the hepatized ammonia, without being able to discover from it any advantage. He also, at my request, ordered this patient one day a diet of river fish, and the next day a whiting, or sea-fish. But, contrary to the observations of my patient, very little alteration was observed from the first day's diet: and on the second day of eating the fish, the quantity of urine was diminished. The patient on the second day had a motion extraordinary, so that probably the diabetic symptoms were rather increased than diminished; though they were not so evidently increased by this diet, as in my patient. Dr. L. had intended to have omitted the milk in this patient's diet, and more rigidly to have confined him to animal food. But the temptation of drink, at the late Norwich Election, caused the patient to desert from the hospital, and prevented Dr. L. from being able to extend his experiments on this patient, or to learn any thing more about him. Dr. L. found in this case, as he had done in two former diabetic patients, that no sort of external application would relieve the phymosis, but that it was always more or less severe, as the other diabetic symptoms were increased or diminished."—pp. 111 and 112.

Practical Observations on the Cure of Wounds and Ulcers on the Legs, without rest; illustrated with Cases: By THOMAS WHATELY, Member of the Corporation of Surgeons of London. 8vo. 352 pp. (Price 7s.) London. Cadell and Davies; Johnson; Callow.

We do not hesitate to recommend a work, which not only possesses much intrinsic merit, but has an additional claim to our notice, from the benevolent intention of the author. It is, within our knowledge, the first publication dedicated to the President, Vice-Presidents, and Members of the

* Not long since (remarks the author), conversing with my friend Dr. Lubbock, of Norwich, he informed me that a person had called upon him to be relieved from a phymosis, which had troubled him for a few weeks, and for which he had been previously under the direction of a medical gentleman for some time; that, upon finding the phymosis did not yield to the applications commonly useful in such cases, Dr. Lubbock began to suspect it was connected with the diabetic diathesis, and upon inquiry found that the patient discharged eight pints of urine in twenty-four hours, sweet to the taste, and readily passing into the vinous fermentation; he was in apparent health, and had made no complaint of general disease:—And it is with Dr. Lubbock's permission that this fact is published.

the Society for the relief of the Widows and Orphans of medical Men, in London and its Vicinity. The author hopes that, by exposing in a variety of instances, the want of uniformity, and consequently the want of success, in the prevailing method of treating ulcerated legs, he may contribute something to the ease and comfort of mankind; and solicits permission to appropriate the profits of this publication to that humane institution, the design of which is, to raise a fund of £10,000, for the distressed families of our unfortunate brethren.

The following extracts from our author's Preface, will unfold his principles, as well as the practice he has adopted, and sufficiently enable the reader to judge of his merit.

"The efficacy of pressure (says he) in counteracting the effects of the dependent posture, was indeed known to the father of English surgery; and the use of the laced stocking was recommended by him for this purpose; nor can there be any doubt, that the good effects of it in his hands were very manifest. His ideas, however, seem not to have been much regarded by succeeding surgeons. We find but little said by the writers on surgery, on the effects of pressure in the cure of ulcers on the lower extremities, previous to the appearance of Dr. Underwood's treatise. Yet I am aware, that there always have been practitioners who were acquainted with the importance of this mode of treatment, and have adopted it in their practice. I had, myself, an opportunity of seeing the extraordinary success attending it, during my apprenticeship in the country. It is matter of fact, however, that the practice is very far from being general. Even in one of the latest publications on the subject, and this too by a surgeon of the first eminence, the effect of pressure is not much relied upon for the cure of these complaints. It is indeed there stated, in several passages, not only that no benefit is derived from compression in several species of these ulcers, but that many ulcers are rendered worse, more painful, and more unhealthy in their appearance by its use*. That there are certain conditions of an ulcer, which will not bear compression, I have allowed, and have endeavoured to point out the proper treatment, to bring on a fit state for the application of that pressure; but that an experienced surgeon should pass over so slightly this most essential part of the cure, and even speak of it as frequently injurious, is a circumstance hardly to be attributed to any other cause than that of a careless and ineffectual application of the bandages. For my own part, having now been for twenty years constantly in the habit of treating a very large number of these cases, I can speak so confidently of the good effects of pressure, properly applied, that I can venture to affirm, that he who doubts its efficacy, has never given it a fair trial.

"In the cases which are added to this Essay, very little variety of dressing was used; the cure was almost always trusted principally to the pressure made on the limb, under the exceptions particularly specified in the work. My success has been so uniform, that I cannot but be anxious to see this practice become established, and generally followed. Nothing but a conviction, that in promoting this end, I am really doing an important service to my fellow-creatures, could have induced me to appear before the tribunal of the public, conscious as I am of my incompetency as a writer. But may I not hope, that the plain tale of a practical man will be heard, though not told with the graces of elegant language.

In whatever manner this attempt be received, I cannot doubt but that
the

* See HOME on Ulcers of the Legs.

the practice here recommended must, in the end, prevail, notwithstanding it has this great obstacle to contend with, that surgeons must condescend, for the most part, to apply the bandages with their own hands. The clumsy and ineffectual manner in which this business is too frequently done, can never be expected to produce the desired effect. I am certain that if the necessary pains be taken, according to the directions here laid down, such effects will uniformly follow, as must convince the unprejudiced mind, that to have recourse to the operation of tying varicose veins, and the application of a great variety of remedies, can be *very rarely*, most probably *never* necessary. I can safely declare, that all such cases as are described by Mr. Home* to be cured by this operation, have readily yielded under the proper management of pressure alone.

“ Since these papers were preparing for the press, I have seen with pleasure Mr. Baynton’s new method of treating these complaints. Every thing that is there said on the efficacy of his method, may be considered as confirming the doctrine laid down in the following pages. His mode however of making the pressure with adhesive plaster, appears to me inconvenient, and on several accounts objectionable. I have no doubt but that the proper application of compresses and flannel rollers, would, in every case recorded by him, have produced similar good effects. The instances of success by his method, after the supposed failure by the roller, I can only attribute to this, that the pressure made with the plasters was applied by his own hands, whereas that with the roller was, probably, as is usual, so made that the effect intended by it could not possibly have been obtained. No surgeon, who will not be at the trouble of applying them himself, can be a judge of what may be effected by the proper management of the roller and compresses.”

The volume before us is divided into ten distinct chapters, in which the ingenious author respectively treats of the difficulties attending the cure of wounds and ulcers on the legs; of the nature, treatment, and cure, peculiar to local wounds and ulcers, and such as are connected with diseases of the constitution; of erysipelatous inflammation after wounds and ulcers of the legs; of the treatment of carious ulcers, &c.—After having ably commented upon the different methods of curing wounds and ulcers of the legs, namely, with and without rest; and likewise explained the method of preventing relapses, he has added *one hundred and sixty-seven* short cases, all of which appear to have terminated successfully, while the patients were permitted to walk about, and pursue their usual occupations.

In a ‘Note’ subjoined to these cases, Mr. Whately observes, “ that about *one hundred and twenty* of these patients are *now* living, and perfectly well. About twenty of the remaining number are dead; and twenty-seven are removed to fresh places of abode.”

For the information of those readers who are not already in possession of this useful book, we shall here insert the formula of the calamine cerate, which the author has generally used, as it is not made according to the London Dispensatory. He observes, however, that this cerate is more apt to grow rancid than the common calamine cerate, and on that account is not so eligible for a plaster; but, with this exception, it is a better composition, and less liable to evaporate than the latter. The following is the formula alluded to :

“ Take

* See HOME on Ulcers of the Legs.

“ Take of fresh hog’s lard, three pounds ;
Fresh litharge plaster, one pound and a half ;
Calamine prepared, one pound.

“ Mix them together according to art, into a calamine cerate.

“ To this formula I shall add another for making a cerate, which nearly resembles the unguentum tripharmacum of the old Dispensatory, but being less oily, it makes a much more adhesive plaster. It should be spread on rag, or silk, as an external covering to the dressing on lint, where a tow plaster cannot be conveniently used ; as in wounds of the face or hands, a bubo, or any other sore, where an external plaster cannot be readily retained in its situation by a bandage. This plaster is likewise so mild that it never irritates the skin. I have found it also a very useful plaster in fractures. The following is the formula ;

“ Take of fresh litharge plaster, one pound ;
Fresh hog’s lard, six ounces ;
Vinegar, four ounces ;

“ Mix them together according to art into an ointment.”

Besides those before-mentioned, the author has annexed nine other “ Cases of carious ulcers on the legs,” accompanied with a coloured plate, and ample explanations. These cases also convey much novel and interesting matter, especially relative to the *internal* exfoliation of bones, and are well deserving the attention of every chirurgical practitioner.

We cannot conclude our account of this practical work, without making the reader acquainted with the hints and directions contained in the “ *Postscript*,” which appear to us so precise and useful, that we shall quote them in the author’s own words ; for the additional reason, as he here likewise replies to the objections made against the application of the roller, by Mr. BAYNTON, of whose Essay, on the same subject, we propose to give some account in the next article.

“ Although” says Mr. Whately, “ there are many observations made in the body of the foregoing work respecting the proper method of applying the roller and compresses, it perhaps may not be unacceptable to the younger part of the profession to add a few more particulars on so important a matter.

“ I have said, that the flannel rollers should be four inches wide, to allow for shrinking in washing ; by which I would have it understood, that when they are made of that width, they are a little too wide ; especially for those whose legs are small. The best width for a flannel roller designed for those who have slender legs, is three inches ; but for those whose legs are of a large size, they should be always three inches and a half in width. They must therefore be torn at first a little wider, that they may be of their proper width when repeatedly washed. It will likewise be found, that rollers made of fine, soft, and open flannel, will answer much better than those made of coarse or hard flannel.

“ For those who have full-sized legs, the length of six yards is but just sufficient to answer all the purposes intended by a roller ; but in those who have very small legs, five yards is a sufficient length. Care should be taken that the rollers be washed in very hot water ; and they should be hung up to dry immediately on being washed. If these precautions be not attended to, repeated washing them will, in some kinds of flannel, make them as narrow as tape, by which they will be rendered almost useless. They should be often washed, as they are much softer, and of course sit easier, when quite clean, than when they are soiled.”

Descriptive

[To be resumed in our next Number.]

Descriptive Account of a new Method of treating old Ulcers of the Legs: By THOMAS BAYNTON, Surgeon, of Bristol. The second edition, enlarged, corrected, and considerably improved. 8vo. 152 pp. 1799. London, Hurst.

In our first volume, pp. 186 and fol. we have duly noticed the first edition of Mr. BAYNTON'S Essay on this subject, and have given the outline of his method of treating old ulcers of the legs, by bringing the edges of ulcers nearer together by means of adhesive plasters, and added a general account of the circumstances and reflections which induced him to adopt the essential and successful improvement in that department of chirurgical practice. At present, therefore, we shall furnish our readers with a more minute description of the method peculiar to the author.

"I shall now endeavour," says he, "to describe the means whereby these advantages are obtained; and as it will be perceived that there is little more in the materials recommended than surgeons have been long in the habit of using, it must also be perceived that the difference in the effects are to be ascribed to the *manner* in which those materials are applied. Success therefore depending upon the *mode* of their application, I shall be more particular in my description of *it* than perhaps may to many appear necessary; but being convinced that almost every thing which can be desired may be obtained in such cases, if the principles are kept in view, and a proper application of the means persevered in, I hope by the fulness of my description to spare those who adopt the plan, the inconveniences and disappointments which may be experienced, if the steadiest attention does not direct its application.

"The parts should be first cleared of the hair sometimes found in considerable quantities upon the legs, by means of a razor, that none of the discharges, by being retained, may become acrid and inflame the skin, and that the dressings may be removed with ease at each time of their renewal, which in some cases where the discharges are very profuse, and the ulcers very irritable, may perhaps be necessary twice in the twenty-four hours, but which I have in every instance been only under the necessity of performing once in that space of time.

"The plaster should be prepared by slowly melting, in an iron ladle, a sufficient quantity of litharge plaster or diachylon, which if too brittle when cold to adhere, may be rendered adhesive by melting half a drachm of resin with every ounce of the plaster; when melted, it should be stirred till it begins to cool, and then spread thinly upon slips of smooth porous calico of a convenient length and breadth, by sweeping it quickly from the end held by the left hand of the person who spreads it, to the other, held firmly by another person, with the common elastic spatula used by apothecaries; the uneven edges must be taken off, and the pieces cut into slips about two inches in breadth, and of a length that will, after being passed round the limb, leave an end of about four or five inches. The middle of the piece so prepared, is to be applied to the sound part of the limb opposite to the inferior part of the ulcer, so that the lower edge of the plaster may be placed about an inch below the lower edge of the sore, and the ends drawn over the ulcer with as much gradual extension as the patient can well bear, other slips are to be secured in the same way, each above and in contact with the other, until the whole surface of the sore and the limb are completely covered, at least one inch below, and two or three above the diseased part.

"The whole of the leg should then be equally defended with pieces of soft calico three or four times doubled, and a bandage of the same about three inches in breadth, and four or five yards in length, or rather as much as will be sufficient to support the limb from the toes to the knee, should be applied

applied as smoothly as can be possibly performed by the surgeon, and with as much firmness as can be borne by the patient, being passed first round the leg at the ankle joint, then as many times round the foot as will cover and support every part of it except the toes, and afterwards up the limb till it reaches the knee, observing that each turn of the bandage should have its lower edge so placed as to be about an inch above the lower edge of the fold next below.

After having given an ingenious explanation of the *modus operandi* of this new method of curing inveterate ulcers of the legs, the author examines the different opinions of other practitioners, which appear to him more or less unsatisfactory, and corroborates the mode of practice he has adopted with eighteen successful cases.

We find the testimonies of Messrs. Everard Home, Thomas Henry, William Simmons, R. Sandford, and Thomas Shute, all of whom have, in public and private practice, introduced the use of adhesive plasters to ulcerated legs. Mr. Home, in particular, allows that it is one of the greatest improvements which has been made in that branch of surgery; and in many cases of private patients; and that its success has answered his most sanguine expectation. Mr. H. however, principally alludes to cases of *long standing*; for in those he found it the most effectual: there are many ulcers too irritable to admit of it, and these of course require a different mode of treatment.

We do not pretend to decide, whether Mr. Whately's method of employing rollers, or Mr. Baynton's practice of using strips of adhesive plasters, in general, deserves the preference: we are rather inclined to think that each of these methods has its peculiar advantages, which must be ascertained by the judicious practitioner, according to the particular cases and constitutions of the patient.

[Want of room has obliged us to discontinue the quotations from Mr. Baynton's treatise, in the present Number, but we shall supply that deficiency in our next.]

POPULAR OR DOMESTIC MEDICINE.

*A Table of Symptoms, pointing out such as distinguish one disease from another; as well as those which show the degree of danger in each disease. To which are added, Observations on the excessive indulgence of Children; particularly intended to shew its injurious effects on their Health, and the difficulties it occasions in their treatment during sickness:—*By JAMES PARKINSON.

These two supplements, though apparently distinct from each other, are intended as additional parts to the author's work, we have mentioned with merited praise in the third Number of our first Volume, p. 310, and of which we have given a farther account in the fifth Number of the same Volume, pp. 497 and 498. We have therefore nothing more to add, than our wishes, that his humane and well directed labours may be attended with that degree of public approbation, to which they appear to us fully and justly entitled.

*An Essay on the most rational means of preserving health; and of attaining to an advanced age:—*To which are added Anecdotes of Longevity. 112 pp. 12mo. Price three shillings, London, Wallis, 1799.

This small compilation is obviously made with a good intention; as it contains a considerable variety of useful precepts, the authorities for which are carefully mentioned. Although it contain neither original, nor *always punctually applicable* rules and reflections, yet the whole is interspersed with much entertaining and dietetic information.

94 *Cit. Rougnon's—Girard's—Huzard's—and Mr. Walker's Books.*

Medicine preservative et curative, &c.—On the prevention and cure of diseases by medicines; or, a treatise on health and the practice of medicine: for the use of young practitioners, and every person regardful of health. By NICOLAS FRANCOIS ROUGNON. 2 vols. 8vo. 500 pp. Besancon, Couché; and Paris, Maquignon.

Although we are long accustomed to see alluring title-pages, used by many authors with a similar intention, as the sagacious inn-keeper exposes a handsomely painted sign to attract the attention of passengers; yet in this instance, we are obliged to make an honourable exception. The aged Professor communicates to the world, in this work, the fruit of his observation and experience during fifty years medical practice; a circumstance, which seldom occurs in the modern annals of medicine.

In treating of each disorder, the author has followed the most natural division, according to the different organs and parts of the body, the derangement or affection of which produces the disease. He concisely enumerates the means of prevention, in regard to the patient's situation, temperament, age, sex, &c. It is an additional merit in the author of this treatise, that he, unlike many writers of the present day, gives only such *facts*, under the head of *practical truths*, as have borne the test of time and experience.

THE VETERINARY ART.

Tableaux comparatifs de l'Anatomie, &c.—Comparative Tables of the Anatomy of the domestic animals used in Agriculture, as Horses, Asses, Mules, Black Cattle, Sheep, Goats, Hogs, Dogs, and Cats; arranged according to a systematic classification, with a view to facilitate that branch of study to beginners. By J. GIRARD, Professor of Anatomy in the Veterinary School of Alfort. Paris, Huzard.

The author begins with pointing out the different branches of science which are necessary accomplishments to a veterinary practitioner: of these anatomy is the most important, and ought to be diligently studied, as far as it relates to the physical organization of all useful animals. He then proceeds to examine the several organic parts of the different mammalia, enumerated in the title, and divides them into four orders which he terms *monodactyles*, *bidactyles*, *regular quadridactyles*, and *irregular quadridactyles*:—The whole is arranged in a perspicuous and accurate manner, so that it may be considered a valuable elementary treatise.

Observation sur un écoulement spermatique involontaire dans un cheval.—On a case of an involuntary spermatic running in horses, with inquiries and remarks on the authors who have written on that disorder. By C. HUZARD. 8vo. Paris.

The author gives here a distinct account of this debilitating disease in that noble animal, the horse; together with the observations and remedies suggested by other writers on this subject; he differs from them principally by employing caustics, where all others recommend astringents and corroborants.

MEDICAL HISTORY.

Memoirs of Medicine; including a Sketch of Medical History, from the earliest accounts to the Eighteenth Century. By RICHARD WALKER, Esq. Apothecary to the Prince of Wales, London, 1799. (five shillings) Johnson. The author commences this work with a general outline of the history of medicine

medicine, from the earliest ages, prior to the era of the Greeks, and he makes some good remarks on the state of medicine among that celebrated people. He extends his research far beyond the time of Hippocrates, gives a short biography of that illustrious character, and pays due tribute to his genius, as well as to his enlightened and liberal sentiments. After several interesting memoirs respecting the practitioners of Greece, he states concisely the discoveries of Erasistratus and Herophilus, relative to the sensibility and power of the brain and nerves. His account of the origin of the medical sect, called Methodists, is curious; he proceeds (in chronological order) to take a short view of the different medical revolutions which have happened in different quarters of the globe, and after paying deserved homage to his countrymen, Harvey, Sydenham, and others, he concludes the subject with a reference to "the present state of medicine in England;" the account of which is extremely concise, as it scarcely fills eight pages. Although this little work possesses much merit, and deserves to be recommended to the medical tyro, especially since the History of Medicine is too much neglected by a certain class of readers, who wish for nothing but '*new facts* and *improvements*;' yet we apprehend, that the style in which it is written will be deemed rather too florid by the plurality of readers. Lastly, we ought to mention that this work is dedicated to the Prince of Wales.

New Medical Publications in July.

A Descriptive Account of a new method of treating old ulcers of the legs: By THOMAS BAYNTON, Surgeon of Bristol. 8vo. second edition. *Hurst.*

A Case of Diabetes, with an Historical sketch of that Disease: By THOMAS GIRDLESTONE, M. D. 8vo. Three Shillings. *Robinsons.*

Practical Observations on the Cure of Wounds and Ulcers on the Legs, without rest: By THOMAS WHATELY, Surgeon. 8vo. Seven Shillings. *Cadell and Davies.*

Remarks on some of the Opinions of the late Mr. John Hunter, respecting the Venereal Disease: By HENRY CLUTTERBUCK, Surgeon. 8vo. One Shilling and Sixpence. *Boosey.*

An Essay on Medical Electricity, demonstrating its effects, particularly in Female Complaints; with Observations on the inefficacy of *Metallic Tractors*: to which are added Outlines of Natural Philosophy: By C. H. WILKINSON. 8vo. Three Shillings and Sixpence. *Allen.*

NEW MEDICAL PUBLICATIONS IN GERMANY.

Annalen der Arzneimittellehre.—Annals of the Materia Medica. By J. J. ROEMER, M. D. Vol. 2d. *Leipzig* Schaefer.

Versuch einer Zeichenlehre, &c.—An Attempt to establish a Systematic Diagnosis in the Obstetric Art: By C. F. ELIAS, M. D. 8vo. 152 p. p. *Marburg.* New Academical Library.

Medicinische Fragmente, &c.—Medical Fragments derived from experience: By J. G. F. HENNING, M. D. 8vo. 400 pp. *Zerbst.* Fuchsel.

Beiträge zur gerichtlichen Arzneykunde, &c.—Contributions to Medical Jurisprudence: By T. G. A. ROOSE, Prof. 8vo. In Numbers. *Braunschweig.* Acad. Library.

Chemische Rezeptirkunst, &c. The Art of writing chemico-medical prescriptions; or a Pocket book for medical practitioners, who, in prescribing medicines, wish to avoid the errors arising from improper chemical combinations in pharmacy: By J. B. TROMMSDORFF, Prof. of Chemistry, and Apothecary at Erfurt. Second edition, improved and enlarged. 8vo. 350 pp. *Erfurt.* Bayer and Maring.

TO CORRESPONDENTS.

We have received a letter dated July 6th, and signed W. R. Medicus; which contains such *extraordinary* information on the subject of inoculating the *Cow-pox*, as cannot be published without the real name of its author. The new method of communicating the variolous matter; the sudden eruption which took place within 48 or 50 hours from the period of communicating the infection; and the very unprecedented mortality among the first patients; are circumstances so novel and striking that we cannot venture to lay them before our readers, without more substantial authority.

The paper with the motto, "*Scire tuum nihil est sine anatomia*," we shall have no objection to insert in our next Number, if the industrious author will abridge it, or at least allow us to omit the "Curious Observations;" as his cases are sufficiently interesting, without introductory matter.

The communication on the subject of Quackery, signed S. M. July 12th. has been necessarily delayed, on account of its supposed libellous tendency, but will be given in our next.

We also acknowledge the letter we have received from a Correspondent, at Birmingham, who signs W. B. July 15th.—As it however contains a medical case which occurred many years ago, we shall consider, whether we can with propriety insert it in a future number.

The remarkable Case of *Hydrocephalus internus*, communicated by Mr I. H. dated July 16th, came too late for the present, but shall certainly appear in our next Number.

The "Observations on the animal nature and properties of vital power," by R. K. dated July 17th. likewise arrived too late:—we have not had leisure to consider the merits of that essay, as it is on a subject which, though abstruse, is interesting for the plurality of medical readers.

The valuable Cases of Inoculation for the Cow-pox, transmitted to us by our Correspondent at Manchester, will appear in the next Number, for want of room in the present.

We are likewise obliged to a Correspondent at Stockport, who has favoured us with a letter respecting the use of musk and salt of hartshorn, in gangrenes and mortifications; a medicine originally proposed by Dr. Darbey—the particulars of which the reader will find in Mr. Simmons's Letter, in this Number.

ERRATA IN VOL. I.

- No. iv. p. 359, l. 9, for "oil," read, "*fixed oils*."
 No. iv. p. 359, l. 10, for "washing," read, "*washing off*."
 No. iv. p. 359, l. 24, for "uncombined" read, "*unaltered*."
 No. v. p. 418, l. 28, for "professional," read, "*professorial chair*."
 No. v. p. 419, l. 1, for "1699," read "1669."
 No. v. p. 419, l. 8, for "ingenious," read, "*ingenuous*."
 No. v. p. 419, l. 36, near the bottom, in the last line of the Latin quotation, from Thruston, read "*quamque interim aliorum scripta de eadem re edita, vel merita sunt vel ambierunt*."
 No. v. p. 421, l. 22, dele the word "*it*," before denotes.
 No. v. p. 421, l. 25, for "*is* well known," read, "*are* well known."
 * In a part of the impression, page 7, of this Number, several words have accidentally escaped correction; the reader is therefore requested to correct the *Note*, as follows:—after the word, "but," for "— of lard" read, "*a drachm of lard*;" and for "— of oil," read, "*half a drachm of oil*."

THE
Medical and Physical Journal.

VOL. II.]

SEPTEMBER, 1799.

[NO. VII.

On the Progress of the Variolæ Vaccinæ: By Dr. PEARSON.

DR. PEARSON'S communication of a paper, entitled "*A Statement of the Progress in the Practice of the Vaccine Inoculation, and TRIALS to determine some important Facts relating to the Vaccine Disease,*" came much too late for insertion in the present Number.

We shall now anticipate the accounts so far as to acquaint our readers that the paper respects—

1. The proportion of deaths by the vaccinè disease to be one in about 2000 already inoculated, and in the small-pox the proportion is estimated at ten times this number of deaths, or one out of 200.

2. That no eruptions like the small-pox have been seen by the author, or are stated in the accounts sent to him during the last four months.

3. That although in many cases the cow-pox by inoculation is a more severe disease, and attended with more alarming symptoms than was originally represented, yet, in general, it is a far slighter disease than the inoculated small-pox.

4. That neither in his own practice, nor in that of his correspondents, have any bad consequences ensued from the inflamed arms, although in some cases the erysipelatous, or as Dr. Pearson calls it, *erythematous* affection was very formidable. In particular he states, that the constitution was very little disordered when almost the whole arm was covered with erythema; and that this affection, without any applications, or merely sedative ones, speedily disappeared.

Dr. Pearson has the satisfaction of announcing, that the vaccine inoculation has occasioned a considerable sensation in Germany, and that some of the principal physicians at Vienna, viz. Dr. DE CARRO and Dr. FERRO, have already inoculated their own children with matter transmitted by himself:—that Dr. FRANK proposes to substitute the cow-pox for the small-pox in his inoculation-practice.

Dr. Pearson expects soon to receive accounts from Portugal. In Scotland, nearly one hundred persons have been inoculated by Dr. ANDERSON; and Dr. Pearson finds that the practice is extending rapidly in that country.

But the most curious part of this paper, is that concerning his *trials* to obtain some useful determinations resulting from experience.

1. It is known that the small-pox renders the constitution unsusceptible of this disease a second time.

2. It seems now proved, that the cow-pox renders the constitution unsusceptible of the small-pox.

3. Dr. Pearson shews by experiments, that persons who have had the *small-pox* cannot take the cow-pox, contrary to Drs. JENNER and WOODVILLE.

4. It might hence be concluded, that a person who has undergone the cow-pox is unsusceptible of the cow-pox a second time: but although the preceding propositions seem to demonstrate this last fact, Dr. Pearson does not trust to reasoning, but determines it by observations.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS Dr. LUBBOCK's remarks on my letter require an answer, I shall be obliged to you to insert in your next number the following observations:

By asserting that MAYOW's name was not mentioned in any author whom I had consulted, published during his life, I could not possibly imply that others whom I had not seen did not take notice of him. From the silence, however, of many cotemporary authors of the first respectability, I felt a confidence in concluding, that the doctrines of Mayow, did not meet with that immediate reception to which they were justly entitled by the accurate experiments from which they were drawn; and I must still withhold my assent to any great diffusion of his opinions during his life. I assert not this from prejudice, or from a blindness to conviction; for by promoting the investigation, I shall feel equal pleasure, whether the spark of truth be struck out by the genius of Dr. Lubbock, or by my own humble exertions. The various reading of Dr. Lubbock has led him to but one author who has mentioned Mayow during his life, and notwithstanding this author filled a Professor's chair, and not without celebrity, yet either from the want of a genius among his pupils, or, more probably, from the want of a conviction
of

of the truth of Mayow's doctrines, they did not acquire that publicity, which a minute detail, before a numerous audience, would readily have produced; for, had ETMULLER fully comprehended the extent and importance of Mayow's discoveries, he would not have failed to have related them to his pupils with all the impressive force of a professor, and their young minds would certainly have yielded to the impression in such a manner, as to give to the doctrines an immediate and extensive circulation. Such an interesting curiosity would have been excited, that no physiologist would have appeared before the public, without passing some observations on a topic which engaged so general an attention; but it was far otherwise, for the doctrines of STAHL prevailed by the celebrity of their author, over the infancy of Mayow's discoveries: but severe, no doubt, would have been the struggle, had Mayow's life been spared. With respect to MUNDAY, I am supported in my opinion by Dr. SCHERER, of Weimar, in Germany. This ingenious chemist has just published an edition of Mayow's works, translated into the German language, with a copy of which he has favoured me; it is to be followed by a commentary.

From the merits of LOWER, I by no means wish to detract. He was one of the first who pointed out the difference between arterial and venous blood, and the cause of that difference; for in the preface to the fourth edition of his treatise on the heart, he observes, "Nemo haftenus venosi atque arteriosi (sanguinis) quoad colorem discrimen clare illustrandum suscepit." No experiments so clearly proved and illustrated this subject as those of the indefatigable Mayow; and, notwithstanding the fourth edition of the *Traктatus de corde*, was published (1680) twelve years after Mayow's *Treatise on Respiration and the Rickets* (1668), and of which an account was given in *Phil. Trans.* of that year, and six years after the complete edition of his works (1674), yet not a single observation is to be found concerning Mayow or his doctrines. Mayow does not betray such illiberality towards Lower, whose experiments on the difference of colour in the blood he quotes in chap. viii. p. 148 of his works:—a proof that Lower must have written previous, at least, to the publication of this part of Mayow's works.

I must also still be of the opinion that THRUSTON ought to have quoted Mayow.—Because a friend writes a letter of congratulation to an author on the publication of a particular doctrine, it is no proof of the difference of such a doctrine, and upon no account could Mayow quote opinions that were merely whispered in conversation, particularly as it was impossible for him to vouch for their authenticity. Others, too, might have disputed with Thruston the priority of right to the promulgation of such doctrines, which indeed is rendered

rendered probable from what Thruston himself says, and of which Dr. Lubbock has taken notice.—In page 106 of *Observations on Modern Discoveries*, I have said, when speaking of Thruston's opinions, "How similar, with some exception, is this to the reasoning of Mayow. Were the experiments of Mayow, before publication, noised abroad, so as to suggest these ideas to Thruston, or did opinions, like these, beginning to prevail at that time, from observation, rouse the genius of Mayow to institute experiments to confirm the truth of them?" It is certainly very remarkable, that experiments so well conducted as those of Mayow, and instituted with a view of illustrating a point so much the subject of investigation at that time, should not have received the honour of quotation from such men as Thruston and Lower.

The crude state in which Mayow found chemical science, obliged him to invent terms, the ambiguity of which perplexed many, but still, however, he made a very great distinction between nitre and nitro-aëreal particles, and was solicitous on all occasions, that his readers should make the same discrimination. He sets out with giving, in some degree, a nomenclature, and because he found in nitre active particles, similar to the active part of atmospheric air, he terms them as being common to both, "*particulæ anitro-aëreæ. Quocirca particulas istas igneas nitro aërique communes, particulas nitro-aëreas, sive spiritum nitro-aëreum in futurum nuncupare liceat,*" p. 18. He seems anxious to avoid the expression *nitrum aëris*, least he should convey the idea that nitre, as such, was contained in the atmosphere. Surely I have good reasons for concluding that such was the opinion of some of the authors quoted by Dr. Lubbock, when in one short passage taken by him from CONNOR, the words *nitrum aëris* are repeatedly mentioned.

In p. 242 of *Observations on Modern Discoveries*, the following remarks on Mayow's terms will be found:—"The equivocal expressions, *particulæ nitro-aëreæ, nitro-salinæ, &c.* which Mayow used, is a reason why he was so easily misunderstood by those who did not thoroughly examine into his expressions, and also afforded an opportunity for others to ascribe to him opinions which he never publicly avowed. Science was not sufficiently improved to allow of better, and as far as chemistry was advanced at this period, no terms could be more aptly applied. Had Mayow lived to an older age, his terms would no doubt have been altered; as by a variety of experiments, he would have extended his discovery of oxygen more generally, and have seen the necessity of inventing expressions less equivocal."

Having thus finished my answer to Dr. Lubbock, whose candour in the controversy claims my acknowledgments, permit me, gentlemen, to make a few more observations respecting Mayow.

Any

Any one who has ever read the *Tractatus quinque* of Mayow, must have discovered a depth of penetration and an accuracy of observation rarely to be met with in so young a man. In him were combined many requisites for a great literary character, a perseverance in research, with a judgment for its direction. It is a little extraordinary, that FOURCROY should charge Mayow with not having pushed his discoveries farther, and that he did but little more than enter upon a career, of the extent of which he had no conception, and that he was not sufficiently struck with the importance of his discoveries. The French chemist has, in other instances, done ample justice to our countryman, but in the above assertion he does not seem to have applied his usual accuracy. Let it be remembered, that the career, upon which Mayow entered terminated only with his life, and no obstacles, however great, checked the ardour of his pursuits. The illiberal and unphilosophical silence observed towards him, in subjects too, upon which his labours had thrown the greatest light, roused not his resentment, and the imputation of novelty in his doctrines, perhaps of youth in himself, restrained not that noble spirit of inquiry with which he was endowed. I am not, I think, too sanguine in imagining, that had Mayow lived to an advanced age, his ardent mind would not have suffered doctrines to have been lost in oblivion for the want of reiterated and varied experiments to confirm the truth of them; and he would have anticipated in a great measure that noble system of chemistry which has so admirably refuted the doctrine of phlogiston; and so fully convinced was he of the truth of those opinions which he adopted, that in the dedication of his works to Mr. COVENTRY, he makes the following dignified and manly exordium. "*Tractatus hocce nomini tuo, vir clarissime, non eo animo inscripsimus, ut eorum patrocinium & defensionem susciperes: veritas enim ipsa se defendet; et si quid erroris, pro humani generis infelicitate admissum sit, patronum ei quærere non debeo, cui hostem me esse cum primis profiteor.*" Mayow certainly did not confine the inferences from his experiments within a narrow compass, as the chapters, *De motu musculari*, *De spiritibus animalibus*, and other parts of his works, fully evince. He endeavoured to explain the laws of the animal economy from his chemical discoveries, and he certainly has a fair claim in many instances to successful conjecture, and in most, to more than plausible theory. He was indeed the LAVOISIER of the seventeenth century. I beg to be understood as speaking relatively to the state of the sciences at the different periods in which these great men lived.

Before his death Mayow repaired to London (at what period I cannot exactly say), probably with a view of exerting those abilities in the metropolis, which had been so successfully employed in provincial practice. He

was, no doubt, ambitious of being conspicuous in the Royal Society, and also by farther elucidation, of confirming his chemical discoveries.—He died at the house of an apothecary in York-street, near Covent Garden, his constitution having probably been injured by constant and severe study, which an unfortunate marriage was ill-calculated to repair.

I am, Gentlemen,

Yours, &c.

BEDFORD, Aug. 8, 1799.

G. D. YEATS.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ONE great advantage of your valuable publication is, that it admits of the communication of practical facts, the knowledge of which may be useful to medical men, without the necessity of entering into long details, for which few practitioners have time or inclination.

The use of digitalis purpurea, in pulmonary diseases, has, for some years past, been no novelty in this town; and the gentlemen who have employed it, have commonly joined it with opium—a combination by which the inconveniences of the two medicines, often experienced when they are given separately, are happily corrected. Perhaps the *Materia Medica* contains no remedy which affords more relief to, and which even cures, harrassing coughs, attended with inflammatory symptoms, that often induce phthisis, than the digitalis; though I cannot say I have ever known phthisis, when really formed, to be removed by it.—From its remarkable effects in diminishing the force of the arterial system, Dr. FERRIAR was led to administer it, with great success, in cases of active hæmorrhage, and, by parity of reasoning, I last winter employed it with advantage, in a case of acute rheumatism.

A gentleman's servant, of thin habit, and narrow chest, by carelessly exposing himself to the cold of last winter, was repeatedly attacked by a bad cough, which yielded to the common remedies.—On the first of December, by inattention to those precautions of warm cloathing, &c. which had been recommended to him, his cough returned, attended with acute pain in his breast, affecting his respiration, so as to threaten peripneumony;—blood, which proved fizy, was taken from his arm; antimonials, demulcents with nitre, and aperients were exhibited; the pain now quitted his breast, and attacked his shoulder, from whence, during the
ensuing

ensuing days, it removed alternately into the higher and lower limbs, attended with such swelling of the hands and feet, as clearly pointed out the case to be rheumatic. In addition to the above-mentioned medicines, he, on the evening of the fourth, took pulv. Ipecac. c. scrup. j. which was repeated every night till the eighth, when, the pain increasing in violence, the antimonials were omitted, and ten grains of the same powder were given every six hours. The remedies that had been used, caused profuse perspiration, but without producing the least abatement of his pain, and his pulse beat 140 strokes in the minute. My experience had taught me not to expect much relief from repeated bleeding in this disease, yet it seemed necessary to reduce the action of the vessels. From the well-known efficacy of digitalis in diminishing the frequency of the pulse, it occurred to me, to make trial of it, on this occasion; and the cough being very troublesome, and pain acute, I determined to join opium with it; accordingly, at three o'clock in the afternoon, December 9th, he took a pill composed of opii gr. j, pulv. fol. digital. purpur. gr. ss. On visiting him in the evening, his pulse was found considerably less frequent, and he thought his pain and cough not quite so severe. He was directed to repeat the pill every eight hours. The next morning all his symptoms were ameliorated, and his pulse reduced to about 90. The same plan was therefore continued, with evident advantage, attention being paid to avoid constipation, till the fourteenth, when the rheumatism being removed, and his pulse reduced nearly to the natural standard, the digitalis was omitted, and he was ordered a decoction of bark with antimonial wine; but his cough being at times troublesome, he took a pill of opium and camphor twice a day, for two or three days longer. On the 18th, the cough being still teasing, a blister was applied between the shoulders; and, by it, and a continuance of the bark, for a few more days, he was completely cured.

It is with pleasure I am able to bear testimony to the good effects of opiate friction, as recommended by my worthy friend, Mr. WARD, in the fifth Number of your Journal.

A young lady of about thirteen years of age, much harrassed with ascarides, had been removed, on the death of a brother by typhus, from this town to Warrington. In a few days, symptoms of typhus attacked her; but, instead of proper measures being taken, she was encouraged to walk out; and growing worse, her friend, with whom she had been placed, brought her, on the tenth day of the fever, twenty miles in a stage-coach, to her parents. On the evening of this day, July 28th, I visited her, and found her in a state of great irritability, with a rapid pulse, considerable heat, and fallen countenance; her bowels being constipated, she was, with
great

great difficulty, prevailed on to take a powder consisting of calomel and James's powder, of each one grain, rhubarb and opiate powder, of each four grains: this procured three loose stools, in which a great number of ascarides were discharged; she now, with a degree of obstinacy I have seldom witnessed, protested against taking any medicine, or even any appropriate food. On the thirtieth, a diarrhœa prevailing to an alarming degree, ten drops of laudanum, concealed in a cup of coffee, were given without her knowledge; and this single dose was the only medicine which, during three days, we were able to administer. She was sinking fast, her pulse very rapid and feeble, and she had a tendency to delirium. Wine, which in this state, seemed highly requisite, she positively rejected; and I despaired of being able to succeed by internal means. I therefore resolved to try the external application of opium. The following ointment was directed to be divided into two parts, and one of them to be rubbed into the thigh of the patient, by an assistant, whose hand was ordered to be covered with a soft bladder:

R Opii subtilissime pulv. scrup. i.

Adipis suill. drachm iij.

Camphor. scrup. fs. M. and divide in chartalus duas.

This application seemed to have some sedative effect, and was therefore repeated in the evening. The next morning, August 1st, I had the satisfaction to find that she had had some comfortable sleep; but the looseness recurring, we contrived to convey ten drops of laudanum again in coffee. The ointment, with an increase of ten grains of opium was continued, and as she appeared more composed, I determined to abide steadily by it. The good effects were each time more evident; sleep almost constantly followed the application of the ointment, though no more laudanum was given internally; her pulse and the intensity of heat were gradually reduced, the diarrhœa was stopped, and on the fourth day from the commencement of this treatment she began to take some wine, acidulated with sulphuric acid. The friction on different parts was persisted in till the 8th of August, inclusively; when the urine having, for the two last days, deposited a proper sediment, and every symptom of fever having disappeared, it was discontinued.

With much respect, I am,

Gentlemen,

MANCHESTER,

Your obedient servant,

August 17th, 1799:

THOMAS HENRY.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

If you think the following observations of any value, I request you to publish them.

I have the honour to be,

BATH.

Your very humble Servant.

August 6th, 1799.

J. F. DAVIS, M. D.

The extraordinary effects of darnel (*lolium temulentum*, LINN.) related by Mr. MARSH, in the fifth Number of this work, induced me to inquire whether the plant is common in our corn-fields, and whether its deleterious nature had been pointed out by any preceding writer.

The first has been satisfactorily answered by a very intelligent friend, who devotes a great part of his leisure to agricultural pursuits. He says that this species of darnel is by no means common in this neighbourhood: that he has found it in many parts of the kingdom, but always on farms occupied by negligent farmers, who were not careful to keep their land free from weeds. Several species of *lolium* are found in Great Britain, amongst which the *lolium perenne* and *lolium temulentum*, Linn. are most common: the former is the most abundant of all the grasses, growing in pastures and by way sides every where; the latter is more rare, growing in corn-fields only.

The powerful effects of the seeds of *lolium temulentum*, appear to have been well known. Linnæus observes, "*Lolium hordeo immixtum pro cerevi fia conficienda, potiores stultos et temulentos reddit.*"* Whence its trivial name *temulentum*. The French call it *lyvraie*. He elsewhere says, that when made into bread with other grain, it is very injurious, if the bread be eaten hot. Haller informs us, that it occasions vertigo, intoxication, vomiting, delirium, and convulsions, which terminate in palsy; and adds, that it produced an epidemic disease amongst some soldiers, of which many died suddenly. It kills, he says, geese, and even horses; but a small quantity mixed with their food, fattens chickens and hogs †. In the second volume of the "*Histoire de la Société Royale de Médecine à Paris*," are some remarks on the effects of darnel mixed with corn in bread; communicated to the Society by M. DE LA MAZIERE, of Poitiers. A farmer, his wife, and servant, eat bread made of the seeds of darnel mixed with wheat. The darnel was in the proportion of five to one. The two latter were seized with vomiting

* Lin. Op. Bot. cur. Gilibert, Tom. 2. p. 404.

† "*Histoire des Plantes Suisses*," Tom. 2. p. 175. Not having the Latin original, I have quoted the French Translation, published at Berne, 1791.

vomiting and purging, and refused to eat any more of the bread. The farmer continued to use it the three following days, and died after suffering the most severe colic pains. I cannot learn, however, that any person has noticed the peculiar affection of the calves of the legs described by Mr. Marsh.

Externally applied, darnel is said to produce anodyne properties, and therefore is recommended by CELSUS in fractures of the ribs: "Gravioribus vero doloribus, urgentibus, cataplasma imponi quoque conveniet, vel ex lolio vel ex hordeo, cui pinguis fici tertia pars fit adjecta*." ARETÆUS administered it in pleurisy; GALEN applied it, mixed with vinegar, to wounds.

P. S. The successful practice of inoculating with cow-pox matter, of which your valuable Journal has been the vehicle, gives me great satisfaction. I am fearful, however, that some observations of mine, communicated to my friends not long since, may have induced them to entertain an unfavourable opinion of it. If so, what follows will, I hope, remove it entirely.

In March, two children (COOMBES and JAMES), were inoculated under my direction, with vaccine matter sent from London by Dr. PEARSON. The punctures inflamed in both children, and formed tumours; but Coombes's only advanced to a state of vesication, James's vanished about the eighth day. Coombes was very feverish and drowsy on the tenth day; while James did not appear to have been at all indisposed. On the twelfth an eruption appeared on different parts of the bodies of both children; two or three pustules suppurated on that of Coombes, but they disappeared on James in a day or two, some indeed in a shorter time. I thought, notwithstanding, that he had undergone the vaccine disease. On applying the test of variolous matter he became infected, and had many pustules. Coombes, on the contrary, resisted inoculation for the variolous disease, and frequently played with James during its progress, without taking it.

Through the friendly assistance of Dr. WOODVILLE, I have since seen a considerable number of patients labouring under cow-pox; and am in consequence fully convinced, that the inflammation was insufficient to prove that James underwent the vaccine disease, and that the eruption was merely adventitious.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following communication I have received from Mr. BARLOW, Surgeon, at Bolton,

As

* Aur. Corn. Cels. lib. viii. cap. 9.

As Mr. B. alludes to a subject which has appeared in the Medical and Physical Journal, and as the case he relates is of considerable practical importance, I shall be glad if you will give it a place in the next Number of your useful publication; and am,

Your very humble Servant,

MANCHESTER,

August 11, 1799.

M. WARD.

“ Agreeably to your request I send you the annexed case, which you are at liberty to publish or not, as you may think proper.

“ I did not keep a journal of the case, which will account for my not mentioning every minute particular.

I am, Sir,

Yours, &c.

BOLTON, August 10, 1799.

J. BARLOW.

“ Esther Knowles, aged 49, was suddenly attacked about the middle of last June, with a shooting pain on the inside of her right thumb, near the second joint. The pain did not continue long; but about the eighth day it returned, and a purple blister appeared upon the part, about the size of a small pea.

“ Not thinking it of much consequence, she allowed a week to elapse before she consulted me. The whole arm was swelled, particularly along the course of the lymphatics, as high as the axilla, where there was a tumour of the glands. The ulcer, which was about the breadth of a shilling, continued spreading, and had a gangrenous appearance: the pain was excessive, and as she expressed herself, shot from her thumb to her heart.

“ I ordered leeches to be applied to her arm, and also a fomentation of poppy-heads, and a common poultice, morning and evening.

“ On the following day, the inflammation was considerably abated; but the pain continued, and the ulcer looked no better.

“ I gave her opium, both in the solid and liquid form, with as much bark and wine as her stomach could bear, which she took a week without much abatement of the pain; the ulcer still spreading. She was then so weak and faint, that she could not come to me to be dressed, as usual.

“ I visited her the next morning, and found her in bed, her stomach rejecting every thing she took, whether food or medicine; and if she raised her head, she fainted.

“ Having lately read your paper in the Medical and Physical Journal, on the effects of opium applied externally, so as to be absorbed by the lymphatics;

phatics; and thinking that plan of treatment worthy of being tried in the present case, I directed a liniment, with six drachms of tincture of opium and an equal quantity of olive oil, combined by the yolk of an egg; the whole of which was rubbed on the inside of the patient's legs and thighs, at three times in the course of the day.

“The next morning she was easier, and the ulcer did not appear to have spread.

“The frictions were continued five days longer, with an ounce of the tincture of opium each day; during which time the pain left her, and the ulcer looked better every day.

“As she had by this time tolerably recovered her appetite and strength, I only saw her occasionally, and gave her, now and then, an opium pill at night.

“The pulse from the time I saw her, was low, and not remarkably quick.”

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE insertion of my last paper in your valuable publication was particularly gratifying, and encourages me to trouble you again with a few remarks on the concentration of vinegar, and on some pharmaceutical preparations formed from this acid, which, if they appear of sufficient importance, I have no doubt of your honouring them with your notice.

I am, Gentlemen,

Your obliged humble servant,

NEWCASTLE, *August 6th*, 1799.

JOHN PROCTOR, Junr.

The utility of this acetous acid, both as an article of diet and of the *Materia Medica*, renders an easy method of obtaining it pure, and tolerably concentrated, of considerable value. When it is not contaminated with the mineral acids, it may be deprived of a considerable portion of its aqueous part by freezing; but this is a process which cannot at all times be accomplished, nor even when it can, is it sufficient to deprive it of the other acids which may be mixed with it; and all the common kinds of vinegar sold in the shops are more or less adulterated with sulphuric acid. Distillation frees it perfectly from this acid; but distilled vinegar, being diluted with water, is too weak for many purposes; and where the deprivation of the colouring and extractive matters is not of much consequence, this operation may be dispensed with.

By

By dissolving pure chalk in a given quantity of vinegar till it be saturated, we obtain a solution of acetated lime, from which we may separate as much of the watery part as we please by evaporation; and afterwards by decomposing this solution, by means of the sulphuric acid, the acetous acid may be thus obtained of any degree of strength required.

When pure vinegar cannot be obtained for this purpose, even such as is adulterated with sulphuric acid can be purified and concentrated by this process with equal success. The chalk neutralizes the mineral acid, and forms gypsum, which being insoluble, is precipitated, and the acetated lime remains in solution. This is to be poured off, and evaporated to two thirds, or less; as much sulphuric acid is then to be added as will separate all the calcareous earth, adding it by little at a time, and taking care to avoid an excess of it, which may be prevented by trying a little of the vinegar from time to time, with a farther addition of sulphuric acid, in a separate vessel; if it is not rendered turbid, it will be necessary to ascertain, with another portion of it, whether the sulphuric acid does not prevail, by adding to it a few drops of vinegar of litharge, or of a solution of cerussa acetata. When the point of saturation is finally adjusted, and the gypsum separated by deposition, the supernatant liquor may be poured off; and it will be found to be a very pure and tolerably concentrated acetous acid.

It is however to be observed, that in this process the flavour of the vinegar will in some measure be altered, if not lost, by the evaporation of the volatile matter in which it resides; but it might probably be restored, or some other flavour equally agreeable be communicated to it, by a short digestion on wine-lees.

Distilled vinegar, as well as that which has not been distilled, may be treated in the same manner, if it be required to obtain the acid free from the saponulous extract combined with it in its crude state. There is no doubt but vinegar thus concentrated might be advantageously employed as a powerful antiseptic in pickling, and its piquancy as a sauce be considerably increased by this process.

The London College have given a method of preparing a concentrated acetous acid, by distilling verdigris per se, which does not appear, however, to be introduced for any other purpose than the making of the hydrarg. acet. Either from the apprehension of this acid containing copper, or on account of its high price, it has been since laid aside, and another method of preparing the hydrarg. acet. substituted in the room of the former one, viz. decomposing a solution of quicksilver in nitrous acid, by means of acetated kali. But the using of this neutral salt is still a needless expence, as the precipitate obtained from the nitrous solution by the vegetable alkali can be dissolved in distilled vinegar by boiling them together, when the same crystals of acetated quicksilver are deposited on cooling, as are obtained by the other more complicated

plicated and expensive processes. Hence it is evident that the pure acid has a greater attraction for the metallic precipitate, than for caloric or water; so that it is only the water of the solution that is evaporated, and which, if collected in a condensed state, would be found totally free from any acid impregnation.

We may observe in a number of chemical operations, how much the order of affinities is regulated by circumstances which require particular attention. Thus, water impregnated with carbonic acid gas soon becomes vapid by exposure to the ordinary temperature of the atmosphere, while its combination with fixed alkalies resists the heat of boiling water; for the subcarbonate of potash (salt of tartar) is capable of decomposing concrete ammonia, and combining with the carbonic acid to the point of saturation, and the volatile alkali may then be dissipated by evaporation.

In the preparation of the aq. lithargyri acet. the College direct the use of distilled vinegar, which is hardly necessary: if the common kinds of vinegar be used, as strong a solution may be obtained, and every way equally fit for use, as that made with distilled vinegar. During the boiling, the sulphuric acid is all separated from it, forming with part of the litharge a sulphat of lead which is precipitated, and the pure acetous acid is left at liberty to saturate itself with the remainder. Instead of boiling the solution down to a certain quantity, it would be better to bring it to an accurate standard by weight; as supposing a long narrow-necked bottle, which, when full, held 1. 0 of water, should hold 1. 3 of the aq. lith. acet.

When the aq. veg. min. is made with hard water, a partial decomposition of the vinegar of litharge takes place, which is not even prevented by using distilled water, because part of the lead is not sufficiently oxydated to keep it dissolved. If instead, therefore, of adding the proof spirit (which rather serves to increase the decomposition), as much distilled vinegar were used in its place, a permanently transparent solution would be had, and of a constantly uniform strength. Sugar of lead and cerusse seem to bear the same relation to each other, as corrosive sublimate and calomel. See CRELL'S *Chemical Journal*, vol. iii. p. 8.

The foregoing remarks apply with equal propriety, and much more forcibly to the solution of antimonial tartar, both in water and in wine; part of the antimonial oxyd being deposited in the same manner from both solvents. I would therefore recommend the rejection of the vin. tart. antim. and a substitution in its place of a given quantity of emetic tartar dissolved in water, with the addition of as much of a saturated solution of crystals of tartar as may be found sufficient to prevent any precipitation. I am persuaded that the objections to this active medicine, on account of the uncertainty of its strength, would, by this manner of preparing it, be considerably done away, and that there would be less occasion for introducing other formulæ, neither superior in efficacy, nor simpler in composition.

STATE

STATE OF DISEASES IN LONDON.

Account of Diseases in an Eastern District of London, from the 20th of July, to the 20th of August.

ACUTE DISEASES.		No. of Cases.	
Typhus	- - -	2	
Pneumonia	- - -	2	
Catarrh	- - -	1	
Acute Rheumatism	- - -	3	
Variolæ	- - -	1	
CHRONIC DISEASES.			
Cough	- - -	6	
Dyspnoea	- - -	7	
Asthma	- - -	3	
Pleurodyne	- - -	3	
Phthisis Pulmonalis	- - -	7	
Hydrothorax	- - -	2	
Ascites	- - -	5	
Vertigo	- - -	3	
Paraplegia	- - -	1	
Epilepsy	- - -	2	
Syncope	- - -	1	
Palpitatio	- - -	1	
Dyspepsia	- - -	7	
Gastrodynia	- - -	5	
Diarrhœa	- - -	10	
Enterodynia	- - -	4	
Dysentery	- - -	3	
Colica	- - -	1	
Colica Pictonum	- - -	3	
Menorrhagia	- - -	2	
Amenorrhœa	- - -	3	
Chlorosis	- - -	4	
Prolapsus Vaginæ	- - -	1	
Hæmorrhoids	- - -	3	
Enuresis	- - -	2	
Calculus	- - -	1	
Dyturia	- - -	3	
Nephritis	- - -	1	
Hysteria	- - -	3	
Hypochondriasis	- - -	2	
Lepra	- - -	1	
Herpes	- - -	4	
Exostosis	- - -	3	
Lumbago	- - -	2	
Sciatica	- - -	3	
Chronic Rheumatism	- - -	13	
PUERPERAL DISEASES.			
Ephemera	- - -	2	
Milk Fever	- - -	3	
Menorrhagia lochialis	- - -	2	
INFANTILE DISEASES.			
Ophthalmia	- - -	2	
Aphthæ	- - -	3	
Dentitio	- - -	2	
Tabes Mesenterica	- - -	1	
Vermes	- - -	3	

There has been nothing in the state of disease during the last month, that deserves any particular attention. The state of the weather, however unfavourable it may prove to the vegetable, does not seem to have produced much derangement of the animal economy. The bowels have been the principal seat of complaint. A few instances of slight dysentery, with a larger number of diarrhœa seem to constitute the list of diseases at present prevailing.

Diseases admitted as In and Out-Patients under the care of the Physicians of the Westminster Hospital, from the 20th of July to the 20th of August.

Fevers	- - -	14	Asthensia	- - -	6
Hepatitis	- - -	1	Asthma	- - -	1
Quotidian	- - -	1	Cough	- - -	4
Tetanus	- - -	1	Diarrhœa	- - -	9
Amenorrhœa	- - -	4	Dyspepsia	- - -	3
Anasarca	- - -	2	Dysuria	- - -	1
Ascites	- - -	4	Enterodynia	- - -	2
Epilepsy	- - -	1	Hemorrhoids	- - -	1
Gastrodynia	- - -	2	Hypochondriasis	- - -	3
Hooping Cough	- - -	1	Impetigo	- - -	1
Hemoptoe	- - -	2			Itch

Itch	-	-	2	Pleurisy	-	-	1
Jaundice	-	-	1	Rheumatism	-	-	9
Lepra Græcorum	-	-	1	Sciatica	-	-	1
Lumbago	-	-	2	Struma	-	-	4
Menorrhagia	-	-	2	Urticaria	-	-	1
Phthisis	-	-	1	Tinea	-	-	2
Paralyfis	-	-	3	Worms	-	-	3

List of Diseases from the 20th of July to the 20th of August; being the Result of the Public and Private Practice of a Physician at the West End of the Town.

ACUTE DISEASES.							
Measles	-	-	9	Pyrosis	-	-	2
Scarlatina	-	-	1	Enterodynia	-	-	5
Small-pox	-	-	1	Diarrhœa	-	-	13
Hooping-cough	-	-	3	Cholera and Bilious Vomiting	-	-	3
Contagious malignant Fever	-	-	7	Colica Pictonum	-	-	1
Synochus, or Summer-fever	-	-	4	Hæmorrhoids	-	-	4
Slow fever and Hæctic	-	-	4	Fluor albus	-	-	5
Catarrh	-	-	6	Menorrhagia	-	-	5
Acute Rheumatism	-	-	2	Amenorrhœa, &c.	-	-	7
Erysipelas	-	-	1	Jaundice	-	-	2
Inflammatory Sore-throat	-	-	3	Scirrhus of the Liver	-	-	1
Child-bed and Milk-fevers	-	-	3	Scirrhus of the Womb	-	-	2
Acute Diseases of Infants	-	-	8	Prolapsus	-	-	1
CHRONIC DISEASES.				Dysury	-	-	1
Asthænia	-	-	28	Worms	-	-	2
Chronic Rheumatism	-	-	10	Rickets	-	-	3
Dropfy	-	-	8	Scrophula	-	-	4
Paralyfis	-	-	2	Tabes Mesenterica	-	-	2
Apoplexy	-	-	1	Lichen	-	-	2
Cephalæ	-	-	5	Lepra	-	-	1
Hysteria	-	-	2	Scaly Tetter	-	-	3
Epilepsy	-	-	1	Urticaria	-	-	1
Cough and Dyspnœa	-	-	15	Roseola	-	-	1
Hæmoptoe	-	-	2	Erythema	-	-	1
Pleurodyne	-	-	1	Ringworm	-	-	1
Pulmonary Consumption	-	-	5	Itch and Prurigo	-	-	13
Dyspepsia	-	-	12	Porrigo	-	-	2
Gastrodynia	-	-	7	Acne	-	-	3
				Lupus	-	-	1

The long continuance of wet and cold weather has not produced in the course of the two last months, any considerable extension of diseases. The measles have been the prevailing contagious epidemic; and, contrary to the position of Sydenham, have spread more widely since the solstice. The disease has however appeared in a very mild form; as it usually does in the summer months, with but a slight cough, and little fever.

The malignant contagious fevers occurred in the close and crowded dwellings of the poor. That the number of them should be greater than usual, was probably owing to the long series of damp and windy days, which confined most of the individuals of families at home, and prevented ventilation, by open windows, &c. Nevertheless induction, from the experience of many years, enables me to ascertain, that mild open winters, and chill, even though moist summers, are on the whole, most favourable to the health of the inhabitants of London.

R. W.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you think the following remarks on *Digitalis Purpurea* worthy a place in the *Medical and Physical Journal*, you are at liberty to dispose of them as you may think proper, and I have the honour to be,

Gentlemen,

SUDBURY, SUFFOLK,

Your obedient servant,

Aug. 4, 1799.

L. MACLEAN, M. D.

Among the many valuable facts and observations with which the *Medical and Physical Journal* abounds, those which relate to the *Digitalis Purpurea* are not the least interesting. It is with pleasure I observe the real properties of this long-neglected vegetable begin at length to be known in different parts of the world. It has long been a favourite medicine with me, and this partiality is founded on the fullest evidence of its extraordinary efficacy, in some of the most formidable diseases incident to mankind.

When I fixed my residence in this country (nine years since the perusal of Dr. WITHERING's excellent work), what I had seen and heard of its efficacy in dropsy impressed on my mind so favourable a bias towards it, that I was anxious for opportunities of putting its virtues to the test. The result has been extremely satisfactory. After several disappointments, arising from the quality of the preparations at first used, my success for upwards of five years has exceeded my most sanguine expectations.

In the course of my experience, many circumstances attracted my notice which I was before unacquainted with, and which induced me to pay more than ordinary attention to its peculiar effects on the living fibre. These I began at an early period to minute down in my Journal, intending to commit them to the press as soon as they appeared sufficiently interesting for public inspection. But the ingenious communications of Doctors FOWLER and DRAKE, the comments and additional reports of the learned Editors of the valuable works in which they are inserted, lead me to deviate in some degree from my original design, and to introduce, without farther delay, to public view, the general results of my experience of the fox-glove in consumption, and a few other disorders, selected from the more detailed cases and observations recorded in my Note-book.

I am aware my experience has as yet been too limited to enable me to speak with precision of the real extent of its powers in consumption; yet when I hear men profoundly versed in medical science mention it in terms of the most extravagant commendation, stamping upon it a character little short of

infallibility, while others speak of it as a destructive poison, that must be resorted to with the greatest circumspection, and many are totally ignorant of its real properties, doses, and mode of exhibition, I trust I may be pardoned thus prematurely intruding my observations on the public.

I am perpetually hearing that Dr. Drake has discovered a specific for consumption; and although this is to be attributed to the well-meant, but mistaken zeal of his friends, yet the conclusions* deduced from the successful results of two cases, are obviously calculated to inspire the fullest confidence in it;—a confidence which the bark in intermittents, or mercury in lues, scarcely warrants.

The result of the first few trials † made by Dr. BEDDOES was not very encouraging; but his subsequent experience ‡ of it has been so flattering, that he is induced to hold out the most sanguine expectations of it.

Dr. Fowler's success § has been great also; yet, like a true philosopher, a cautious and experienced practitioner, he has contented himself with merely detailing the cases, leaving the public at liberty to draw their own conclusions, withholding *his* until farther trials might enable him to speak more decidedly of the real powers of the medicine.

Dr. Beddoes's name is familiar wherever the sciences are cultivated, his capacious mind having embraced every branch of them; and his zeal in making his labours and discoveries more especially subservient to the health and comfort of his fellow-creatures, is highly meritorious, and lays the public under weighty obligations to him.

Dr. Fowler likewise stands deservedly high as a man of science, and a judicious practitioner.

Dr. Drake, too, I know, from personal acquaintance, to be a man of character and of talents.

Hence the high encomiums bestowed upon the fox-glove in consumption, by such respectable authorities, must necessarily have considerable influence, not only within the immediate sphere of their practice, but with the medical world at large.

But whether subsequent trials be attended with effects equally happy, the public will speedily be in possession of evidence sufficient to enable them to decide.

* "Medical Contributions," p. 486. "Medical and Physical Journal," p. 291.

† "Medical Contributions," p. 521. "Medical and Physical Journal," p. 293.

‡ "Essay on Consumption," p. 270. "Medical and Physical Journal," p. 384.

§ "Medical Contributions," p. 500. "Medical and Physical Journal," p. 295.

decide. If even it fall short by some degrees of performing what is promised from it, there will, as Dr. Beddoes emphatically expresses it, "be a cause for national rejoicing, greater and more universal than has before occurred*."

My own experience in upwards of twenty cases will not suffer me to speak in such high terms of it. I have certainly found it a most valuable anti-phthical remedy, and although I trust it will be found by others the most efficacious that has hitherto been resorted to, yet its powers are limited, even in the early stages.

I was first encouraged to prescribe it in pulmonary consumption, from the happy effects experienced from it in the chronic cough, dyspnoea, distressing pain and stricture across the chest frequently attending hydrothorax, and sometimes remaining after the serous fluid was evacuated. It was exhibited under the most favourable impressions, and when my mind was not influenced by theory, and no circumstances tending to insure its success were overlooked. The cases were not selected for my purpose, but such as chanced to fall under my care in the regular routine of practice. Some of these were of the true genuine consumptive kind (by which I mean, that which arises under peculiar circumstances of constitution, accurately delineated by several authors; is in general hereditary and connected with a scrophulous habit; appearing from sixteen to thirty, but more especially under twenty years of age, and sweeping away whole families, particularly females, no less distinguished for high mental endowments, than by beauty and personal accomplishments, without even being checked in its fatal career); others supervened to neglected or improperly treated catarrhal affections, and pneumonic inflammation, at various ages and apparently unconnected with this peculiar habit, and these were at various stages, and consequently of different degrees of violence.

The success of the fox-glove, as is the case with every remedy, was proportioned to its early exhibition. Instances continually occur to practitioners with all the characters of phthisis, but without the existence of tubercles; there is incessant cough, sometimes with copious expectoration of a yellow-matter, sometimes without; the hectic fever, with morning or evening exacerbations, or both, and night sweats, are strongly marked. Such instances are more common among husbandmen than others, and arise from their continuing their labour in the fields, exposed to all the vicissitudes of temperature, under violent colds or catarrhal affections; but if the phthical habit does not exist, they frequently yield to a particular treatment. In these

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* "Essay on Consumption," p. 271. et seq.

the fox glove will be found an excellent remedy. Many cases of chlorosis are of this description: there is cough, generally dry; pain of the side, chilliness, succeeded by heat, intense thirst, and sometimes night-sweats. Many such, that had been pronounced confirmed phthisis by a noted consumption-doctor, have been restored to health under my care, by means of steel, myrrh, bark, with saline medicines occasionally, and suitable regimen. The true, genuine, fatal disease, however, is sometimes ushered in, or attended with chlorotic symptoms.

But although the fox-glove is chiefly to be relied upon in such cases and in the early stages, yet I was fortunate in rescuing a few from death, after all other means failed. Two of these, Mr. BREWSTER, of Melford, aged thirty-two, and Miss L. CANHAM, of Edwardston, aged fifteen years, I attended with Mr. EDWARDS, of Melford, and Mr. WYNN, of Boxford; to whose kindness in attending to the plan I recommended, and in preserving minutes of the cases, I feel much indebted. The tincture was the preparation used. Mr. Brewster was kept for some weeks under its full influence; Miss Canham not so long. Four of Mr. Brewster's family, and as many of Miss Canham's family died of consumption.

Some of my patients for a time, "advanced," to use Dr. Beddoes's expression, "with a firm pace towards recovery;" but the pace became gradually less and less firm, until they ceased at length to make any progress; and after remaining stationary for a certain time, all the unpromising symptoms returned in the same gradual manner they had receded, and the disorder terminated its fatal career in defiance of all my efforts. In a few, however, when by the aid of the digitalis, the hectic symptoms were subdued, and only weakness remained, tonics completed the cure.

In the cases of two young ladies (sisters) in this neighbourhood, the one seventeen, the other fifteen years of age, labouring under confirmed phthisis, apparently much more favourable than those I have related of its success, it completely failed. It was first given in powder to one; afterwards in tincture to both, in combination and alone; introduced gradually and increased to the fullest extent the habit was capable of bearing; or at once in large doses. It was repeatedly discontinued, sometimes by degrees, sometimes suddenly, for some time, and then had recourse to again, but in vain. The symptoms were evidently for a time not only relieved, but checked in their progress in both. The elder for several nights could not sleep without a full dose (gtt. xxx.) at bed time. This for a time insured a good night, but it ultimately ceased to do any good; and the elder is sinking under the disease, while the situation of the younger is extremely precarious, and all medicine
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has been abandoned as useless. In one the disorder had been checked more than once before, but the means failed now; and an elder sister fell a sacrifice a few years before, after the progress had been suspended during the summer months three different seasons.

Mr. HARROLD, of Nayland, an intelligent practitioner, on whose fidelity and accuracy in attending to its effects, in the intervals of my visits, the fullest reliance may be placed, was equally desirous with me in giving the digitalis a trial, and equally interested in its success. Hence it may be supposed to have had a fair chance.

On the whole then, the fox-glove will be found a valuable remedy in consumption. It will sometimes cure when the most approved remedies fail. When of itself it is insufficient to subdue the disease, it will prove a valuable auxiliary to other means. It has always, with me, quieted and soothed the sufferings of the patient more or less; and where it ultimately failed, it lengthened the duration of life, and smoothed the avenues to death.

This is all I apprehend it will be found capable of performing; but this is doing a great deal. Those who expect wonders from it, or that it will *in general* cure consumption, will be disappointed, I lament it is not possible for me at present to form a correct estimate of the proportion of successful to the unsuccessful cases, because I see the most serious evils begin already to result from its not answering the high expectations that have been raised.

A physician of eminence and extensive practice in this county, from the strong recommendation of Dr. Drake, was readily induced to give trial to it in three cases of phthisis, and he assured me it had fair play; but from its failure in all, he can scarcely be prevailed upon to have recourse to it again. In one of these the disease was afterwards suspended for several months, by change of air and suitable regimen, under the direction of a physician of eminence in town, who reprobated in pointed terms the exhibition of fox-glove, and I hear, declared the case not consumption. But the lady has lately fallen a victim to the most confirmed and distinctly marked hectic that ever occurred.

Others begin to lose their confidence in it from similar failures, whereas, had it been brought forward with its true character stamped upon it, this would not be the case. Digitalis will be found highly beneficial in asthmatic affections, coughs of every kind, dyspnoea, and other chronic affections of the chest and lungs. It promises to prove useful in hooping-cough; and to those who may have opportunities, it is worthy a trial: none have as yet occurred to me.

In a most formidable case of pleurisy, where the use of the lancet was judged imprudent, it acted like a charm. In this case (a young man aged eighteen), the breathing was more quick, difficult, and anxious than I had ever observed it in any instance. The countenance was expressive of the greatest distress. The pulse was 112 and feeble, with general prostration of strength. The danger seemed imminent, and if he survived the present urgent attack, phthisis as a consequence was to be dreaded. The pulse was in a few days reduced to 48, and permanently kept from that to 56. The surgeon who attended with me numbered it once at 46. This was the only instance that occurred to me, where neither the stomach or head were affected under so great a reduction.

Mr. Harrold informs me, a youth about nine years of age was speedily cured by the digitalis of a violent convulsive cough, which before baffled all his efforts.

It promises to prove permanently successful in a case of distinctly-marked epilepsy. Master TWEED, aged fourteen, had been subject to frequent returns of epileptic fits from early infancy, the longest intervals being three days, and he frequently had three in one day. Every remedy that has been recommended for this disease, both by regular and irregular practitioners was tried, but in vain. At my request, the fox-glove was given in substance, made into pills with confect. aromat. under the immediate direction of his father, an eminent surgeon at Bocking, in Essex. The first week after beginning it he had three fits, the last on the 12th of December last. He has remained perfectly free since, and from having almost constant stupor, great languor, bloated, swollen countenance, with impaired strength and appetite, his health is perfectly restored, and he is become brisk, lively, and active. He was kept under its influence, more or less, for upwards of five months.

I have tried it in another case since, for upwards of a month, but was obliged to discontinue it from my stock of tincture being expended. It seemed to lengthen the intervals from a week to a fortnight, but the fits were more violent. My hopes in this case are not very sanguine; but the fox-glove deserves farther trials in epilepsy.—The pulse was preternaturally slow in this case, being 67 before beginning the tincture, and it may be worthy of remark, that when under its full effects, it was in general quickened. Thirty drops, three times a day, was the utmost extent to which it could be carried, though a strong, active young man.

Some of the most remarkable Effects of Fox-glove.

It is necessary for those unexperienced in its use to be in possession of cer-
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tain *criteria* to direct them in its exhibition, and to enable them to judge how far they may venture to proceed with safety. The most common effects observed from full doses, are vertigo, pain, or throbbing of the forehead, or in the bottom of the orbits; imperfect vision, as if a cloud or mist were passing before the eyes, or as if small spots were moving or dancing in the air; nausea of the most distressing kind, and vomiting; reduction in the frequency of the pulse, or extreme irregularity of it. Sometimes it beats in a slow, uniform, regular manner, and becomes fuller than before. More generally, however, from being slow, it runs on rapidly for a few pulsations, then resumes its former standard, or the finger loses now and then a complete stroke. When slow it is quickened on the slightest bodily exercise. I have never been able to reduce it under fifty in phthisis, without the head and stomach being affected; so that those who expect to succeed in reducing the pulse to any considerable degree without these effects, will be disappointed. In dropsy, where the excitability is not in general so great, this may be done more readily. Some stomachs are extremely susceptible of it, while others bear a full dose without inconvenience. Twenty drops of the tincture sometimes produce immediate but temporary nausea, before the habit has felt its effects. Drowsiness often occurs to a great degree, and from passing restless nights they sleep sound. The intellectual operations are greatly disturbed, for my patients become unfit for any occupation that requires mental exertion. But the most striking effect arising when under its full influence is, to use their own words, "a faintness or sinking at the stomach, as if their life was going from them," different from any thing they ever experienced before. This attracted my attention more than any other, because they all complain of it, and nearly in the same words. When this exists to a very great degree, with constant disposition to fainting, extreme languor, and cold, clammy sweats, it has been carried beyond due bounds, and we ought instantly to desist. The urine, from being high coloured, and depositing a thick sediment, sometimes assumes its natural colour, and is increased in quantity; at other times it is not sensibly changed.

I generally begin with from ten to fifteen drops, three times a day, increasing two drops every second day, until the habit begins to feel its influence. I then desist, and afterwards diminish in the same gradual manner, or augment the dose according to the effect. By these means, the body may, with the greatest safety, be kept under its influence for weeks, and even months.

When there is intense heat and thirst, with flushed cheeks, I direct it to be given in a saline mixture, or draughts; and when these and the ordinary hectic symptoms are subdued, and only weakness remains, tonics are generally

rally necessary to complete the cure. It is a mistaken idea that stimulants must be given in combination with it.

The distressing nausea and sickness do not interfere with its salutary effects; the immediate relief sometimes experienced after vomiting, leads me to think they contribute to its success; and, from the quantity of bile and viscid mucus thrown up, without much exertion, the biliary and pancreatic secretions seemed increased by it. The appetite, from being considerably impaired, becomes sometimes very keen, and they can eat heartily during the intervals of nausea and vomiting. I never knew the bowels violently affected by it in phthisis, as they frequently are in dropsy; but it keeps them moderately open: nor have I ever observed salivation or the sweetish taste of the mouth from it; but this may be owing to my experience being much more limited in consumption.

In answer to the epithets "dangerous, deleterious", and the like, that are continually bestowed upon it, I think it incumbent upon me to observe, that a fatal instance never occurred from its use, under my care; and I have, I am persuaded, prescribed it in upwards of 200 cases, nor have I seen alarming symptoms from it, except in two instances, where from neglect it was increased after the habit was under its full dominion; and I will venture with confidence to affirm, that any serious consequences that have arisen, or may arise, from it, have been, or will be, from inattention to its effects; as it invariably gives full warning of its deleterious qualities. The most valuable medicines in our possession, or even the most salutary substances, will prove injurious, if administered to excess. It is unfair to argue of the use of any substance from the abuse of it. Opium, tartar emetic, the active preparations of mercury, and many other valuable remedies, are destructive poisons if administered in undue quantities.

Mode of Preparation and Exhibition.

It becomes an object of importance to have a preparation as a general standard which possesses its virtues unimpaired at all times, and can readily be procured at all seasons, as medical men will then be prescribing and making observations on the same remedy, which is really not the case at present. The infusion or decoction of the fresh leaves are preferred by Dr. Fowler, but as the plant is not to be had in many districts, even counties, and where it is, as a scanty supply only is to be procured in winter, with its virtues probably impaired, this preparation is, on these grounds, inadmissible.

I always used the powder in substance, or the infusion of the dried leaves in consumption, as I had done in dropsy, until I heard that Dr. Drake
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attributed his success in the two cases alluded to, to the tincture. I have since used it in several cases, and now give the preference to it, not because I think it possesses superior virtues to any of the other preparations usually resorted to, but because the dose can with more certainty and accuracy be regulated, and it retains its active properties longer, most probably, for years. I imagined at first, it acted more readily on the heart, without affecting the stomach or head, but I am now convinced, this is not the case. In dropsy the other preparations merit a decided preference, as they act more readily on the absorbent system, at least in taking up ferrous fluids.

Having experienced so many disappointments from the quality of the medicine when I first began to prescribe it, I have for some years cultivated the plant in my garden, whereby I have reason to believe its virtues are improved: they certainly are not impaired. The leaves have a greener hue, are thicker, more tender and succulent than those growing in the natural state. These 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. When the stalks grow thick, strong, and tall, with a full supply of large, thick, green leaves, the plant is in full health and vigour. I begin to gather the leaves when the lower blossoms are fully expanded, and I have a second crop of smaller ones; but the time of gathering is of little consequence provided they appear green and healthy. They are either dried slowly in the shade, or quickly in the sun, or near a fire; but they must not be alternately in the sun and shade, otherwise they lose their colour and their virtues. I pass a packthread through the stalks, and suspend them in the shade, where a current of dry air passes through them. When thoroughly dried, they are packed close in brown paper bags, and suspended near the kitchen fire. In this manner they will retain their active properties unimpaired for a long time, but I never trust to them for more than one year. When wanted for use, no more than will soon be consumed should be powdered, as, by frequent exposure to the air, the powder speedily becomes an inert substance. I wish particularly to insist on these precautions, because few vegetables require greater care in preparing; and because I know many disappointments have arisen from the want of them, which have operated powerfully against the more general introduction, and consequently the success of this valuable article. What is sent from London is mixed with the stalks, and is of no use. I have prescribed it to the extent of several grains, without the smallest effect, and from several failures, I had nearly abandoned, as useless, a medicine, which I have now no hesitation in

affirming, is one of the most valuable in the whole range of the *Materia Medica*.

A single grain of the powder prepared as above, the fibres being carefully excluded, is a medium dose for an adult to begin with, and taken evening and morning, with a little confect. aromat. has frequently evacuated the water in general anasarca, in forty-eight hours. A grain and half, however, may in general be began with, twice a day, increasing half a grain a dose every second day, until some effect be obvious. The leaves when dry, should appear green, and have a flavour like found fresh hay.

I have tried various proportions of the leaves to spirituous menstua, for tinctures. The proportions recommended by Dr. DARWIN, are an extravagant waste of the leaves, and of the tincture; for without the strongest pressure, a great portion of the latter is lost. I have found that of the tincture made according to the following formula, which I beg to submit to the consideration of the learned College for insertion in their Pharmacopœa,

I have never been able to exceed gtt. xxx. ter. in d.

R γ Folior. digit. purpur. recent. exsicc. unc. i.
 Sp. vin. ten. unc. viij. M.
 Digere leni calore per dies septem dien cola.

Or the following, which I still prefer, as having the plant in its perfect state:

R γ Folior. digital. purpur. recent. unc. iv.
 Sp. vini. rect. unc. v. M.
 Digere dies septem leni calore dien cola.

This makes a beautiful dark-green tincture. I have found by drying the leaves, that they lose from three-fourths to four-fifths (for they vary much in the degree of humidity they contain) of their weight; so that in the above formula I allow three ounces of water contained in the leaves, to the five of pure spirit, which is a larger proportion of the spirit than is contained in the first formula, but nearly the same of the leaves. For infusion dr. ij. of the dried leaves, to unc. viij. of boiling water, suffered to remain in a close vessel till cold, make a very strong infusion; a table spoonfull

Were the College to admit these, or any better formulas that may be presented to them, their sanction would give more general currency to the fox-glove.

I have for some years supplied the practitioners with whom I prescribe this medicine; very few, till lately, at my request, paying attention to its
 of which, taken three times a day, is a full dose for an adult to begin with. prepa-

preparation. I have now some pints of the tinctures made as above, and some pounds of the leaves in my possession, and though my consumption increases yearly, shall be happy in furnishing any of your numerous readers who may be desirous of giving trial to them, with a portion of either.

I have requested Mr. BROWN, Wholesale Chemist and Druggist, Lothbury, London, to collect a quantity of the leaves of this season, and gave him the necessary directions for making the tinctures, &c.

Conjectures respecting its Mode of Action.

I should not, in this little abstract, have entered into any speculative opinions on its *modus operandi* on the living fibre, did I not see theories advanced (on which indications of cure are grounded), that appear to me totally inadmissible.

That its good effects do not always depend upon its power of diminishing secretion, and promoting absorption, as maintained by Drs. Fowler and Drake, is obvious from this, that it is equally, and indeed, more efficacious in cases where there is no increase of mucus or pus.

Dr. Drake affirms, "that it has been ascertained, that hectic fever arises only from the matter of an open ulcer." But however high the authorities that may be adduced in support of this opinion, daily observation contradicts it.

In the early stages of consumption it is well known, that the hectic fever is often clearly and distinctly marked, without any increased expectoration, and when the tubercles are still in their infancy, and consequently before they have suppurated. Scrophulous enlargements of the mesenteric glands, will, I believe, produce confirmed hectic, and destroy life, without arriving at maturation. This, if I mistake not, I have repeatedly observed in children whose parents, especially the mothers, were consumptive, or had scrophulous affections externally on the body. Females who have survived two or more pregnancies under phthisis, sometimes produce children that are hectic at birth, and die of marasmus, from mesenteric indurations, in early infancy.

In convulsive coughs its good effects are equally conspicuous, where there is no inordinate secretion to lessen or absorb.

Nor does its efficacy depend *entirely* on the reduction of the contractions of the heart; for in some of my patients, the cure was completed without any remarkable diminution of the frequency of the pulse.

On looking over the reports of Miss Canham's case, the pulse was only once brought to 48, and this and the preceding day, when it was at 52, the stomach and whole body were so disordered that she was confined to her bed. The following day the digitalis being discontinued, it rose to 66, and except once that it was 64 and 84, 90 is the lowest number I observe in my notes. Brewster's never used to be reduced lower than 90, and this only once. In both it was originally extremely frequent and small, from 120 to 140.

In a case of confirmed phthisis, with distinctly marked scrophulous habit, now under my care, which promises to do credit to the fox-glove, the pulse was only 64, prior to his beginning it, which I considered as preternaturally slow; and it is remarkable, that it has been quickened by it; having been 68, 72, and 76, when examined since, nearly at the same hour, and under the same circumstances. The head and stomach are affected to a great degree by twenty and twenty-two drops of the tincture, three times a day. In this person, beside the ordinary effects, objects sometimes appear of a green colour that are not so in reality.

It is obvious, however, that if the blood can be made to pass through an organ whose excitability is morbidly increased in a very high degree, 60 or 50 times in a minute, or even less, instead of 140 or 120, a very important end will be obtained.

But the theory on which Dr. Drake particularly insists, and on which his curative indications are chiefly built, appears to me liable to insuperable difficulties.

"It has been lately maintained," says he, "by the most celebrated physiologists, among whom Mr. HUNTER stands foremost, that pus is a secreted fluid, the consequence of certain diseased motions of the extremities of the blood-vessels; it has been likewise ascertained, that hectic fever arises only from the matter of an open ulcer; that what is termed laudable pus, when secluded from the air is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it rests. When pus, however, is exposed to atmospheric air, it rapidly attracts oxygen, an acid of a peculiar kind is generated, and hectic fever, the effect of the absorption of aerated matter, is produced. Now as an ulcer of the lungs is perpetually exposed to a stream of air, and of course an ichorous poison, continually forming by the union of oxygen with secreted matter, an important curative process would seem to arise, from promoting absorption so rapidly from the surface of the diseased parts, that the pus shall be taken up as soon as secreted, and consequently its combination with oxygen prevented."*

That

* "Medical Contributions," p. 480.

That pus was a secreted fluid I have long believed; that it attracts oxygen, I do not pretend to deny; and that an acid of a peculiar kind may be generated, I take for granted, because it is presumed the fact has been ascertained by experiment; but that the inferences deduced from these premises are founded in fact, I see neither evidence nor probability. That hectic arises from collections of matter in different parts of the body, and more especially from vomicae in the lungs themselves, without any communication with the external air; and that the fluid thus formed, is frequently not a laudable pus, but a thin offensive ichor, it is only necessary for me to call instances to the recollection of every medical man of observation. It is still more difficult to admit that the hectic fever arises from the absorption of the peculiar acid, or ichorous poison, generated by the union of oxygen with pus. If this were the case, the thick bland matter secreted from every wound or ulcer, when exposed to a stream of air, would become an ichorous poison, and be productive of the effects mentioned by Dr. Drake; but that this does not in reality happen, daily observation sufficiently evinces. Even in the lungs themselves, when from pleurisy or pneumonic inflammation, suppuration happens in a constitution previously sound, good, thick pus, without any fœtor, is sometimes formed; and we continually observe both in the lungs and other parts, the acrid offensive ichor of ulcerated surfaces, converted into a copious secretion of what is termed laudable pus; whereas, while any is continued to be secreted, being equally exposed to the air, it ought still, according to this theory, to be a thin ichor. It appears to me obvious, that cause is here confounded with effect, and effect with cause; and that the ill-conditioned matter thus poured out, is the immediate consequence of the highly morbid state of the vessels secreting it, as well as of the whole body, and not of any subsequent changes it undergoes; and that it will be vain to attempt to improve the one until the other be corrected. A wound or ulcer in any part of the body under confirmed hectic, would most probably discharge a thin offensive ichor, and every judicious surgeon would endeavour to correct the morbid condition of the habit which occasioned it, before he expected to succeed in healing it. Good pus he would look for as a necessary consequence; nor would he under any circumstances, endeavour to promote its absorption.

A peculiar delicacy of constitution, with a high degree of susceptibility, both of body and mind, are mentioned by all authors as characterising the true genuine phthical habit. Hence the slightest causes often produce the most powerful impressions. The circulation is accelerated by stimuli, which

in others produce no more than the healthy actions. A cough, pain of the side, or some local affection, supervene to every little exposure to cold, or transition of temperature; and a cough once arising in such habits, without extreme caution, will soon lay the foundation of the disease. The inflammation of the mucus membrane and bronchial glands, at first trifling, proves a constant source of irritation to the whole habit. The blood will be urged with increased velocity through every part; and the muscles subservient to respiration being thrown into repeated convulsive actions, the pulmonary system will more especially suffer from the effects of congestion, distention, increased action, and impetus. Indurations of the glands, or tubercles, will be formed, which, by degrees, run through the progressive stages of inflammation and suppuration; and as the pus thus generated cannot be expected to be of a good bland kind, it proves by its acrid qualities, like oil to a lamp, additional fuel to the flame which gave birth to it. I do not mean to infer, that this is always the progress observed by the disease, but believe it is often so of the most dangerous and fatal kind; and whatever way it originates, the effect will be the same. To lessen or remove this morbid excitability should be the grand object of our art to attain, if we expect to be successful in preventing, or when once formed, in permanently removing consumption. But this is extremely difficult—often impossible. Not only the diet, dress, peculiar habits and occupations, but the climate itself, must be changed, before so important an end can be gained. When tubercles are once formed to any considerable extent or degree, especially in scrophulous habits, where the glandulous system is in a state of continual predisposition to inflammation of the most hopeless kind, it is often too late. The fox-glove, however, seems to me to possess powers over every other remedy yet known, in correcting this morbid condition of the whole frame, and the train of morbid phenomena resulting from it. And it is to these I have been disposed to attribute, in a great degree, its salutary effects in this deplorable malady. If it frequently possess such controul over the heart as to reduce its contractions from 140 and 120 to 50 in a minute; if it allay, as it does in a most extraordinary manner, the cough and irritation of the lungs, and indeed of every part, the advantages thence resulting will be incalculable. The vessels of the diseased lungs will be placed in a condition of secreting bland, healthy fluids, every organ in a state of performing its healthy functions, and thus the unison and harmony which constitute the healthy standard will be established throughout the body.

As in other cases the lymphatics are the artificers, or active agents employed by Nature in removing inorganic matter, either solid or fluid,
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that has no other ready outlet; so in this, what cannot readily be expectorated may be taken up by them and eliminated through the various emunctories. But whether they possess the extensive powers attributed to them by Dr. Fowler, and which they certainly do in absorbing ferrous fluids, appears to me extremely doubtful.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you should esteem the following general observations on the *animal nature and properties of vital power*, deserving a place in the department of your *Journal* appropriated to physiological speculations, they are at your disposal.

I am, Gentlemen,

Your's respectfully,

BRISTOL, July 17th, 1799.

ROBERT KINGLAKE, M.D.

No inquiry has engaged the zeal of modern philosophy with more ardour than the phenomena of vital power; and much subtilty of reasoning, and ingenuity of talent have been exercised on the subject, with various success. The difficulties which nature presents in this research appear to be less formidable than those which have arisen from the errors of artificial investigation. The real order of things is oftener overlooked, by allowing undue license to efforts of imagination, than correctly perceived.

A notion of variety of power necessarily induces a correspondent complexity in the opinion of its operation, and but too frequently eclipses the more simple and intelligible course observed by the undeviating laws of nature.

To enumerate the various hypotheses which have been, through every succeeding age, from remote antiquity to the present time, conceived and promulgated on this question, would be at once unprofitably tedious, and inconsistent with suitable brevity; it is sufficient to remark, that the labours of elapsed centuries on this topic have scarcely afforded information enough to serve as a rallying point to the modern distresses of speculative delusion. This disastrous want of success may be justly ascribed to an intemperate desire to explain, by precipitate generalization, what a cautious and ample accumulation of facts can alone develop.

Insulated facts are not less useless than a desultory and discordant concatenation

tenation of them is obstructive to the progressive improvement of science. Truths, if susceptible of legitimate union, require no adventitious aid to be systematized, but combine with natural and obvious facility; and when the connection does not spontaneously and evidently obtain, there is strong reason to presume, that some extraneous obstacle, or deficient link, interrupts the continuity of the chain.

To avoid stumbling on the difficulties alluded to in the preceding observations, it is here only designed to suggest a few reflections on the apparently elementary nature of animal excitability.

This vital property is so inseparably connected with the various conditions necessary to animal life, that it can no more be considered abstractedly, than an effect can be intelligibly examined independently of its cause: it cannot, for the shortest duration, exist in a state of disorganization, in any manner cognizable to the human senses; it must therefore be contemplated not as a cause, but as an effect resulting from an uniform assemblage of operative laws, appositely prescribed by physical necessity.

Now, as effects must necessarily assume and indicate the specific character and diversity of the causes from whence they originate, so in the various structure and organization of the animal machine, is strikingly exemplified a peculiar difference of excitability, accurately corresponding with the particular physical and chemical powers, respectively connected with such dissimilar construction of parts.

Could the human eye be rendered sufficiently microscopic, to pry distinctly into the minutest integrant particles of animal organization, analogy derived from the more evolved structure warrants the conclusion, that every organ would be found essentially different in the disposition, form, number, and proportion of its radical and constituent principles; hence it is fair to infer, that the vital power manifested by the property of excitability, partakes of the nature and quality of such diversity; and consequently it is allowable to affirm that the excitability of the brain is modified by the peculiar structure of that organ, the same may be said of all the thoracic and abdominal viscera, likewise of the muscular, nervous, vascular, cuticular, cellular, membranous, ligamentous, and ossific arrangements of animal matter.

Although the property of excitability in these dissimilar parts varies, as effects proceeding from different causes, yet similarity in general principle and design joins and associates every variety, in a species of indivisible union, for the purpose of constituting and preserving the integrity of the system, and maintaining the vital and salutary relations of its various
organs

organs, hence similar general laws, modified by diversity of structure, govern and consolidate the animal frame, as a compound whole.*

If this view be correct, the notion of sensibility being an original and distinct property from the modified systematic excitability, is wholly untenable.

The property of sensibility results from a nervous modification of the general excitability, originates in the brain, and is distributed in suitable and relative diversity of structure† to every part of the system; in like manner, the digestive power, by which alimentary, and probably most medicinal substances,‡ are decomposed, and partly assimilated in the stomach, depends on the peculiar character of excitability, arising from the particular vital construction of that organ. Thus excitability may, with natural propriety, be denominated from the part in which it exists, such as cerebral, pulmonic, cardiac, diaphragmatic, stomachic, intestinal, hepatic, pancreatic, renal, &c. &c.§ An analogous unity of principle constitutes and governs by specific adaptation, the variously modified phenomena of corpuscular attraction and repulsion, the peculiar chemical affinities appertaining to the respective principles

* *Diversæ corporis partes, suas rite præstantes functiones characterem vitæ humanæ certum ac distinctum faciunt ut vita totum pervadit mundum, sic forma ejus conspicua vim irritabilitatis afficit.*

† *Dissertatio physiologica inauguralis de vitæ principio, &c.*—Auct. ROB. KINGLAKE, 1794.

‡ *Ich setze den specifischen unterschied der Nervenreizbarkeit in der verschiedenen structur der nerven. Es ist Thatsache, dass die nerven eine verschiedene structur haben.*——*Gesetze der Nerven reizbarkeit,* VON KOELLNER.

§ Parity of reason justifies the opinion, that medicinal substances, whose radical and constituent principles often resemble those of alimentary matter, both in general texture and chemical combination, should be equally subject to the decomposing and assimilating influence of the stomach, and that effects produced on remote parts of the system by such agents taken into the stomach, result from sympathetic propagation of impression made on that organ, and not from original or direct contact. It is further consonant with the provident security universally manifested in the animal economy, to suppose, that no description of matter could find admission into the sanguiferous system, by either the pulmonic, stomachic, or cuticular route, without previously undergoing a relative assimilation in those several situations; a secreting operation probably obtains, by which a suitable decomposition and recombination are produced.

§ Thus specifically nominating excitability tends usefully to direct the attention to a distinct physiological enquiry into the causes on which the peculiar vital properties of dissimilarly organized parts essentially depend.

ciples of light, electricity, magnetism, and in short, the universal efficiency of matter.*

These several powers are generated by the operation of physical and chemical forces, specifically adapted to produce those peculiar effects, and which, like vital organization, cannot exist without their respective material arrangement.

The application of this principle is of the utmost importance to the study of every branch of physics, but to none more than that of physiology. It presents the vital power in the character of an effect of material organization, and not as a cause, and thus affords an elementary clue, by which to unravel the precise nature of the various agents that concur in producing, amidst an infinity of other wonderful phenomena, that most sublime evolution—organic life. The agents by which the vital power is supplied, sustained, and perpetuated, are furnished by the various functions allotted to the several organs of the system; the lungs, stomach, brain, and cuticular surface, appear to be of the highest importance in administering to the incessant wants of the animal economy.

How the exercise of those functions maintains the various phenomena of life; what is contributed by them to render the muscular fibre contractile, and the nervous structure sentient; or in what stationary or variable relation the power of being impressed by accessorial agents consists, is a question not incommensurate with the progressive elucidations of time and assiduity ultimately to solve, but at present involved in a degree of obscurity widely disproportionate to the physiological means yet possessed for affording it a satisfactory illustration.

The agents which form the component parts of life are objects of sense, and capable of being scrutinized in every way necessary to arrive at the mode and effect of their operation.† It would undoubtedly be highly gratifying to science, to learn as much of the nature and character of vital power, as the antiphlogistic doctrine of chemistry has taught of the separate and combined powers of simple substances; to know, for example, as much of
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* *Leges, vitæ principio, in omnibus rebus corporeis, existenti, impositas, sive in fabrica menti humanæ propria, vel in vegetabilium functionibus, vel in fossilium attractione, conspiciatur, philosopho recta ratione ducto investigare licitum est. Humana scientia hisce legibus accurate observatis excolatur multum et augetur.*

'Diss. Pby. inaug. & dact.' R. KINGLAKE.

† Respirable air, light, and nutritious substances, are the most efficient vital agents.

the action of vital agents, as is understood of combustion, or of respiration, and the generation of animal heat by the direct effect of oxygen; but were this knowledge obtained, would one step be gained toward the solution of the reason of such a cause; or would the information go further than to verify that the vital power is inseparably connected with certain agents, is a non-entity without their operative influence, and is liable to all the intermediate imperfection occurring between its full force and final extinction? Thus much is known of corpuscular attraction, repulsion, gravity, and chemical affinity; but why such effects should obtain, can only be explained by referring to that decree which imposes on matter the general and specific laws of necessity.

Pursuant to the view proposed of vital power in the preceding observations, the most philosophical definition applicable to that principle, would appear to be, that it consists in a peculiar attractive and repulsive force, subsisting between the particles of animal matter, generated by the concurrent operation of various physical and chemical* agents; that, like the principle of light or electricity, it is susceptible of general distribution, augmentation, diminution, and specific modification, by which the laws of inanimate matter are resisted, and occasionally assimilated to its own nature, in short, that it exists as the necessary effect of a vital combination of attractive and repulsive motion.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

SHOULD you think the following case of Hydrocephalus internus worthy of a place in your valuable periodical publication, by inserting it in your next you will oblige,

Gentlemen,

Your very humble servant,

JAMES HUME SPRY,

Surgeon, Aldersgate-street.

LONDON, July 16th 1799.

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* Physical and chemical, in common with every diversity of motive power, originate from the same universal principles of corpuscularian attraction and repulsion, varying only in being generated by different arrangements of matter.

Much ingenious elucidation, and original application of the principles of corpuscular attraction and repulsion, have been afforded by Mr. H. DAVY's new Theory of Heat, Light, &c.

Vide 'Contributions to Physical and Medical Knowledge,' collected by T. BEDDOES, M. D.

Miss BARROW, aged four years and four months, of a delicate habit of body, and fair complexion, had always from her infancy (till her late illnesses), enjoyed a good share of health; having never been subject to those complaints which are commonly attendant upon the infantile state; if we except that, during dentition, she had two or three convulsive fits.

About one year and a half, or two years, previous to her death, it was observed that she was more than usually drowsy; and that this drowsiness came on, most frequently, at the same hour in the day: i. e. between one and two of the clock, in the afternoon, her usual dinner-hour; it would sometimes come on a little before that time. She came to table, in general, with an appetite; but in a short space of time, often in five minutes, or less, would say she was sleepy, and immediately, if not removed from the table, would lay her head down, and fall fast asleep. When she offered to take any thing, her hands were frequently observed to tremble, or shake; and she was very soon fatigued with walking: she was likewise observed to eat less food than usual. Being naturally of a volatile disposition, her spirits were generally good; and as she had never complained of being in the least indisposed, her periodical drowsiness was attributed by her parents to an acquired habit; consequently, the advice of a medical practitioner was never thought of.

About the 16th of May last, she was seized with symptoms of a low fever; she became languid, and apparently uneasy, with a small, quick, irregular pulse, generally about 90 in the minute: she now became quite indifferent to her food, and complained of being sick with a considerable pain in her stomach, and likewise in her head; these complaints, were accompanied with costiveness. After taking some aperient, and febrifuge medicines, her complaints gradually receded, till she was considered as nearly recovered.

Upon the 3d of June, in the morning, the feverish symptoms returned; she became better towards noon, and was cheerful. In the evening, she was suddenly seized with symptoms of disordered vision, as she complained of seeing insects flying before her eyes; almost immediately after her making this complaint, a very violent fit of convulsions came on, which threatened every moment instant dissolution. Her pulse during the paroxysm was extremely irregular; being sometimes so quick as not to be enumerated, at other times slow, and scarcely to be perceived; she remained in this state three hours, when she gradually began to recover; but the convulsive paroxysms with delirium, recurred at intervals; which were succeeded by stupor, and frequent sighing. She was observed always to be worse at the same hour the drowsiness usually came on. At this period of the disease, her stools became thin, of a dark clay colour, with scybala, and were passed involuntarily

luntarily, as well as her urine; which was very high coloured, staining the linen of a deep yellow: when sensible, she complained of the pain in her stomach; which had gradually increased in violence, from the first attack. Her pulse increased in velocity, and became more irregular, as the disease advanced. During the fits of delirium, she made frequent attempts to put her right hand to the posterior part of the head; and sometimes (if not prevented) would attempt to scratch, or tear her face. In the last stage of the disease, the same hand and arm were affected with a constant convulsive tremor, accompanied with vain efforts, to raise the hand to her head, which now appeared only to be affected. Near the close of this distressing disorder, her countenance underwent various, and very frequent changes; being at one time pale, at another red, and at a third of a very deep red, similar to a person suffering strangulation. Her eyes at this time appeared to start from their orbits, with very considerable dilatation of their pupils: coma, with convulsions at intervals, succeeded to these symptoms; and death soon closed the scene. She died on the 16th of June.

Various medicines were exhibited, during the course of the disorder, by the medical gentlemen who attended; such as cathartics, febrifuges, antispasmodics, &c., as well as blisters; but without the smallest alleviation of the symptoms.

It ought to be noticed, that two children have died in the same family of the same complaint; by which it would appear, that in some families, there is a predisposition to the disease: if this is really the case, every opportunity of inspecting the bodies of those children, who may be supposed to die of this dreadful malady, ought to be embraced by the practitioner; by which means, we may hope, at some future time, to detect its latent cause. But it unfortunately happens, that the prejudices of mankind are so great against any operation being performed upon the body of a diseased friend or relation, as to be almost an effectual barrier to any pursuit, or investigation of the kind, however great the advantages likely to be derived to posterity by such an examination may be; unless in a few solitary instances, where the superior education of the parent gets the better of the bigotry of superstition, the greatest enemy to the advancement of all true knowledge, and in no science more so than in the science of physic.

Dissection.

The head was of the natural size; and the bones were firmly united at the sutures. Upon removing the upper part of the cranium, leaving the cerebrum with its membranes entire, the whole felt upon pressure uncommonly tense: removing the dura mater in part, leaving the falx, with the longitudinal

dinal

dinal sinuses, the vessels of the pia mater appeared through the tunica arachnoides, more distended with blood than usual: the longitudinal sinus was empty, probably from its position: the transverse lateral sinuses were much loaded with blood: upon making an incision into the ventricle of the right hemisphere of the brain; from six, to seven ounces of pellucid fluid rushed out with considerable force: the plexus choroides in each ventricle, was of a whitish colour: no other morbid appearance was observed; excepting, that the pineal gland was much more flabby than usual.

To the Conductors of the Medical and Physical Journal.

GENTLEMEN,

AS the discussion is not finally closed, relative to the expediency of introducing the cow-pox into general practice, as a substitute for the small-pox, I shall make no apology for transmitting to you the following cases:—

It is a little extraordinary, that the first patient whom I inoculated for the cow-pox, had a confluent eruption; and though the symptoms were milder than I ever remember having seen them in the confluent small-pox, she was in so much danger, as to make me very anxious about her from the 12th to the 21st day.

During the continuance of the eruptive fever, she found relief from being carried out, and attended at the Infirmary, on my out-patient days, till the 21st of May (the 15th day from the time she was inoculated, and the 4th day of the eruption), when the soreness and debility became too considerable to allow a continuance of the exercise. She then began to take opiates and acids, the salutary effects of which (especially of the opiates, repeated morning and evening), were very evident. Laxatives were occasionally necessary, and the cerat. litharg. acetat. was applied for a few days towards the close of the disorder, to those parts where the discharge was considerable, to prevent her cloaths from adhering.

The same vaccine matter was made use of in the first nine cases: the other five patients were inoculated with matter taken from MARTHA MEAD.

MANCHESTER, July 12, 1799

M. WARD.

First Case.

April 16, 1799. Martha Mead, aged seven years. Fourth day. The punctures are considerably inflamed; the superior one discharges a little matter. Eighth day, there is less efflorescence round the punctures than on the fourth

fourth day. Thirteenth day, the superior puncture is healed, the inferior one has the appearance of an oblong vesicle, and contains a limpid fluid; it is more elevated than on the 8th day; there is also a greater degree of efflorescence. She began to be feverish yesterday morning, and continued so all day; had a restless night, and was delirious; but walked to the Infirmary this morning, and is relieved by being out; her breath is offensive, tongue white, appetite bad, and her eyes look dull and heavy. Fifteenth day, she slept tolerably the last night, vomited three times the night before, and was very ill yesterday till noon, when some spots were observed on her face, which relieved her. Towards evening a great number of pustules appeared on her neck, breast, and arms; and this morning there is a plentiful crop on every part of her body. Her arm is more inflamed than on the thirteenth day; her tongue is white and foul; thirst great; her appetite bad; but she slept better last night than she has done since the eruptive fever attacked her.

Sixteenth day. She has had a restless night, and complains of her throat being sore. Several pustules are visible on the tonsils and mucous membrane of the throat; in other respects she is much the same as yesterday. The eruption is now confluent in some places on her face and arms.

Seventeenth day. She slept well, and is not so feverish; but she is rather hoarse, and very dull, and complains of general soreness.

Eighteenth day. She has slept well; is very weak; throat sore.

Nineteenth day. She has not had a good night; her tongue is foul and very sore; there are several pustules upon it; throat somewhat better; her eye-lids are much swelled, and nearly closed; the pustules become more confluent daily; she is very unwilling to be moved.

Twentieth day. The patient has had a restless night, and complains heavily of the soreness; her throat is better; her eye-lids are closed; the pustules continue to run more into each other; maturation seems nearly complete every where but on the legs and feet; the inoculated arm is painful from the shoulder to the elbow; it is much loaded with pustules; the puncture is covered with a small dry scab.

Twenty-first day. She has been restless, but is better this morning; her throat is well, and the hoarseness gone; the soreness is so great that she moans and cries continually, except when quieted by opiates.

Twenty-second day. She has slept well and is much better; she can open her eyes with ease. Many of the pustules have dropped off from her face since yesterday, and have left the skin of a deep red colour, but not pitted.

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The child has complained several days of pain in her left knee, a cluster of pustules having joined so as to form one very large one. It broke last night and she is easier.

Twenty-third day. She has slept well, and makes no complaint, except of soreness on the bottoms of her feet, which prevent her from walking. It is surprising with what rapidity the pustules fall off from her breast and neck, leaving only a redness and a roughness on the skin.

Twenty-fourth day. She is going on well in every respect. The pustules continue to exfoliate rapidly.

Twenty-sixth day. She has had an uneasy night; there is a considerable discharge from the pustules on her sides, back, and belly.

Twenty-eighth day. Has rested well the two last nights, but is very tedious and uneasy to day; she complains that "her cloaths stick to her body like bird-lime."

Thirty-fifth day. Her health is restored.

July 4. She was inoculated with variolous matter.

July 11. She has not taken the infection.

I have only to add to the above statement, that the eruptive fever was not so strongly marked by debility, as it usually is in the confluent small-pox: the secondary fever was so trifling as to be scarcely worth mentioning; the progress of the pustules to maturation, as well as their subsequent separation, was more rapid, the separation was also more complete, and the exhalations were all along free from any unpleasant odour. As nearly as I could ascertain, she had not fewer than from 1600 to 1800 pustules.

Though she lives in a populous part of the town, I have reason to believe the disease has not been communicated from her to any other person in the neighbourhood, having taken some pains to gain information on this point.

Second Case.

April 16, 1799. WILLIAM MEAD, aged nine months. He was attacked with feverish symptoms on the eighth day, at which time some elevation of the punctures, accompanied by some degree of efflorescence, had taken place. These appearances decreased from that time to the eleventh day, when they were quite gone, and on the fifteenth day one of the punctures was healed, and the other was covered with a small dry crust. The child continued well from the eleventh to the thirty-second day. A slight ulceration began to take place under the scab on the twenty-first day, which gradually

dually increased to the size of a silver three-pence, but it was so superficial, I did not think it necessary to apply any thing; a little ichor was discharged from the place from this time to the thirty-second day, when he became feverish, and continued very restless and tedious three or four days. On the thirty-third, thirty-fourth, and thirty-fifth days, about fifty pustules appeared, most of which were on his face. The discharge ceased, and his arm got well, soon after the fever abated.

I was unable to account for the fever coming on so late as the thirty-second day (and it seemed a strong argument against introducing the cow-pox into general practice) till I had read Dr. JENNER's second publication on the *Variolæ Vaccinæ*. He there attributes this circumstance, in some instances which he has met with, to the secondary effects of the virus, and says he is able to prevent them, by applying escharotics to the part affected.

July 4. I inoculated him with variolous matter.

July 11. The punctures are healed.

Third Case.

April 16, 1799. SARAH GRAY, aged five months, was inoculated.

April 23. She was inoculated again, the matter inserted on the 16th having produced no effect. Fourth day:—She has not taken the infection; variolous matter was inserted. Eighth day:—The eruptive fever has taken place. Twelfth day:—She has a fine, distinct sort.

Fourth and Fifth Cases.

April 16, 1799. ANN MORLEY, aged five years, and MARY ANN MORLEY, aged nine months. Eighth day:—They have not either of them taken the infection, and were therefore inoculated a second time, and with the same event. April 30:—They were inoculated with variolous matter, but without success, and they were inoculated again with variolous matter on the 5th of May. Eighth day:—The punctures are a little elevated and inflamed. Seventeenth day:—The children have not been indisposed since the last inoculation, nor have any pustules appeared on either of them. The mother is certain they have not had the small-pox, and they were in every respect healthy each time of their being inoculated.

Sixth Case.

April 16, 1799. GEORGE WOOD, aged three years, was inoculated with vaccine matter, and afterwards with variolous matter, but without effect in both instances; but it must be observed, he had been inoculated four months before, and that his arm was inflamed at that time: a trifling indisposition also took place, but no pustules appeared.

Seventh Case.

April 19, 1799. THOMAS COOP, aged five months. April 23:—He was inoculated again, the first inoculation having failed. April 26:—The punctures are healed. He was inoculated with variolous matter. Eighth day:—The inflammation on his arm is pretty considerable. Fifteenth day:—The child has not been indisposed, nor had any pustules. His arm is well.

Eighth Case.

April 19, 1799. SAMUEL BARNES, aged sixteen months. April 23:—Not having taken the infection, he was inoculated again. Eighth day:—There appears about as much inflammation round the incisions as usually takes place on the third or fourth day, when infection has been produced by variolous matter. He has been hot and feverish since the fifth day, owing to his teeth, as his mother supposes, and this opinion is strengthened by the state of the arm. Eleventh day:—There is a good deal of efflorescence round the punctures; he was restless last night, and is tedious and hot to-day. Eighteenth day:—He is very well and has not had any pustules. Twenty-ninth day:—I inoculated him with variolous matter in both arms; but no disease ensued.

Ninth Case.

April 23, 1799. JAMES HOPWOOD, aged nineteen weeks. The punctures being healed on the 26th, he was inoculated again with vaccine matter. Fifth day:—His arm is inflamed from the vaccine matter inserted four days since. He was feverish yesterday, but is better to-day. His mother thinks he is about his teeth, but his gums are not swelled. Eighth day. The inflammation advances on his arm; he looks pale, and is hot and restless. Twelfth day:—No complaint; the punctures are healed; he has not had any pustules, except a few on the inoculated arm, close to the incisions. I this day inoculated him with variolous matter. Nineteenth day:—He has taken the infection. Twenty-second day. He has a mild disease, and thirty pustules.

Tenth Case.

April 30, 1799. JOHN LUNT, aged fourteen weeks. He took the infection, and sickened on the seventh day. He began to break out on the tenth, and was pretty full of pustules on the twelfth, but the eruption was distinct. There was an unusual number of white pustules, as well as a great degree of efflorescence round the punctures, on the eleventh day; and the pustules being placed at regular distances from each other, the arm assumed a studded appearance. He continued to be more or less feverish from the seventh day to the eighteenth, and was uncommonly tedious; indeed he was
seldom

seldom quiet during that time, except when he was under the influence of tincture of opium, or when he was carried out. On the last mentioned day his eye-lids were swelled and inflamed; these appearances continued several days. A hoarseness came on the eleventh day, and did not leave him till the eighteenth. On the twenty-second day, however, his health was completely restored, and on the twenty-fourth he was inoculated with variolous matter, but without effect.

Eleventh Case.

WILLIAM BULLOCK, aged nine months. He took the infection, and broke out on the tenth, eleventh, and twelfth days, and had about sixty pustules, besides a great number in the neighbourhood of the punctures; he was poorly three days before they came out, and one after. He was subsequently inoculated with variolous matter, but without effect.

Twelfth Case.

ROBERT FOLEY, aged six months. As he did not take the infection, I inoculated him again in ten days, but his mother neglected to bring him in and I have not heard of him since.

Thirteenth and Fourteenth Cases.

HENRY DELMORE, aged three years, and ELIZABETH DELMORE, aged six months. Their place of residence was not noted, and I have not heard of them since.

The great question relative to the cow-pox, seems now to be brought within a narrow compass.

We have the authority of a physician whose experience in the inoculated cow-pox is very extensive, for asserting, that those persons who have had this disease by inoculation, are thereby secured from having the small-pox.*

The same gentleman has lately found, that the inoculated cow-pox is seldom accompanied by pustules, if the virus be taken from those persons who have had the disease in its mildest form †.

Considering the above observations as established facts, and should it also appear, that the cow-pox is not so liable to be propagated by contagion, as the small-pox; may we not indulge a hope, that the æra is probably not far distant, when we shall be able to congratulate mankind at large, on their having a fair prospect of being exempted, at no very remote period, from that most destructive malady.

To

* See "WOODVILLE'S Cases and Remarks on the Cow-pox."

† See the "Medical and Physical Journal for July, No. V."

To the Conductors of the Medical and Physical Journal.

GENTLEMEN,

AS I have been requested for a statement of an *asthmatic case* that came under my care some time ago, I have referred to my memorandums respecting it; and as I have stated the particulars of it, if you think the perusal of them may prove agreeable to any of the readers of your valuable publication, I submit them to your disposal.

I am, respectfully,

Your most humble Servant,

BIRMINGHAM,
July 15th, 1799.

W. BACHE.

Mr. PARKER, an attorney of eminence and respectability in Birmingham, when I was first called to him had been for several years severely afflicted by asthma, that reduced him to a state of extreme weakness and emaciation. He had previously subjected himself to the medical advice of several physicians of well-established reputation, and had at times received some temporary relief.

Several weeks before I saw him, he had been removed from his house in town to a fine dry spot, about a mile distant from Birmingham, for the benefit of the air, but had not experienced any sensible advantage from the change of situation; and several of his friends and acquaintance freely declared to me, that they thought the violence of his complaint was such, as must necessarily terminate his existence in a few days.

Upon enquiry, I found he had experienced a considerable degree of dyspepsia, and that it had attended him almost constantly for several years, but the period of its origin was not within the compass of his recollection. I could not discover any inflammatory affection in the system, either general or local; slight spasmodic and convulsive ones had frequently exerted an influence upon various parts of the body. His sleep also was frequently broken, and much disturbed by unpleasant dreams. He was remarkably subject to changes, both in his sensations and animal spirits, from the vicissitudes of the atmosphere.

His saliva was remarkably frothy, and his expectoration extremely viscid. The alvine fæces oft-times assumed the appearance of yeast in a state of effervescence. The urine was in common of a natural colour; when it had stood a few hours an eneorema generally appeared in it, and *its surface seemed as if covered with dust*. Being struck by this uncommon appearance, to ascertain its nature, I bent a strip of writing paper about three inches
long

long, and half that width, in its middle (to a right angle), I then laid one of its square surfaces flat upon the surfaces of the urine in the glass, and upon raising it perpendicularly, found the matter attached to it; I dried it gently, and then subjected it to examination by the microscope, which convinced me that what I had mistaken for dust were saline crystals, but I was unable to collect a sufficiency of them for any chemical experiment.

When I poured a small quantity of very transparent lime-water into Mr. Parker's urine, the lime contained in it was always precipitated by it with more celerity, than when I applied the same calcareous solution, in like manner and proportion, to my own.

The matter he perspired generally smelt sour; and when pieces of bibulous paper were previously stained by a solution of litmus, and then applied to various parts of the body, the exudation from each produced the effect of a weak acid upon the colour; and when the paper was made dry, and the edge of it applied to the flame of a candle, I found it a weak touch-paper, but when I dissolved about a grain or two of vegetable alkali, in a small wine-glass of water, immersed the paper in that, and dried it a second time, I always found that its property as a touch-paper was greatly augmented.

From these observations I became convinced, that an acid pervaded the whole of the circulating system, and I presumed that it existed in a morbid degree, either as to quantity or strength, and was the exciting cause of the spasmodic affections observable in the lungs, and other membranous parts, to which it might occasionally be applied, probably sometimes in a gaseous state, and at others in a more dense and concentrated one, and perhaps variously combined. The indications of cure suggested to my mind, were to restrain its influence, by the application of alkalies, cretaceous and absorbent earths; my choice of each was governed by the existing circumstances, at the time when each was prescribed, and my attention was principally directed to the state of the stomach, the bowels, the expectorations, the kidneys and the skin.

Gum guaiac. bitters, aromatics, and essential oils, I ordered occasionally, as I wished an increased, or otherwise diversified action in different parts of the system; and when an augmentation of spasmodic affections took place, or coma, vigil, or dryness of the skin, I had occasional resource both to opium and camphor, which were not only internally, but externally applied, combined with solutions of volatile alkali.

These were the whole of the medical means I employed; but as I believe

believe that the neglect of proper attention to prophylactics, and improprieties in cloathing, are the primary cause and chief support of the majority of chronic complaints, to prevent a relapse previous to a confirmed state of the functions of his stomach, &c. I thought proper to recommend a close attention to articles of diet, moderately warm cloathing, and rather sparing meals. The importance of proper mastication I also endeavoured to point out, and seriously urged an attention to it. Animal food I desired might be his principal subsistence. I was much pleased to find every particular of diet was cautiously attended to, as a complete cure was finally accomplished, and it has continued to the present time.

Cursory Observations on the Importance of anatomical Knowledge in the Treatment of Diseases, with Remarks on two Cases of Hydrocephalus internus.—By CHARLES BROWN, Surgeon, Member of the Corporation of Surgeons of London.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MEDICAL and chirurgical practitioners, from the time of HIPPOCRATES to the present day, have ever considered the study of anatomy, as forming one of the most essential branches of their education, and without which, they were not qualified to practise the *ars medendi*. Independent of its being one of the most entertaining, it is also the most useful part of natural philosophy. It expands our ideas, opens the understanding, and tends strongly to erase prejudice from the mind.

The zeal with which it is now cultivated, the large sums of money which have been expended in anatomical museums, and the priority and boldness which a surgeon, skilled in anatomy, assumes in the performance of any capital operation, are convincing proofs of its great utility.

One of the most able anatomists and physiologists of the present day (Mr. JOHN BELL), and one whose writings bear sufficient proof of this assertion, observes, “that a consciousness of the high value of anatomical knowledge never entirely leaves the mind of the student.”

We are indebted to the illustrious MORGAGNI for his valuable work, “*De causis et sedibus morborum*,” a work abounding with many excellent practical remarks, but more so for that part which more immediately relates to, and is connected with *morbid anatomy*. Doctor BAILIE has also added
a rich

a rich store to our anatomical knowledge, by the publication of his invaluable work, entitled, "*The morbid Anatomy of some of the most important parts of the Human Body.*" The number of valuable cases to be found in some of our periodical publications, have also assisted the student in his inquiries after diseased appearances. Having premised these few observations on the importance of cultivating this branch of science, I would at the same time insist on the propriety of every medical man, using his utmost exertions in overcoming the superstition and prejudice which attach to the minds of some persons, who contumaciously refuse the bodies of their deceased friends being examined, although it were to lead to some great improvement in the practice of physic.

I purpose therefore, from time to time, relating with the utmost exactness, any morbid appearances, which I can obtain leave to examine in my own practice, or that of other gentlemen, and accompanying those remarks with further observations on the practice pursued in the treatment of such diseases which lead to the investigation.

I have the honour to be

Your's obliged,

No. 25, HATTON-GARDEN.

CHARLES BROWN.

Two Cases of Hydrocephalus internus, with practical Remarks.

It is the opinion of all enlightened philosophers of the present day, that in order to get at truth, and accumulate useful facts (which, particularly in medicine, are indisputably much wanted), we ought to suspect our own pre-conceived opinions, to divest ourselves as much as may be of our prejudices, and make use of the greatest impartiality in judging. If we look around us, we must observe, even among our most intimate friends, how greatly they are biassed to the ideas which have been engrafted on their understanding, by education and custom; notwithstanding some of them may involve the greatest absurdities:—Thus we find, for instance, many of the wives of the Indian kings are brought to believe, that by self-murder (a crime which we think the greatest and most contrary to nature) they shall inherit the greatest bliss.—Under this persuasion, many throw themselves into the funeral pile with their dead husbands, encouraged and animated to it, by those who are believed to be the best and wisest of their people. We may also observe, that a person educated in Italy will be a Catholic; in England, a Protestant; in Turkey, a Mahometan; in India, a Gentoo:—Errors from the same cause reign in philosophy, as well as divinity and medicine; our philosophical opinions are generally formed in the same manner, by education, and the company

company we keep; and often under the protection of some great name, whose notions few dare to oppose, or even to investigate and examine:—thus the earth, moon, and planets, were believed to circulate round the sun, by the ancients down to PYTHAGORAS. After that, the *Ptolemean* system took place, then the *Tyconic*, and now the ancient system is again recovered by COPERNICUS and his followers, and demonstrated to be true by the immortal NEWTON, and now universally believed.

The foregoing observations shew us how easily we are induced to believe false opinions by education, and with what difficulty they are eradicated afterwards.

I have been led to preface the following cases with these remarks, with a view of drawing the attention of my readers to a disease of very considerable importance, and which seldom yields to those remedies usually employed.

There are some diseases, says an elegant writer, “whose symptoms are so obscure, or so similar to those of other diseases, as to prevent us from forming a certain diagnostic, till death ensues, and dissection ascertains the cause.” Of this number we may include *hydrocephalus internus*; for although this fatal complaint is accurately described by late writers, yet there are few of the symptoms attending it, as pathognomonic, but may arise from very different causes: as pressure upon the brain, from various causes, dentition, and even from worms in the intestinal canal, according to the authority of medical writers. In a late publication,* I have endeavoured to lay down the distinguishing characteristic between this disease and others which are ushered in with the same symptoms; but most disorders of children are, more or less, accompanied with anomalous appearances, particularly as to the state of the pupils, heaviness about the eyes, picking of the nose, and inactivity. In regard to the use of mercury in this disease, little dependence is to be placed upon it, nor is it ever exhibited in private practice, without being conjoined with opium, and very frequently the *fol. digit. pur.* Blisters are generally applied at the time the patient is under the mercurial course, as also leeches, electricity, and other topical remedies; so that we can never be accurate in our commendation of any remedy which is employed in conjunction with others equally active, and possessing similar virtues. The two following cases occurred nearly within a few days of each other; the first was treated with mercurials, in consultation with an apothecary in my neighbourhood, and died; the other

I had

* BROWN ON SCROPHULOUS DISEASES, OCTAVO.

I had the sole charge of myself, was treated in a contrary way, and recovered.

CASE I. S. D. a child two years old, was attacked, June 5, 1799, with symptoms of hydrocephalus. The first suspicion of disease was indicated by great stupor, pain in the head, a distortion of the eyes, and a pulse beating 160 strokes in a minute. The child had long been troubled with worms, for which a patent vermifuge had been exhibited without success. The gentleman who first attended prescribed calomel and rhubarb, in small doses; but on the 12th, the pupils of the eyes became dilated, and insensible of light. *Strabismus* succeeded, and in the evening there were evident symptoms of apparent dissolution. Upon being called in, I ordered the head to be shaved, and blisters to be applied in the direction of the sutures. The following medicines were prescribed:

Rj Hydrargyr. muriat. mitis, gr. i. Opii. crud. pulv. gr. ss. Cretæ præp. gr. iij. M. fiat pulvis hora somni exhibendus, et quartis horis repetendus.

Inung. nucha unguent. hydrarg. scrup. ij. bis quotidie.

June 13. The calomel has not proved purgative, and the patient slept last night, but was frequently troubled with convulsive motions of the arms and eyes, and tosses the head from one side to the other on the pillow. The pupils continue in the same state. Pulse 120.

Applicentur hirud. duæ, capiti.

Persistat in usû medicam. ut heri præscript.

June 14. Restless all night, vomited twice. Pulse this morning 122. Had two stools; very feverish; frequently screams out, as if in great pain; the pupils not so much enlarged. At nine o'clock this evening the muscles of the lower jaw were convulsed, the patient became very restless, and died apparently in great agony at twelve o'clock.

The next morning I opened the head, and discovered the lateral ventricles filled with water. The *cerebrum* was largely distended, in consequence of the *septum lucidum* having been ruptured, the two ventricles having then a free communication. One very remarkable circumstance shewed itself in this case, which was that the *infundibulum* was hollow, and filled with a diaphanous fluid. This is worthy of remark, as anatomists in general deny this being the case, although some late experiments on this part of the brain* by Professor MURRAY, of Upsal, clearly prove it to be a medullary canal,

* Disp. de infundibulo cerebri,

146 *Analysis of the Memoirs of the Medical Society of London.*

canal, surrounded by a lamina of the *pia mater*. He froze the brain, and found the canal leading to the *glandula pituitaria* filled with ice. Dr HAEN * tells us, he found it dilated, and filled with a calcareous matter.

CASE II. The patient was eighteen months old, and of a strumous habit, and had all the usual symptoms of the disease. I applied leeches to the temples, blisters to the head and nape of the neck; gave the *fol. digit* and *calx zinci* combined; when comatose, stimulated with *sal. c. c. vol & æther*: with a small electrifying machine, I passed a few shocks twice a day through the head. Gave opium to the amount of three grains each night *ad tres vices*. In nine days he was quite recovered. Hydrocephalus is evidently a disease of debility, and requires remedies which increase the excitability of the system. On a future occasion, I shall continue my remarks on this disorder.

July 5, 1799.

Analysis of the Memoirs of the Medical Society of London.

[Continued from our last Number, pp. 29---35.]

ART. XX. contains "*Cases of Cynanche Trachealis, successfully treated, with Observations on that disease,*" By H. FIELD, Apothecary, Sec. M. S.

The treatment of these cases is by venesection, leeches, blisters to the sternum, antimonial emetics, laxatives when necessary, and an embrocation to the throat, by means of linen cloths, constantly wetted with

Rj Aq. ammon. acet. unc. ij.—Spir. æther. vitr. comp. unc. j. M.

After the account of four cases, and the successful treatment, Mr. Field adds,

"Previously to entering upon those practical observations which are designed to accompany these cases, it will not, I trust, be deemed totally uninteresting, to premise a few remarks on the different kinds of disease which have been known under the general name of croup, and also on the nature of the malady as to contagion.

"It has been stated by authors, that there are two kinds of this disease, the one spasmodic, and the other inflammatory. Of the propriety of this distinction I am at present well satisfied, and am only concerned, that two diseases, so extremely different in their causes, and consequently in their mode of treatment, should be confounded under one and the same title; a circumstance which has an evident tendency to mislead the practitioner, and which has undoubtedly been the reason why we find such very opposite modes

* *Ratio Medend.* tom. vi. p. 271.

nodes of cure recommended by different writers, and each with a confidence derived from some degree of experience.

“ That the symptoms of the two diseases bear considerable resemblance, will readily be allowed; nevertheless, there are evidences of difference, I think, sufficiently strong to enable an attentive person to discriminate them. These marks of distinction I shall endeavour now to describe, and to give them the greater effect, shall contrast the one with the other.

“ The spasmodic croup always attacks suddenly, and usually in the night. The attack of the inflammatory croup is sometimes equally sudden, but more generally gradual, being preceded a few days by slight feverish symptoms, and a teasing, short cough, not however, sufficiently important to create the smallest uneasiness in the friends of the patient. The spasmodic croup often intermits; and in these intervals, both the respiration and the cough, if any exists, are free from its usual characteristic sound: the inflammatory, on the contrary, when once completely formed, never intermits so as entirely to lose its distinguishing mark; particularly in coughing; add to which, the heat, frequency of pulse, and other symptoms of *pyrexia*, are found in the latter in much greater degree than in the former. Dr. RUSH* has mentioned several other marks of difference, but as they apply chiefly to the effect of remedies, and to the later stages of the disease, it is not judged necessary to insist upon them here, it being in the first attack of this malady, that a due discrimination becomes so extremely important; that being the time in which the application of powerful and decisive remedies is most conducive to the relief of the afflicted, a delay of a few hours being frequently the cause of irreparable injury,

“ Every author that I am at present acquainted with, has denied this disease to be of an infectious nature. In a former† paper on this subject, I have taken the liberty to suggest my doubts as to this opinion being well founded, for which I have there assigned reasons; since that time, my particular attention has been given to that point, and I am sorry to add, that increased experience has tended to confirm me more strongly in the opinion, that the true *cynanche trachealis* is a contagious disease. I have since met with repeated instances of its occurring in the same family, and that after such an interval as we most usually find contagious diseases to require in order to produce their morbid effects, namely, from six to ten days: whether the above opinion be well or ill founded, I would strongly recommend to practitioners to avoid the danger of communication, by requesting that every child may be removed, if possible, from the same house; or, at all events, be prevented entering or coming near to the sick chamber.

“ It has been said that this disease has occasionally been met with in adults; when this has been the case, I am very much disposed to think, that it was not
the

* Vide “ Medical Inquiries,” by B. Rush, M. D. vol. i. p. 141.

† Vide “ Memoirs of the Medical Society of London,” vol. iv. p. 151.

the inflammatory, but the spasmodic croup; in confirmation of which opinion, I have never heard of its having proved fatal to them.

“ The first and most important curative indication in the treatment of the true or inflammatory croup (for to this our present observations will be confined) is, to diminish the quantity of blood. In the paper on this disease, which the Society have done me the honour to publish in their Memoirs, I gave a caution against the use of the lancet, from an apprehension that the early debility, which had been observed to come on, would render general bleeding an unsafe and improper practice, and that our evacuation of blood should be only topical, by means of leeches; which, however, was advised to be freely and vigorously pursued. Since that time I have had opportunities of observing, that the lancet may not only be safely, but even advantageously employed, and that it should never therefore be omitted, when medical advice is required in the earlier stages of the disease, from two to four or five ounces of blood being taken away, according to the age and strength of the patient; much caution is nevertheless requisite in repeating this operation. If any abatement of symptoms takes place after the first bleeding, which frequently happens, I should certainly think it unnecessary to repeat that evacuation; but if an evident exacerbation should afterwards come on, it will be generally proper to do so: in this case a topical discharge, by means of leeches, appears to me much to be preferred to a general one. Allow me here to give a caution relative to the prognosis in this disease. The means now recommended in the early stage of it, being frequently followed by a considerable and very flattering appearance of recovery, the practitioner may be so far deceived as to be encouraged himself, and, in consequence, to encourage the friends of the patient, with great expectation of a favourable issue; but in this he cannot be too much on his guard, nor should he consider the danger to be past, until three or four days have elapsed without a return of symptoms, by which time the patient will have made considerable progress towards recovery.

“ Our next subject will be an inquiry into the use of blistering in the cure of this disease. I have, on a former occasion *, taken notice of Dr. HOME'S objection to the early application of blisters to the affected parts, as liable to do injury by their immediate stimulus. I am well satisfied, from later observations, that this objection is well founded, although sufficient attention does not seem in general to have been given to it; and whoever considers the extreme vicinity of the diseased part, the external surface of the throat, must surely coincide with me in opinion, that the application of a blister immediately to the part must act as a local stimulus, and therefore must increase, rather than diminish inflammation. Vescicatories should, for these reasons, be either entirely omitted, or else applied only to distant parts. Whether they will in the latter case be of any service, I am at present unable to ascertain. Blisters were applied in only

two

* Vide “ Med. Soc. Memoirs,” vol. iv. p. 159.

two of the present cases, and in those there is not the smallest reason to suppose, that they contributed in any degree to the cure; in the last of the two, the blister scarcely took any sensible effect on the skin.

“The situation of the trachea with respect to the external integuments, which I have above alluded to, suggested to me an idea that refrigerating, and also sedative remedies, might be used externally with advantage. In the third and fourth cases now recited, I made trial of an embrocation with that intention; how far the success of those cases is to be attributed to this remedy, it is impossible to say; it is sufficient, however, to enable me to recommend this and similar applications to further trial, and also emollient and sedative cataplasms and fomentations. The occasional use of emetics, so as to produce their full effect, and their constant use so as to excite nausea, as far as has hitherto appeared, seems to be attended with good consequences. The body should be kept at all times in a soluble state, but any considerable evacuation by stool is better avoided, its immediate tendency being to debilitate, without apparent advantage, in relieving the patient. The warm bath, either partial or general, may be employed with probability of benefit.”

ART. XXVII. Presents us with some very interesting and new “*Observations on human intestinal Worms; being an attempt to their arrangement into Classes, Genera, and Species.*” By R. HOOPER, M. D.

As this article is illustrated by beautiful plates which we cannot command, we must content ourselves with presenting our readers with the result of Dr. Hooper's classification, referring to the Memoirs themselves for the synonyms, anatomy, &c.

Worms found in the human stomach and intestines he divides into two classes, viz. into,

- I. Those worms, which are generated and nourished in the human intestinal canal, and which there propagate their species; and,
- II. Those insects or worms, that accidentally enter the human primæ viæ *ab extra*; such are, several species of scarabæi, the lumbricus terrestris, the fasciola, the gordius intestinalis, and others. This second class belongs to the province of natural history, and is therefore omitted by Dr. Hooper.

The first class is divided into two orders, viz.

Order I. ROUND WORMS.

Genus 1. *Ascaris*.

Species 1. *Ascaris lumbricoides*. The long round worm.

2. — *vermicularis*. The thread-worm.

Genus

Genus 2. *Trichuris*.Species 1. *Trichuris vulgaris*. The long thread-worm.

Order II. FLAT WORMS.

Genus 1, *Tape worms*.Species 1. *Tænia osculis marginalibus*. The long tape-worm.2. ————— *superficialibus*. The broad tape-worm.

This volume contains a collection of most interesting papers, and histories of particular cases of disease ; but whenever we make any extracts from the few select works which we profess to analyze, we endeavour to confine ourselves as much as possible, to improvements in the *practice* of medicine and pharmacy.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

A VERY sensible letter appeared in the fourth Number of the *Medical and Physical Journal*, page 337, on the subject of Quackery. It is much to be wished, that some such regulations as are therein suggested, might be adopted to suppress the baneful compositions of the ignorant and daring self-created doctors, or at least to prevent their so very general circulation and use.

There is, I fear, little reason to expect that the College of Physicians, whatever powers they are possessed of, will interest themselves in the affair ; but without their assistance, much may be effected by the profession at large, if they will only consent to oppose the quacks with their own weapons.

It is evident, that the only way a quack-medicine gets very celebrated, is, by its being constantly puffed off in advertisements. Whenever a cure has been performed, or supposed to have been performed by any of these compositions, thousands of advertisements are distributed in all possible ways, to make it universally known and attended to ; but not a word is whispered, not a syllable dropt, of the thousands who, having credulously swallowed these incongruous remedies, have found the relief *they* could not give, in the grave, or have continued to exist miserably, in a state worse than death ! Why are not these cases made public ? What should hinder professional men, who are daily witnessing the mischiefs occasioned by these noxious drugs, from publishing them to the world ? The expence, I conceive, might

might easily be defrayed by subscription (which I have little doubt would be soon filled up), and it is to be hoped, that in these cases, truth would not be esteemed a libel*.

In addition to this, it would be proper to endeavour by occasional addresses in the public papers, to convince the respectable persons, who are sometimes prevailed upon to attest cures, said to be performed by these medicines, of the injuries they may occasion by such injudicious conduct, though their motives are undeniably praise-worthy; for though they may believe that the remedies recommended, are very proper in cases similar to those, in which they have experienced good effects, yet as sick persons and their friends are very frequently, and very woefully mistaken, in their opinions of diseases, the use of medicines thus recommended, may be attended with fatal effects.

The names of dignitaries in the church and law have, for some months, been pompously exhibited upon all the posts and dirty walls of the metropolis, as recommenders of some newly-broached worm-medicines; but surely, these great and estimable characters would never have so publicly sanctioned these remedies, however useful they may prove as anthelmintics, were they aware, that children are often suspected to have worms where none exist, and that under such circumstances, these medicines may do infinite mischief; of which the following is an instance:

A few months ago, a child about three years of age, was suspected by his parents to have worms; without ascertaining this, they determined to give the medicines thus trumpeted forth as inestimable by the Proprietor, and sanctioned by such high names. The first dose, given according to the printed directions, made the child very ill; not discouraged, however, they gave a second and third, and then the patient was so alarmingly worse, as made his friends desirous of regular advice. The physician who had on former occasions attended the family, was called in, and found the child languid and weak, the pulse quick and low, the lips pale, appetite gone, breath offensive, breathing short, frequent, and profuse, hæmorrhage from the nose, and small purple spots appearing on all parts of the body. This excessive state of debility appeared to have been produced by the injudicious exhibition of these powerfully drastic purgatives, to a child who was ill in consequence of long-continued cold, damp weather, and poor diet. Had this child, instead of being treated for worms (in which case these medi-

cines

* Some correspondent may, perhaps, give proper information on this subject, as it is understood, that Dr. LETTSOM, who so spiritedly pointed out the injurious effects of a late Quack's nostrums, was prosecuted for a libel, and obliged to pay damages.

eines would have been much too rough for him), taken some light cordials, joined with gentle purgative physic, and been supplied with proper diet, he might, probably, have been now alive; as it was, though partially recovered by proper means from the state above described, he gradually sunk into an atrophy, and died completely exhausted.

Societies are forming almost every day for various beneficial purposes; let one, then, equally beneficial, be formed for the purpose of convincing the public of the dangerous consequences of quackery. To this end, let well-attested cases be published of the injuries produced by the use of these unknown remedies; no unfair means should be used, but every well-authenticated failure should be fairly and unequivocally submitted to the public.

If the public are in this manner put upon their guard, it is to be imagined that laws and regulations to restrain quacks will be less necessary; something effectual, however, in that way, should be attempted, and a society instituted for the aforementioned purpose, would probably soon be able to furnish a plan effectual for this.

July 12, 1799.

S. M.

To the Editors of the Medical and Physical Journal,

GENTLEMEN,

SHOULD the following remarks on the subject of Animal Impregnation, contain any thing in your opinion worthy of being submitted to the public, your insertion of them in the Medical Journal, will oblige

Your most obedient servant,

July 21, 1799.

R. B. M.

Few subjects have oftener engaged the attention of the physiologist, than animal impregnation. From the time of PYTHAGORAS, to the present, a number of theories have been presented to us, many of which have been ingenious, and some very ridiculous. Among the number of those which are now almost forgotten, I think that of HARVEY merits notice; and the more so, as I think it bears a considerable similitude to the opinion advanced by Dr. HAIGHTON, in a very ingenious paper published in the "*Philosophical Transactions*," Part I. 1797.—There have been few physiologists, except Harvey and Dr. Haighton, who have not supposed that the rudiments of the fœtus existed in the male semen; and it is well known, that the theory supported by LIEUWENHOEK supposed that the fœtus in miniature, endued with animal life, was actually contained in the male semen

femen.—This hypothesis, ridiculous as it may now appear, was greedily and almost universally received at one time; a striking proof of the fondness for the marvellous, to which human nature is so prone, and which is so injurious to the cause of truth.

Bidding adieu to these idle opinions, I will now take the liberty of making a few remarks on the theory proposed by Dr. Haighton.

It appears from the result of Dr. Haighton's well-directed experiments, that the formation of *corpora lutea* in the ovaria is the true test of impregnation having happened, and that the contact of the semen with the ovaria is not necessary to produce this effect; which is ascribed to *sympathy or consent of parts*.—This expression, however, does not perhaps convey a very clear idea of the subject. Might I be allowed to turn commentator, I should say, that the act of coition induces impregnation, and that the semen passing into the vagina, is thence absorbed, and carried into the general system, where, by its peculiar stimulus, it produces those changes, which happen after impregnation, in the uterus, its appendages, and the breasts; so that I consider the stimulus of the semen as perfecting what the stimulus of coition had begun.

Whether my comment will serve to elucidate the original, remains for others to determine; but before I conclude, I shall endeavour to obviate one objection which may be made to this theory.—It may be said, if impregnation is occasioned merely by a stimulus, how is it that females never conceive from any cause, except the introduction of semen into the vagina? This query, however, would hardly be considered as a difficulty by an abettor of the theory, and I should not have noticed it, had it not afforded me an opportunity for mentioning a remarkable change which sometimes takes place in the ovaria; and which I think affords support to Dr. Haighton's theory. In answer, then, to the above-mentioned query, I would say, that proper conception can take place from no stimulus except semen, yet that some of the changes consequent to impregnation, may, and do sometimes happen, from stimuli of other kinds. It is well known to those who are in the habit of dissecting, that hair, teeth, and other foetal remains, are sometimes found in the ovaria, and some appearances of this kind have been observed in subjects, where it was evident that impregnation could not have taken place from coition. This circumstance led Mr. HUNTER to explain the growth of hair in this situation, by saying, "that the ovarium had taken on a cuticular structure;" but I think that it is much more easily and rationally explained, by supposing that in those cases, a very imperfect kind of impregnation had taken place, from some unusual stimulus; and it will, perhaps, be found, that some other diseased

alterations occasionally happening in the female system, may with propriety be referred to the same cause.

Those remarks are submitted to the public merely as conjectures, which if they are not perfectly just, may assist in the attainment of truth by promoting inquiry.

Extracts from Cit. LOMBART's Observations on Chirurgical Cases, &c.

[Continued from our last Number, pp. 46—50.]

AMONG these observations (says the French editor), the sixth and seventh are particularly worthy of attention, as they evince the danger of attempting to cure particular species of *fistula ani*, especially when Nature appears to have made choice of this canal to discharge matter, the retention of which would necessarily effect the dissolution of the patient.

SIXTH OBSERVATION.

A Clergyman of Réthel-Mazarin was afflicted for a number of years with a suffocative asthma, in which he had a remission of four hours only in the four and twenty, and this after an abundant expectoration. The symptoms of the disease left not the smallest doubt of the state of the patient. In the spring of 1783 he made a journey on horseback. This exercise occasioned an abscess at the extremity of the anus, which was succeeded by a fistula. Four months after this happened I was called in (says Cit. LOMBART), and as I knew his state previous to the appearance of the fistulous ulcer, I persuaded him to consider this symptom as a salutary effort of Nature to relieve him from a disease which would soon have terminated his life. I remarked to him that he was no longer troubled with his habitual asthmatic affection; that the expectoration which had undermined his constitution had now abated; that his respiration was free, his lungs sound; and that he had again acquired muscular fulness and energy; that his sleep was no longer interrupted; and in short, that if he wished to continue in a good state of health, he must relinquish the idea of curing his fistula. Soon afterwards the patient changed his residence, and came to Mesny. I was informed that he had resolved to undergo the operation. I forewarned him of the danger to which he would expose himself; and advised him to nominate an executor, if he was determined to venture on the operation. However, no credit was given to my suggestions, nay the officiating surgeon treated them as merely chimerical. At length the clergyman underwent the operation, but beneficent Nature seemed to counteract it. The fistula broke out again, and the operation was again repeated, and the complaint

complaint was soon apparently cured. But the patient was scarcely in a state of convalescence, when the symptoms which had affected his breast again returned in such an aggravated degree, that his sister applied to me for advice. I employed leeches, vesicatories, and every other means prescribed in similar cases, but in vain. Phthisis pulmonalis made so rapid a progress, that this unfortunate gentleman died a few months after, of a consumption.

SEVENTH OBSERVATION.

An attorney of the Bailiwick of Réthel was during several days afflicted at different intervals, with spasmodic colics, which often attacked him in the form of *cholera morbus*. He was suddenly troubled with an abscess, succeeded by a fistula, which only extended from 12 to 15 millimètres (half an inch) in depth. I advised him not to attempt the cure of it precipitately, but to keep the part affected in the most easy state, and to use simple injections. I kept the fistula open with prepared sponge, and observed to the patient that the colics to which he was liable had not returned since his abscess happened. In this state he lived for a year, without experiencing the least change in his health; but he at length became impatient to be relieved from a state more disagreeable than dangerous. The operation was performed by a skilful surgeon, who was not informed of the circumstances which had preceded the fistula. Some time after his cure, the attorney observed a considerable change in his health; and the colics returned with such violence, that in the month of January, 1787, an extreme paroxysm caused his death.

Being called in to open the body, I found that all the viscera of the abdomen had been affected by the inflammation; the intestines were in a gangrenous state, they appeared to be entangled, and presented an heterogenous mass. No morbid appearance was perceptible in the kidneys, ureters, or bladder, which could justify the prevailing supposition that the patient's death had been occasioned by long-continued nephritic attacks.

An Historical View of Surgery in the Sixteenth Century.

[Continued from our last Number, pp. 54—60.]

§. 7. THE discovery of the high operation was the work of necessity and accident. PETER FRANCO, of Turrieres, in Provence, surgeon at Berne, Lausanne, and Orange, was requested in the year 1560 to perform this operation for lithotomy, at Lausanne, on a child two years of age. He had already begun to operate with the small apparatus, when he found that the stone was of the size of a hen's egg, and consequently too large to be

be removed in that manner. The child's parents insisted that the operation should nevertheless be finished; and as the bladder very much projected above the *ossa pubis*, he determined upon making the incision above these bones. Although he eventually succeeded in this bold attempt, yet he prudently dissuades his brethren from imitating that practice: and indeed the danger to be apprehended from the effusion of the urine into the abdomen is so great, that even the improvements made by DOUGLAS, on the high apparatus of FRANÇO, have not much diminished it.—In order to remove the stone from female patients, FRANÇO rejects both the large and smaller apparatus, while he proposes merely the dilatation of the urethra, by means of an instrument invented by himself; after which he extracts the stone with the forceps, without dissecting the parts. He likewise invented a gorgeret, and a forceps, the arms of which expand in the bladder; but it must be acknowledged, that the use of these instruments is extremely inconvenient.

§. 8. A very painful and unnecessary operation excited great attention during this century, although it had been previously performed. The reader will perhaps smile at an attempt to repair and restore that prominent part of the human face, the nose, when mutilated by accident.—BARRI, an Italian author, in his "*Italia illustrata*," page 1060, fol. Francof. 1600, considers VINCENT. VIANEO as the inventor of this singular practice.

Two Sicilian surgeons of the name of BRANCA, father and son, had so early as the latter end of the fifteenth century, acquired celebrity by the successful renovation of noses; an art which became hereditary in the family of the BOJANI. But CASPAR TAGLIACOZZI, Professor at Bologna, raised this art to such high perfection, as to render it one of the principal branches of surgery: he became so celebrated by his operations, that his cotemporaries erected a public monument at Bologna, where he is represented with a nose in his hand. This operation is described in an interesting work, intitled, "*Tagliacot. de curtior. chirurgia*;" fol. Venet. 1597; in which he compares it (p. 47) to the ingrafting of trees, expatiates on the dignity and ornament of the nose, and endeavours to prove that there is not the least danger in cutting out a piece from the biceps muscle of the arm. With respect to the diet to be observed during the operation, he gives ample and rigid instructions, while he maintains that the inoculated nose is possessed of a more acute smell, and that it generally grows much larger and stronger than the organ which had been accidentally lost. The hair on the new nose, according to his account, in many instances grows so fast that it must be regularly shaved.

Two respectable eye-witnesses, FORTUN. LICETI, in his book, "*De Monstris*," lib. ii, cap. 29, p. 108, and JOH. BAPT. CORTESI, as quoted by HALLER, in his "*Biblioth. Chirurg.*" Vol. I. p. 293, confirm the truth of Tagliocozzi's assertions, that he has successfully restored not only noses, but likewise ears and lips. MARC. ANT. ULMO, in his "*Physiol. barbæ human.*" p. 230, fol. Venet. 1604; and RANCHIN, in his "*Questiones en Chirurg.*" p. 118, both speak in favour of this operation:—VESALIUS also, in his "*Chirurg. magn.*" lib. iii. cap. 9, p. 983, describes the whole process of operating, with all the minutæ, as if he actually had performed it himself. In the "*Oeuvres d'Ambr. Paré*," liv. xxiii. cap. 2. p. 574, this illustrious writer relates the case of a knight, le Cadet de ST. THOAN, who having lost his nose by a cut, had another successfully engrafted by this artificial process. FABR. VON HILDEN, in his "*Centur. III.*" Observ. xxxi, p. 214, fol. Francof. 1646, also mentions a remarkable case of a lady, who recovered her nose by means of this operation, performed in the year 1592, by GRIFFON, a surgeon at Laufanne.

§. 9. It will be necessary for the elucidation of chirurgical history, to take a short view of the general state of surgery in the sixteenth century, and to give some account of the violent disputes which prevailed in France, on the prerogatives of the medical art over those of surgery, but particularly on the contested privileges of the surgeons. Although the documents relative to this subject have been partly printed, or have at least not been withheld from the inspection of historians, yet no part of medical history has been conducted with more partiality, and less regard to truth, by both parties, than that which is now under consideration. The author of the work entitled "*Recherches sur l'origine et le progrès de la Chirurgie en France*" is guilty of the grossest misrepresentation, though this book has by some been ascribed to FRANC. QUESNAY. He is so much attached to party-interest, that his account resembles more a judicial plea than a faithful relation of facts.—PASQUIER, in his "*Recherches de la France*," fol. Paris, 1620, deserves much more credit, and for this reason, the most important points relative to that extraordinary dispute have been briefly collected from his more authentic statement.

The surgeons of Paris have, since the time of LANFRANCHI formed a distinct body, called the College of St. Côme; they obtained additional and respectable privileges of PHILIP, surnamed the Fair, in 1311, which entitled them to equal rank with the members of the medical faculty; hence they could not bear the idea that barbers should usurp the right of bleeding, applying plasters, and treating external injuries and ulcers. In consequence of this encroach-

encroachment, the surgeons, in 1425, obtained an act or arrêt of the Parliament of Paris, by which the performance of chirurgical operations was prohibited to the barbers, while they were permitted to dress wounds, and extirpate corns by the knife. But the physicians embraced the cause of the barbers, and instructed them in the practice of surgery, with a view to take vengeance on the surgeons, who, it was affirmed, had usurped medical privileges. The complaint of grievances which the surgeons, on this occasion, laid before the faculty, in the years 1491 and 1494, were not attended with any other effect, than the promise to change the situation of affairs; nevertheless, the members of the faculty were permitted to deliver anatomical lectures to barbers, in the French language. The surgeons again, though in vain, represented to the faculty, that they acted contrary to the laws made by themselves, by permitting their members to instruct barbers in the knowledge of anatomy, and this in their native language. However, no other redress could be obtained, but that of licensing the surgeons to undertake public dissections, and of granting them a certain rank above the barbers, for which they paid sixty *solidos* annually to the treasurer of the faculty. This event took place in the year 1502; and in 1505 the surgeons renewed their application in the character of scholars or pupils to the faculty, whom they intreated to confirm their privileges; but HELIN, the senior of that body, sent them the discouraging answer, that their pretended rights or immunities had been acquired by surreptitious means.

§ 10. In the same year, the physicians of Paris, as Pasquier expresses himself, passed the *Rubicon*, and entered into a formal contract with the barbers, who, on account of their implicit obedience, were patronized in preference to the surgeons. The barbers were consequently, in contempt of the surgeons, pronounced to be the true scholars of the faculty: they were matriculated under that name; but a promise was exacted from them, according to which they were not allowed to administer internal medicines, without consulting, in every case, a member of the medical faculty; they farther agreed to undergo an examination, previous to their commencing business as masters. Since that period, the barbers have been no longer called *barbitonfores*, the complaisant faculty having conferred on them the more honourable title of *Chirurgici a Tonstrina*, or *Tonfores Chirurgici*. A few days after this change, the faculty proceeded to such extremities as to prosecute the surgeons in a court of law, because they had received information, that several surgeons had prescribed internal remedies, without the previous advice of a physician.

Probably, in that age, no man of genius and activity presided over the Collège de St. Côme; for no sooner was STEPHEN BARAT elected president
of

of that college, than the situation of affairs was thoroughly changed. In the year 1515, he urged the faculty to exempt the society of surgeons from the oppressive tax they were obliged to pay annually, and not to compel them to attend the lectures given by members of the faculty. As Barat addressed himself to the whole university, and as old Helin, the most zealous antagonist of the surgeons, died in the same year, this manly remonstrance had the desired effect. The university issued a decree, by which the surgeons of Paris were nominated *Scholastici*, or perpetual scholars of the faculty. But still greater immunities were granted to the surgeons in 1545, by the good offices of WILLIAM VAVASSEUR, principal surgeon at the court of FRANCIS I. He successfully effected a complete separation of the barbers from the surgeons, and at the same time obtained a decree, in conformity to which every master of the chirurgical art, if he wished to obtain the privilege of exercising his profession, was obliged to study the Latin language, logic, and other elementary sciences. By this favourable regulation, the College of Surgeons was at once raised to the rank of a learned school, and obtained at length the right of creating Masters, Bachelors, Licentiates, and Doctors of Surgery. In consequence of this arrangement, HENRY II. granted to the members of the Chirurgical College of St. Louis, all the prerogatives attached to a faculty; and the patent issued on that occasion, was registered in the parliamentary laws, under the name of *Lettres d'Orroi*.

§ 11. In the year 1551, the medical faculty, under the deanery of JOHN DU HAMEL, recommenced the dispute against the surgeons. Although RUDOLPH LE FORT, dean of the College of St. Louis, zealously defended the surgeons, yet Du Hamel found the means of procuring a repeal of the decree enacted in 1515; and, contrary to the spirit of that law, the surgeons were again obliged to submit to an examination before the medical faculty. Under HENRY III, however, the surgeons once more obtained a confirmation of their privileges, in 1577, by virtue of which they were entitled to confer academical dignities; and, notwithstanding the new opposition of the faculty in 1579, the surgeons, as well as the university of Paris, were in the same year favoured with an indult of Pope GREGORY XIII, while DE THOU vindicated the cause of the former, in a spirited and successful manner, against the oppressions of the faculty. The colleges subsequently established by surgeons, acquired such a degree of authority, that, in the year 1596, they were empowered to give serious orders to the barbers, in difficult chirurgical cases always to consult a sworn surgeon, and upon no account to undertake the treatment of any other but the slightest external injuries. These privileges and prerogatives of the surgeons of
Paris

Paris were farther confirmed by HENRY the Great, in 1602; and LOUIS XIII, in 1614.

[In our next Number, we shall continue this article, and begin with an account of the most celebrated surgeons of that century, in chronological order.]

A Concise History of the principal Discoveries in Anatomy.

[Continued from our last Number, pp. 60—69.]

§ 10. TO relate the most important discoveries in systematic order, it will be necessary to begin with *Osteology*. The most interesting discovery which was made in this branch of anatomy, related to the ear. MONDINI and his followers, fearing they should commit a crime by sawing through the *os temporis*, had consequently left this important organ of sensation entirely unexamined. ALEXANDER ACHILLINI, about the year 1480, discovered the two bones of the labyrinth, the malleus and the incus, and even then described their uses. BERENGAR had a more accurate notion of the use of these bones; he described the *septum auris*, and doubted whether it originated from the auditory nerve, or from the membranes of the brain. VESALIUS added to these the vestibulum of the labyrinth, which he called *forum metallicum*, and the manubrium of the malleus, of which STEPHANUS knew as little as of the auditory bones in general. The third bone of the ear, which we call *stapes*, was yet undiscovered. INGRASSIAS, EUSTACHIUS, COLUMBUS, and LEWIS COLLADO, a pupil of Vesalius, and Professor at Valencia, contend for the honour of this discovery. Ingrassias, however, seems to have the strongest claim to it; for he maintains that he ought to be considered as the discoverer, having demonstrated the existence of the *stapes* publicly at Naples, in the year 1546. This assertion gains additional probability, when we compare with it the testimony of the just FALLOPIUS, who obtained the first information of it in the year 1548, from a pupil of Ingrassias. Vesalius and COITER are likewise of opinion that Ingrassias was the real discoverer of it. It cannot, however, be denied that Eustachius himself may be allowed the merit of a second discovery of this bone; but Columbus and Collado are much too late with their pretended discovery, the account of the latter having been first published in the year 1555. Eustachius discovered the tube which is called after his name, and the spiral line: he has also given a very good description of the membranous zone of the cochlea. Fallopius was the first who denominated the membrane of the tympanum, and gave an excellent description of it.

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He had a knowledge of the aqueous duct of the vestibulum, of the nervous duct of the pyramid, of the lamina spiralis, and of the scalæ of the cochlea, as well as of the foramen ovale. ARANZI also had examined these parts very minutely, for he describes the round condyle of the anterior crus of the incus. VOLCHER KOYTER gives a good description of the nervous duct in the pyramid of the temporal bone, one fulcus of which is pervaded by the optic nerve; he knew the round and oval fenestra, the labyrinth, the semicircular canals, and the long process of the incus. ALBERTI and PLATER have likewise given a very good description of these parts.

§. 11. GUIDO GUIDI was the first who caused the pyramidal sanguiferous ducts of the temporal bone (*sinus petrosi*) to be correctly drawn; but they had been before described by Fallopius. The *os basilare* was first examined more minutely by Berengar. He discovered the cavities in its basis (*sinus sphenoides*), which terminate in the upper duct of the nasal cavity, and are frequently connected with the ventricles of the brain, by a foramen in the *ephippium*; hence he accounts for the origin of colds in the head, by an accumulation of mucus in those ventricles. Vesalius indeed accurately described this bone, together with its wings (*alæ*) and points (*apices*); but he would not admit its immediate connection with the ventricles of the brain, which really does not exist in many instances. SYLVIVS insisted upon the aforementioned connection being always admitted. Fallopius at length discovered that such ventricles are often not found in infants, and Ingrassias described the *os basilare* so carefully, and particularly explained the different modifications which it forms with the other bones so clearly, that it is scarcely possible to give a better description. GALEN had maintained, that there is a fissure between the dental cells, or on the external and anterior part of the upper jaw-bone, which in animals separates the intermaxillare from the *os palatinum*, but is never found in human beings. Vesalius contradicted this assertion, but admitted that a fissure divided the *apophysis palatina ossis maxillaris superioris* towards the inside, and in that direction disappeared between the dens incisor and the angular tooth. SYLVIVS again confounded the two fissures with each other, and thereby perplexed himself. Ingrassias gave a tolerably good description of the lower *ossa spongiosa*, and according to Berengar, who was the first that made this discovery, the real perforation of the *os cribriforme*, which formerly served to account for colds in the head, was denied by several anatomists. Guidi caused a good drawing to be made of the articulated condyles of the inferior maxilla with their cartilaginous superficies, and ALBERTI was the first who described the *ossa wormiana*. The *os hyoides* was represented

by Vesalius, and all those who copied his plates, much larger than it is in a natural state, because the pieces of bone which are found in the ligaments of the hyoides of aged people, were mistaken for necessary parts of the bone itself. This prejudice was exploded only, after Eustachius had more minutely investigated the subject.

§. 12. Ingrassias rejected the foramina in the first vertebra of the neck, which Galen, misled by the observations he had made in dissecting apes, had adopted. Ingrassias, on the contrary, proved that sulci were actually in the atlas of the vertebral artery, and that the superficies of the ligaments of the occiput formed cavities, in conjunction with the superficies of the ligaments of the atlas. Eustachius, however, defended Galen, by asserting that the foramina ought to be denominated sulci. The number of the pectoral bones occasioned another dispute, which was carried on with great acrimony between Vesalius and Sylvius.—Galen had adopted seven in the human skeleton, but Vesalius proved that there were only three, and that his opponent had again been misled by the skeleton of a monkey. Sylvius objected to the assertion, that men had been larger and taller in the time of Galen, and had seven pectoral bones, but that in this dwarfish century, three only could be found.—Fallopianus and Eustachius, who thought that this evasion was very ridiculous, nevertheless asserted, that in the embryo the sternum was composed of seven cartilages, which formed only a single bone in adults, and that Galen, having probably divided it according to the number of the ribs, was excusable. Vesalius was the first who proved, in opposition to Galen, that the first rib was immovably connected with the sternum: Columbus, however, maintained a contrary opinion, merely to contradict his instructor. Sylvius observed also in the middle breast-bone, the large and disproportionate foramen, which indeed is frequently found there. The number of the *ossa cruciata* also excited the attention of anatomists; as Galen had mentioned only three, though from five to six were actually found. Vesalius was the first who demonstrated this, and Eustachius expressed himself in this instance rather unfavourably with regard to Galen. Vesalius was likewise the first who, from accurate experience, refuted the supposition of an incorruptible bone in the heart. Ingrassias afterwards corroborated this refutation. The former asserted, that the bones of the hand are not totally destitute of medullary substance, as Galen had maintained; and Sylvius again endeavoured to refute his assertion, by the absurd argument that the bones in former times, had been firmer and harder, and consequently required no such substance. The anatomists, in the beginning of this century, differed in opinion concerning the number of bones in the tarsus. Achilinus reckoned in the year 1502 only five bones in the
tarsus,

tarsus, probably because he had considered the *ossa cuneiformia* as one; but in the following year he found all the seven. Vesalius rejected the large curvature which Galen ascribed to the *os humeri*, and the *os ilium*; while Sylvius defended Galen, by asserting, that the bones had become more straight by the modern mode of dress. He vindicated, in a similar manner, Galen's neglect in describing the cartilages of the extremities of the bones: "In former times," said he, "the bones were more solid, and consequently required no cartilages." Stephanus knew, and described HAVER's *Synovia* in the joints of the bones.

§. 13. With respect to *Myology*, anatomists began to examine the structure and powers of the muscular system. Galen had maintained, that a muscle was composed of tendinous and nervous fibres. Vesalius, on the contrary, demonstrated that there was no proportion between the nerves and muscles; that frequently large nerves with numerous ramifications pervade the smaller muscles, while only a few nerves pass through the strongest muscles of the human body, for instance, the heart; that tendons differ entirely from muscles, and rather approximate to the nature of ligaments. The muscular fibre has, according to his opinion, a self-subsistent power, capable of primary motion; nor does it lose its capability of action, if it be wounded in a longitudinal direction. Fallopius explained this opinion more perspicuously, and proved particularly, that motion, in every instance, is exerted only where muscular fibres pre-exist; that it depends not always exclusively on the direction of those fibres; and that consequently it cannot be maintained with the ancients, that the oblique fibres effected a retentive, while the transverse caused the protruding motion. Columbus traced the nerves from their ramifications to the muscular fibre, and shewed that the latter apparently often originates from the former. The muscular membrane (*panniculus carnosus*), which Galen had endeavoured to find in the whole extent of the cutis, was ascribed by Vesalius to particular animals only. Stephanus also denied its existence in the human body, and Koyter demonstrated that the porcupine, by means of this membrane, was enabled to convolve itself. The majority of the anatomists of this century agreed, that a peculiar membrane covered the muscles, and separated them from each other; and we are indebted to STENONIS for the refutation of this error.

Many of the separate muscles were at this period discovered and properly denominated; others were more accurately described, and the incorrect anatomical accounts of the ancients, as well as the difference between the human and animal muscles, were pointed out. Stephanus, like his predecessors

cessors, mistook the frontal and occipital muscle for the periosteum, which was surrounded only with much cellular texture and adipous membrane. Fallopius, however, described it first very minutely and correctly. The doctrine of the ophthalmic muscles, and of their use, was still blended with many errors. Berengar enumerated six pair, and a solitary one; the latter, in animals, restrains the eye, and winds itself closely round the optic nerve: this muscle he farther supposed to exist in man.—Even Vesalius believed in the existence of this muscle, and besides considered the sphincter of the eye-lids as two different muscles. Fallopius refuted both these erroneous notions, and proved that the muscle in question was found only in herbivorous animals; and that the sphincter of the eye-lids was only a single one. Vesalius, however, obstinately contended for the existence of this internal muscle, and imputed its obscurity, in some human bodies, to Jeanness. Columbus refuted him likewise. Aranzi discovered the elevator muscle of the upper eye-lid in the year 1548, while he was a pupil of Maggi; but Fallopius probably knew nothing of this muscle at that time, as he claimed the merit of having discovered it in the year 1553. Aranzi is wrong in asserting, that the muscoli recti of the aged arise from the os basilare. Koyter discovered the corrugator supercilii, or contractor of the eye-brows.

§. 14. It was even at this time generally understood, that the muscles of the ear perform voluntary motion: one of the retractors of this organ was also discovered; it was represented by Eustachius, and described by Columbus. The muscles of the internal auditory organs also became the objects of anatomical investigation. Eustachius very accurately described the dilatator and depressor of the membrana tympani, and the muscle of the stapes; and Koyter's description is also agreeable to nature. Aranzi knew the dilatator of the membrana tympani, but was ignorant whether it was an artery or a nerve: and VAROLI denied for a long time the existence of these muscles, mistaking them for nerves lacerated in sawing through the temporal bone. He at length became sensible of his error, at least with regard to the muscles of the stapes, and even maintained that they could be spontaneously moved. Vesalius descanted on internal muscles of the nose, which were to serve the purpose of contracting it; but Columbus objected that he had found these muscles only in animals, and described in their place the external contractors of the foramen nasale. POSTHIUS, on the contrary, assures us that the discovery of Vesalius really could be corroborated by instances in very muscular subjects. Vesalius has an equally high opinion of his discovery of a concealed muscle of the cavum oris, which is the pterygoideus internus.—

Fallopius added the pterygoideus externus, and the circumflexus palati.

Vesalius

Vesalius also pretended to have discovered between the os hyoides and the epiglottis, muscles (*hyo-epiglottideos*), which however were considered by Fallopius and Columbus as non-entities. Fallopius, besides, admitted only four muscles of the tongue, the stylo-glossus, the genio-glossus, the hyo-glossus, and the lingualis; though Vesalius had mentioned a greater number. Fallopius has, however, committed a great mistake, in asserting that the stylo-pharyngeus presses against the tongue. Eustachius for the first time, mentions the stylo-hyoideus, and Berengar the thyreo-epiglotticus. The omo-hyoideus which the ancient anatomists supposed to arise from the acromion process of the scapula, was traced from the superior margin of this bone by Columbus, who refuted Galen's assertion, that this muscle served to put the shoulder in motion. Eustachius caused correct drawings to be made of the muscles of the head, the neck, and particularly those of the cervix. Vesalius erroneously derives the biceps muscle of the upper jaw from the processus styloideus, whereas it arises from the processus mammillaris. Fallopius describes the descending muscle of the neck, the discovery of which has been ascribed by some to DIEMERBROEK, and attributes to the subclavian muscle the power of drawing the first rib upwards. He denies, on the contrary, though perhaps unjustly, that the large serrated muscle contributes any thing towards respiration. Fallopius mentions three muscles, instead of the scalenus of which Galen speaks, and we now know of four or five. He describes the internal muscle of the breast (*sterno-costalis*) as consisting always of four parts, though this muscle is subject to the most diversified changes.

§. 15. The notions, which Vesalius had of the intercostal muscles and their uses, were yet extremely obscure: he knew, however, that the functions of the external cannot be opposed to those of the internal intercostal muscles, as described by Galen, namely, that the external intercostal muscles contract the cavity of the thorax, while the internal ones expand it. Vesalius justly remarks, that both merely draw the ribs together, alternately. Guidi, on the contrary, believed that the external intercostal muscles only give way to the exertion of the internal ones, without acting themselves; and even Aranzi was of opinion, that the intercostal muscles served only as a septum, and exercised no particular action. FABRICIUS coincides with Galen, but thinks that his real opinion is contained only in those passages in which he says, that the external intercostal muscles expand, and the internal ones contract the cavity of thorax. The other passages of Galen, in which the contrary is affirmed, Fabricius pronounces spurious. He thinks that the cavity of the thorax must be expanded by the ribs being drawn upwards. Amongst the abdominal muscles, those which descend obliquely,

obliquely, together with the pyramidal muscles, were well described by Fallopius; he also was acquainted with POUPART'S ligament (*ligamentum inguinale*). Piccolhuomini was the first anatomist who denominated the white line (*linea alba musculorum abdominalium*). The doctrine of the superior extremities (*artus superiores*) has obtained much more perspicuity by CANNANI'S representation and description. In the second figure, the flexor sublimis digitorum is represented, and divides itself *here* into five tendinous parts: the third contains the ulnaris internus; the eighteenth, the lumbrical muscles, and the flexor of the little finger: the nineteenth contains the muscle of the palm (*palmaris brevis*), which VALVERDE afterwards copied, and which Fallopius ascribed to Cannani as an important discovery. This muscle was believed at first to expand the palm of the hand: we know, however, that it serves to contract it. The short flexor of the thumb, the seven muscles between the bones of the metacarpus, and the abductor of the little finger, have been, if not discovered, at least described first in a perspicuous manner by Cannani. It is to be regretted, that he in general represents the muscles unnaturally thick and tumefied! We find, indeed, the coraco-brachialis (*perforatus Cafferii*) previously, though rudely, delineated in the work of Vesalius; but Aranzi was the first who gave a correct description of it. The muscles of the sura, and the transverse muscle of the *planta pedis*, were discovered by Sylvius, and Fabricius described the latter correctly. The long extensor of the toes was discovered by Columbus, the pyriform muscle of the os ilium by Fallopius, and Vesalius investigated the use of the muscle of the poples more minutely, and maintained that it did not produce a perceptible flexion of the tibia. Fabricius observed the two-fold organization of this muscle.

§. 16. The greatest and most important discoveries were made in *angiology*, and the farther improvement of it occasioned the foundation of a new system, which changed the whole of the theory and practice of medicine: the veins had hitherto been considered as the principal vessels; the real blood, and the function of nutrition had been exclusively ascribed to them, and they had likewise been uniformly placed first in the compends of anatomy. Vesalius himself adopts this arrangement, as the arteries appeared to him to be only the conductors of the vital spirits from the heart throughout the body; he treats of them after the veins, and far less minutely than of the latter. Although he observed, on applying the ligature to arteries, a swelling between the parts compressed and the heart, yet this was caused, in his opinion, by stopping the efflux of the blood from that organ. But perceiving that this swelling under similar circumstances did not take place in the veins, he imputed it principally to the
 accumu-

accumulation of the vital principle which is combined with the circulating blood in the arteries. It was generally believed, that the blood circulated to and from the vessels, according to the stimulus existing in different parts of the body, and particularly, that respiration propels the blood into the vessels by inspiring, and restores it to the heart by expiration. Galen's opinion, that the veins originated in the liver, had been exploded long before that period. Vesalius, especially, defended the hypothesis of ARISTOTLE, that the vena cava proceeded from the heart, and SUSIUS had publicly and zealously defended the same theory at Bologna, in the year 1543. Sylvius, however, continued to appeal constantly to the infallible Galen; and even Columbus, Eustachius, and Fallopius, earnestly maintained that the vena cava originated in the liver, and that in ascending it communicated with the heart by only one branch. It was supposed that the vena cava was united in the liver with the vena portæ, by forming considerable anastomoses, which, in this century, were generally conjectured to abound in the body. Varoli and DU LAURENS seriously endeavoured to prove the existence of these extensive anastomoses between the vena portæ and the vena cava. Berengar had formerly conjectured the existence of such large inosculation between the femoral arteries and their veins. Eustachius united, in a similar manner, the hypogastric veins with those of the bladder; and Fallopius did the same with the arteries of the mesentery and those of the rectum. It was generally believed, in imitation of Galen, that anastomoses subsisted between the veins of the breasts and those of the abdomen; with a view to account for the consensus between the uterus and the breasts. These inosculation are indeed very perceptible and easily demonstrated.

§. 17. More minute investigations into the nature of the valves of the larger vessels of the heart, and of the veins themselves, at that time occasioned deep reflections on the use of these membranes, and gradually opened the way to the theory of the circulation of the blood. We are indeed much indebted to Berengar in this respect. He described the semi-lunar valve of the ascending vena cava, and the valvulæ mitrales of the pulmonary vein. They appeared to him similar, because they did not fit completely, but shewed some laxity, were not possessed of equal firmness with the other valves, and always became contracted after the dilatation of the heart. He farther discovered the large tricuspidal valve between the orifice of the vena cava and the right ventricle of the heart, the use of which appeared to him to be the prevention of the blood in the heart, from its reflux into the cyst of the vena cava. He also described the arterial semilunar valves in the pulmonary artery and in the aorta, shewed the similarity of their structure, and supposed that, as they opened towards the heart, their function was to prevent the reflux of the blood. Sylvius had likewise observed the semi-lunar valve in the lower ascending vena cava, which erroneously has been denomi-

denominated after Eustachius, who indeed has described it, and given an imperfect representation, but certainly did not discover it. Vesalius has, by mistake, been considered as the discoverer of the mitral valves in the pulmonary vein, though he describes them better than Berengar; and he also shewed to Sylvius the valves in the aorta. Fallopius and Le Vasseur likewise knew the valves in the ascending vena cava, in the cyst of that vessel, and the arterial veins; and they were of the same opinion with Berengar, respecting the functions of those valves. Posthius expressed himself still more clearly with regard to the use of the valves in the large veins of the heart; and Aranzi described the cartilaginous edge of the valve in the pulmonary artery, and the little condyles of the mitral valves, which go by his name.

Valves were also discovered in several other veins. However, a series of years elapsed before the most accurate result was deduced from these observations. It has already been mentioned, that Cannani, in the year 1547, discovered on the orifice of the solitary vein (*vena sine pari*), a valve, which he supposed to be designed for preventing the superabundant influx of blood from the vena cava. Sylvius had previously observed similar valves in several other veins: but anatomists, nevertheless, treated Cannani's discovery with ridicule. Stephanus was, perhaps, the first who made this discovery, as he wrote prior to the year 1536, and hence deserves the greatest credit. Eustachius clearly perceived the valves in the coronary veins of the heart, of which he caused drawings to be made. In the crural veins, Posthius distinctly observed the valves in the year 1560, on the Anatomical Theatre of Montpellier; and a few years afterwards, SAL. ALBERTI made a similar discovery in the renal as well as the crural and other veins. In the year 1574, PAUL SARPIS and Fabricius observed those valves in most of the veins of the human body; the latter furnished incomparable drawings of them, and explained their use, by stating that they were designed by Nature to prevent congestions, as well as too great dilatations of the veins. "In the arteries," said Fabricius, "the valves were unnecessary; as the influx and reflux of the blood here are not so much interrupted as in the veins. The valves are indispensable to the veins of the limbs; because, without them, irregularities might easily arise in those parts, on account of their varied and almost incessant motion. The veins of the brain and the pelvis require no valves, as the blood naturally flows with greater velocity into these parts." From this passage it is obvious, that Fabricius did not conceive the principal use of the valves;—namely, that of promoting the return of the blood to the heart; a discovery of the first importance, which seems to have been reserved for the superior genius of the immortal HAYEY.

[To be resumed in our next Number.]

HINTS

HINTS AND IMPROVEMENTS
 IN THE PRACTICE OF
 MEDICINE AND SURGERY.

Remarks on the Cure of Spasmodic Asthma.

DR. UNZER, in his valuable Manual of Medicine, page 1256, and full has given some hints which well deserve to be communicated to our readers. According to this writer, spasmodic asthma generally requires bleeding, where obvious plethora or hemorrhoidal affections, are the pre-disposing cause of the disease; or when obstinate spasms warrant the application of extreme remedies: although venesection has been found sometimes rather to promote than to prevent the fatal catastrophe.

If the danger of suffocation does not require immediate relief, we may frequently and successfully apply a good number of leeches, which may be put to the breast, the back, or whatever part seems to indicate the use of them, and particularly to the hemorrhoidal veins, where Dr. Unzer has in several instances observed them to afford singular relief. At the same time, two or three pretty strong injections ought to be given at one hour's interval from each other, and after these, opium may be safely administered. Thus, for instance, he gave thirty drops of laudanum; or a mixture consisting of an ounce and a half of peppermint water, five and twenty drops of laudanum, the same quantity of the oleum C. C. and two drams of common syrup, to be taken at one draught.

If, however, the spasms should be connected with an acrimony of the fluids, in such cases the squill, with opium and salt of hartshorn, may be given with advantage. This method may be adopted in all instances where speedy relief is required, whether the breast be idiopathically affected, or by sympathy with the stomach.

A very obstinate spasmodic asthma was, according to Dr. WEIKARD, at length removed, by rubbing the feet every night with the tincture of cantharides.

Another German physician, Dr. LENTIN, asserts, that four grains of musk have proved beneficial in an inveterate case of spasmodic asthma; and that, in general, the anti-hysterical medicines may be safely and often successfully prescribed in every species of asthma. Sometimes indurated glands, particularly in the neck, are the collateral symptoms of spasmodic asthma, and in such cases, the anti-hysterical remedies deserve the principal attention of the practitioner, while the spasmodic paroxysms ought to be treated like nervous affections arising from spasms.

LE COMTE, a French writer, relates the following extraordinary case of a woman, who was in other respects healthy, but had from her infancy, almost every night, been troubled with an asthmatic paroxysm, increasing with her years. On account of indurations in the breasts, this patient was directed to take the extract of cicuta internally, which not only dissolved the callosity of her breasts, but likewise alleviated her asthmatic complaint, and at length completely cured it. She took this medicine during the almost incredible time of four years, in the evening, in increased doses, so that she at length usually swallowed forty grains for a dose; nay, she at one time increased the

doses to one hundred and twenty, and one hundred and forty-six grains; which, however, produced a violent narcotic effect, insomuch that when she recovered from this stupefaction, all objects appeared to her remarkably diminished. Sometimes she would suspend the use of the medicine for eight or nine days; and during the term of about two years and a half she had consumed no less than nineteen thousand grains of the extract of hemlock.

If external stimuli, arising from acid vapours, should occasion a spasmodic asthma, it will be readily perceived, that the only remedy is the removal of the exciting cause.—Thus, in the vicinity of Mount Vesuvius, the inhabitants were attacked with a convulsive asthma, after an eruption of this volcano, and most of the patients died on the third day, obviously from the fatal effects of venesection.

An ingenious Italian physician, VIVENZIO, on the contrary, prescribed mucilaginous remedies, and the steam of a decoction of emollient herbs; and as soon as the sense of suffocation was overcome, he ordered twelve ounces of blood to be drawn, and the inhalation of emollient vapours to be continued. In this manner, says DELLA TORRE, Vivenzio saved the life of almost every patient, without an expectoration or any remarkable crisis having taken place.

[To be continued in our next Number.]

A singular Case of Anasarca of the Liver.

Dr. SACHSE, a German practitioner at Uelzen, relates, in the tenth Number of the "*Journal der Erfindungen*," the following remarkable case, which we are inclined to term an *abscess*, rather than *dropsy* of the liver.

A farmer's wife, thirty years of age, applied to him on the 4th of March, 1794, complaining of a hard, thick, and painful swelling, which extended from the short ribs of the right side to the pit of the stomach, and seemed to occupy the seat of the large right lobe of the liver.—The colour of her eyes as well as the skin, was natural; respiration somewhat difficult; the pulse small and rather irritated; the heat of the body natural; the *feces* of a proper consistence and colour; decumbence on the right side difficult; sleep tolerably easy; the menses regular; no sweats at night, no shiverings accompanied with heat, nor apparent emaciation.—Formerly she had enjoyed good health, excepting some pains in her back and shoulder. Since the last 12 months she could not bear her stays tightly laced; and about three months ago she was seized with a burning pain in her right side and shoulder: she lost her appetite, which had usually been good; was troubled with nausea and frequent vomiting, accompanied with febrile symptoms, insomuch that she was for five days confined to her bed. At that period the swelling in the right side appeared, which, however, was disregarded, while all other symptoms yielded to simple family remedies, although she felt, without intermission, a sense of pressure and burning heat in the part affected. These sensations, about three weeks previous to her consulting him, had become more intense, and the swelling of the part more extended.

The circumstances of the case here detailed, induced Dr. Sachse to believe that three months ago she had been afflicted with an acute inflammation of the liver, which had since been changed into a chronic induration. Hence he prescribed the taraxacum, senega, and radix graminis, in decoctions; antimonial remedies with gentle cathartics; and directed mercurial ointments to be rubbed in, with the necessary precaution. A week after these prescriptions, she again applied to Dr. Sachse, who resided at some distance from the patient's abode, and complained that she had experienced no relief; that

on the contrary, her pains had become more violent, the swelling more extensive, and that she was troubled with slight shiverings and frequent flying heat. These symptoms, together with an obscure fluctuation he perceived in the part affected, which could not well bear to be touched, made him suppose that there was a collection of purulent matter, and that it was an abscess of the liver, which required to be opened by the lancet. Yet he was too timorous to venture on the operation, and directed therefore emollient poultices, pointing out the spot to which a roasted onion should be applied: this he did with a view to effect a more certain concretion of the liver with the peritoneum. In two days he saw her again; she could not support the very excruciating pain but in a reclined posture; the fluctuation appeared still more distinct, and the operation was now determined upon. The incision was made to the depth of an inch, and there appeared no pus, but, contrary to all expectation, an effusion of water took place, which instantaneously alleviated the pains of the patient. The water flowed without intermission till about four pounds and a half had been evacuated; it issued more freely when the patient bent herself backwards; was at first of a yellowish, afterwards a reddish, and then of a completely white colour; had a saline and somewhat sweetish taste; coagulated quickly, and at length had the appearance of weak hartshorn jelly: on stirring it, tough yellowish threads separated from it, which extended above the length of a yard without breaking, similar to those formed by the blood when agitated with rods. While the water, or rather lymph was still trickling out of the small wound, he applied a pledget and covered the orifice with thick compresses, to exclude the access of air: thus it became gradually smaller, and healed without difficulty in eight days. Internally, Dr. Sachse directed the use of antimonial remedies, with bark and small doses of rhubarb, which, after having been continued for several weeks, effected a cure, excepting that the patient still feels a continued but inconsiderable induration of the liver. And although she has remained in good health for a twelvemonth after this attack, yet Dr. Sachse remarks, that time only can determine whether she will undergo a relapse.

An Account of the Cachexia Africana.

As we doubt not, that this article will be found particularly worthy the attention of our readers, we have extracted it from the "*Medical Repository*" printed at New-York, conducted by Drs. MITCHELL and MILLER. The author of it is Dr. CHISHOLM.

The similarity between this disease, to which the negro slaves lately imported into the West-Indies are subject, and one to which young females are liable, in most countries, we presume will not escape the observation of practical readers: and we do not hesitate to pronounce, that the same theory may be safely applied to both.

"There is," says Dr. Chisholm, "a disease to which the negroes, and particularly those lately imported are much subject: it is named by us *Mal d'Estomac*, or *Cachexia Africana*; and from a constant symptom which attends it, *dirt-eating*, by some. (Dr. HUNTER; Diseases of Jamaica.) Negroes also, who have been some time in the country, are subject to this disease, but not so frequently as amongst the former. It affects those who have, generally speaking, been badly clothed, ill-fed and lodged, and whose constitutions have been worn out by hard labour. The mind partaking of the sufferings of the body, is affected with nostalgia, brooding over their ill-treatment, separated from friends and relations, and doomed to suffer without daring to complain.

"The

“ The first symptom, and which indeed is both the cause and effect, is a fondness for solitude, sadness, grief, and despondency; a loss of appetite, or a desire only for what is pungent and stimulant; difficulty of breathing, especially in walking up a hill; a painful gastrodynia; palpitation of the heart; general debility; drowsiness; paleness of the face and palms of the hands; the tongue white, sometimes with an appearance like stains of ink upon it; the lips colourless; the tunica adnata of a glassy whiteness, as also the teeth; the skin of an olive complexion, and cold to the touch, with a rough surface, and the papillæ elevated; anasarca swellings of the eye-lids, face, and extremities; water is afterwards collected in the belly and chest, and the unhappy sufferer can only breathe in an erect posture, for fear of instant suffocation; the pulse is always small, and generally becomes quicker towards night. There is, during the disease, an unwillingness to attempt, and inability to perform motion.

“ Morbid changes take place throughout the alimentary canal, in consequence of the vitiated state of the gastric juice and impeded digestion; a morbid acidity prevails, and a symptom arises from this cause, which, with some has given name to the disease,—a habit of eating chalk, dirt, or whatever will obtund acrimony.

“ This vitiated action is propagated throughout the whole alimentary canal; the lacteals are abraded by acrimonious fluids, and no longer possess the power of absorbing healthy chyle; hence the lymphatic glands of the mesentery become inflamed and indurated. The blood poor, vapid, and colourless, no longer stimulates the heart and arteries to action; hence asphyxia and sudden death, and those polypous concretions found in the heart after death.

“ It is to the want of irritability of the blood that we are to ascribe obstruction of the menstrual flux in women, in this disease.

“ From this short account of the disease, which has no other merit than truth, you will be prepared for the appearances upon dissection:

“ The stomach is found much enlarged, and thickened in its coats; the liver sometimes enlarged and schirrous, but always preternaturally white; the gall-bladder sometimes with biliary concretions; the bile never of a healthy appearance, generally thin and watery, and slightly yellow or green; the mesenteric glands indurated and schirrous. Those appearances induced a medical practitioner in a neighbouring island to employ mercury, with a view of removing, as he supposed, obstructions, but a very small quantity of it excited such terrible effects as obliged him to desist. Accumulated irritability, from the abstraction of the usual stimuli, had rendered them more susceptible of the slightest stimulus.

“ From this view of the disease, the pathology and treatment of it, I conceive, will be easily understood. Resembling scurvy, in some respects, it differs from it only in the symptoms of putrid diathesis not being so obvious—putrid animal food not having been here employed as an article of diet. The same defect of oxygen prevails in both diseases; and it is probable, that we would find the same benefit from the use of acescent vegetables; but we have not here the same putrid diathesis to obviate; and the stomach has been already so much debilitated by weak vegetable diet, that it requires a more stimulant plan—animal food, wine, warm clothing, a gentle treatment, &c. The preparations of iron are here found of the most essential service. Much benefit has also been derived from weak fermented liquors—acescent cane-liquor has cured many.

“ Perhaps there may be also a deficiency of carbon. I am inclined to think that the lungs have a greater share in separating oxygen than the stomach

stomach and alimentary canal; but from the mutual sympathy which subsists between the stomach and lungs, the vigorous exertion of the former is required to enable the lungs to perform their peculiar action, I conceive, that to produce scurvy, the abstraction of the usual stimuli, as in the disease, the history of which I have just now given, will be sufficient.

“It is remarkable that negroes, subject to this disease, have been much benefited by living in a low situation, near marshes, which quickly prove fatal to whites; and I have long observed this, before I had formed any theory upon the subject. Perhaps the hydro-carbonic air may act as a cordial—it is perhaps the nervous ether itself. It has been remarked by medical writers, that the attack of remittent marsh fevers is frequently preceded by an unusual flow of spirits.”

A Case of Epilepsy, treated by Argentum Nitratum.

The following case has been communicated to the Editors of the Medical Repository, by Dr. J. E. WHITE, of Wayneborough, in Georgia; and as the subject of epilepsy has already engaged the attention of our readers, in the second and sixth Numbers of this work, we do not hesitate to insert it.

“The patient,” says Dr. White, “was a boy aged six years. He had laboured under the disease from the time he was eighteen months old. The fits occurred most frequently in the night, generally to the number of four or five; but he has been known to have sixteen in that space of time. He rarely passed a night without having more or less, except once, for about two months, when they entirely ceased; but they seldom recurred during the day. Various remedies had unsuccessfully been tried, and the fits had now become worse than ever they had been known, returning very frequently, both night and day.

“I was applied to, and thought it a fair case for giving the nitrated silver: I accordingly directed it in the following manner:

R \bar{y} Argent. nitrat.

Medull. pan. aa. fem. drachm. and divide into thirty pills; one to be taken night and morning.

“After he had taken four of the pills, the dose was increased to three in the day, (one being taken at noon) without producing any sensible effect. He had continued their use but four days, before the fits seemed to be suddenly arrested in their progress towards a fatal termination, and he remained entirely free from them for nearly two weeks. He had now a very slight return of them, and I ordered five pills to be given in the day. This dose was continued for a short time, when I increased the quantity of the argentum nitratum in each pill, to one grain and a half, of which he took four in the twenty-four hours, for a few days, (still remaining entirely clear of his complaint) when he was seized with the fever of this climate, which, from inattention, quickly put a period to his existence.

“Though it cannot be determined what would have been the issue of this case, yet, in my opinion, the most unequivocal proofs were given of the good effects of the medicine, and I shall not fail, in future, to make trial of it in cases that I may deem proper for its exhibition.”

Observations on the Nature and Cure of Hydrophobia.

The Medical works of Dr. RUSH, of Philadelphia, are too well known and esteemed, both in Europe and America, to require any additional commendation. This original writer has lately published the fifth volume of his

“*Medical*

“*Medical Inquiries and Observations,*” from which we have selected the following article: and as we find a concise and satisfactory view of it given by the Editors of the “*Medical Repository,*” in their fourth Number of the second volume, we do not hesitate to avail ourselves of their well-executed labours.

The exertions of physicians to lessen the number of incurable diseases form a splendid part of the modern history of medicine. Success has not always crowned the endeavours directed towards this object; but no effort has been wholly lost; and the improvements made, in many instances, have been such as might be sufficient to incite even the most tardy in this career of usefulness.

The terrors of hydrophobia have long held possession of the minds of men. Few instances of the successful treatment of it are to be found upon record, and even these few are supposed by many to be of dubious authority. Our learned author, therefore, has not declined any difficulty in selecting the subject of these observations.

Dr. Rush assigns the following as some of the remote and exciting causes of hydrophobia: the bite of a rabid animal—cold night air—a wound in a tendinous part—putrid and impure animal food—worms, &c. And the theory of the disease, which an examination of its causes, symptoms, and accidental cures, has led him to adopt, is, that it is a *malignant state of fever*. He is induced to think so from the febrile nature of the disease in all rabid animals—from its prevalence as an epizootic, at the same time that malignant fevers are epidemic—from the resemblance between the symptoms of canine madness and malignant fevers—and from the appearances of the bodies of dogs dead of the disease, as discovered by dissection.

Dr. Rush concludes, that the disease produced in the human body, by the bite of a rabid animal, is of the nature of a malignant fever—from its symptoms—from its appearing, like a malignant fever, at different intervals after the time of receiving the infection—from the similarity of the appearances of the blood, when drawn in both cases—from the agreement of the diseases in point of duration—from the equally rapid putrefaction of bodies dead of either disease—and from the sameness of appearances in the dead bodies upon dissection.

The remedies for hydrophobia are divided by our author into two kinds: 1. Such as are proper to prevent the disease, after the infection of the rabid animal is received into the body. 2. Such as are proper to cure it when formed. Under the former head of remedies, he mentions cutting or burning out the wounded part—long and frequent affusion of water—and keeping the wound open and running for several months. He recommends low diet as a means of prevention, and supporting the spirits and confidence of the patient; but he does not rely upon mercury for this purpose, as the disease has been known to come on, notwithstanding a salivation.

As soon as the disease is discovered, Dr. Rush urges the use of blood-letting as the principal remedy, and advises that the quantity drawn be very copious. Many instances are adduced of the bold employment of this remedy with success. Besides blood-letting he recommends purges and clysters, sweating, and salivation by mercury. He also mentions cases where musk and opium, bark and wine, have been found efficacious remedies. Blisters and stimulating cataplasms, he supposes, may be useful in the decline of this disease, as they are in that of malignant fevers. The cold bath, also long immersion in cold water, have produced beneficial effects.

The analogy between hydrophobia and malignant fevers, which is so ably supported by Dr. Rush in these observations, seems to be founded upon
a just

a just survey of the action of poisons upon the animal system. However various the substances called poisons may be, in respect either of their constitution or the effects they may occasionally produce, we are well persuaded they all hold many principles in common, and that a multitude of them attack animal life in a mode essentially the same.

*On the Use of the Digitalis in Dropsy, Consumption, &c.**

From a letter addressed to us by Dr. SHERWEN of Enfield, Middlesex, dated August 8, 1799, we extract the following particulars:

“The favourable report which has been given of the effect of the *Digitalis Purpurea*, in the *Cure of Consumption*, has already excited, and will doubtless, still more excite, the attention of the faculty. I wish it may not also induce the public at large to make too free with that poisonous plant.

“The good effects of digitalis in the cure of dropsy, are now well known; and I believe there are few medical men ignorant of the fatal effects which it is also capable of producing, and which it frequently has produced, even when administered under the direction of very skilful practitioners. It is a duty therefore incumbent upon those who are endeavouring so meritoriously to *revive* the reputation of digitalis, to unite their encomiums with proper cautions respecting those insidious and deleterious properties of this plant, which have doubtless been the reason why it fell into disuse during the greatest part of the present century.

“That there is nothing new under the sun, is an old adage, not badly exemplified upon the present occasion; for the following encomiums upon the anti-phthifical virtues of digitalis may be read in “*SALMON'S Botanologia, or British Herbal*,” a large folio volume, published about one hundred years since.

“It is a specific which transcends all other vegetable medicaments for the cure of consumptions; cleansing and healing after an admirable manner ulcers of the lungs. It opens the obstructions of all the viscera, cleanses, carries off, or expels the recrements of the humours, by which means the daily nutriment may be conveyed to all the parts of the body. The syrup or rob of the juice of the herb and flowers, made with honey, may be given morning and night, four or five spoonsful at a time, according to age or strength of the patient. Some advise three spoonsful to be taken in mead, in the morning fasting, as much at ten in the morning, three spoonsful at four in the afternoon, and lastly, as much going to bed. This medicament has restored (where the patient has not been absolutely past cure), beyond all expectation. It cures a phthifick or ulceration of the lungs, when all other medicines have failed, and the sick been esteemed past cure. It opens the breast and lungs, frees them from tough phlegm, cleanses the ulcer, and heals it, where all other remedies act without effect. I have known it do wonders, and speak here from a long experience. Persons in deep consumptions, and given over by all physicians, have, by the use of this syrup, or rob, been strangely recovered, and so perfectly restored as to grow fat again. I commend it as a secret, and it ought to be kept as a treasure. I am very confident of it; the deplorable wasted patients who have been long languishing in an inve-
“terate

* On this subject we have already inserted, in a former part of this Number, p. 115 and foll. an interesting paper communicated to us by Dr. MACLEAN, to which we beg leave to refer our readers.

“terate and tedious consumption, or a pthifis, if they make use hereof, will give me thanks for this notice, whilst they may have reason enough to curse even the memories of quacking blood-suckers, issue makers, and blister-drawers, who, as they may have possibly drained them of a fair part of their estate and treasures, would, by a continuance under their hands (for all their specious methods of cure) have fooled them out of their lives too. But here it is to be noted, that this syrup ought chiefly or only to be made of the flowers.”*

“Very little is mentioned by Salmon of its virtue in the cure of dropsy: he says indeed, in a general way, that it is “*abstersive, emetic, cathartic,*” that it “cleanses and purges the body both upwards and downwards, freeing it both from viscous and watery humours.” He also adds a caution, “that it ought not to be given in too great quantity, because of its violent operation;” but he appears to be a perfect stranger to all the nervous distress and deadly influence over the vital principle which it sometimes produces, entirely independent of its evacuating powers. Although he was unacquainted with this part of its character, he speaks positively of its good effects in the cure of epilepsy, “and by late experience” (he says) “it has been found effectual against the falling sickness, for that divers have been absolutely cured thereby.”

“When, to the popular encomiums of Salmon at the commencement, we add those of the late Doctor ALSTON, of Edinburgh, about the middle of the present century, it is I think fair to conclude, that an herb, the virtues of which were so generally known, could not have fallen into disuse but for good reasons; and although these have not been assigned by any of the older medical authors, from what we now know of its deleterious nature, there can be no doubt but numbers must have been injured by it; and I think we have every reason to expect that the same will be the case again; as the public are ready to catch eagerly at every new remedy for consumption; particularly when recommended by men deservedly high in their esteem.

“The above, together with the modern encomiums, afford satisfactory evidence, that the digitalis is a valuable remedy; and since we are now well acquainted with its poisonous properties, there can be no doubt but in the hands of prudent and attentive practitioners, it will be a valuable addition to the modern *Materia Medica*, in the treatment of consumption, as well as dropsy; and it must be added, that the assertion of Salmon (although he was never an author of merit or reputation †) respecting its salutary influence on *epilepsy*, deserves the most serious attention ‡. The fashion

* Obsolete as Salmon’s *Botanologia* is, this extract from it was submitted to my opinion by a lady who was preparing it for her friend in the last stage of consumption: I am persuaded that the modern encomiums of digitalis were not known to the friend who sent it her. I. S.

† A pleasant anecdote is told of an Auctioneer who had the sale of some books, one of which, a work of SALMON’S, had been in the possession of Dr. RADCLIFFE. This the auctioneer puffed most violently, as a work of the ingenious and learned Dr. William Salmon, with marginal manuscript Annotations by Dr. Radcliffe. This excited attention, as the great Doctor Radcliffe had never been known to have written any medical observations, and the book sold at a high price. When the purchaser came to examine his treasure, the hand-writing was certainly that of the Doctor, and to the following effect: “This is the most cursed stupid book that ever was published.” — “ignorant blockhead” — “booby” — “jack-ass” &c. &c.

‡ Admitting the facts, which perhaps there can be no good reason to doubt, may not the good effect of the digitalis in this instance also depend on its property of exciting absorption or promoting a free discharge of urine. There is some reason to believe that epilepsy may often depend on an over-proportion of water or lymph in the ventricles of the brain, without its amounting to actual hydrocephalus.

fashion of the day, and the high authority of the College * tend so much to encourage the use of poisons, that there can be no doubt but the digitalis will be very generally prescribed by professional men, and I sincerely wish its administration may remain in their hands.

“ The theory of retarding the circulation for weeks together, has a very promising sound, respecting some of the symptoms and circumstances connected with phthisis pulmonalis; but the digitalis could never have been prescribed with that view by Salmon and his contemporaries. Perhaps the salutary effects of this medicine in consumptive cases may, in some instances, be referred entirely to its diuretic property: serous effusion into the cavity of the thorax is a very common consequence of active inflammation in the lungs; emaciation, cough, night-sweats, hectic fever, and copious expectoration of mucus of a purulent appearance, may, and often do, follow inflammation in the lungs, where neither abscess nor ulceration has taken place; and it is easy to conceive that all these symptoms may be combined with hydrops pectoris; and that a patient, gradually sinking under their combined influence, may have been speedily restored to health, by the administration of a medicine capable of producing such happy effects as we now frequently witness in the most dangerous symptom, the hydropic oppression; that being removed, all the other appearances of phthisis pulmonalis would gradually subside, and the digitalis acquire the reputation of curing a consumption which had never existed.

“ I am afraid that a greater number of facts, and more experience must be brought forward, before we can administer it with much confidence in the true scrophulous consumption. It is, however, worthy of remark, that Salmon in his specification of its virtues says, “ it cures consumption, king’s evil, green sickness, and falling sickness, also wounds, old sores, and running ulcers.” Hence it is evident, that he considered it as useful in scrophula; and we have reason to suppose that his observations and encomiums are the result of experience; because he appears to have known very little of its virtues, when he wrote his “ *New London Dispensatory*, with Remarks,” the imprimatur of which bears date thirty years antecedent to the “ *Botanologia*.”

Miscellaneous Facts and Remarks.

FROM a letter of Dr. L. MACLEAN, dated Sudbury, August 18th, we extract the following passages, relative to the use of the fox-glove, as connected with his paper, inserted p. 113, and fol.

“ As I perceive your ingenious correspondent Dr. MOSSMAN, appears desirous of giving the fox-glove a fair trial in consumption, I trust I may be suffered to presume on the experience I have had of this medicine in pulmonary affections, by assuring him he is not likely to be successful while he continues to prescribe it as he now does. In one case he directs gr. j. to be administered every two hours. Now, as this quantity of the powder
of

* Nostris temporibus alia est, et longe dissimilis venenorum fortuna; neque enim ab iis, tanquam prorsus inimicis, abhorrere videtur medicina, sed ea ad partes suas traducere, et opem eorum sociam et adjutricem exposcere.”

Pharmacop. Coll. Reg. Medic. Lond.

of the genuine leaves, prepared as directed in the abstract lately transmitted to you, would, in less than twenty-four hours, produce in most habits very powerful effects, I am induced to infer, that instead of the active fox-glove, his patients were using the inert powder of half-decayed leaves, a circumstance I have repeatedly experienced when I first began to prescribe it. This I am persuaded has been the case with many practitioners, and must frequently happen, without the strictest attention to the mode of preparing it.

“ It is only by the most gradual exhibition of the medicine, and by keeping the habit for some weeks under its influence, that any permanent advantage is to be derived in the worst cases of phthisis; and gr. j. of the powder, or from fifteen to twenty-five drops of the tinctures of which I have given formulas, taken morning, noon, and night, will in general be found sufficient to do this.

“ In the case of a young woman now under my care, of confirmed hereditary consumption, twenty-nine drops of the tincture have been taken, *ter in dies*, but she has been for some days so much under its dominion, that I judged it prudent yesterday to lessen the dose to twenty drops. The pulse has never been reduced lower than 120, but one day when it was 112 in a minute, although she has been taking it for upwards of a fortnight, and it was increased in the most gradual manner. No advantage has as yet been obvious, nor am I very sanguine. Pray have the goodness to add, after the formula I have given of the infusion, “ a table-spoonful of which, taken three times a day, is a full dose for an adult to begin with.”

The American continent in general, and the United States in particular, are very much engaged in ascertaining the real causes of their epidemic diseases, and the best means of preventing them. The Transatlantic Journals contain many ingenious and instructive papers on this subject; especially those relative to Dr. MITCHILL's theory of the *septic acid*, which at present appears to be by far the most prevalent. Although these subjects are of the first importance to the practitioner in warm climates, we are inclined to believe, that the articles we have selected, will be equally interesting and useful to all medical readers.

Dr. RUSH mentions in the fifth volume of his “ *Medical Inquiries and Observations*,” a striking illustration of the *good effects* of depletion, as a preparative in strangers, to encounter the dangers of a baneful climate, in a communication from Dr. BORLAND, one of the physicians of the British military hospitals in the West-Indies.

“ In the beginning of August, 1797, 109 Dutch artillery-men arrived at Port-au-Prince, in the Bangalore transport. The florid appearance of the men, their heavy, cumbersome cloathing, and the season of the year, seemed all unfavourable omens of the melancholy fate, we presumed, awaited them. It was, however, thought a favourable opportunity by Dr. JACKSON and myself, to try what could be done in warding off the fever. It was accordingly suggested to M. CONTURIER, the chief surgeon of the foreign troops, and the surgeon of the regiment, that the whole detachment should be blooded freely, and that on the subsequent morning a dose of physic should be administered to every man. This was implicitly complied with in a day or two after; and at this moment in which I write, although a period of four months has elapsed, only two of that detachment have died, one of whom was in a dangerous state when he landed. A
success

success unparalleled during the war in St. Domingo. It is true, several have been attacked with the disease, but in these the symptoms were less violent, and readily subsided by the early use of the lancet. The crew of the Bangalore, on her arrival at Port-au-Prince, consisted of twenty-eight men. With them no preventive plan was followed: in a very few weeks eight died; and at present, of the original number only fourteen remain.

"It is curious to notice, in connection with the above narrative, a fact quoted by Dr. Rush, from Dr. M'KITTRICK, that the heat of the body in strangers, newly arrived in the West-Indies, has been found to be between three and four degrees above that of the temperature of the natives. How far such depletion, as that practised in the case of the Dutch artillery at St. Domingo, might be useful at the beginning of an epidemic season in the United States, may be left to the decision of future experience."—*Medical Repository*, Vol. II. p. 190.

Dr. WILLIAMSON, of New-York, after having stated several instances, proving the ill effects of blood-letting in putrid bilious fevers, and pneumonia typhoides, as they appear in North-Carolina; and after observing that he did not hear, during a whole winter season, of a single case of a patient recovering who had been freely bled, concludes with the following judicious remarks:

"As the patients," says Dr. Williamson, "who suffer by the complaint are commonly men, not often women, and as men expose themselves much more imprudently than women to the cold and to the rain, there is reason to believe, that a checked perspiration is the proximate cause of the complaint. Any fever, thus induced, where the fluids are dissolved, and in such a state of the atmosphere as has been mentioned, must soon be expected to put on a dangerous appearance. I have known a man, thus prepared by intermittents, in the season and country mentioned, bring on by dancing, what was called a pleurisy in his head, and die in forty-eight hours.

"I was assured by Dr. SAWYER, a physician in Pasquetank, about thirty miles from Edenton, that he was called to many patients in the winter of 1792. They complained of a pain in the side, and a high fever. He seldom waited, as he declared, even for a remission: he gave the bark in substance, and his patients recovered. Having business in Pasquetank, I inquired concerning the general progress of the fever during that sickly season. I was assured by a gentleman there, whom Dr. Sawyer had attended, that having a high fever and considerable pain, he took the bark in substance, and thought that his fever moderated by every dose. He said that one of his slaves had been treated in the same manner, with a similar effect. He added, that another physician in the same vicinity, a man of talents, and well-educated, adhering to the bleeding system, while the pain and fever remained, had lost the most of his patients.

"Whatever success may have attended the practice mentioned, I think the indiscriminate and immediate use of the bark must be exceptionable and hazardous. I am nevertheless persuaded, by all the observations I have made on this subject, that the lancet should seldom be used in the brumal fevers, which often appear in the low country in Carolina; but it is a remedy commonly at hand—it promises immediate relief to a person in pain; these circumstances appear to have kept it too long in use. *Ibid.* pp. 156—159.

Mr. DANIEL D. WALTERS, apothecary, in New-York, relates of himself the following case of the dysenteric effects of nitrous acid taken into the

the stomach. He had exercised himself considerably on a day, near the end of April, 1798, and had become thirsty; entering his shop in this situation, he took a large bottle which he supposed to contain water, applied it to his mouth, and drank heartily; immediately after swallowing the last mouthful, he was sensible of a sourish, disagreeable taste, and on inquiry found that his apprentice, instead of putting the water for drinking into the usual bottle, had poured it into another bottle of the same material, size, and capacity, standing beside it: neither of them being marked or lettered, and the bottle into which the water, by mistake, had been poured, was the one in which aqua-fortis had been kept, and not completely poured out. The liquid he swallowed was therefore a diluted aqua-fortis. Within a few minutes a deadly and intolerable nausea came on, which, within a quarter of an hour, ended in vomiting. After this he felt better for some time, when pain, griping, and flatus succeeded, and about fifteen hours after taking the dose, tenesmus and bloody stools followed; these latter symptoms were attended with head-ach and fever; the dysentery lasted two days, and gradually went off, no medicine having been taken.

The brother of Mr. Walter, who drank of the same acidulated water, was also excessively incommoded by it, and placed in extreme danger. *Ibid.* pp. 337 and 338.

Dr. MITCHILL, of New-York, has lately addressed a letter to Sir JOHN SINCLAIR, on the *affinities and relations of septic (nitric), or pestilential fluids to other bodies*; intended as an additional article to the proposed Report of the British Board of Agriculture, on the subject of manures—from which we extract the following curious passages:

“While I was engaged,” says Dr. Mitchill, “in investigating the manner in which pestilential fluids exerted their powers on the human body, and just after I had arranged the materials of my letter to Mr. HAVENS, an occurrence of a kind novel to myself befel a man in the Infirmary of New York. Being then in attendance as a physician, I was requested to take under my charge one of the patients in the surgeon’s ward, who had for several days before been seized with an intermitting fever, and severely handled by it. On inquiring into the particulars of his indisposition, I found the complaint for which he had been admitted into the house was an ulcerated leg. This, for some time, had been dressed with the red precipitate (septite of quicksilver), in such large quantities, that when at the customary time the surgeon’s assistant renewed the dressings, the bottom and sides of the sore were frequently covered with it, in its undecomposed state. Such a long-continued and plentiful application of the escharotic seemed to have afforded septic (nitric acid enough, to be absorbed into the vessels, and apparently to produce considerable effects on the constitution. To this interpretation of the disease I called the attention of the bystanders, and the circumstance of the ulcer, with the febrile symptoms, had so much of the probability of cause and effect, that we were generally of opinion, the feverish commotion might have been stirred up by the acid absorbed, after its disengagement from the mercury.

* Some precious remarks on the fixation of the septous (nitrous) vapours of manures by earthy substances, are to be found in SCANDELLA’s letter to ARDUINO*. The author’s observations, which were made for the Venetian territories, apply with great force to New-York, whose southern part is nearly

* See Outlines of the 15th Chapter of the General Report, &c. Addend. p. 12.

nearly the same parallel of latitude with the north of Italy: Scandella considers putrid diseases in the southern parts of Europe, if not originating from the septic exhalations of dunghills and heaps of manure as their only cause, as certainly rendered more dangerous by them. He observes that they "may be looked upon as not far dissimilar from marsh-miasmata, and may afford a fomes to periodical fevers." And in manufacturing manure in hot climates, he gives particular cautions against the putrid exhalations which it emits.

"The people of Great Britain may imagine themselves secure from the noxious effect of these pestilential steams; but I have a confidence, if the matter was properly inquired into, they would find not only their jail, and ship, and hospital fevers originating from this effluvium, but that among their poor peasantry and manufacturers, though it is not concentrated enough to cause the high-wrought forms of febrile ailments in America, yet their typhus, in all its gradations, is fairly to be ascribed to the more feeble and gradual operation of these septic (nitric) vapours.

"This kind of compound seems also to have been almost expressed by DARWIN (*Zoonomia*. vol. 1. sect. xxviii. 2.), where the *hectic fever* supervening, by admitting air to an ulcerated surface, on opening an abscess, is ascribed by that elegant and original philosopher, to the *azotic*, rather than the oxygenous portion of the atmosphere; though he appears since to have changed it to the *oxygen*, in which he has probably not bettered his judgment; the preferable opinion being, that they are *both* instrumental in stirring up febrile commotion in the system, by forming a septic fluid, producing, with an allowance for peculiarity on attendant circumstances, an effect analogous to the patient whose case I related in the beginning of this letter.

"It surprises me, in looking into SCHMEISSER's edition of VON USSLAR's Observations on Plants, that so little is said concerning the operation of the *septic* principle (azote) on the vegetable economy; but septon (azote), so long overlooked, will probably attract more attention for the future." *Ibid.* pp. 345—353.

Dr. NOOTH, Superintendent-General of the hospitals in British America, in a letter to Dr. Mitchill, dated Quebec, Jan. 24, 1799, gives the following opinion respecting the *treatment of dysenteries, and other autumnal diseases*:—"I can assure you," says he, "I am almost convinced of the truth of your doctrine with regard to azote, or septon, as the cause of those epidemic diseases which generally make their appearance toward the end of summer, in warm countries. There are some observations which I have made in my own practice, that lead me to suppose, there may be *something of an acid nature*, that may act as an exciting cause in the dysentery and yellow fever, and indeed in many other diseases that arise from heat and other circumstances, in the latter months of the warm season.

"Having unfortunately seen, in the course of my practice, a great number of dysenteric cases, and having experienced the inefficacy, in general, of the usual mode of practice, I was induced to try the effects of the several purgatives now in use, with the view of ascertaining how far any one was preferable to the others, in the treatment of dysenteric patients. Experience soon taught me, that the *tartarum solubile* (neutralized tartaric potash) was the most salutary in its effects; and of course, I have always, since that discovery, had recourse to it in dysenteries and other autumnal diseases; and, I can assure you, with the greatest success, both in children and adults. The component parts of that neutral (acid of tartar and potash),
and

and the advantages attending its use in the cases above alluded to, seem to confirm your doctrine, and induce me to believe your theory is better founded than the world will, perhaps, at first allow. *Ibid.* p. 437.

Under this head of our Journal we wish, at present, to revive in the memory of our readers, the *alexipharmic powers of pure ammonia*, or caustic vegetable alkali, in the cure of persons bitten by snakes in hot climates. The dose is sixty drops in a sufficient quantity of water, taken internally, till the symptoms abate. The wound ought also to be washed with the same solution. This treatment has always been attended with success, when the patient was able to swallow the medicine.

Dr. RICHTER, of Göttingen, has lately described a particular species of dropsy, in a very interesting and useful work, entitled "Medical and Chirurgical Observations," page 268, of the original German; a faithful English translation of which appeared in 1794, by Dr. SPENS, of Edinburgh. As this work is little known among our medical friends in this country, we presume to repeat, that Dr. Richter derives the *hydrops vagus*, or the vagrant dropsy, from a spasmodic state of the lymphatic system, arising from any particular stimulus. This may be either of a gastric, bilious, rheumatic, arthritic, venereal, or any other kind, so that it may affect any part, or organ of the body, exclusively. This theory appears to be perfectly consonant to nature, and to explain many pathological and therapeutical difficulties, especially to those who are accustomed to treat all dropical complaints indiscriminately with diuretic remedies.

Prof. HECKER, of Erfut, is so much convinced of the truth of this hypothesis, that he has illustrated it with a remarkable instance communicated to the Editors of the "*Journal der Erfindungen*," who have given it a place in their tenth Number. As our limits do not admit of relating this case at full length, we shall only remark that the learned Professor explains the cause of that disease in his patient, from the irritable and spasmodic state of the whole system; from the peculiar stimulus which first produced gastric symptoms, preternatural sensibility of the stomach, pain in the side, fever, and afterwards the *hydrops vagus*. The good effects of antispasmodic remedies likewise appear to confirm the aetiology of Dr. Richter, in a great variety of dropical cases: nor does either of these learned writers maintain, that spasms are the *only* cause of *all* dropsies.

Another important fact tending to corroborate this theory, we find in the last volume of "*New Observations and Facts, 1795*," by the venerable THE-
DEN, Surgeon-General to the Prussian armies. He recommends, from long experience, in dropical cases after quartan agues, the use of the belladonna, the leaves of which afford the best and most effectual remedy. It is scarcely possible to conceive any other effect from this medicine, than that of removing or suppressing the irritable state of the nervous system, of which dropsy frequently is the consequence.

In the opinion of Prof. Hecker, even the *digitalis* (which is perhaps too generally prescribed in dropsy) appears to possess no specifically diuretic virtues. This medicine obviously diminishes irritability, so that *the pulse becomes slower*, while it moderates tensions and spasms. Its resolvent and diuretic powers, therefore, must be ascribed chiefly to those effects. Hence it will most probably effect a cure in spasmodic dropsy, but prove of no service in that arising from other causes: and thus we may account for the contradictory opinions which have hitherto prevailed respecting the efficacy of this medicine.

MEDICAL AND PHYSICAL
I N T E L L I G E N C E,
 (Original and Selected.)

As the subjects generally introduced in this department of our Journal have only a distant relation to the practice of the Medical Art, while they consist chiefly of miscellaneous articles, tending in some degree to mark the scientific progress in the AUXILIARY BRANCHES OF PHYSIC, we shall not hesitate to communicate to our readers any information transmitted by correspondents, who wish to aid our efforts, in attaining that desirable purpose.

FROM a very ingenious and elaborate paper, originally written by Dr. MITCHILL of New York, and addressed to Dr. HOPE, the present Professor of Chemistry in the University of Edinburgh, *on the application of the doctrine of septic fluids, to explain some of the diseases of human teeth and bones*, we shall, under this head of our Journal, extract the part of Dr. Mitchill's disquisition, together with his experiments, relative to some of the morbid changes which the teeth and bones of animals undergo in the progress of life.

Dr. Mitchill aims at a scientific explanation of some of the alterations which bones suffer by disease; as the writers on surgery have scarcely ventured upon this inquiry. What he has aimed at in this respect is, to connect the facts related by the late Mr. HUNTER, of London, with those detailed by Mr. RUSSELL, of Edinburgh, by means of certain experiments and observations of his own. From the known disposition of oxygen to combine with septon, and from the septic acid, it appeared probable to Dr. Mitchill, that it would be formed occasionally in the human mouth, from the remains of food adhering to the teeth, settling between them, and corrupting there. If this were the case, this acid ought to unite with the calcareous earth of the teeth, and form the septite of lime, which might be washed away by the saliva, or possibly in some instances concrete upon the teeth themselves; and, if formed there, the acid might be expected to corrode the enamel, lay bare the bony part, and bring on a caries; or to incrust the outside, irritate the gums, and occasion foreness and bleedings.

In order to determine whether these effects actually took place, Dr. Mitchill procured from a dentist a quantity of the substance called the "tartar of the teeth," which he supposed might contain some septite of lime, and subjected it to a number of experiments.

Having some time before received complaints from the merchants of Glasgow, of the inferior quality of the pot-ash and pearl-ash supplied from the port of New-York, and having been requested by the President of the Chamber of Commerce to visit with him the stores of the inspectors of those articles in the latter city, he had collected specimens of both, of the first qualities, with a view of making some experiments.

These salts, being in their caustic state, had been placed in separate glasses, to attract water and carbonic acid from the atmosphere; and after standing

standing several months, the ferruginous and earthy parts having subsided, beautiful crystals of the alkali were formed at the bottom of the liquor.

A solution of these crystals was made in water that had been boiled some time, to extricate its air, and precipitate some of its earth; and to this solution of pot-ash, was added a parcel of the yellowish, earthy matter scraped from human teeth, which had been previously reduced to powder in a mortar.

Instantly on mixing them, bubbles of air were set loose, and thickly floated on the surface of the mixture; and, by their long continuance without bursting, seemed to indicate a sort of tenacity in the fluid, derived probably, from animal mucilage. The coarser part of the earthy matter soon sunk to the bottom, but the finer particles took a long time to settle; yet in a few minutes, even before the liquor had become clear, a piece of clean paper, dipped in the solution, and dried before the fire, deflagrated on being burnt, and emitted numerous flashes and sparkles, after the manner of salt-petre; while no such lucid or radiant appearance was evident on setting fire to paper that had been dried, after dipping it in a solution of the alkali alone.

It is not unworthy of remark, that the smell of the mixture was offensive and nauseous, resembling, as much as any thing, the disagreeable odour of ditch and puddle-water. On repeating the experiment several times, and in the presence of several persons, the abovementioned appearances were, with trifling variations, similar.

The object of inquiry having been less to make an entire analysis of the lapis dentalis, or "tartar of the teeth," than to ascertain whether it contained any septic acid, the author was satisfied with the persuasion, that the question is determined in the affirmative, *by the union of the septic acid of the tartar (which seemed to consist partly of nitrat of lime, combined with animal mucus, &c.) with the alkali of the mixture into nitre, which deflagrated on being subjected to the operation of fire, with the paper to which it had attached itself.*

In order to apply this principle, it must be understood what the component parts of the teeth are. SCHEELÉ and GAHN seem, as long ago as 1776, to have succeeded in obtaining phosphoric acid from the bones of animals, by employing septous (nitrous) acid, which dissolved their lime, and constituted with it calcareous nitre, while the phosphoric acid was set free. More recently, BERNIARD (*Journal de Physique, Octobre, 1781*) obtained phosphoric acid not only from fossil bones, from those of the whale and sea-horse, but from the tooth of the manati, and the grinder of the elephant. It has also been extracted from ivory.

In short, those who experimentally attended to this subject, have agreed, that animal bones are chiefly composed of phosphoric acid and calcareous earth, or are phosphats of lime, and that their teeth consist principally of the like materials. Septic acid, therefore, formed in the mouth, decomposes teeth upon the same principle that, in the experiments of the Swedish chemists, it disorganized bone; that is, by detaching the phosphoric acid from the lime, and combining itself with that earthy basis.

HUNTER (*Natural History of Human Teeth, p. 125.*) has an idea that the concretions on the teeth resemble the intestinal balls and bezoars found in the bowels of many animals—and this opinion is probably very just; but, perhaps, less just is his other idea, that these extraneous matters consist merely of "earth and the common secreted mucus." (*Diseases of the Teeth, p. 66.*) He informs us, that he has seen such earthy depositions "cover not only the whole tooth, but a part of the gums: in this case, there is always

an accumulation of a very putrid matter, and frequently a considerable tenderness and ulceration of the gums, &c."

The destruction of the enamel and bony part of the tooth, the rottenness of the alveolar processes, the ulceration, absorption, and bleeding of the gums, and the fetid breath, seem to arise occasionally from the same general cause.

After investigating the order of the chemical elective attraction subsisting between phosphoric acid, one of the constituent parts of the teeth, and other bones—and between lime, the other ingredient, and the substances with which it has a disposition to combine, Dr. Mitchill enters upon an extensive inquiry into the vital economy or animated structure of these parts.—The whole is interspersed with judicious and original remarks, accompanied with a variety of appropriate quotations from the ancient classics. But as the limits of our Journal will not admit of extending this article, we propose to resume the subject in the next Number.

Cit. BRUGNATELLI remarks that, in consequence of the rejection of GOETTLING's theory, he is obliged to withdraw the term *foxygen*, which he had lately given to the *azote* of the French chemists; and, instead of these, he proposes the word *septon*, derived from the Greek, and signifying putrid. This denomination was originally suggested by M. SALTONSTALL, and expresses, in the opinion of Brugnatelli, the essential property of azote, namely that of being the principal agent in the process of putrefaction.—The nitric acid therefore will, conformably to this change, be called by the name of *oxyseptonic*; the nitrates by that of *oxyseptonates*, &c. The author farther proposes to place the nitric acid among the productions of the animal kingdom. The French editors observe, on this occasion, to the learned Professor of Pavia, that it would now be rather a difficult attempt to maintain that division of chemical bodies into classes, according to the kingdoms of Nature.—*Annales de Chimie*, No. 86.

The same author communicates a method of preparing a solid gold of the finest quality, which perhaps is not unworthy the attention of the chemist, though it may not lead to medical improvements.—A solution of the nitrat of tin is precipitated by liquid sulphat of potash; the precipitate is then dried, and put into a retort with the half of its weight of sulphur, and the fourth part of the muriat of ammonia: a sulphat of tin of the brightest colour is said to be formed at the bottom of the retort. *Ibid.*

VAN MONS, in a letter to Brugnatelli, gives the following account of some of his experiments on fulminating substances: "I am assured," says he, "that the oxyds of gold, precipitated by the oxyds of other metals, do not in themselves possess the property of fulminating; whence I conclude that some of those oxyds formed by alkalies, owe that property to the azote which is fixed in them, and which forms the combustible process (*fonction*), as is the case in the aurum fulminans. The oxyd of silver fulminates likewise with much greater force than that of gold. The grey oxyd of mercury, precipitated by ammonia, detonates by compression alone. *Ibid.*"

M. MUSSIN wished to discover whether a mixture, consisting of sulphur and phosphorus, which continues in a liquid state at the temperature of the atmosphere, would not coagulate, if the proportion of the sulphur were increased. This mixture, at first, did not seem to disagree; the mass resembled

bled wax, and showed an inclination to rise to the surface of the water, when the bottle which the author held in his hand, flew into a thousand pieces. The bursting of the bottle was accompanied with a fulmination, which resembled the report of a pistol; and a sulphureous alkaline smell filled the laboratory. The contents of the bottle which were scattered on the ground, was not inflammable; but some drops of it, when put on a mirror and pressed with the finger, took fire. The author was preserved from injury only by the circumstance that the explosion happened in the direction towards the ceiling; and he imagined that this accident must be attributed to the expansion of a particular gas, which he supposes to have been the phosphorated hydrogen gas combined with sulphureous gas. *Ibid.*

Cit. VAN MONS communicates the following observations relative to the preparation of the black oxyds of antimony and mercury (*æthiops antimoniales*) in the humid way.

Antimony, by its combination with sulphur, or crude antimony, very forcibly retains this combustible ingredient, though it be not sufficiently saturated to part with it by simple trituration with mercury. The extinction of this metal, which was supposed to take place in the sulphur, was, after an extremely tedious experiment, so far from being accomplished, that the result appeared to be a mixture consisting of the sulphur of antimony, and black oxyd of mercury united by air. QUARIN endeavoured to remedy this defective operation by adding sulphur to the matter subjected to trituration; but this improvement tended only to abridge the labour, and afforded a still more imperfect mixture of the two sulphurs of antimony and mercury.

Van Mons proposes to prepare the antimonial æthiops by precipitating the hydro-sulphureous alkali of the antimony with the nitrat of mercury. To compose this hydro-sulphur, twelve parts of the sulphur of crude antimony are boiled with six parts of caustic potash and three parts of sulphur, in a sufficient quantity of water. In these proportions of the ingredients, the sulphur which is formed does not occasion any precipitate on cooling. A portion of the liquid is filtered, and examined whether the alkali is saturated with the antimonial sulphur. This point being ascertained, the liquor should be precipitated in a very clear and gradual manner, by means of a solution of mercury in the nitric acid.

No hydrogenated sulphureous gas is disengaged during the precipitation, as the hydrogen is converted into water by the portion of oxygen which the mercury ought to discharge, in order to become a black oxyd, this being the only degree of oxydation in which it can unite with the sulphuric base to form sulphur.

The precipitate, when washed and dried, is black, lightly tinged with green. It might be admitted into pharmacy, under the denomination of *æthiops antimonial, in the humid way*. The physicians of these departments who have prescribed it, have assured the author, that its exhibition has been attended with the best effects. *Ibid.* No. 89.

The same author has, in a letter to KASTELEYN, on the *non-oxygenability of the sulphuric acid*, added the following facts in addition to those stated by VAUQUELIN and BOUVIER.

1. Twenty grains of the filings of zinc, dissolved in four ounces of sulphuric acid, were distilled over the oxyd of manganese, and sufficiently diluted. During the solution, hydrogenous gas was disengaged. If the acid

acid had been oxygenated, it would have imparted to the zinc its oxygen, some of which it required to dissolve it, and the water would not have been decomposed.

2. The same experiment made with iron instead of zinc, afforded a similar result.

3. Thirty grains of zinc, dissolved in three ounces of sulphuric acid, were digested over the oxyd of manganese, according to the instructions of GIBBERT. The solution in this instance took place without any disengagement of hydrogen gas; but the metal dispelled the oxygen from the oxyd of the dissolved manganese, and not from the supposed oxygenated acid; it being proved by the disappearance of the red rose colour, that the sulphuric acid owed its combination with a portion of the oxyd of manganese, to the maximum of oxydation.

4. The same experiment made with iron, produced a similar effect.

5. The nitric acid boiled with the sulphuric acid, did not oxygenate the latter.

From these experiments Van Mons has discovered how to prepare a liquor for artificial bleaching, which is remarkably cheap and easily procured. Three parts of muriatic acid must be digested over one part of the oxyd of manganese, in a glass retort closely stopped; after a sufficient digestion, the limpid part is poured off and precipitated with potash or soda, in order to separate that portion of the oxyd of manganese which is dissolved; the lye is then filtered, and the precipitated oxyd is added to that which is not dissolved, to wash and make them re-oxyde in the open air, by the medium of water. In this manner the same oxyd may continually serve for new operations, and contribute much to the cheapness of the process.

This oxygenated liquid always retains a purple colour, if it be not surcharged with alkali; and it greatly resembles faggot-lye (*lessive de javelle*). *Ibid.*

M. HILDEBRANDT has lately made some useful experiments on the solution of mercury in the nitric acid, of which the following is an abstract.

One hundred parts of concentrated nitric acid dissolved one hundred and twenty-five parts of mercury. The same acid, diluted with half its quantity of water, dissolved one hundred and ninety seven parts of the metal; but when diluted with equal parts of water, it did not dissolve more than one hundred and seventy, and if mixed with double its quantity of water, its solvent power was reduced to one hundred and fifty parts.

The crystalline form of the nitrat of mercury varies according to the circumstances in which the solution is made, whether in a low or high temperature, or if the acid is in a concentrated or weak state.

The nitrat of mercury uniformly deposits a portion of the white oxyd of that metal by its solution in water.

The nitrous solution of mercury forms crystals the moment it parts with its free or unsaturated acid.

The mercurial oxyds dissolve in a smaller quantity of the nitric acid than mercury in the metallic state.

The mercury is precipitated from its nitrous solution by the alkalies and caustic earths, in colours which differ according to the manner in which the solution has been made, or according to the state of oxydation in which it was dissolved.

Mercury and its different combinations offer a vast field to the inquiries and reflections of the chemist. M. Hildebrandt has discovered by his experimental

rimental operations on this metal at least *three hundred new facts*, and yet remarks that he has scarcely begun its investigation. *Ibid.*

VAN MONS has accidentally discovered a method of producing a *real white oxyd of mercury*, by precipitating the oxygenated muriat of mercury, formed by the mixture of the red oxyd of mercury, dissolved in the nitric acid by heat, with a solution of the muriat of soda. The precipitates which were formed by the first additions of alkali, disappeared almost as soon as they were separated; yet they were every time produced in great abundance. When the whole of the acid was saturated with ammonia, the precipitate became fixed; and its colour was of the finest white, and extremely light.

Neither the caustic, fixed, and volatile alkalies, nor lime, affected the colour of this precipitate: which only volatilised to a red colour, while it was reduced; it readily dissolved in the nitric and muriatic acids, &c. In short, it appeared to be a real oxyd of mercury, from the relation in which it stands to the alkalies and lime. *Ibid.*

Dr. SCHERER, of Weimar, has, in a letter to Cit. Van Mons, given the following account relative to the *extraction of sugar from the beet-root*.

The celebrated ACHARD, director of the Physical Class in the Royal Academy of Berlin, has at length discovered a substitute for sugar in the beet-root (*beta vulgaris*, LINN. the *runkelrübe* of the Germans); a plant which has hitherto almost exclusively been used for feeding cattle. He took twenty-five roots in their rough state, weighing thirty-two pounds and a half, which, after having removed the outer rind, he bruised very small, and expressed their juice. The gross part remaining after this expression was again extracted by means of hot water, so that both liquids, when united, weighed fourteen pounds and three-quarters. The whole was then evaporated by slightly boiling it in a tin vessel, till it became of the consistence of honey. During this evaporation, the impurities which still remained in the juice, spontaneously separated, and there is no doubt that they were carried away by the coagulation of the albumen of the roots. The juice thus inspissated was then evaporated to dryness by a much milder heat. The result of this process was a mass easily reducible to a dry powder, of a light brown colour, which scarcely absorbed any moisture from the atmosphere, and which had a pure saccharine taste; its weight amounted to three pounds and three ounces: hence thirty-two pounds and a half of the root produced that quantity of raw sugar.

M. Achard then made an experiment by which he proved, that one pound of the root contained only twelve drachms, or at the utmost two ounces of mucilaginous parts; and it is to the small quantity of the latter ingredient that the easy separation of the saccharine matter must be attributed.

In order to ascertain the quantity of *pure sugar* contained in a given weight of inspissated juice, or *raw sugar*, a portion of the latter was subjected to a slow heat, with a sufficient quantity of alcohol, to dissolve the whole of the saccharine substance. This solution, when cold, was filtered and carefully evaporated: it yielded a very white and perfectly pure sugar. From the quantity thus obtained the following calculation resulted; namely, that by the ordinary process, eight pounds of the purest refined sugar were obtained from one hundred pounds of beet-root; consequently, that a piece of ground containing 180 square yards, which could produce 46,000 pounds of roots, ought to yield twenty-two quintals of raw sugar. By computing the produce

duce at four pounds of the root to each square foot of ground, a single German mile might produce 16,756 quintals and seventy pounds of the root, or 134,053 pounds of white refined sugar.

On this subject, Cit. VAN MONS has furnished us with the following commentary.

“The *runkelrübe* or *dickwurzel* of the Germans is not the *beta vulgaris* of Linnæus, as it would appear from the remark of my friend, but is the *beta cicla* of that author. The specific character of the latter consists in its being tripetalous; while the former is polypetalous. The *beta vulgaris* has, according to Linnæus, no variety of white roots, as that from which Achard appears to have extracted his European sugar; but is only a red root of a greater or less size, a yellow and thick root, and a pale green and thick root. They are simply distinguished by the names of red beet-root, yellow beet-root, &c. The *beta cicla* is a white root with red leaves, or a white root with pale green leaves. The former is the true *runkelrübe*; and the latter is that species which the Swiss call *mangold*.

“The *runkelrübe*, or the variety of the *beta cicla*, with leaves of a red colour, or pervaded by red veins, is the ground or field beet-root, which grows abundantly, but is very scarce in France. The English call it *turlip*, whence no doubt the name of turnips has originated, which has been mentioned in the news-papers as a discovery of Achard, so that they have confounded it with the thick turnip, (*brassica laponica*), and other turnips, (*brassica rapa*). It is therefore to be hoped that the learned director of Berlin, who exclusively devotes the last period of his laborious life to the improvement of botany, will soon remove our doubts on this subject.

“Margraff has formerly asserted that a very pure sugar may be extracted from the fresh root of the different species of the *beta cicla*, by the same process which is employed in extracting sugar from the cane. The red beet-root, when dried and treated with spirits of wine, yields the twenty-sixth part of its weight of sugar candy, while the white beet-root gives the sixteenth. Vide LEWIS's *Experimental History of the Materia Medica*; Aikin's edition, under the article of *beta vulgaris*: and likewise the “*Memoires de l'Academie de Berlin*; 1749.”

As the method of preserving pathological subjects, which the skilful Mr. JOHN SHELDON had adopted in his anatomical cabinet, is highly curious and interesting, we do not hesitate to extract the following article from Professor SAINT-FOND's *Travels into England, Scotland, &c.*

“The anatomical cabinet of Sheldon,” says our traveller, “contains a great variety of curious preparations. I visited it several mornings, and examined a number of valuable designs made by able artists; but nothing in this collection interested me so much as a kind of mummy, which was very remarkable in two respects: first, on account of the subject itself; secondly, in regard to the manner of the preparation, and the particular care with which it had been made. It occupied a distinguished place in the chamber where this anatomist usually slept; and he was particularly fond of this work.

“I was introduced into a very handsome bed-room; in the midst of which, a mahogany table of an oblong form stood opposite the bed.

“The top of the table opened by a groove, and under a glass frame I saw the body of a young woman, of nineteen or twenty, entirely naked. She had fine brown hair, and lay extended as on a bed.

“The glass was lifted up, and Sheldon made me admire the flexibility of the arms, a kind of elasticity in the bosom, and even in the cheeks, as well

well as the perfect preservation of the other parts of the body. Even the skin partly retained its colour, though exposed to the air.

“ The fleshy parts, however, appeared rather dry, and there was too great a rigidity of the muscles. This gave the figure, though it still possessed the remains of beauty, a meagre and feeble air, which considerably diminished the delicacy of its traits.

“ Sheldon informed me, that this was partly occasioned by the long sickness of which the young woman died.

“ He explained to me the manner in which this preparation had been made: by injecting several parts of the body with strong spirits of wine saturated with camphire, and mixed with a small quantity of turpentine.

“ The skin was prepared, and as it were, tanned with finely powdered alum, rubbed on with the hand. The intestines were taken out, and covered with a varnish composed of a mixture of camphire and common resin. All the internal parts of the body underwent the same operation, and were afterwards rubbed with alum.

“ Sheldon assured me, that pulverised camphire mixed with resin, formed an excellent composition for preserving muscular and fibrous parts. After having placed all the viscera, thus prepared, in the body, he injected the crural artery with a strong solution of camphire, in rectified spirit.

“ Wishing afterwards to imitate the natural tint of the skin of the face, a coloured injection was impelled through the carotides to produce that effect:

“ In this state the body was placed in the table aforementioned; but within a double case of timber. The first is made of Virginia cedar (*Juniperus Virginiana*). The inner bottom was covered with calcined chalk, to the thickness of one inch, in order to absorb all humidity. Upon this bed the body was placed; the box or case was then carefully shut up, to secure the body from the impression of the external air.

“ The case was not opened till five years after the preparation had been made. It was then observed to be in the same state of preservation as when it was first enclosed. No mark of decay appeared, and no insect had introduced itself near the body. This shrine had been several times opened before I saw the mummy; and though it then still possessed elasticity in several parts, it is to be supposed that the action of the air will ultimately wither it.”

It gives us pleasure to mention the rapid progress of beneficent institutions in America, especially in those branches of medical practice which have a more immediate tendency to alleviate human misery, in the lower classes of society.—A lying-in ward has been lately established in the city of New-York. The cases which occur there are numerous enough to answer the purpose of public instruction. A course of lectures on the *obstetric art* is delivered every season, by Dr. VALENTINE SEAMEN, who at the same time explains the anatomical, physiological, and practical parts of midwifery as far as is necessary to enable *females* to exercise that profession with scientific judgment; as this establishment is particularly and *exclusively* devoted to their education.

A handsome impression of the anatomical appearance of the human body, after removing the common integuments, has been executed by Dr. ALEXANDER ANDERSON, of New-York. Part of the abdominal and thoracic viscera are also represented. The engraving is about thirty-six inches by eighteen, and is executed in wood, after the manner of Mr. BEWICK. This promising young artist, who has repeatedly given proofs of his

his taste and skill, has sailed for Europe, to perfect himself in the art of engraving, under the best masters in London and Paris.

Domestic Intelligence.

It having been suggested to us, that a concise Account of the different Hospitals, Infirmaries, and other Medical Institutions in Great Britain, would be acceptable to many of our Readers, and also tend to diffuse the benefits of the Healing Art; in compliance with this suggestion we request our Correspondents to furnish us with such accounts of these Establishments, as may seem likely to answer useful Purposes. We submit the following outline of the Particulars: an Account of the Origin or Foundation of the Institution: a concise History of its Progress to the present Time; a Description of its present State, with respect to Direction, Medical Officers, number of Pupils, Patients, &c. annually admitted.

Dr. OSBORN and Dr. CLARKE propose to begin their lectures on the principles and practice of midwifery, and the diseases of women and children, on the first Thursday in October, at half past ten o'clock, at the house of Dr. Clarke, in New Burlington-Street, near Piccadilly: these Lectures will be continued there only, and at an hour calculated for the attendance upon the different Hospitals and the other Lectures on the different departments of medicine.

Dr. PEARSON will commence his winter courses of lectures on the *Materia Medica*, Practice of Physic, and Chemistry, in the first week of October next; at the usual hours, at his house in Leicester-square.

Dr. BRADLEY will recommence his course of lectures on the theory and practice of physic, at the lecture-room, No. 102, Leadenhall-street, on Monday the 7th of October, at six o'clock in the afternoon.

Dr. ROBERT KINGLAKE, of Bristol, is preparing for the press a translation of Professor TROMMSDORFF's useful work, entitled "*Chemische Receptirkunst für praktische Aerzte, &c. i. e. the art of writing chemico-medical prescriptions, for the use of practical physicians*:"—a work which cannot fail to be interesting to the practitioner in this country, as it contains almost every recent improvement in pharmacy and medical chemistry. We are persuaded that the translator will not fail to avail himself of the valuable works published by GÖTTLING, HAHNEMAN and BUCHHOLZ, on that subject, and especially of an anonymous publication which appeared in the year 1792, at Copenhagen, under the title "*Etwas über die Londoner Apothekerbücher; i. e. Strictures on the different London Pharmacopœias*:"—we have ventured to suggest these hints, as Dr. Kinglake proposes to enhance the practical value of his Translation, by the addition of occasional notes and illustrations.

Mr. JAMES PARKINSON, of Hoxton-square, has a work in the press, which he flatters himself will be acceptable to the lovers of chemistry. It consists of *Chemical Memoranda*, systematically arranged, so as to form an analysis, or rather a compendium of modern chemistry, intended for occasional reference, with a description of the external characters of stones, minerals, &c. from KIRWAN; tables of affinities from BERGMAN, &c. forming together a pocket remembrancer for the chemist and mineralogist.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.
[FOREIGN AND DOMESTIC.]

* * * Our desire of doing justice to medical works, without exception, and giving at least a concise account of every book in the various branches of Medicine, as soon as it is published, is often frustrated, because we are not acquainted with the time and place of its publication. We shall therefore esteem it a favour, if authors or publishers will communicate to us this information as early as possible: but we cannot, consistently with our plan, take notice of books which have not been published within the last twelve months.

NATURAL HISTORY.

The Natural History of the Tea-tree, with Observations on the medical qualities of Tea, and on the Effects of Tea-drinking; with coloured Plates. A new edition. By J. C. LETTSOM, M. D. 4to. 102 pp. Price 10s. 6d. London; Dilly.

The subject of this splendid and elaborate work, being now in general use among the inhabitants of this kingdom, as well as in many other parts of Europe, and constituting a large portion of our commerce, it cannot but afford pleasure to the curious and intelligent, to possess the history of a shrub, with the leaves of which they are so well acquainted.

Dissertationes academicæ Upsaliæ habitæ sub præsidio Caroli Petri Thunberg, Equit. Reg. ord. Wafæi, &c. Volumen primum. Cum. Tab. V. aeneis. 8vo. 326 pp. 1799. Gættingen; Dieterich.

Whoever is acquainted with the name of THUNBERG, and the difficulty of procuring foreign dissertations, will no doubt consider himself indebted to M. PERSOON, whose name we find subjoined to the preface of this volume, as the collector and editor. Every friend of medical botany must feel a lively interest in the continuation of this valuable collection, which on account of its variety, and the useful species of information it conveys, cannot fail to meet with universal approbation. But we think it our duty to remind the respectable publisher of this work, not to neglect the promised plates, or even to forget them, as is the case in the volume before us, which contains the following dissertations: *Genera nova plantarum*, p. 1—8, 1781—1798. *De scientia botanica utili atque jucunda*, 1793. *De Flora strengnesensi*, 1791. *De use Menyanthidis trifoliatæ*, 1797. *De oleo Cajeputi*, I. II. 1797. *De Moxæ atque Ignis in Medicina usu*, 1788. *De cortice Angusturæ*, 1793. *De arbore Toxicaria Macassarienti*, 1788. *De Medicina Africanorum*, 1785. *Observationes circa remedia nonnulla indigena*. 1790. *De nautarum valetudine tuenda*, 1795. *Observationes in Pharmacopœam succicam*, I. 1796.

Herbærium vivum Muscorum frondosorum cum descriptionibus analyticis ad normam Hedwigii, Pars I. Curante ALBERTO HOSE. 8vo. 93 pp. (Price two rix-dollars and nine grosch. Sax. Curr.) 1799. Leipzig: Græff.

Our expectations respecting the execution of this work have been rather disappointed. From the plausible title, we expected to find some new and peculiar arrangement and description of the mosses, so that the characters given to them by HEDWIG, might be more obvious and easy to the naturalist than he has hitherto been accustomed to meet with. But here, the mosses are merely patted to coloured octavo pages, violet, blue, or red; without giving a specific description of their parts of generation; especially of those whose exterior difference and form are discoverable by the naked eye: nor has the author furnished us with a description of the distinguishing parts of such mosses as cannot be easily determined, without knowing their peculiar brim, cover, capsule, &c. All these requisites being neglected, Mr. HOSE has prefixed an index of his genera, a few synonymes, and an account of their native places, together with the time of their fructification. The number before us contains the following twelve species: *Tab. 1. Bryum argenteum. 2. Dicranum scoparium. 3. Fissidens purvinata. 4. Hedwigia pulvinata. 5. Hypnum velutinum. 6. Hypnum intricatum. 7. Hypnum purum. 8. Leskea subtilis. 9. Polytrichum urnigerum. 10. Tetraphis pellucida. 11. Tortula muralis. 12. Trichostomum canescens.*

Mineralogisches Taschenbuch, &c. i. e. A Mineralogical Pocket-book, for the use of beginners and amateurs. By J. G. LENZ, Doctor of Philosophy and Professor at Jena. Vol. I. pages xxiv. and 300, besides Index and Tables, 1798. Vol. II. pages 246, in Twelves, 1799. Erfurt: Hennig.

The author's aim to guide the student and beginner, who have no opportunities of attending public lectures in this difficult branch of science, is indeed praiseworthy; but unfortunately there is something more than goodwill required to succeed in any scientific attempt, without possessing either a peculiar talent for description, or genius for discovery. In justice, however, to the industrious author, it must be confessed that he has furnished an useful compend for the tyro; and though he cannot claim much merit of originality in the work itself, as he has chiefly adopted Werner's description of the external characters of fossils, yet his arrangement is sufficiently perspicuous and easy, especially to those pupils in mineralogy who have already acquired some elementary knowledge of this fascinating science.

In the first volume, Dr. Lenz treats of the different species of earths and stones; in the second, of the metals; and in the third he proposes to give an analytical account of the salts and inflammable substances.

Journal für die Botanick, i. e. The Botanical Journal: edited by SCHRAEDER, Counsellor of Health. Number first. 8vo. 272 pp. with three plates, 1799. Göttingen: Dieterich.

When the editor of a new Journal assures us in the introduction, that no attempt, or at least no successful one, has hitherto been made, which could answer the purpose of improving and extending this department of physical knowledge, and that he is enabled to remedy this deficiency, we ought naturally to expect that he will be thoroughly acquainted with the nature of his undertaking, so as to fulfil the promises by which he has committed himself to the public. He in a manner challenges competition, and invokes the severest shafts of the critic.

Our limits do not admit of analytical proof that M. Schrader is not strictly possessed of the qualifications requisite to a good botanical editor; for the very first of the essays entitled, *Lichenum gelatinosorum illustratio*, by Dr. BERNHARDI, is not free from error and inaccuracy. Thus, instead of distinguishing particular species of the Lichen with care and attention, the author gives the *Lichen subtilis* a separate place, although it obviously is only the young Lichen *tenuissimus*, DICKS. Fasc. I. T. II. Fig. 8.—farther, among the Lich. pulposos, he has confounded five different species; namely, the *Collema glaucescens*, *crispum*, *obscurum*, *cristatum et lobatum*, HOFFM.—as, on the other hand, the Lich. nigrescens he confounds with the *Collema auriculatum*.

The second article is written in German, by Dr. NÖHDEN, on the manner in which plants separate the pollen, or farina, from the parts of fructification;—the third, on the genus *usnea*, together with some remarks on Hoffman's Flora Germanica, by the editor, is likewise a very superficial performance.

The second section of this Journal consists of extracts from foreign botanical works, particularly VAHL's *Eclogæ Americanae*, fol. 1726; SMITH's botanical history of the *Mentha exigua*; WOODWARD's Remarks on the genus *Ulva*, and the Linnean Transactions, vol. iii. 1797.—The third section contains a review of several botanical publications; the fourth, literary correspondence; and the last, miscellaneous accounts. On the whole, it cannot be denied that this periodical work might prove equally interesting and useful to the friends of botanical science, if it were conducted with more ability and discernment.

PRACTICE OF MEDICINE AND SURGERY.

A Treatise on Bilious Diseases and Indigestion; with the effects of Quassia and Natron in those disorders: By J. GIBSON, M. D. Surgeon in the Royal Navy, &c. 8vo. 68 pp. 1799. (Two Shillings.) London; Murray and Highley.

Every medical practitioner is apprised of the frequency and distressing nature of dyspeptic complaints, whether arising from an idiopathic disease in the stomach itself, from a derangement in the biliary or pancreatic secretions, or in a secondary way from more general diseases of the system, such as gout, pregnancy, fever, &c.

The success in the cure will always depend upon assigning the true seat and cause of the evil, and then applying the most efficacious remedies.

Our author's treatise is confined to the latter class of means. His favourite remedy is—

R γ . Ligni quassia \acute{e} incif. sesquidrach.
 Natron drach. ij. cum semisse
 Aquæ fervent. lb. ij.—Infunde per horam & cola.

Dosis cochl. iv. mag. ter quarterve de die.

He occasionally increases the sal sodæ, and sometimes gives calomel, salts, soap, and aloes, camphor and ipecacuanha, steel and myrrh, and warm water.

He does not, however, exclusively confine himself to dyspepsia, but introduces jaundice, dry belly-ach, ague, cholera morbus, &c. as depending on the bile.

Observations deduced from Facts and Experiments, tending to evince the non-existence of Typhus-contagion: interspersed with remarks on animal life, and

on those laws by which it is governed; also with some remarks on the nature of those diseases, which are epidemic at sea. By J. FRANK, Surgeon in his Majesty's navy, &c. 8vo. 70 pp. 1779. London; Johnson.

At a time when the nature of febrile contagion, and the most effectual means of preventing its ravages, engage so much attention through the whole continent of America, and among the physicians of the British navy and army in Europe, our readers will doubtless be surprised to find a pupil of Blane, Robertson, and Trotter in England, and an eminent physician at Calcutta*, attempting to prove, from their own observation and experience, that *such contagion* has no existence.

Dr. MITCHILL, and his numerous adherents in America, appear to support their opinion, by referring the cause of their endemics to a particular state of the atmosphere. Even Dr. ROBERTSON, who imputes all idiopathic fever to contagion, says, page 88: "Whatever has a tendency to debilitate the system, may either be a remote or a proximate cause of fever, according to the constitution of the patients," &c. See our Number V. p. 474.

It is not our province to give decisive opinions; but, by suggesting arguments, facts, and experiments, to enable the reader to form just ideas for himself: we have, however, no hesitation in admitting the importance of the subject.

Practical Observations on the Cure of Wounds and Ulcers on the Legs, with and without rest; illustrated with Cases: By THOMAS WHATELY, &c.

[Concluded from our last Number, pp. 88—91.]

With respect to the *manner* of applying the roller, Mr. Whately is anxious to give the most pointed and unequivocal directions; and as we have already quoted some of the particulars relative to this subject, we think it our duty to extract the succeeding part of the "Postscript," in the words of the ingenious author; and thus enable the reader to form a just opinion on a subject of great importance in chirurgical practice.

"In applying a roller, the first circle should be made *round the lowest* part of the ancles as near as possible to the heel; the second should be formed from thence round the foot; the third should be passed again round the foot quite to the toes. The roller should then be passed from the foot round the ancles and instep a second time, to make the fourth circle. In doing this it should be brought nearer (but not over) the point of the heel than it was at the *first time* of going round this part. The fifth circle should pass over the ancles again, and not more than half an inch higher up the leg than the fourth circle. The sixth, seventh, eighth and ninth circles should ascend spirally along the small of the leg, at the *exact distance* of three fourths of an inch from each other. Having proceeded thus far up the leg, we may begin to increase the distances of the circles from each other; they may succeed each other upward to the knee, at the distance of from one to two inches, according to the size and shape of the leg. At that part where the calf of the leg commences, it is generally necessary to let the upper edge of the roller be once, twice, or thrice, turned downwards for about half the circumference of the leg, in order to make the roller lay smooth between the middle of the calf, and the small of the leg. When the roller has been thus applied as far as the knee, there will be a portion of it to spare of perhaps a yard in length; this remainder should be brought down by spiral windings, at greater distances

* Dr. Maclean.

tances from each other than those which were made on the ascent of the roller. The windings should in general be completed in the small of the leg, where the roller should be pinned.

“ In many cases it is necessary to apply the roller *over the heel*. Where this is done, the first circle should be made as low as possible round the ankles; as in the former description. From thence, the second circle of the roller should pass from the instep over one side of the heel, and be brought over the other side of the heel to the instep again. The third circle should be passed round the ankles a second time, but still nearer to the heel than the first circle was. The roller should after this be brought back to the foot, and passed round it to make the fourth circle. A fifth circle should be again made (though it is not in all cases absolutely necessary) round the foot, to the toes. To make the sixth circle, the roller should be brought back, and passed round the ankles again. The seventh, eighth, ninth, tenth, and eleventh circles should ascend spirally at the *exact distance* of three fourths of an inch from each other; these distances commencing at the sixth circle. The roller should then be carried to the knee, and be brought down again to the small of the leg, as described in the former instruction.

“ In applying the compresses, it is necessary in every instance to put them on one by one, and not all in a mass, though they be of a proper size and number. They should be crossed in different directions; the largest of them should in no case be longer than just to meet on the opposite side of the leg to which they are applied. I have in many instances seen the compresses applied by patients of such a length as to go round the leg like a roller, and be fastened together with pins. This method generally wrinkles and blisters the skin, and by no means answers the purpose of making a compression on the part where it is most wanted. I never suffer a pin to be used in the compresses. If the same compresses in any case be applied two days together they should be always turned on the contrary side at each re-application, in order to prevent wrinkles on the skin.

“ I must now reply to two objections made by Mr. Baynton, in the 39th page of the second edition of his work. The first is, that it is difficult to retain the roller on the parts to which it is applied; the second is, that it gives pain to the patient. In answer to the first of these objections, my experience warrants me to say that a flannel roller will in almost every instance keep the exact position it was first placed in for much longer time than is necessary. I have seen these rollers many hundred times keep their situations without any variation whatever for two days; and that too without the least restraint upon exercise. This has happened in those cases, where from the distance of the patient, or from the circumstance of his being nearly cured, I have wished to dress the leg only every forty-eight hours. I must go a step further, and observe, that I have seen repeated instances in which these rollers have remained in their situation for three or four days, and even nearly for a week without being applied afresh. In short, it is one of the best properties of a flannel roller, that it is easily retained in its situation, when well applied. In every instance in which it is necessary to use one, I could pledge myself to apply it in such a manner, as should prevent its altering its position for two days. The method I should use I have already described; in addition to which nothing more would be necessary, even in those cases where the shape of the leg is peculiarly unfavourable to the retention of a bandage, than the insertion of a few pins.

“ In answer to the second objection, I observe, that I have invariably found, that when a flannel roller has been applied in the manner here described, and has not been drawn unnecessarily tight, it gives no pain. It fits nearly

as easy as a common stocking, and allows a very free motion and exercise of the limb. It has been stated in this work, that the application of the compresses makes the necessary degree of pressure on the ulcer, and thereby prevents the necessity of drawing the roller so tight over the other parts of the leg, as would have been necessary were the compresses not used.

“There is another circumstance which Mr. Baynton considers as giving his method a great advantage over the roller, which is, that by means of the plaster, the edges of the sore may be made to approximate in such a manner that the cicatrix, or new-formed skin, will be less after a cure performed by this method, than by any other. In almost all these cases, before the cure is attempted the leg is more or less enlarged by swelling; and as this swelling is entirely removed by compression, it readily allows the skin to approximate on the healing of an ulcer. Added to this, there is a process of Nature always going on in healing an ulcer or wound in any part of the body (whether there be a loss of substance or not), by which a cicatrix is always considerably less than the previous size of the sore. This effect occurs in all cases, whether the patient be cured by the horizontal position, a roller, or by strips of adhesive plaster. The size of this cicatrix will likewise vary in different cases where the ulcers have been of the same size, by whichever of these three methods they be cured. It will be larger in those ulcers which are accompanied with strong adhesions of the adjoining parts, than in those where such adhesions have not been produced; and this effect will take place to the greatest degree where the ulcers are situated over the tibia, and by long continuance have produced immoveable adhesions of the cellular substance to the adjoining periosteum. The adhesive plaster, when applied as a bandage, will without doubt, leave as small a cicatrix as any other method of cure; but for the reasons already assigned, I do not believe, that the cicatrix will in any case be *smaller* than that produced by a roller. In every case cured by the latter method, I have found the cicatrix very small, when compared with the previous size of the ulcer.”

Descriptive Account of a New Method of treating old Ulcers of the Legs: By
THOMAS BAYNTON, &c.

[Concluded from our last Number, pp. 92 and 93.]

In furnishing the reader with an account of the method adopted by Mr. Baynton, in the treatment of old ulcers of the legs, we were, for want of room in our last Journal, reluctantly obliged to discontinue the quotations from the author's treatise, immediately before we mentioned his explanation of the *modus operandi*, and the respectable testimonies he has adduced in favour of his practice.—At present, therefore, we resume the subject, from that part of his work where he has described the mode of applying the bandage, and managing the dressings.

“If the parts be much inflamed,” continues Mr. Baynton, “or the discharges very profuse, they should be well moistened and kept cool with cold spring water, poured upon them as often as the heat may indicate to be necessary, or perhaps at least once every hour. The patient may take what exercise he pleases, and it will be always found, that an alleviation of his pain, and the promotion of his cure, will follow as its consequence, though, under other modes of treating the disease, it aggravates the pain, and prevents the cure.

“These means, when it can be made convenient, should be applied soon after rising in the morning, as the legs of persons affected with this disease are then found most free from tumefaction, and the advantages will be
greater

greater than when they are applied to limbs in a swollen state. But at whatever time the applications be made, or in whatever condition the parts be found, I believe it will always happen, that cures may be obtained by these means alone, except in one species of the disease, which seldom occurs, but that will be hereafter described. The first application will sometimes occasion pain, which, however, subsides in a short time, and is felt less sensibly at every succeeding dressing. The force with which the ends are drawn over the limb, must then be gradually increased, and when the parts are restored to their natural state of ease and sensibility, which will soon happen, as much may be applied as the callico will bear, or the surgeon can exert; especially if the limb be in that enlarged and incompressible state, which has been denominated the scorbutic, or if the edges of the wound be widely separated from each other.

“ It was observed in the preceding part of this Treatise, that I feared the consequence of breaking the skin in the vicinity of the sores; later experience has proved such occurrences to be of no consequence on any part except the tendon Achilles, those wounds being always healed again in a few days; whereas on the tendon, such accidents occasion more trouble, and require sometimes the care of many weeks. I therefore now make it a practice, wherever the case requires considerable extension of the skin upon that part of the limb, especially if the patient be of a spare habit, to defend the tendon with a small shred of soft leather, previously to the application of the adhesive slips.

“ It may be necessary to add, that cures will be generally obtained without difficulty, by the mere application of the slips and bandage, but when the parts are much inflamed, the secretions great, or the season hot, the frequent application of cold water will be found a valuable auxiliary, and may be always safely had recourse to, where the heat of the parts is greater than is natural, and the body free from perspiration.”

After having illustrated and exemplified the superior advantages of his practice by eighteen cases, the last of which deserves particular notice, as the swelling, pain, and inflammation of the leg arose from weakness of the absorbents, occasioned by a fracture of one of the bones of the leg, the author concludes his account with the following judicious remarks:

“ In many other instances of weakness and lameness, which succeeded to fractures of the bones and strains of the joints, the adhesive plasters prepared and applied, so as to form bandages, have proved very useful, through the support they afforded; and I believe it will be generally found, that the confinement required in such cases may be considerably diminished, and frequently rendered unnecessary, by their application. This should, perhaps, be expected from what has been suggested concerning the theory of their effects; but if it be conjectured, that the same advantages may be obtained by common bandages, my personal experience, as well as the reports of my patients, unfortunately enable me to assert the contrary, as a contusion and strain of one of my knees, and a similar injury of my left ankle, the former received in the month of May last, and the latter about ten days since, by the falling of horses, prove that it is possible to walk without much inconvenience, when the parts are so supported, at a time that it is scarcely possible to stand, if they receive only the support of a common roller.

“ These facts so strengthen some of the opinions delivered concerning the manner whereby the cure of many ulcers is accomplished, that it would be improper to omit their insertion. The practical interference will not, I believe, be found less deserving of attention, as it informs us that plasters denominated

denominated strengthening, prove so in consequence of their affording a peculiar kind of support to the systems of vessels, rather than through the qualities of their ingredients; and that they become much more effectual when applied so as to encompass and support the whole, or part of a diseased limb, than when merely placed upon it, with the expectation of advantages from the properties of their component parts."

An entire new Treatise on Leeches; wherein the nature, properties, and uses of that animal are clearly explained. By G. HORN, Apothecary, &c. 8vo. 30 pp. 1s. 6d. London; Symonds.

The importance of this valuable *instrumentum medicinae* will doubtless induce the public to inquire into its uses, and the best means of its propagation and preservation, for the purposes of medicine and surgery; on all which subjects our author appears to have taken considerable pains to convey information.

NEW MEDICAL PUBLICATIONS IN AUGUST.

Lectures on Diet and Regimen: being a Systematic Inquiry into the most rational means of preserving Health, and prolonging Life; together with physiological and chemical explanations, calculated chiefly for the use of families, in order to banish the prevailing abuses and prejudices in Medicine. *The second edition, improved and enlarged, with considerable additions.* By A. F. M. WILlich, M. D. 8vo. 708 pages. Price 9s. in boards, or 10s. 6d. on wove paper. Longman and Rees.

The Natural History of the Tea-tree; with observations on the medical qualities of Tea, and on the effects of Tea-drinking; with coloured Plates. *A new edition:* By J. C. LETTSON, M. D. 4to. 102 pages. 10s. 6d. Dilly.

Observations deduced from Facts and Experiments, tending to evince the non-existence of Typhus-contagion, interspersed with remarks on Animal Life, and on those laws by which it is governed; also with some remarks on the nature of those diseases which are epidemic at sea. By J. FRANKS, Surgeon in his Majesty's navy, &c. 8vo. 70 pp. Johnson.

A Treatise on Bilious Diseases and Indigestion; with the effects of Quassia and Natron in those disorders: By J. GIBSON, M. D. Surgeon in the Royal Navy, &c. 8vo. 68 pp. 2s. Murray and Highbly.

An entire new Treatise on Leeches, wherein the nature, properties, and uses of that singular and valuable animal are clearly explained. By J. HORN, Apothecary, &c. 8vo. 30 pp. 1s. 6d. Symonds.

Observations on the diseased and contracted urinary bladder, and frequent painful micturition, with some cautions respecting the use of the caustic bougie in the treatment of strictures in the urethra: including a paper on the scirrho-contracted rectum, to which the Medical Society of London adjudged a prize medal in the year 1798. By JOHN SHERWEN, M. D. Member of the Corporations of Surgeons. Price 1s. 6d. Johnson, and Murray and Highbly.

NEW MEDICAL PUBLICATIONS IN GERMANY.

Sammlung auferlesener Abhandlungen, &c.—A Collection of Treatises, selected for the use of Medical Practitioners. 8vo. Vol. XVIII. Leipzig. Dyk.

Kurze Darstellung, &c.—A concise view of the chemical inquiries into the nature of the different gases. By Dr. A. N. SCHERER. 8vo. Weimar. Gädicke.

Versuch einer Theorie der elektrischen Erscheinungen.—An Essay towards a theory of the phenomena occurring in Electricity: By L. A. VON ARNIM. 8vo. 146 pp. with a Plate. Halle. Gebauer.

Der Arzt für Freudenmädchen, &c.—The Medical Guide for the Vorarriet of Pleasure, &c. 8vo. 138 pp. Bremen.

Ueber das Ausziehen fremder Körper, &c. On the extraction of foreign bodies from the œsophagus and the trachea: By T. G. ECOLDT. 4to. with five plates. Leipzig; Tauchnitz.

Analytische Tabellen, &c.—Analytical Tables, exhibiting the different species of Minerals; being an Attempt towards a more correct Method of determining and recognizing them, without a Teacher. By A. J. G. B. BATSCH, Prof. at Jena: with a Plate (28 großch. or about 3s. 6d.) Jena; Gœpferdt.

Handbuch der praktischen Heilmittellehre, &c.—A Manual of practical Therapeutics, for the use of the young Practitioner, as well as the Friend of the Veterinary Art. Vol. I. containing the Therapeutics of external diseases. 8vo. (12 großch. or about 2s.) Leipzig; Seeger.

Apothekerlexicon:—A Pharmaceutical Dictionary. By SAM. HAHNEMANN. 8vo. two vols. Leipzig; Crusius.

G. F. HOFFMANNI, *Plantæ lichenosæ delineatæ et descriptæ*. Vol. VIII. Fasc. 3^{ius} cum figuris coloratis. Folio. (3 rix-doll. 12 großch.) or about 13s. 6d.) Ibid.

NEW MEDICAL PUBLICATIONS IN FRANCE.

Expériences sur le Galvanisme, &c.—Experiments on Galvanism, and likewise on the irritation of the muscular and nervous fibres: By F. A. HUMBOLDT, translated from the German; with Additions, by J. F. A. JADELOT. 8vo. 600. pp. (Price 6-livres) Paris; Fuchs.

Observations sur l'Operation dite Césarienne, &c.—Observations on a successful instance of the Cæsarean operation: to which is added a Description of a new method of performing it. By Cit. J. A. MILLOT, Accoucheur. 8vo. 32. pp. Paris; Croullebois.

TO CORRESPONDENTS.

We have already apprized our Correspondents, that we cannot, consistently with our plan, admit anonymous strictures on any communications which have been published in this Journal, with the signatures of their authors. We are confident that many of our respectable friends have been induced to honour us with their contributions, in consequence of the conviction, that they were perfectly secure from the shafts of illiberal or anonymous criticism.

The letter dated August the 12th, and signed "Observator," contains such assertions relative to the Inoculation of the Cow-pox, as cannot be published without either proof or authority. If the 'Observator' can procure the former, and authenticate it with the signature of his *real* name, we shall not hesitate a moment to comply with his wishes.

Another paper signed J. B. August 17th, must be delayed for similar reasons.

The letter with the signature D. W. on the Prevention and Cure of Dysentery, arrived too late for insertion in the present Number.

The interesting Account of an extra-uterine Fœtus, transmitted to us by a Medical Friend at Norwich, shall certainly appear in our next.

Mr. L.—'s paper on the Aqua Ammoniacæ Acetata must be likewise postponed for want of room.

THE
Medical and Physical Journal.

VOL. II.]

OCTOBER, 1799.

[NO. VIII.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the "*Contributions*" lately published by Dr. BEDDOES, I observe that I have offended that gentleman to such a degree as to make him throw off the politeness of the scholar, and forget the language which one well-educated man has a right to expect from another. I am the more concerned at this, because I greatly suspect that, in justifying myself, I shall produce still more irritation than appears in the work alluded to; for I shall be under the necessity of proving by extracts from his former writings, either that he did not understand the language he employed at the time he wrote them—or that, with a deep, and wary penetration, he has given birth to different opinions on the same subject, to the end, that when one goes out of fashion, he may bring the others forward as a protest against it, if necessary.

I will now enter on my defence, but before I do so, let me state my arraignment.

The following note, bearing the genuine type of the meek spirit of Dr. Beddoes, is to be found at page 369 of his "*Contributions*:"

"Dr. CRICHTON ("*Mental Derangement*," 1—46,) says, 'There is scarce any treatment of consumption but has shewn equal, if not superior powers to a reduced atmosphere.' "The repose alone, which I have often known follow the use of gases, seems to shew that this is a mistake. I have nowhere said, that occasional small respiration of gases and vapours have cured, or promise to cure consumption. And where have they been kept constantly applied to diseased lungs? Can Dr. C.'s learning supply a satisfactory reference to facts of this nature? Dr. C. asserts (p. 35) that I have adopted Dr. GIRTANNER's opinion concerning irritability. This is false. In my earliest conjectures ("*Observ. on Calculus, &c.*" p. 264), I have protested against this interpretation of my words; and

NUMBER VIII.

C c

Dr.

"Dr. C. should have attended to what I have since written, since he chose to notice my opinions."—

Here I stop, Gentlemen, for it is this last part of the note which has caused me to trouble you with this letter.

I am charged with having given a false representation of the Doctor's opinion concerning Irritability. The following are the words I have made use of, and which have given Dr. Beddoes offence:—"It may appear, nevertheless, to many, that oxygen is probably the principle on which the irritability of bodies depends. This seems to be Dr. Beddoes's opinion, as well as Dr. Girtanner's, and he (Dr. B.) makes it a ground of argument in favour of his ærial method of treating phthisis."

That it was natural to draw this conclusion, I will venture to assert, will be the opinion of every impartial man who has read the Doctor's "*Essays on Obesity and Consumption*," which are annexed to the "*Essay on Calculus*," to which he refers.

Dr. Girtanner thinks the solids obtain their oxygen from the blood during circulation. That Dr. B. thinks so also will appear *probable* from the following passages:—"Probably the solids, during circulation, more than divide with the blood, its loosely attached oxygen; if they have a superior attraction, they will, as some of the constituent parts of the blood itself do upon standing, take the whole, and leave the blood dark-coloured."—*Beddoes on Calculus, &c.*—p. 121.

Dr. Girtanner thinks that oxygen not only yields the stimulating quality to the blood, but that it is also the cause of irritability in the solids. That Dr. Beddoes appears to entertain, or rather appears to *have entertained* this notion, will probably be the opinion of many others besides me, after they have read the following:—

At p. 137, "*Observ. on Calculus*," he makes an extract from a paper of LAVOISIER's, in which that ingenious chemist and philosopher relates the effects which oxygen gas produced on Guinea-pigs, that were made to live in it for a certain time; they died with evident marks of inflammation. Dr. Beddoes accounts for this effect in the following words, p. 138.—"The unusual animal heat which must have been generated in these experiments—the *stimulant power of the blood*, which, independently of heat, oxygen confers upon the blood—that *irritability which it communicates to the solids*—all these causes might easily produce the inflammation observed by Lavoisier."

From the above, I was led to conclude that Dr. Beddoes really meant what he wrote; and I was the more confirmed in this opinion as I did not discover

discover in any of his remarks on Dr. Girtanner's Essay, that he had entered a formal protest against Dr. Girtanner's opinion, although in the note which relates to me, in his "*Contributions*," he positively has done so.—I shall now insert the whole of the passage contained in the page to which he refers in the note, and in which he says he has protested against the opinion, that oxygen is the cause of irritability, which opinion, from the extracts above, I concluded him to possess.

"Attention," says Dr. Beddoes, p. 264, "is undoubtedly not less due to the other elements of organized bodies; and if the importance of oxygen seems to have been magnified in the foregoing observations, it is only because we have few or no facts which afford a foundation for reasoning concerning the connection of an excess or deficiency of hydrogen, or azote, with the functions of life: and yet much obscurity and many difficulties must be expected to remain till we acquire the knowledge of such facts. This reflection should render us the more attentive to the phenomena of life; for if we can but perceive enough to suggest a new hypothesis, capable of being verified by experiments, physiology will not fail to gain something, and perhaps something considerable, by its falsehood."

Such, Gentlemen, is the protest upon the authority of which Dr. Beddoes says I have given a false representation of his opinion. Let the rest of the medical world be the jury to give a verdict on this contested point. If they can discover in this passage a formal protest against his entertaining similar speculations with Dr. Girtanner concerning oxygen, I shall then conclude that Dr. Beddoes has had the address to state two opinions which destroy each other, but where I could not see the opposition between them. To me this paragraph appears only to be a kind of apology for a most extravagant extension which he (Dr. Beddoes) has made of the hypothesis, and which immediately precedes the protest.

"Was not MAYOW," says Dr. Beddoes, p. 258, "infinitely nearer the truth, than any author of a later hypothesis, when he imputed muscular motion to the effervescence of his nitro-atmospherical particles? Does not muscular contraction or intumescence really depend upon the combination of oxygen with hydrogen (separately, and combined in various proportions), in consequence of a sort of explosion produced by the nervous electricity? According to this hypothesis, animal motion, at least that of animals analogous to man, would be produced by a very beautiful pneumatic machinery; and our nervous and muscular systems may be considered as a sort of steam-engine. This hypothesis, though not perhaps

204 *Dr. Marshal and Dr. Wieselthal, on Worms found in Poultry.*

“ perhaps at this moment capable of strict proof, *is extremely probable*, since
“ it is countenanced *by every observation and experiment yet made on the*
“ *subject.*”

I hope it will appear from these passages that I have not given a false representation of Dr. Beddoes's opinions.

Your zeal in communicating whatever concerns the interests and honor of the profession, your impartiality and love of justice, have induced me to present you with this letter, which you will oblige me by inserting in your Journal.

I am, Gentlemen,

With much regard,

No. 15, CLIFFORD-STREET,

Your obedient, humble servant,

15th September, 1799.

ALEXANDER CRICHTON,

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I SEND you the following extract of a letter from an ingenious physician, Dr. A. WIESENTHAL, Professor of Anatomy, at Baltimore, in North America; if you think as I do, that the communication is curious and interesting, you will allow it a place in your instructive monthly publication.

I am respectfully, Gentlemen,

BARTLET'S-BUILDINGS,

Your most obedient and

Sept. 10, 1799.

humble servant,

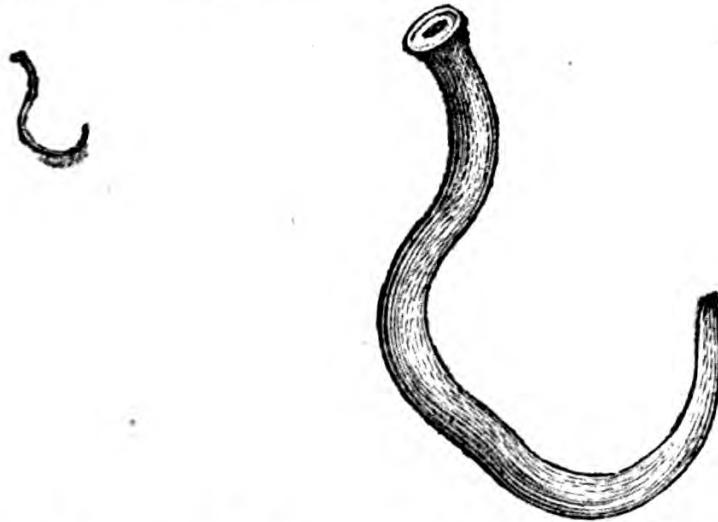
ANDREW MARSHAL.

“ BALTIMORE, *in MARYLAND, May 21, 1797.*

“ There is a disease prevalent among the gallinaceous poultry in this country, called the *gaps*, which destroys eight tenths of our fowls in many parts, and takes place in the greatest degree among the young turkeys and chickens bred upon old established farms. I know not whether the same kinds of fowls in England are liable to it, and therefore shall take the liberty to give you a brief account of it.

“ Chicks and poults, in a few days after they are hatched, are found frequently to open their mouths wide, and gasp for breath, at the same time frequently sneezing, and attempting to swallow. At first the affection is
slight

flight, but gradually becomes more and more oppressive, until it ultimately destroys. Very few recover; they languish, grow dispirited, droop, and die. It is generally known, that these symptoms are occasioned by worms in the trachea. I have seen the whole of it completely filled with these worms, and have been astonished at the animal's being capable of respiration under such circumstances. The annexed cut is a representation of these animalculæ of the natural figure, and magnified.



“ The small figure represents the worms of their natural size, found in the trachea of chickens and young turkeys : the large figure, the same magnified. They are of a reddish colour, and at first view, resemble the human *lumbricus* ; but when examined, are materially different. When exposed to the microscope, they are found to have an orifice or mouth at one end, formed for suction ; the other end, as far as I know, imperforated. Through the integuments is seen the intestinal tube, much convoluted, like that of the *lumbricus*.

“ No effectual remedy is known against these most destructive animals. I have indeed seen them drawn out of the trachea, by means of a feather stripped from near its end, which is passed into the larynx, and twisted round till it engages one or two of the worms, which are extracted with it.

“ ANDREW WIESENTHAL.”

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

PERHAPS nothing would go further in promoting a successful medical practice, than that every practitioner should lay before the public his own knowledge of remedies which he may have long employed, with unequivocal success,

success, particularly of such as may not be in general use. Thus the late Dr. MOSES GRIFFITHS, in giving to the world his favourite chalybeate mixture, did a more essential service than if he had published an elaborate system of physic; and DOVER'S Legacy is still remembered for his celebrated sudorific powder, when many ingenious theories of more modern date are sunk into silent oblivion.

It is with a view of throwing my mite into the medical treasury, that I send you a prescription which I have been in the habit of using for these fourteen years past, and (as is well known to many apothecaries in this town) with extraordinary success, in all the complaints of pregnant women, arising from too prevailing an acidity, so general with them, such as heart-burn, vomiting, cough upon taking food, and that feverish, restless state so common in the latter period of pregnancy. For all these complaints, I direct two or three spoonful of the following mixture to be taken either occasionally, or when the symptoms are more continual, immediately after every meal:

R $\bar{7}$ Magnesiæ ustæ, drachm. j.
 Aqua puræ, unc. vss
 Spt. Cinnamomi, drachm. iij.
 Aquæ Ammoniacæ puræ, drachm. j.* M.

Magnesia has long been a celebrated remedy for these complaints, but the most efficacious ingredient in the prescription is the pure ammonia, as the effect will be nearly the same without the magnesia, but this without the ammonia is far inferior indeed.

I was first led by accident to the discovery of the extraordinary power of the pure ammonia in correcting acidity in the stomach, over other alkaline substances. My wife being seized in the night with a severe heart-burn, I arose with a view of getting her some magnesia; but not being able to find any, and being desirous of procuring her some immediate relief, I expected to obtain this by any alkaline substance, and not meeting with any but the water of pure ammonia, which I happened to have by me, I administered twenty drops in a glass of water; the relief was instant, and more complete than she had ever experienced from taking magnesia. This induced me on another occasion to give her a tea-spoonful of hartshorn drops in water, expecting the same effect; but, to my surprize, no sensible relief was obtained, even when repeated: recourse was had again to the pure ammonia, and with immediate success, as was afterwards found invariably to follow its use. This induced me to try it in others. At first I was apprehensive that the frequent

* This proportion supposes that the aq. ammon. puræ as prepared at the Apothecaries' Hall is used; that made by some of the chemists is much stronger.

quent use of caustic volatile alkali might be attended with some inconvenience, and I was unwilling to believe that it could possess any power beyond any other alkaline substances, which might neutralize the acid in the stomach; but experience convinced me both of its superior efficacy and its innocence, never having known any disagreeable consequences follow its use.

It should seem probable from the effect of this remedy, that the cardialgia, and the other symptoms enumerated, may arise from an acid gas in the stomach, more than from its liquid contents. This gas is probably neutralized by the alkaline gas into which the water of pure ammonia will be converted by the heat of the body. That the carbonates of ammonia will not succeed, may arise from the superior attraction of the carbonic acid for the alkali, to that of the morbid gas. But whether the theory be just or not, the effect is certain.

Before I conclude, it will be proper to remark, for the sake of the younger practitioners, that the vomiting which occurs in early pregnancy, very rarely arises from, or is connected with acidity, and that this remedy of course is not appropriate. When vomiting in early pregnancy is moderate, and confined to the fore-part of the day, it appears to be useful, and nothing should be done to prevent it; but it sometimes happens that the vomiting is incessant for many days together, accompanied with great prostration of strength, and constant thirst, and at the same time an utter inability of retaining any thing on the stomach. In this state the most effectual remedy I know of is, the application of leeches to the pit of the stomach, and a constant attention to suffer nothing to be swallowed that can irritate. I have found it of the greatest service to allow the patient nothing but asses' milk, and that by single spoonful only. The use of leeches applied to the pit of the stomach in relieving vomiting is by no means confined to the state of pregnancy, but when this symptom occurs in fevers, or follows the ingestion of any acrid substance, they are equally useful, as I have repeatedly experienced.

NEW BRIDGE STREET,

Sept. 21st, 1799.

JOHN SIMS.

P. S.—I have received a letter from Mr. COOK, surgeon, at Barking, informing me that MARTHA ANGEL, who now lives in the capacity of cook to Mr. DOWNING, Hatton-Garden, had the cow-pox very severely, being very full, and exceedingly ill, at Highworth, in Wiltshire, in the year 1760. Thirty years after, in the year 1790, she was inoculated, and had the small-pox in the usual manner. It may be expected that I should not withhold this case from the public; at the same time it must be acknowledged, that the experiments already instituted seem fully sufficient to decide that the cow-pox matter which has been used for inoculation is effectual in preserving the patient from any future attack of the small-pox, unless it should be true, as

has

has been suggested, which I deem very improbable, that the cow-pox enables the constitution to resist the contagion of the small-pox for a certain length of time only. It appears more probable that there may be different diseases among the cows, which are not very accurately distinguished; and in this point of view, the publication of this and similar cases may have its use, in exciting a due care, that the genuine disease only be taken for the purpose of inoculation.

STATE OF DISEASES IN LONDON.

Account of Diseases in an Eastern District of London, from the 20th of July, to the 20th of August.

ACUTE DISEASES.		No. of Cases.			No. of Cases.
Typhus Gravior	- -	2	Colica Pictonum	- -	2
Typhus Mitior	- -	4	Hæmorrhoids	- -	3
Quotidian	- -	1	Dolor Nephriticus	- -	2
Pneumonia	- -	3	Menorrhagia	- -	3
Catarrhus	- -	1	Prolapsus Vaginæ	- -	1
Measles	- -	2	Dysmenorrhœa	- -	2
Acute Rheumatism	- -	2	Amenorrhœa	- -	4
CHRONIC DISEASES.			Cancer in Utero	- -	1
Asthma	- -	4	Chlorosis	- -	5
Cough	- -	12	Dysuria	- -	4
Dyspnœa	- -	9	Enuresis	- -	2
Phthisis Pulmonalis	- -	5	Hysteria	- -	3
Pleurodyne	- -	4	Scrophula	- -	4
Cephalæa	- -	4	Herpes	- -	6
Epilepsia	- -	1	Lichen	- -	1
Vertigo	- -	4	Pfora	- -	1
Syncope	- -	3	PUERPERAL DISEASES.		
Palpitatio	- -	2	Menorrhagia lochialis	- -	3
Dyspepsia	- -	6	Mastodynia	- -	6
Vomitus	- -	3	Ephemera	- -	3
Gastrodynia	- -	4	INFANTILE DISEASES.		
Diarrhœa	- -	12	Hooping Cough	- -	4
Dysentery	- -	4	Measles	- -	5
Colica	- -	3	Aphthæ	- -	6
			Ophthalmia purulenta	- -	3

We may repeat the observation made in the last Report of the state of diseases, that notwithstanding the weather has been unusually cold and wet, the number of diseases has not been increased. Colds and coughs, indeed, have been rather more general than they are at this season of the year, owing probably to the sudden showers of rain which have fallen, and for which persons going abroad have not been prepared. Slight disorders of the bowels have still prevailed. Diarrhœas have been frequent, but of a mild and favourable kind, rather producing a salutary evacuation, than any morbid effect upon the constitution. Dysenteries have also occasionally occurred, accompanied with very slight degree of fever, and yielding pretty soon to the usual methods of cure. The measles have prevailed amongst children; but this, like the other diseases of the present season, has proved mild: the fever and cough, which are the symptoms of principal consequence in this disease, have been very slight.

Case of Diabetes, with an Account of the Appearances after Death, stated in a Letter to Dr. Rollo; by ALEXANDER MARCET, M. D. Member of the Royal College of Physicians, London; and Physician to the City Dispensary.

DEAR SIR,

I WAS very much disappointed by not seeing you at the examination of the body of my diabetic patient, which took place on the 6th of the last month, according to the notice I had sent you: Dr. WILLAN and Dr. DELARIVE were present at the dissection; and Dr. MARSHALL was so obliging as to perform it. I am sensible how much more interesting it would have been to you if received from the hand of that experienced observer, and flatter myself he may yet be induced to give it to the public. In the mean time, I transmit, in compliance with your request, a short account of the case, and will afterwards relate, as well as I am able, the principal circumstances which presented themselves, or were pointed out to me, during and after the dissection.

The history of the case contains nothing, I believe, that has not been before observed in diabetes: but, as you will see from the account of the dissection, this patient also laboured under phthisis pulmonalis, a circumstance which I was not aware of, and which some other medical men who visited him with me at different periods, seemed to have likewise overlooked.

R. K. of Chancery-lane, a carpenter, aged 55, applied to the dispensary in Carey-street, in March, 1798. I then attended the dispensary as an assistant physician to Dr. Willan, and this man became one of my patients. He complained of great weakness and emaciation; of pains in his loins, and across his stomach; and of a slight cough, to which he had been at times subject, but which, he said, was but very trifling. He complained also of heat in his inside; but he never spit any blood; and his expectoration was never copious nor purulent. His tongue was dry, but clean and florid; his skin uncommonly dry, and had been so for a long time; his pulse was a little more frequent than natural. Those symptoms would have naturally led to the suspicion of consumption, and indeed it was the first idea that occurred to me; but having inquired more particularly into the circumstances of his illness, and having found he was labouring under diabetes, I thought I could explain the symptoms of pain, heat, and emaciation, without any other supposition, and I lost sight of the phthisical symptoms.

I learnt that his appetite was usually very keen, though not so at that moment, owing, as he thought, to his having caught cold. His thirst, however, was immoderate, and his urine, which was much more copious than natural, had the peculiar diabetic colour and properties. He did not pass his water without being conscious of it, but could not retain it a single moment whenever he had a call to discharge it. His ancles frequently swelled towards evening, and his feet were in general cold; but he complained of occasional heat in the palms of his hands. He had but a few teeth left, which were quite loose in their sockets. His spirits were extremely low, and had been so during the whole course of his illness; he was so despondent about nine months ago, as to make an attempt against his own life, which proved very nearly successful. His memory seemed to be considerably impaired; and he could not distinctly remember in what manner he was first taken ill; but his wife told me his complaints had begun about eighteen months before; and that the first symptoms she could trace, were an uncommon appetite and a proportionate thirst. He had been a hard drinker all his life, and still indulged the same habit. He had been, at different periods, subject to diarrhoea, but latterly complained of obstinate costiveness. The quantity of his drink amounted to seven or eight pounds of beer, or spirits and water, in twenty-four hours; and he passed in a similar space of time, between four and six pounds of sweet, pale urine, which yielded an uncommonly copious saccharine sediment. According to the account of his wife, both his drink and urine were some time before much more considerable, and she thought the quantity of his urine had been, at times, fully equal to that of his drink.

These were the principal circumstances of the case, of which I kept memorandums ever since I undertook the treatment of it; and though there have been within these fifteen months some fluctuations in the symptoms, I did not perceive any remarkable change in the general state of the patient till a few weeks before his death. His legs and ancles then swelled very much; his pulse became quicker, though not very weak nor irregular; his powers of digestion almost entirely ceased: frequent purging and vomiting supervened, which continued with little abatement to the moment of his death. He remained sensible till within a few hours before he expired, but he then lost his power of speech, and was soon after carried off in a fit of convulsion.

I saw him, for the last time, four days before his death. Till then, the diabetic symptoms had continued, and his urine had the qualities peculiar to the disease.

The method of treatment employed could scarcely afford any interesting observation, since from the complicated and advanced state of the disease,

I could

I could only use palliative remedies. His stomach was totally unable to bear the animal regimen, and there were but very few articles of food that could at all agree with him. He was very whimsical in his diet, and refused, at times, to take any kind of animal food, whilst, unfortunately, he was very fond of sugar and sweet things of any kind. Opium always relieved him, and was repeatedly administered in different forms. When he was costive, aloes agreed with him well, and were often prescribed. At a later period of the disorder, his bowels were in a very relaxed state, which could only be corrected by restringents, either alone or combined with opiates. During the last summer he went to spend a few months in the country, when he discontinued the use of any medicines; he thought at first the country air was of some service to him, but at his return, he seemed to be nearly in the same state as before,

Dissection about thirty-six Hours after Death.

LUNGS.—Several adhesions were found between the pleura costalis and the pleura pulmonalis; and in each side of the lungs a large ulcer was discovered, containing a considerable quantity of pus. The whole texture of the lungs was very much diseased. The purulent matter did not appear to have found its way through the trachea.

HEART.—There was very little fat about the heart; but it was surrounded with a remarkable quantity of a peculiar gelatinous matter. In other respects, it appeared quite natural.

STOMACH.—The stomach was uncommonly small. The muscular coat appeared a good deal thicker than usual; and also whiter. It contained only a small quantity of a yellow-greenish, gelatinous matter, the chemical properties of which, unluckily, were not ascertained.

COLON.—The colon was likewise very much contracted in its size, and fully as much so in proportion as the stomach. The intestines were empty, and in general of a small size.

MESENTERY.—The whole of the mesentery was very much diseased. All the glands were remarkably enlarged; some of them very hard and of irregular texture; some others softer and of an uniform spherical shape. Many of the lacteals could be seen considerably *enlarged*.

LIVER.—The liver appeared quite sound, and natural in every respect.

PANCREAS.—The pancreas was of a paler colour and of a harder consistence than common.

The **SPLEEN**—was quite natural.

URETERS.

URETERS.—There was nothing unusual in the ureters, except that they appeared somewhat whiter than common.

KIDNEYS.—The right kidney was of a natural size; the left was rather larger than usual. Both of them had externally a natural appearance; but on being cut through, the cortical substance appeared uncommonly vascular; and the substance of the tubuli uriniferi & processus mamillaris was whiter and more tender than usual. The left kidney was taken away for the sake of a more minute examination.

BLADDER.—The bladder was rather larger than common, and distended with a quantity of muddy urine.

PENIS.—A small quantity of mucous or purulent matter was found cozing from the orifice of the urethra, which appeared slightly inflamed; and some contractions were perceived in it.

GLANDS.—All the glandular system, and especially the glands in the neck and groin, were very hard and considerably enlarged. Those of the mesentery, as already observed, were remarkably diseased.

LYMPHATICS.—The *lymphatic vessels* also were generally enlarged; but this was more particularly obvious in the intestines. The state of the lymphatics in the lungs could not be distinctly ascertained.

URINE.—Some urine was taken out of the bladder after death, which being evaporated, yielded a residuum which had a very strong urinous smell, and did not appear to contain any saccharine matter: at least the presence of sugar was not discoverable by the senses.

N. B. The left kidney having been dissected and kept in spirits for a few days, exhibited the appearances above described, except that the processus mamillaris had lost that shining white colour which was remarked on the first inspection.

I had collected some blood from one of the large veins, but finding no sugar in the urine, I did not think it necessary to submit the blood to any chemical examination.

This dissection, I am afraid, will be found to throw but little additional light upon the theory of the disease; yet it may, I believe, by exhibiting a variety of morbid appearances, which had not been observed in former instances of the same disease, and a sound state of several organs which, in other cases had been found altered, tend to corroborate the opinion that diabetes does not originally depend upon any organic disease in the abdominal viscera, but rather upon some change in the process of digestion and
assimi-

assimilation, in consequence of which, after a length of time, some of the organs connected with those functions, may become more or less diseased. The state of the mesentery, in this case, corresponded in a general point of view, with the theory which you and Dr. RUTHERFORD have so ingeniously developed; but at the same time it must be acknowledged, that the morbid appearances alluded to were by no means exclusively in the mesenteric system.

I will not fatigue you with any farther speculations upon this curious and still problematical disease. Permit me only to recal to your attention the curious combination of diabetic and phthisical symptoms, which occurred in the present case. The skin continued always dry, and not only the colliquative sweats, but all perspiration whatever was totally prevented. On the other hand, the colliquative diarrhœa took place in a very high degree and the obstinate costiveness which is peculiar to diabetes, entirely disappeared at the latter end of the disorder.

I have the honor to be,

Dear Sir,

CAMOMILE-STREET,

Your humble, obedient servant,

London, July 1st, 1799.

A. MARCET.

P. S. I have read the above account to Dr. MARSHALL, Dr. WILLAN, and Dr. DELARIVE, all of whom, I am happy to find, agree with me in their recollection of the circumstances therein mentioned.

*To Dr. Rollo, Surgeon-General,
Royal Artillery, Woolwich.*

FOR THE MEDICAL AND PHYSICAL JOURNAL.

A Statement of the Progress in the Vaccine Inoculation, and Experiments to obtain Determinations concerning some important Facts belonging to the Vaccine Disease. By GEORGE PEARSON, M. D. F. R. S. Physician to St. George's Hospital.

THE collection of testimonies which I published in November last in my "*Inquiry concerning the History of the Cow-pox*;" and the circular letter which I issued in March last, stating the progress of the *Vaccine Inoculation*,
and

and containing thread impregnated with *matter*, have procured me much information. In particular, through the recommendation of the *Surgeon-General*, THOMAS KEATE, Esq. the new practice has been introduced into the army, of which, a valuable report has been already communicated. I have been also so fortunate as to obtain permission to practise the *new inoculation* in certain situations where great numbers would have been inoculated for the small-pox. The cases from these sources, and a pretty large stock from private practice, form a valuable body of evidence, by means of which, the professional public would be enabled to estimate (I do not say precisely) the value of the *new practice*, and also answer many of the queries, and supply some of the deficient parts of the history of the vaccine disease, which are stated in the *Inquiry* above mentioned. But such are my occupations at present, and in all likelihood, such they will be for a considerable time, that I shall be unable to arrange for the use of the public, the valuable materials transmitted to me. It will however, perhaps, be not without utility at this time, first, to state a few general results from the vaccine inoculation; and secondly, to relate some *trials*, from which I apprehend conclusions can warrantably be drawn, which may promote the investigation now going forward.

Not much more than six months have elapsed since the opportunity was afforded, by the breaking out of the *vaccine disease* in two principal milch-farms near London, of obtaining matter for propagating the same disease among human creatures. The *new inoculation* was immediately introduced in London, and soon afterwards in the neighbourhood, as well as in many provincial situations. It is with sincere satisfaction that we can now reckon, at the fewest, 2000 persons who have passed through the cow-pox by inoculation; but, in this number, I include the very large proportion furnished by him, who, so beneficially for the public, and honourably to himself, possesses the office of physician* to the Small-pox Hospital. From the above experience we receive, as I expected, important information.

1. Of the above number, it appears that *one* patient died. (Woodville's Reports, p. 151.) And to avoid controversy, let us allow that the death was occasioned solely by the inoculation. Now, according to the justest calculation I have been able to make; as in the inoculated small-pox one in two hundred * dies from the disease, it is evident, in the present state of
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* I am fully aware that so great a proportion as one in two hundred, will not be allowed by many practitioners; and to persons who have been told, and believe, that inoculation for the small-pox "scarcely ever does any harm;" that certain practitioners have inoculated many thousands without losing a patient! that others have
told

the practice, that the proportion of fatal cases in the inoculated small-pox to the inoculated cow-pox is as ten to one.

2. The constitutional affection, or fever, which occurs in the cow-pox about the ninth day after inoculation, is much more considerable in many cases, than was apprehended from the first account by Dr. JENNER; although in a great proportion of cases it is extremely slight, and in many, cannot be observed at all. But I must correct my statement in March last, in which I said, "although the extreme cases of the severe kind which ordinarily occur in the same number of cases in the inoculated small-pox, did not occur in the new practice; and although many of the patients were even more slightly disordered constitutionally, yet the whole amount of the constitutional illness seemed to be as great as in the same number of patients in the inoculated small-pox." Since that report, or at least, for the last four months, as far as I have observed, and been able to learn from others, the whole amount of the constitutional illness was not one half of the whole amount in an equal number of patients inoculated for the small-pox. Now, whether the greater mildness of the disease depended on the different state of the human constitution in the summer from that of winter, as seems to me most probable; or that it depended on the difference in the state of the vaccine matter, must be determined by future experience in the same seasons.

3. The most remarkable difference in the practice of the last winter and present summer, has been with regard to the eruptions which so often occurred, especially in the Small-pox Hospital; which eruptions, in many instances, could not be distinguished from those of the small-pox, and which were wholly unexpected from the original description by Dr. Jenner. No explanation hitherto given, consists with the observations relative to these eruptive cases; but the facts are, as Dr. Woodville informs us they have occurred much less frequently this summer, than in the spring and winter preceding. In my private practice, not a single case with

told their friends "they never had a fatal inoculated case in their whole lives:" I say to such persons, no advantage on the score of saving life will be allowed from the cow-pox; but I have conversed with many candid and experienced practitioners, and they are well satisfied that I am warranted in the above statement of deaths in the inoculated variola. I beg leave to say further, that I believe more persons in proportion have died of the inoculated small-pox within a few years, than died in the same time twenty years ago; and this may be accounted for, from the unwarrantable assertions of many inoculators; from whence a great part of the public have imbibed the opinion, that the inoculated small-pox was not attended with any danger; and the practice is often trusted in the hands of persons not sufficiently acquainted with the treatment fit for different states of the human constitution.

with eruptions resembling the small-pox, has occurred these last four months, and but a small proportion with any eruptions of other kinds. From my correspondents I have not had a single case of eruptions like the variolous, since that of Dr. REDFEARN's, of Lynn; not one of this sort in Mr. KELSON's, of Seven Oaks, report of about one hundred patients; not one in Dr. MITCHILL's, of Chatham, of about fifty patients; not one in the report of near one hundred patients from Dr. HARRISON, of Horncastle, communicated to the Right Honourable Sir JOSEPH BANKS; and, in short, not one case with these eruptions appears in the accounts from my other correspondents.

4. The arms have manifested in many instances a much more extensively spreading red areola around the inoculated part, than is usual in the small-pox, which redness sometimes extended over the greater part of the whole arm. This appearance is very alarming to both the patient and the inexperienced practitioner; but no danger seems to be attendant on such a state of the parts; for it disappears in at most two or three days; by no means gives pain in proportion to its appearance, and, in the cases I have seen, affects the constitution very little. I would rather call this spreading redness of the skin *erythema* than *erysipelas*. As to phagedenic ulcers, as they have been called, ensuing from the inoculated part, many fore arms have been produced; but nine out of ten were occasioned, or, at least, much aggravated, by the tightness of the clothes; by allowing the linen to stick to the sore; by scratching the pustule, and sometimes by emollient poultices. The experience we have had since January last in London, and in the country, does not agree exactly with Dr. Jenner's account concerning the state of the arms. He thinks some new applications of a caustic nature necessary in many cases to prevent secondary symptoms from the sores; but Dr. Woodville (Report, p. 155), my correspondents, and myself, have not found any want of applications on this account.

5. Concerning the important point of the certainty of the action of the cow-pox on the human constitution to produce unsusceptibility of taking subsequently the small-pox, I can only say at present, that I have inoculated many scores with small-pox matter after the vaccine disease, and never with the effect of exciting the small-pox. But I have had accounts sent to me, not of people taking the small-pox after the inoculated cow-pox, but of these taking the small-pox after the cow-pox in the casual way. I have, indeed, been desired to see even some of my own patients, who, I was acquainted, had taken the small-pox after the cow-pox; but these cases turned out to be either those in which the cow-pox had not in reality preceded, or they were cases of merely local affection from the inoculated small-pox.

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With respect to the facts of other practitioners, I shall, at a future time, make some remarks on them to render their accounts consistent with those of Dr. Jenner, Dr. Woodville, and myself. In the mean time, I will not allow that any person's evidence is on this point much to be depended upon, unless he really knows what are characters of the cow-pox pustule, and what are those of the variolous, and some other common eruptions.

By this remark, I do not mean to imply, that inferiority of natural judgment renders such persons' evidence of little weight, but I mean that any person whatever, who has not been accustomed to observe the appearances of certain eruptions, will scarcely be able to discriminate them. Therefore, as the vaccine poison by inoculation, especially when the matter is dried, produces inflammation, a little tumour, and sometimes pustule, which are not the effects of the *specific stimulation* of the matter, it is not surprising that reports should be given of persons taking the small-pox after such inoculation; and also of their taking the cow-pox more than once. Men of common accuracy in observation, by experience, will find out the mistakes they have committed in this respect, but I am very much afraid that *all* have not the candour to acknowledge and rectify them, however honourable such conduct is in the estimation of the best part of society. It affords me great satisfaction to find my friend and correspondent, Dr. DAVIS, of Bath, has displayed this honourable disposition; I conjectured the case was as he has stated it, when he some months ago communicated it to me. (See *Medical and Physical Journal* for last month, p. 106). His conduct in this instance, although it is no more than I had a right to expect from my opportunities of knowing his studious habits, I cannot help considering as a certain preface of distinction in his profession.

From the preceding general results, without entering into a more particular account, I think we may safely conclude, that the cow-pox inoculation is attended with advantages sufficient to force its way speedily into general practice; and that in course, it will supersede, and ultimately extinguish, the small-pox; but this conclusion is only made, provided no new facts shall arise, adverse to the experience now possessed.

With regard to the second object of this paper, Dr. Jenner, very usefully to human society, and very honourably to himself, first published some FACTS, which I thought it my duty, in common with other members of the profession, to investigate, and have laid before the public. Among these facts, the fourth and fifth were asserted in these terms:

IV. *A person having been affected with the specific fever, and local disease, produced by the cow-pox poison, is liable to be again affected as before by the same poison; and yet such person is not susceptible of the small-pox.*

V. *A person is susceptible of the cow-pox, who has antecedently been affected with the small-pox.*

Neither of these facts being supported by any analogy, a great part of the public seemed inclined to disbelieve them; and not only inclined to disbelieve these facts, but the credit of others was, for obvious reasons, thereby weakened. It may be seen in my *Inquiry*, that I thought the assertion stood in need of confirmation, which I was not only unable to procure, but contrary evidence was obtained. Some of my correspondents not only asserted that men were not affected more than once, but that the same cows had not been known to be affected more than once. It was also positively asserted by some, that a person is not liable to the infection of the cow-pox after going through the small-pox (p. 49, *Inquiry*), "and I saw persons pitted with the small-pox, who had been much exposed to the cow-pox without taking it." (*Ibid.* p. 50.)

Notwithstanding my confidence in Dr. Jenner's evidence, I could not help pointing out, in the following words, what I apprehended was a source of error in both cases: "The evidence for this fact (*viz.* 1 v.) to my apprehension only, proves satisfactorily, that the *local affection* of the cow-pox may occur in the same person more than once; but whether the *peculiar fever* also occurs more than once in the same person, from the cow-pox poison, does not appear certain, and must be determined by future observations, made with a peculiar view to this point." Farther; I was so dissatisfied, that I wrote to Dr. Jenner to answer my query, Whether, in the instance of the cow-pox occurring more than once in the same person, it was certain that the specific fever was present more than once? The Doctor very obligingly answered my letter, and says (see Dr. Jenner's letter, p. 99 of my *Inquiry*), "You may be assured, that a person may be repeatedly affected, *both locally and generally*, by the cow-pox; two instances of which I have adduced, and have many more in my recollection." But he very candidly adds, "Nevertheless, on this important point, I have some reason to suspect that my discriminations have not been till lately sufficiently nice."

With respect to fact v. I said in my *Inquiry*, p. 49, "It seems sufficiently authenticated, that people may have the cow-pox after they have had the small pox; but it will require more nice attention to satisfy the query, Whether, in such cases, the cow-pox affects the whole constitution; or is only a local affection?" Subsequently to this observation, I find Dr. Jenner himself, from a theoretical consideration, offers as a "conjecture, what experiment must finally determine, that they who have had the small-pox,

are not afterwards susceptible of the primary action of the cow-pox virus." (*Further Observations, &c.* by E. Jenner, M. D. &c. p. 32.)

I shall now relate the *trials* I have instituted, and the *observations* I have made, to obtain *determinations* with respect to these important questions of facts.

Trials to determine whether or not Persons be susceptible of the SPECIFIC COW-POX PUSTULE and FEVER, who have undergone the Small-pox.

The following four first-named gentlemen being engaged with me in physical inquiries, were desirous to experience in their own persons, the effects of the vaccine poison.

1. Mr. DANGERFIELD was inoculated in one arm by means of a puncture with a lancet stained with fresh, but dried matter, rendered fluid by steam, when inserted. The other arm was inoculated by passing through the skin a bit of thread impregnated with matter.

On viewing the arms in three days time, that with the thread appeared inflamed, with a red, elevated, small spot; the other arm which had been punctured, barely shewed a red spot. The punctures had smarted for about twenty-four hours, but no other effects were produced. These red spots disappeared in a few days.

In three weeks further the inoculation was again instituted, but with fluid lymph applied immediately from the pustule of a patient present, to punctures in each arm. More smarting and more inflammation were produced by this inoculation than by the former. A small quantity of pus was produced in the little red spots from the punctures in about six or seven days, but no disorder arose in the whole constitution.

Mr. Dangerfield was next inoculated in one arm with *variolous* matter. In the evening of the day of inoculation, inflammation appeared, which increased to a greater degree and extent than from the vaccine inoculations. A small phlegmonic tumour, in the part inoculated with variolous matter, continued for a fortnight, during which time it suppurated, and the sore from it did not heal in less than three weeks further. There was no constitutional affection, but much pain was felt in the arm-pit in about five days from the incision.

2. Mr. POLLOCK was inoculated in each arm with a lancet armed with fluid lymph, immediately after taking it from a patient. A little smarting was felt for a day or two, and the parts inoculated were red for several days, but no pustules arose, nor constitutional affection.

3. Mr.

3. Mr. PERKINS was inoculated by puncturing one arm with a lancet stained with recent *vaccine matter*, and the other arm was inoculated with variolous matter. A red spot was seen on each of the parts inoculated the day following, and an itching sensation, especially from the vaccine matter, was experienced for a day or two. The parts remained elevated and inflamed a little for a few days further, and then got well without suppurating, or being attended by any general disorder.

4. Mr. ARMITAGE, whose constitution was fat and muscular, was inoculated in each arm with a lancet stained with limpid vaccine matter, immediately on taking it from a patient present.

A small red spot was observed the day following, and a little burning sensation was complained of. The red spots grew larger and larger for four or five days, and at length produced a small, unequal, hard tumour, in which a little pus was afterwards generated; but the parts soon got well, without any attending disorder of the whole constitution.

In a fortnight after this, each arm was inoculated with variolous matter: more inflammation arose, in a few days, than from the vaccine inoculation, followed by small tumours, which suppurated. The parts inoculated remained sore for more than a fortnight, but no feverish symptoms ever appeared.

5. G. P. a boy twelve years of age, who had gone through the cow-pox ten years before, was inoculated in one arm with recent dried vaccine matter, but rendered fluid by steam just before it was inserted. The day following not so much as a red spot appeared on the part inoculated, nor had there been any uneasy sensation. He was therefore inoculated a second time, but with fluid lymph immediately from a patient.

The day after the second inoculation, an itching sensation of the punctured part was complained of, which continued for two or three days. The part punctured had a small, red, elevated spot upon it the day after the inoculation, which grew gradually larger for four or five days, and became a trifling phlegmonic tumour, but without any red surrounding areola. In a few days the little swelling subsided, but a red, and rather sore spot, remained for a week longer. No disorder of the whole constitution was perceived.

6. I was inoculated by Dr. Woodville, in one arm, with fluid vaccine lymph from a subject present. The punctured part smarted a little all the remainder of the day of the inoculation, and also the day following.

In twenty-four hours a red spot on the inoculated part was seen, exactly
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like that which is seen in the same time when either the vaccine, or variolous infection has taken effect, and increased for yet another day; but after this the redness vanished, and no sore was left.

I once accidentally punctured the back of my hand with a lancet which had fluid vaccine matter upon it. The consequence was, a circumscribed, very small, red, hard tumour. This remained for a fortnight, then suppurated, and afterwards burst. The part soon healed, but left a very small superficial cicatrix.

As belonging to this head, I mention that I have seen several instances of nurses having small, red, conical tumours on their lips and cheeks, and sometimes hands, evidently from the application of cow-pox matter from the children under their care during the vaccine inoculation. These little tumours sometimes remained for several weeks, and a particle of pus was formed in them. They never were attended by any fever symptoms, nor by any surrounding erythematous areola. I here speak of nurses who had long before passed through the small-pox.

I have no hesitation to refer the following cases to this head of unfitness of taking the cow-pox, to having previously gone through the small-pox.

A male servant to THOMAS KING, Esq. about eighteen years of age, was brought up under circumstances in which he could get no testimony to his having had, or *not* having had the small-pox. Not having undergone this disease to his own knowledge, it was thought advisable to inoculate him for the cow-pox, in order to resist the small-pox, with which his fellow-servant was seized. This I did on Wednesday, the 23d of March, in one arm, with matter on a bit of thread.

4th day, Tuesday 26th. The parts inoculated had smarted for the first two days, and they were now red and a little elevated, as if the infection had taken.

6th day, Thursday 28th. Inflammation had almost entirely gone off. Inoculated a second time in both arms with matter from a different patient.

3d day of *second inoculation*, Saturday 30th. The parts appeared inflamed,

6th day of *second inoculation*, Tuesday, April 2d. Inflammation had disappeared. Inoculated a *third time* with limpid fluid from a patient present, and with which matter I had excited the vaccine disease in several persons.

7th day

7th day of *third inoculation*. The parts inoculated had inflamed and felt painful for two or three days, but were now well. Inoculated the patient a fourth time with *small-pox matter*, in both arms; from which a little inflammation arose in both arms, but nothing more. This young man frequently visited his fellow-servant in the small-pox, at the Small-pox Hospital, and often shook hands with him, while under my care for the cow-pox inoculation.

In this case either the small-pox had already affected the constitution, or some other disposition existed, rendering it equally unsusceptible of the small-pox and cow-pox.

From Dr. MITCHELL at Chatham, whose report is now before me, I learn that there were several instances of soldiers, to whom the cow-pox could not be communicated; and, although they had they had no recollection themselves of having gone through the small-pox, it was most likely they had really been affected by it.

If I had seen any instance of genuine cow-pox pustule and specific fever in a constitution which had previously suffered the small-pox, I should have related it; but I ought to mention that such a case has fallen under the observation of Dr. Woodville (Reports, p. 52 and p. 143). I shall never object to the testimony of so experienced a physician without more than usual consideration; but I cannot avoid here observing, that the evidence in his case of the patient having had the small-pox *when a child*, is merely that of the patient; and I submit to Dr. Woodville, whether or not that evidence is admissible to build upon, now that we have the above unequivocal contravening cases of the fact asserted. But I trust the Doctor will be less tenacious of this instance, as he himself tells us that he failed to excite the vaccine disease, by inoculating several patients who were recovering from the natural small-pox. (Reports, p. 144.)

Whatever impression the above instances may have made on my own mind, I do not expect they will produce conviction in the mind of every practitioner, *that it is a law of the animal economy to be rendered unsusceptible of the cow-pox fever and specific pustule, by undergoing the small-pox.*

Hence I find that my expectation of the hands of physic being strengthened by the possession of a sure means of exciting an innocent fever is not realized (*Inquiry*, p. 81); but I feel some consolation from the prospect of the new inoculation being more speedily introduced, by the removal of one obstacle, viz. the fears of many patients who have already passed through the small-pox, that they would be liable to the cow-pox, if the diffusion of
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the infection of it became extensive by the vaccine inoculation. Another advantage suggested in my *Inquiry*, p. 92, is now, I think, greatly confirmed; namely, an advantage for those who are not certain whether or not they have had the small-pox, but possess so great a dread of this disease as not to be able to submit to inoculation for it.

I congratulate such persons on the discovery of a test to which I apprehend the most timorous minds will submit: for if the *specific pustule* and *fever* do not take place from the inoculation of the cow-pox poison, they may be assured, that *either they have already passed through the small-pox, or their constitutions are not susceptible of it.*

It now seems to me that the following facts are established on the foundation of experience:

1. A constitution which has undergone the small-pox is unsusceptible of again undergoing the disease.
2. A constitution which has not undergone the small-pox, but which has undergone the cow-pox, is unsusceptible of undergoing the small-pox.
3. A constitution which has not undergone the cow-pox, but which has undergone the small-pox, is unsusceptible of undergoing the cow-pox.

Now, if the variolous poison destroys the susceptibility of the constitution to the future agency of this poison, in the respect of its producing the small-pox—and if the cow-pox poison destroys the susceptibility of the constitution to the future agency of the variolous poison, in the respect of its producing the small-pox—and if the variolous poison destroys the susceptibility of the constitution to the future agency of the vaccine poison, in the respect of its producing the cow-pox—it is demonstrated, that the same state of susceptibility of the constitution with respect to the future agency of the variolous poison, is produced equally by the agency of the variolous poison, and by the vaccine poison; but, if the variolous poison produces unsusceptibility of the constitution to the future agency of the vaccine poison, it is demonstrable that the following fourth proposition is true, viz.

4. A constitution which has undergone the vaccine disease is unsusceptible of again undergoing that disease from the vaccine poison, because a state of unsusceptibility with respect to the agency of the variolous poison is produced by the vaccine poison (2d proposition), and a state of unsusceptibility with respect to the agency of the vaccine poison is produced by the variolous poison (3d proposition);—but the state of the constitution being the same in the two cases, whether it be produced by the variolous, or vaccine poison, with respect to unsusceptibility, it seems inevitably in course, that
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unfufceptibility of the constitution to the future agency of the vaccine poison is produced by the vaccine disease; and the demonstration, in course, could be given of the 1st *propofition*, on the ground of the 2d and 3d *propofition*, that unfufceptibility of the constitution to the agency of the variolous poison is produced by the variolous disease, if this were not already proved by abundant experience. At a future time, however, I fhall relate the observations and experiments to confirm this *à priori* conclusion; first, because these proofs will increase the validity of the 3d *propofition*; and fecondly, because I do not mean to offer this demonstration as infallible, like mathematical.

From the preceding reasoning it may be imagined, that I confider the cow-pox and fmall-pox as the only varieties of the fame species of difeafe, and that therefore, the name *variola vaccina* is appropriate, although I endeavoured to fhew that it was unjust, and tended to miflead, by giving erroneous notions (*Inquiry*, p. 108). But it muft here enter into our contemplation, that the fame ftate of an animal, or other fubftance, in a certain refpect, may be produced by very different things, and the phenomena attending their agency, may be very different from one another. It is fo in the instances under confideration; and farther, in order to eftablifh refembling things to be *varieties of the fame species*, we ought to be able to trace them to one common origin, or to fhew that they all agree in what fhould be reckoned effential properties. Now, hitherto it has not appeared that the cow-pox has arifen from the fmall-pox, or the fmall-pox from the cow-pox. If it be faid, that in fome of the eruptive cafes of the cow-pox the pufcules could not be diftinguifhed from the fmall-pox, it fhould be confidered, that it has not been yet fhewn that in any cafe the fmall-pox has changed into the cow-pox; that the cow is fufceptible by inoculation of the cow-pox, by inoculation of the matter of the cow-pox from the human fubject; and that the pufcules refembling the fmall-pox, which occur in the cow-pox, afford matter which, I believe, produces in fome cafes (although perhaps not in fo great a proportion as originally) the cow-pox in its ufual mild way, viz. a pufcule in the inoculated part only, and a flight fever. Hence I humbly am of opinion (but fubmit the queftion to the decifion of fcholars), that the denomination *variola vaccina* is a tranfgreffion of the law in philology, and repugnant to found logic.

Extended as this paper is, much beyond the limits propofed, I cannot confine to myfelf the gratification from the Reports of the *New Inoculation*. I fhall only mention, however, one or two of them.

The fenfation excited on the continent by the vaccine inoculation, has
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been much more considerable than even in our own island, as I learned, first from Dr. MARCET, and since, by a letter from Dr. PESCHIER. At Vienna, Dr. FERRO inoculated two of his own children with vaccine matter, which I transmitted; and next, Dr. DE CARRO inoculated two of his own children. An accurate journal of these two last cases was kept by Dr. de Carro, which he has had the complaisance to communicate to me through the hands of Dr. Peschier. The above patients had the vaccine disease in the usual mild way that they have had it in England, and were inoculated subsequently for the small-pox, but without taking that disease.

It is expected that Dr. FRANK will adopt the new inoculation, as it is likely to be generally done at Vienna.

I expect reports from Portugal, and other parts of the Continent.

When matter is to be kept for a long time, I preserve it on thread, which I enclose in a bottle filled with hydrogen gas, or nitrogen gas, quite free from moisture.

In Scotland the new inoculation has not been less successful. Dr. ANDERSON, of Leith, informs me he has inoculated above eighty persons; that Dr. DUNCAN, and others, have begun the practice at Edinburgh; and that it has been introduced in Dundee, Paisley, and Dalkeith.

If the vaccine inoculation proceeds with equal mildness as it has done the last four months, doubtless the variolous incision must in no remote period be superseded. And if such an event should take place, posterity will behold with amazement, the prejudices and inattention of their predecessors to the application of a fact in practice, by which a formidable and loathsome disease was extinguished—a fact well known, time immemorial, to almost every farmer in half a dozen counties of England, but neglected till Jenner had the courage to indicate the advantages of it to society. If I were to name a parallel instance of inattention or prejudice, it should be the neglect of inoculation for the small-pox till it was introduced into England from Constantinople, although it had been practised time immemorial in the Barrozzo mountains, on the frontiers of Gallicia, in the same rude manner that it is at this day.*

To

* This intelligence was communicated to me by a Portuguese nobleman, whose opportunities of information and accuracy authorize me to mention the fact: but an attested account from some of the inhabitants of those mountains is intended for me.—See a book written by *Jacobus a Castro Sarmiento*, in which, I am told, this fact is asserted.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I LAST Saturday delivered a woman of this place, who had gone her full time, of a male child; both hands, one knee, one leg, and one foot of which were either singularly imperfect, or strangely distorted, according to the following description. It lived some hours, and was perfect in every other part. The parents would neither suffer a drawing of it to be taken while it was alive, nor the body to be dissected after it was dead. Being a stranger to you, I have taken care to have the fact attested by two gentlemen, who likewise saw and examined the infant.

I embrace this opportunity of wishing success to your very valuable Publication, and am, with great respect,

Gentlemen, your most obedient servant,

THOMAS FOSTER, *Surgeon.*

The Right Hand—Was furnished with a thumb and fore-finger, perfect in their nails and joints; the other three were wanting. The space they should have occupied had much the appearance of a stump that had been healed after amputation. From the inner part of the wrist were suspended, by a slender filament, about an inch in length, two round fleshy substances, one of them as large as a marble, the other somewhat smaller.

The Left Hand—Was destitute of both wrist and palm, and terminated in one large finger, which had its nail and joints perfect, and was supported by a single metacarpal bone, that moved upon the small extremity of the ulna.

The Left Knee—Was destitute of a patella. A preternatural elongation of the thigh-bone impeded the outward motion of the leg, which was bent considerably inwards, and could move only backwards, and a little towards either side.

The Left Leg—Terminated abruptly in the basis of the tibia, as if the foot had been long amputated from it.

The Left Foot—Was joined to the lower part of the leg in a horizontal direction. It had the fourth and fifth toes only. The space which the others should have occupied resembled the defective part of the right hand. A kind of corn, evidently the effect of pressure, grew from the outward angle.

“I examined the child that my friend has above described, an hour or two after its birth. It was then alive, but not likely to live, and the foregoing description of it appears to me to be perfectly accurate.

“EDWARD FOSTER,”

HAMPTON-LUCY, Aug. 19, 1799.

Assist. Surg. 64th Reg. of Foot.

“I baptized the child which my neighbour, Mr. FOSTER has here described, about a quarter of an hour after it was born. It died a few hours afterwards. The description appears as correct as possible.

“JOHN MORLEY.”

Vicar of Wasperton, and Curate of Hampton Lucy.

Experiments and Observations on certain Sensations of the Eye, connected with the Theory of Vision: By C. R. AIKIN, Surgeon.

IT is a well-known fact that, in certain circumstances, impressions made on the retina of the eye, totally distinct from those of light, will, nevertheless, excite the sensation of vision. Thus a blow upon the eye will produce the sensation of a flash of light, which will be the most vivid even when the eye is shut, or in perfect darkness. So in many diseases of the eye, as in inflammation, or in the incipient state of amaurosis, a number of irregular sensations of light are perceived, sometimes like momentary flashes, at other times like minute insects passing over the field of vision, which continue either till the eye is restored to a healthy state, or till the disease has rendered the retina incapable of transmitting any impression whatever.

This aptitude in the retina to transmit the idea of light from other impressions has been frequently noticed, but I have not seen it observed, that these sensations correspond in other respects with some of the known laws of vision, especially with regard to the apparent place of the image and its intensity.

This will be illustrated by the following experiments; but I must premise that in these, as in all experiments upon the minuter sensations of the eye, some practice, and much attention is necessary, in order to detect these transitory perceptions, which, nevertheless, are in themselves perfectly real.

EXPERIMENT FIRST.

Make a moderate pressure upon the upper eye-lid at the external angle of the eye, so as to compress the globe of the eye as far back as the bones of the orbit will permit. The pressure may be made with the little finger, but it is better done with the blunt head of a probe, or a similar instrument, in order that the pressure may be distinct, and occupy only a small, well-defined space. If then the attention be directed towards the nose, a small dark spot will be perceived, apparently upon the nose, and exactly on the opposite side of the eye to that where the pressure is made. If the pressure be now carried to different parts of the globe of the eye, the same spot will accompany the pressure, and always in the same direction; that is, it will appear above when the lower part is pressed, and below when the upper.

The exact appearance of this image, when the eye is open, is, to my eyes, that of a dark spot, surrounded with a faint ring of light. This is more visible when a piece of black or white paper is laid upon the nose, over the apparent place of the spot, for a reason to be afterwards mentioned. The same image appears when the eye is shut, only then it is more illuminated and better defined. It is difficult to produce the image on the upper part of the eye without giving some pain, owing to the greater quantity of fat covering the under eye-lid (where the pressure must be made), which in some degree defends the eye from any local pressure.

EXPERIMENT SECOND.

Let the pressure be made on the external angle of both eyes, at the same time, whilst the sight is directed straight forwards, and downwards to any object, at the nearest focus of distinct vision. If attention be then paid to the nose it will appear double, with the image of a black spot upon each; that belonging to the *right nose* (if I may so speak) being produced by the pressure of the left eye, and *vice versa*, which may be directly proved by discontinuing the pressure on either side alternately.

EXPERIMENT THIRD.

Let the eye-lid of one eye be closed, and the pressure be made upon that eye in the manner above-mentioned, and the image will appear in the same relative situation. Then carry the probe, with a gentle pressure, to the anterior part of the eye (which could not be done when the eye was open), and the spot will be found to disappear as soon as the pressure is carried beyond the ciliary ligament, and no image will be formed as long as the probe remains over any part of the cornea; but, if exact attention be paid to the sensations, the image will return as the pressure passes again over the tunica albuginea.

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These experiments shew, in a curious manner, how an impression on the retina, totally foreign to that of light, will however produce the same sensation; and this sensation will excite the idea of a visible object in the same place in which it would be situated if it really were the cause of the sensation, that is, in any part of a right line projected from the sentient point of the retina, and passing through the center of the eye to any part of external visible space. That in the above experiments, the sensation is produced immediately on the point exposed to pressure, is shewn from the disappearance of the image as soon as the pressure is removed to the cornea, a part situated beyond the insertion of the retina. There exists this difference between the artificial sensation of vision and real sight, that in the latter the impression on the retina, which is the immediate cause of sensation, is actually produced through the medium of an external object; whereas in the former, the impression is independant of a visible object, and excites the idea of one that does not exist. Hence, in the case of the above experiments, the more completely the effect of real external object is excluded, the more vividly will the idea of it be artificially excited; and this is brought about either by closing the eyelid, or by placing any uniform surface, such as black or white paper, in the situation which an external object would occupy, in order to excite its image on that part of the retina on which the artificial impression is made,

In an ingenious paper by Mr. ELLIOTT, a very accurate description is given of the effects of considerable pressure made upon the whole globe of the eye, by applying the open hand over the whole of the anterior part of the eye. I have once or twice repeated the experiment, and with nearly the same sensations which he describes, but it is a painful, and I think not a very safe experiment. One or two circumstances in it deserve notice.

The pressure is made by laying the hand upon the eye, and keeping up a firm long-continued force, which, after a while, produces a circular luminous spectrum within the eye, somewhat resembling a full moon, with a double halo around it; and if the pressure be longer continued, the spectrum grows fainter, and gradually disappears, leaving the eye for a while insensible to external objects. Now, as the pressure is only made upon the cornea in this painful experiment, and therefore at a distance from the retina, it follows that the sensation of light is produced from the communication of impression from the anterior to the posterior part of the globe, and this accounts for the spectrum not being *immediately* produced, and the great degree of force required to produce it at all; whereas in the experiments which I have given, the part of the eye immediately pressed is that which excites the sensation, as is proved by the apparent place of the spectrum;

- its requiring but little force of pressure, and not being produced upon any part of the cornea.

Another circumstance in which this artificial sensation of light corresponds with real vision is, in the increased intensity and distinctness of the perception, in proportion as it is excited nearer to the center of the retina, which point is well known to be that of the most distinct vision. To illustrate this, let the following experiment be made:

EXPERIMENT FOURTH.

Let pressure be made, as in the foregoing experiments, upon the external angle of one eye, as far back as the bones of the orbit will allow, and with the eye-lid open, and the sight directed straight forwards; this, as before-mentioned, will throw the image of a dark spot upon the nose. Then, without discontinuing the pressure, let the eye, by rolling inwards, be directed towards the spot, and it will appear to diminish in size, become more distinct, and in some degree to retire from the eye, which will, however, get nearer to the spot, and almost touch it, as it were, but not quite: then if the eye be gradually rolled outwards, the spot will as gradually become less distinct, will enlarge, and by enlarging will appear to pursue the eye for a little way, as it appeared before to retire from the eye by diminishing.

This experiment is explained by reflecting that, as the pressure is all along continued, when the eye rolls inward, the parts of the retina successively presented to the outward pressure, are constantly approaching to the central point of the retina, where vision is the most distinct, and therefore the apparent object (the black spot) is continually getting smaller and more defined; but it can never exactly coincide with the axis of the eye, because the eye, however prominent, can never be rolled so far inwards as to present the central point of the retina to any external pressure.

Experiments of this kind may suggest several very curious questions, with regard to the quality of the nerves belonging to the organs of sense, of transmitting only their peculiar sensations, and it would be an interesting question to solve—Whether the retina acquires by habit this quality of referring various impressions to the sensation of vision; or whether this is an inherent quality of this organ?

In either case, the fact appears to me certain, that these artificial sensations follow the laws of real vision, both with respect to the apparent situation of the object, and in being more easily excited on the parts of the retina the most susceptible to light.

As the optic nerve, even where it penetrates the coats of the eye, is not susceptible of the external impression of light, so we may probably conclude that no kind of impression which was confined to the nerve alone, and not conveyed by the medium of the retina, would excite the idea of light; and perhaps this may be the reason why in some cases of fever affecting the brain, in phrenitis, and in general, in all cases where the brain, or its membranes, acquire an unusual degree of irritability, the symptom of deep-seated pain of the forehead, shooting into the eye-ball, precedes that of increased susceptibility to light, owing, as I conceive, to the morbid irritability being communicated gradually down the optic nerve to the retina, and that it is only when the latter is affected that light becomes painful.

The other organs of sense are not so easily made the subject of experiment as the eye, but they appear in some degree to possess the same property of transmitting their peculiar sensations from very various kinds of impressions. Thus the sensation of ringing in the ear, which often occurs during a severe cold, may be occasioned by an increased irritability of the membrane of the tympanum, communicated along the Eustachian tube. The same irregular sensations of sound follow a violent blow on the external ear, and attend incipient deafness, in the same manner as those of the light attend the eye in similar circumstances; and in many cases of general affection of the head, where light is painful, noise is equally so. Perhaps the strong sensation of taste made on the tongue, by the metallic influence in the Galvanic experiments, may be owing to the same cause, and not to an actual solution of any part of the metal in the saliva, which must otherwise be imagined.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE maxim inculcated by writers on surgery, that a wound of the uterus is mortal, is confirmed by the uniformly fatal event of the Casarean section.

The operation is, notwithstanding, insisted on by some practitioners, in a *speculative* case; this, however, they have failed to describe, and the accoucheur is consequently left to conjecture the right application of their doctrine.

It may be useful to enquire into the existence of this supposed case; and also to fix a principle for the government of our conduct.

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To do this, it will not be necessary to enter into nice calculations of the dimensions of the pelvis; for a general statement of the question will, I think, suffice, and lead to an obvious and apposite conclusion.

I can conceive, that an incision might be made into the right ventricle of the heart, and that a polypus might be extracted from its cavity; that the lips of the wound being brought into contact, union by the first intention might take place, and the patient recover.

A wound of this organ has, however, proved invariably fatal; so that, should such a project be put in execution, the operator might be deemed guilty of murder. The cruelty of such an experiment would not be lessened by the possibility of a recovery, as all rational practice must rest on moral evidence. To apply this argument to the Cæsarean section: Suppose the pelvis of a woman to be so distorted as to prevent the delivery of her child through its contracted aperture, and that it shall be certainly known that the child is alive, and strong; as the mother would die undelivered, and the child might be saved, would not these circumstances justify the performance of the operation?

This, I conceive, constitutes the only case in which a reasoning mind would ever entertain a thought of performing it.

All the experience of this country informs us, that the Cæsarean section will prove fatal to the mother; and therefore the whole question turns on this single point, Whether the mother's life shall be sacrificed to save her child?

I anticipate that the answer will, in general, be in the negative; for, besides that the intention of employing professional assistance is to save, and not to destroy; the legislature has not thought fit to enact a statute of indemnity for this particular case; and the sixth commandment says

“*Thou shalt do no MURDER.*”

Both divine and human laws then prohibit the employment of means, which will be destructive to the parent, though certainly preservative of the life of her child; and to perform the operation, even in the above-described case, would be to exercise a power in opposition to those omnipotent authorities.

The question then is stopped *in limine*, and our attention must be confined solely to the mother; as the consideration of saving her child cannot be entertained, without previously determining to destroy her.

But this is putting the question more favourably than experience warrants, for the signs by which we must judge of the state of the child before birth,

are

are inconclusive of its real condition; and, consequently, should the mother's life be yielded to its intended preservation, disappointment might even precede her melancholy catastrophe, in the extraction of a fœtus already dead.

This view of the subject leads to an obvious deduction, that the Cæsarean section is inadmissible during the parent's life; and hence is derived a rule, at once plain and precise, to direct our conduct on this trying occasion; for, when other means fail to accomplish the delivery, or are deemed inexpedient, we can only deplore the miserable sufferings of the patient, and the insufficiency of art to relieve them; and the disposal of life must be left to HIM who gave it.

MANCHESTER, Aug. 21, 1799.

W. SIMMONS.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING, by accident, a few days ago, met with the last Number of your Journal, I shall venture, through so respectable a channel, to lay before the Public any observations on professional subjects which I may be enabled to make. Satisfied that a Regimental Hospital, if properly conducted, is one of the best schools in the world for acquiring practical knowledge, I have endeavoured to improve the advantages of my situation to the utmost. I have been upwards of six years surgeon of the western regiment of Kentish militia, during which time our number of sick has never been inconsiderable; whereby much opportunity of practice has been afforded me. I have been in the habit of keeping a Journal of the different cases as they occurred, wherein I carefully noted every symptom of which a patient complained, the various remedies exhibited, the time when, and with what view given. I also marked every change that took place in the course of a disease, and the effect of the medicines made use of; and lastly, my own opinion of the method of cure which I had adopted. In the course of my practice, I have endeavoured, on every occasion, to determine the justness of pre-conceived theories, by experience, and on every subject to think for myself, uninfluenced by the "tenets of the schools," or the opinions of others. I have had an opportunity of giving every new remedy a fair and candid trial, and in every instance wherein my present practice or opinions differ from what are generally adopted, I can solemnly assure you, that they are the result of actual experience only, for I have no theory to serve. The prevalence of any mode of practice is certainly not a clear proof of its being useful;

nor is it a sufficient recommendation, that it may be practised with safety; if it is not evidently beneficial, it ought to be laid aside.

In this light I consider the too general custom of bleeding, as a means of cure in febrile diseases, contusions, &c. which I have no hesitation in asserting, is not necessary in any complaint with which we are acquainted. 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. It certainly cannot be denied that, in every disease wherein bleeding has been used, complete recovery has been protracted, owing to the debility thereby occasioned. We are directed to use blood-letting to lessen irritability, to take off the phlogistic diathesis, to deplete the blood vessels, and to prevent inflammation. I know from much experience, that these indications can be fulfilled as expeditiously, as effectually, and certainly with much more safety by opium, if given in a dose proportioned to the violence of the disease which we have to combat. The timidity of practitioners has brought opium into discredit, as a means of cure in the diseases alluded to. Though the ill effects of the loss of blood, unless excessive, are seldom perceivable in youth, yet they rarely fail of being felt before the age of forty-five. People who have been often bled when young, about this period of life generally begin to be affected with chronic pains; they recover very slowly from fits of illness, and are liable to febrile paroxysms, that become more teasing than dangerous, and in which there is seldom any increase of irritability. I have rarely been deceived in my conjectures respecting patients of this description, when I have met with them. The first of the cases mentioned in the last number of the Medical and Physical Journal, by Dr. DENMAN, shows that bleeding does not always prevent inflammation or abortion. Nor is it clearly proved, that by taking away blood, we lessen the diameter of the blood vessel, as we find that six ounces from a large orifice has a greater effect than twenty from a small one.

I have taken the liberty of subjoining a short history of a few cases, as proofs of what I have advanced, respecting the use of blood-letting and opium, and with what safety and advantage a large dose of it may be given, when necessary.

CASE I.—R. A. about thirty years of age, was on the 9th of August, 1794, brought to the regimental hospital, on account of a blow which he had received on the right side of his head with a poker; for which he was bled twice, and took several doses of salts, by which means, the pain of the head, which seemed very violent, was removed; yet he was unable to go to his duty before the beginning of the following November. This man,

On the evening of the King's birth-day, 1796, received on the left side of his head a severer blow, with a similar weapon. He now complained of pain not only on the affected side of his head, but also on the other. Bleeding was omitted, and he had given him three grains of powdered opium, which so far mitigated the violence of the symptoms, that he fell asleep. It was necessary to give him an opiate for several succeeding evenings, as the pain returned more than once, during the first week, but was not very severe. He took only a little calomel, and a dose of salts, besides the opium, and was able to go to duty within five weeks after the accident.

CASE 2.—J. S. aged forty, came into the Hospital, in Nov. 1795, for a blow on the thorax, which rendered respiration very painful. Twelve ounces of blood taken from a large orifice gave him no relief.

CASE 3.—W. M. about twenty-seven years old, was admitted into the Hospital in October 1796, for a pain in the region of the stomach, with nausea; he had been costive during the three preceding days. A dose of salts was given him which gave him stools, but did not in the smallest degree abate the pain. He felt some relief from a blister put to the pained part; but on the third day he found the pain gradually increasing, and towards evening it became very violent, with vomiting, quick pulse, dry skin, &c. the blistered part also was quite dried up. A draught, with two hundred drops of laudanum, of which he was directed to take one third every two hours till he was easier; a large blister was prepared for him, and was applied to the region of the stomach. He was relieved soon after he took the second dose of the opiate, but did not sleep much during the night. By this means, though the pain was greatly abated, yet it was not removed entirely for a week, which rendered a repetition of the opiate (but not in such a dose as the former) necessary, every evening during the period.

In this case, was the seat of the pain in the stomach, or in the gall-ducts?

CASE 4.—T. B. twenty-eight years of age, had just recovered from a fever when the regiment was ordered from Portsmouth in July, 1797. While he was unloading a baggage-waggon at Maidstone, he was struck on the back by a large chest of immense weight. I saw him about twenty minutes after the accident, when he appeared to be in great pain, which was increased by the least motion. I gave him immediately ninety drops of laudanum, which not affording him any relief, was repeated two hours afterwards, whereby he soon fell asleep; in the evening he took other sixty drops. The following being a halting day, a dose of salts was given him, and an opiate draught, with sixty drops of laudanum, was directed for him at bed-time, but was afterwards not judged necessary; it was therefore not taken. Next day he was able to travel in a waggon without any inconvenience.

nience; the pain in his back, from the blow, being now considerably relieved. He went to his duty about a fortnight after the accident.

CASE 5.—Corporal M. aged twenty-five, very stout, of a florid complexion, was in February, 1798, seized with pains in the thorax, painful respiration, and other symptoms of pneumonia, with a quick and full pulse. He took immediately two pills containing five grains of calomel, and three of powdered opium; about two hours afterwards, as he was not relieved, other two grains of opium were given him, and blisters put to the pained parts, which gave him ease, though he passed a sleepless night. Two grains of opium were given him the three succeeding evenings; and without the use of any other remedy he soon recovered.

CASE 6.—G. B. a stout young man, aged twenty-three years; was in April, 1798, thrown with great force against a heap of bricks, which he struck with his head. I saw him about an hour afterwards, when I found on the right side of his head a slight wound; the contused parts much swelled, with pains darting through the whole head, and which seemed to be excruciating; the blood flowed from his mouth and right ear: altogether this was truly an alarming case. I gave him immediately a draught with 120 drops of laudanum, which it was necessary to repeat about two hours afterwards; soon after this second dose he fell into a profound sleep, which lasted upwards of seven hours. It was judged requisite to give him at bed-time the same evening another draught, with sixty drops of laudanum, as the pains, &c. were not so much abated as I expected. On the following day he had a brisk cathartic given him, and on that, and four succeeding evenings, he took an opiate consisting of one hundred drops of laudanum; when all the symptoms, except the swelling and wound, were removed. As he was an officer's servant, and comfortably lodged, he was not taken into the hospital, therefore I was uncertain how soon afterwards he recovered entirely.

I shall add two other cases, to show the good effects of opium in complaints where laxatives seem indicated.

CASE 7.—A gentleman of high rank, upwards of forty years of age, and very stout, was in November last seized with a severe pain in the right side of the abdomen, which grew worse in the course of the day, till it became quite alarming. After repeated attempts to procure stools by laxatives and glysters of tartarised antimony and Glauber's salts, without effect, towards evening I gave him ninety drops of laudanum in a little syrup and water, which dose was repeated within half an hour, and soon after followed a copious evacuation by stool, which gave him relief. As the pain was not entirely removed,

removed, a large blister was put to the affected part. A few days afterwards, when the pain had entirely left him, he had a fit of gout which came on very slowly, and very unlike a first attack of that complaint; he had no degree of fever, though the pain in both great toes was severe. This gentleman had in his younger days been afflicted with pneumonia, and some other complaints, for which bleeding was judged necessary; he had been some years subject to flying pains, spasms of the calves of his legs, and occasionally a weakness of stomach, for which he had at different times taken steel and other tonics.

CASE 8.—Corporal B. was one evening, on our passage from Ireland, seized with all the symptoms of colic, in a degree more violent than I had ever witnessed it; he took ninety drops of laudanum, and about six drachms of tincture of senna. Within an hour he had several loose stools, whereby he was greatly relieved, and a few days afterwards was quite well.

The subjects of the above cases are still living, and free from any complaint whatever.

In my inaugural dissertation on the the epidemic catarrh, published at Edinburgh, in June, 1793, I endeavoured, in some degree, to combat the too frequent use of the lancet in that and some other diseases of the acute kind; but not with the same confidence that I now endeavour to do so. On this, as well as other professional subjects, I gladly embrace this public opportunity of acknowledging my obligations to Dr. LUBBOCK, of Norwich.

I shall mention the following case, as I wish it to be generally known.—By the inattention of one of the hospital people, about five drachms of laudanum were taken by one of the patients. I did not see him for several hours after he had taken it; he was then seemingly dying; pulse low and weak, the heart labouring much, skin cold, and covered with a clammy sweat. Though I had not the smallest hopes of success from any means that could be devised for saving him, I diluted about two ounces of elixir of vitriol with a sufficient quantity of water, and, by means of a tea-pot, forced down his throat the greatest part of it.

What would almost appear incredible, within half an hour he was able to speak, and called for victuals. I had once witnessed a fatal instance of poison by laudanum, the quantity taken not half an ounce; though medical aid was at hand, and the patient, a stout woman, had lived upwards of six hours after she had swallowed it. The vitriolic acid was not tried in this case.

Dr. TROTTER, a physician far above either my praise or censure, has proposed bleeding as a remedy in some cases of ague, which I am confident will

will never be found necessary. I once saw a soldier who was subject to ague, taken ill with it the day after he was bled. I can, from experience in upwards of four hundred cases of ague, recommend the following mode of cure as certainly efficacious;

R \bar{y} Pulv. cinchonæ flavæ, drachm. x.
Tinct. opii. drachm. i.
Pulv. pimento, vel pip. nigr. drachm. i. fs. M.

Of this, either put into a bottle of water, or made into an electuary, the patient is directed to take a dose as soon as the cold stage comes on; and which he is to repeat in such quantities, and at such intervals, so as to finish the whole within twenty-four hours. After the medicine has been taken as here directed, I have very seldom met relapses, or found a repetition of it necessary. An emetic given, in a tertian, about an hour before the fit is expected, will in general remove it entirely. Thirty drops of laudanum given before the fit, will commonly produce the same effect. But in the quotidian or quartan, both will be, for the most part, found ineffectual. In the cure of agues the diet should be low, and every article containing alcohol carefully refrained from.

I am, Gentlemen,

ASHBURTON,

Your humble Servant,

24th, August, 1799.

A. HUGGAN.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

BEFORE I detail the following cases of *phthisis*, permit me to assure Dr. MACLEAN, of Sudbury, that I feel highly obliged by his friendly hint respecting the necessity of having the genuine leaves of *digitalis*, properly collected and prepared. I am well aware, that without the most fastidious attention to this matter, every attempt to appreciate the real qualities of the plant will be unavailing; I have therefore very generally inquired into the nature of the powder which I have employed. The greatest part of the *fox-glove* which I have hitherto prescribed has been collected and dried by a gentleman of this place, Mr. MAUD, who is scrupulously exact in his preparations, and who is equally ambitious with myself to unfold the positive powers of *digitalis*. As soon as I read the extract from Dr. Maclean's letter inserted in the last number of the *Journal*, I solicited Mr. Maud to give me in writing a brief history of his mode of collecting the plant, and his subsequent

quent management of it.—The following is the reply I had from that gentleman:—

“ W. Maud’s respects attend Dr. Moffman: in compliance with his request, and in reply to his inquiries relating to *digitalis*, he has sent the following short statement:—W. M. believes he can assure Dr. M. that the *digitalis* used in all the prescriptions W. M. prepared, was of the most unexceptionable quality, and prepared as nearly as possible, in strict conformity to the statement below :

“ The *digitalis* employed has always been collected from healthy, vigorous plants, growing on hilly, uncultivated, or at least in soils not manured, and in situations most exposed to the sun. Those plants which have acquired a darkish, brownish cast are preferred. They are gathered in autumn, after they have received all the advantages of the summer heats, without sustaining any injury from frost. The leaves thus collected are carefully separated from the stalks, and the latter are cut away, so as only to leave room to tie them into small bunches, which are hung to dry in a warm, airy kitchen. When dry it is *partially* powdered, and by this means the stalks and more fibrous parts of the leaves, which require more beating, are completely, or at least pretty fully separated. The finer part of the leaves, when sufficiently powdered, is closely bottled for use.”

The *digitalis* so collected and prepared is what I have chiefly used. I perfectly agree with Mr. MAUD in the preference which he gives to the leaves of a dark colour, approaching to brown. My ideas also correspond with his, in choosing those plants which grow in situations the most exposed; for I am very well persuaded, that those herbs excel in flavour and quality which are collected from the most elevated grounds.—This opinion requires no evidence to establish it but the most common observation; hence I am induced to believe, that a garden is the worst of all situations (except marshy grounds) for the cultivation of *digitalis*, and that the plant which I have been employing is much superior to that recommended by Dr. Maclean.

If Dr. Maclean will recur to the history of my cases, he will perceive that my usual method of administering the *fox-gloves* is, by the exhibition of a grain four times a day. In the case quoted by the Doctor, my patient was labouring under a very severe *active hæmorrhage*, and I deemed it important to his existence to lessen arterial action as speedily as possible. The employment of the remedies specified in the history of the case, was so efficient as to render a long continuance of them unnecessary; I have no
hesitation.

hesitation, however, in affirming that the patient was decidedly under the influence of *digitalis*; for I could plainly perceive some of the most prominent features of its effects, so very justly delineated by the Doctor himself: Dr. Maclean's paper is now before me; and I think his remarks entitled to high consideration, inasmuch as they seem to be the fruit of an unbiassed judgment, enlightened by ample experience. My observations are still so narrow, that at present I am totally unprepared to decide conclusively upon the virtues of *fox-glove*; I feel, however, the importance of the subject; and am determined to prosecute my inquiries till I can at least satisfy my own mind.—I shall only now observe, that opinions respecting its power have already forced themselves upon me, which have considerably lessened the terrors which I entertained respecting the issue of *phthisis*, and I feel irresistibly impressed with the idea, that that disease will, at some future period, cease to be the *opprobrium* of our art.

BRADFORD,
Sept. 10th. 1799.

I am, Gentlemen, your's respectfully,
GEORGE MOSSMAN;

Cases continued.

CASE 6, *June 3.*—S. P. aged eighteen, has laboured, more or less, for two years past, under symptoms of *phthisis pulmonalis*, accompanied with *anasarca* of the lower extremities—she dates her complaints from sleeping in a damp bed.—She has had several opinions upon her case, and she has taken a variety of medicines, without obtaining any permanent relief. I prescribed for her a grain of the *digitalis* to be taken four times a day, with a cupful of a strong cold infusion of *chamomile flowers*.

June 20.—In a few days after she began the use of her medicines, the *anasarcous affection* began to lessen;—it is now entirely removed. She has taken the *digitalis* regularly, but has occasionally complained of a slight giddiness, accompanied by a tendency to drowsiness; the pulse is reduced from 120 to 100 strokes in the minute. Her difficulty of breathing, she says, is considerably relieved, but her cough is as distressing as ever. I ordered her to take only *two grains* of the *digitalis* daily, but strongly recommended punctuality in taking this quantity.

Aug. 29.—I heard no more of her till this day, when I called to inquire after her, and was agreeably surpris'd to find her in the bloom of health.—She informed me, that finding the distressing symptoms of her disease gradually abating, she continued to take her medicines for several weeks, till she found them no longer necessary.

CASE 7. *July 6.*—M. P. a married woman, aged forty-eight, about Christmas

was last, was seized with a bad cough, pain in her side and dyspnoea, for which she took no medicine since the period above mentioned; all her complaints have much encreased—she is extremely feeble and emaciated—her pulse is 120, small and irregular—her cough distresses her much, more especially in the night. What she expectorates is of a frothy appearance, and, as she says, of a saltish taste. She cannot lay upon either side without experiencing a very uneasy sensation, accompanied with incessant coughing—her dyspnoea is great—her legs have lately become *œdematous*—her tongue is partially streaked with a white fur—she has great thirst and no appetite—colliquative sweats and diarrhoea alternate with each other. *Milk, eggs, broths, jellies, &c.* were recommended for her diet—she was ordered a grain of the *digitalis* four times a day—she had *troches of liquorice and opium* for her cough, and she had a large *blister* applied to the chest.

July 12.—The *blister* operated extremely well, and gave her much relief—her cough is better, and expectoration more free—she sleeps and eats better, and feels stronger than she was a week ago—her pulse is reduced to 104—her ankles only are a little *œdematous* at night—her medicines were continued.

Sept. 4.—The pulse is 70—her appetite good—her cough, difficulty of breathing, and all her complaints, have disappeared.

CASE 8. July 14.—H. S. aged fourteen, about six months ago lost a brother by *phthisis*.—She was deeply afflicted by this event, and from the period of her brother's death, she has appeared to decline; her appetite has gradually impaired, together with her flesh and strength, and she is now much emaciated.—Her tongue is furred; she complains of a pain in her left side, more especially upon a full inspiration—she has a short tickling cough—she has no perceptible chills, but a paleness and flushing of her countenance are frequently observed to succeed each other—her pulse is 125—bowels regular—urine high-coloured—she has occasionally partial sweats—her sleep is much disturbed—her spirits are very irregular—she has never menstruated. A diet of *milk* was exclusively enjoined, and the use of the *swing* four or five times a day. I directed her to have a grain of *digitalis* four times a day, with a couple of table-spoonfuls of Dr. GRIFFITH'S *antibiotic preparation*, so much recommended in cases of *phthisis*.

July 23.—Her medicines, &c. have agreed with her well—her appetite is better—her pulse 100—her tongue clean—the pain in her side much abated—all her complaints are very considerably lessened, and she seems to approach rapidly to a state of the most complete health.

Sept. 4.—For several weeks past she has enjoyed the most perfect health.

CASE 9. Aug. 22.—J. R. aged twenty-three, caught cold three weeks ago by being wet, and sitting in his moist cloaths—he was soon after seized with cold shiverings, pain in his side, difficulty of breathing, and every symptom of *pneumonia*. Till to-day he had not applied for medical aid, but had imprudently taken a variety of heating cordials, which had been recommended to him by his neighbours—he cannot lie on either side without experiencing a sense of suffocation; he breathes with extreme difficulty; his cough is incessant, and without any expectoration, except a sort of blue-coloured froth—his pulse is 120—extreme prostration of strength—thirst considerable, and frequent rigors. To the exclusion of every thing cordial, I ordered his diet to consist of *milk* and *eggs*, &c. I prescribed four grains of the *digitalis* daily, the use of the *troches* specified in a former case, and the application of a *blister* to the chest.

Aug. 25.—The *blister* operated well—dyspnœa much relieved, and expectoration much more free—no thirst remaining—appetite good—the most remarkable phenomenon, however, is the astonishing diminution of vascular action—his pulse is reduced from 120 to 74. He seems to approach fast to a state of convalescence—he has a singular sort of feeling, which he describes as preceded by a faintness, and terminating in a tendency to sleep. As his cough is still troublesome, I ordered him a *mixture* to be taken occasionally, composed of *oxymel scillæ*, *syr. ex althea*, *tinct. opii. camphorat. et vin. ipecac.* The *digitalis* was continued.

Sept. 6.—He is well—a slight affection of his head, which assails him at a particular time of the day, is the only complaint he has. Upon the supposition that it is a *nervous head-ach*, I have ordered him the *bark*.

[To be continued.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I SEND you these few observations on the subject of Generation, and the principle of Life; being a brief analysis of what I have published more at large on the same subject. If you think them deserving of notice, you are at liberty to insert them in the Medical and Physical Journal.

I am, &c.

Your's very sincerely,

NEWINGTON, SURRY,

Sept. 14th, 1799.

RICHARD SAUMARIEZ.

The

The Medical Journal of the last month contains a paper on *Animal Impregnation*, evidently written for the purpose of confirming two opinions, which have lately been broached and entertained on the subject. The one is, that the palpable application of semen to the ovarium does not take place;— and secondly, that the existence of corpora lutea constitutes the true test of animal impregnation.

In order to prove the error of the first opinion, I shall trace the various modes by which we know fœcundation is accomplished in some orders of the more simple systems, as it will enable us to understand the manner in which it is effected in those of a more complicated structure. Such is the regularity which vegetables, and the lower orders of animals, display in the actions they perform, that we are necessarily led to conclude, that those actions are governed by fixed and general principles, which they cannot either suppress or prevent; there is an appointed period of growth for the different organs in general of each, and an appointed season for the evolutions of particular organs, and when the disposition for their respective actions begins and ends. The alteration which vegetables periodically undergo, from a torpid to an active state, until fructification is accomplished, is obvious to every observer. In many vegetables the propagation of the species is not confined to one, but extends to several different modes, viz. by branches and buds, by suckers, by leaves, and by seed; when the propagation of the species is the consequence of seed, the organ by which it is produced is found to be resident, for the most part either in the same branch, or enclosed within the same calyx. There arises either directly from the summit, or from the sides of the germen or seed-bud, an erect column called pistillum, the base of which has received the appellation of style, and which is terminated by the stigma, or crown of the pistil, and is generally found with a downy covering of a moist quality; it is this organ which LINNÆUS supposed constitutes the female part of generation. External to the pistil we find the stamina to be situated; the base immediately arises from the plant, and proceeding in a thread-like form is called *filamentum*, which is terminated by the *anthera*; the anthera generally consists of two cavities, which contain a fine farinaceous powder, analogous to the *semen masculinum*, called pollen; these cavities ultimately burst, so that the pollen which is shed from the anthera, or summit of the stamen is received by the stigma, or summit of the pistillum, so that an union of both takes place. These are the means which vegetables employ to celebrate their connubium, or marriage, and the mode by which it is consummated. It appears to me impossible to do away the croud of facts which prove the power which the pollen contains, and the faculty it has of imparting the character of the system from whence it is produced, to the female system by which

which it is received; the various hybrid productions that are the consequent result establish the fact beyond controversy.

If we proceed from vegetables to the lower order of animals, we find that although the mode of propagation may be limited with respect to them, that it is far superior to what the higher classes possess. The sexes are also not only particularly distinguished, but there is evidently sexual intercourse between them: in them the mode of propagation is limited to one, requiring the union of two subjects before it can be accomplished. The first order of these animals is called hermaphrodite, when both sexes, male and female, are found existing in the same system—the snail, the slug, the leech, &c. belong to this class. Although hermaphrodite animals possess both sexes, it does not appear that the different sexes of the same system ever copulate together; the union of two separate systems is necessary to call forth the combined actions of the four sexual organs at one and the same time.

When we go to examine the generating organs of different animals, we shall find that the evolution they undergo at particular seasons is great and striking. The evolution of those organs is less evident in the higher than it is found in the lower classes—less evident in the human species than in quadrupeds—in quadrupeds than it is in birds, in the amphibia, in fish, or in vegetables. The direct evidence we possess that the semen of the male is applied in a palpable form to the ova of the female in the latter systems, lead us to make an analogical conclusion, that it takes place also in the former, although the manner is different, arising from the difference in the nature of their organization; I shall therefore proceed to examine the mode by which fecundation in them is accomplished.

The organs of generation in fish consist of two testes, and two ovaria; the system that possesses the one is called the male fish; the other is distinguished by the appellation of female. If either are examined in the winter season, during their torpid state, both these organs are found flaccid and empty; on the contrary, when viewed in the spring and summer, when the evolution in the system in general has taken place, these parts in particular appear distended and full. The testes, which are distinguished by the whiteness of their colour and softness of their texture, have received the appellation of roe, and are then full of a white fluid called semen. The female organs are called ovaria, known by the name of hard roe, and are completely full of ova.

When these parts have attained the full perfection of their evolution, they are expelled from each system; the semen of the male unites with the ova of the female, and fecundation ensues, without sexual intercourse between
both,

both. It is with a view of accomplishing this end that fish in general go in shoals—that particular classes of fish have particular latitudes for their habitation, and particular situations to which they resort at particular seasons, in order that the spawn which they shed may immediately combine together, an union takes place between the semen and the ova, without any intercourse between the parents, and fœcundation ensues to an extent far surpassing any example we witness of the most complicated frame.

In the amphibia, and birds, the same enlargement in the fœcundating organs is equally apparent. The animals that belong to the former class consist especially of the frog, the toad, the turtle, the lizard, and all of the snake kind. I shall take the frog as an example, because the changes the male and female undergo are more striking than in any other. We have constant opportunities of beholding the palpable application of the male semen to the female ova.

The male frog has a testis situated in the loins, having an excretory duct called *vas deferens*, communicating with a *vesicula seminalis*, which finally terminates at the *anus*. The female frog has a number of small ova, attached to a membrane, which is connected to the loins somewhat similar to the male testis. There is an oviduct terminating in an uterus, to which it is attached. The ovarium and the testes are remarkably small during the autumnal and winter months; but as the winter cold departs, and the vernal warmth succeeds, the testes and the ova become gradually developed, and ultimately assume a considerable size; so that when these animals are examined in the spring, the appearance they display is totally different from what they manifested in the winter. Instead of being thin and flat, languid and torpid, they are found, lively, and active. The male is plump and fat, the female distended, and swelled to a considerable size; and finally, instead of subsisting in a state of separation and divorce, they are found embracing each other, and consummating their union. Animals that are in this state are said to have the *astrum* upon them. The male climbs upon the back of the female, passes his arms over her shoulders, and adheres to the surface of her body in such a manner that the *vas deferens*, which terminates at the anus, is placed exactly above the vagina; this is the condition in which they are found, and which they preserve for a fortnight, until the final cause of their union is accomplished: the final cause of their union in the female consists in the expulsion of the ova which the ovarium contains—in the male it consists in the discharge of the semen from the testis, through the medium of the *vas deferens*, upon the ova, so that they become sprinkled by it in proportion as they are repelled, constituting the mode by which fœcundation is accomplished.

The mode of propagation in this prolific system, although very simple, is even more complicated than it is in fish. In fish there exists a separation between the male and female, but an union only between the semen and ova from without; in frogs there is an union between the male and female in general, before fecundation can be accomplished.

The higher species of the amphibious class are all of the snake kind: in them we find a considerable degree of difference which subsists;—instead of fecundation taking place without the use of sexual organs, fecundation can be accomplished by means of sexual organs alone. The male has two *testes*, with two *vasa deferentia*, which terminate not at the anus, as in the frog, but with two distinct penes, or male sexual organs, the surface of which are covered over with numerous papillæ. The female has two sets of ovaria, which extend from the middle of the animal's body to its posterior extremity, containing an abundant quantity of ova; there are two Fallopian tubes, or oviducts, which receive the ova from the ovaria, and convey them to the uterus, from whence they are expelled. Although the mode of fecundation is different in these higher systems, the end is evidently the same as in the inferior; the semen, instead of uniting with the ova out of the body, is conveyed within by the agency of the sexual organs of the male, through the medium of the Fallopian tubes, to the ovaria of the female, in order that it may unite with the ova which are sufficiently evolved, that fecundation may be accomplished. That the Fallopian tubes possess the power of conveying the semen to the ovaria, is evidently proved from the strong and active peristaltic motion they display, and which appears evidently designed in the first instance to convey the semen to the fimbriæ; while the fimbriæ, which before only covered a small portion of the ovaria, are gradually expanding themselves, so as to grasp and completely enclose the ovaria. It is by the wonderful reciprocity of action at this time in these various parts, that the semen is applied to the surface of the ovaria, and the ova which have evolved and enlarged become fecundated by the union of the semen with them.*

On examining a doe rabbit, which I killed two hours and a half after she had been admitted to the male, independant of the inward vascularity of the Fallopian tubes, and strong peristaltic motion—of the progressive attachment of the fimbriæ to the ovaria—and of the protruding condition of several ova in them—I do declare, that I discovered a fluid in colour and consistency exactly similar to æther, and which spread itself as æther is wont to do, when
rubbed

* Having given in detail all the experiments that illustrate the subject of animal fecundation in the System of Physiology which I lately published, I must refer the reader to the work itself.

rubbed between the fingers, supported by that portion of the expanded fimbriae which had not yet grasped the ovarium. I firmly believe that this was the fluid destined to impregnate the ova. I do not, however, wish to dwell too long on one solitary fact, when the analogy is so strong and so general, that it cannot be resisted. The union of the semen to the ova is proved directly in the whole inferior order of animated beings I have examined—in the amphibia—in fish—and in vegetables; why then should it be denied to the higher classes?—For no other reason than the mere supposition that “it is absorbed from the vagina, and conveyed to the general system, where, by its peculiar stimulus it produces the changes which happen *after* impregnation in the uterus—its appendages and the breasts perfecting what the stimulus of coition had begun.” This is the mere *ipse dixit* of your correspondent, unsupported by proof; refuted by analogy, arising from his ignorance of the true end for which the act of coition is designed.

In proportion as we ascend in the chain of animated existence, we find a considerable abatement in the effects which œstrum alone produces; the power and disposition to action in the generating organs progressively diminishes, requiring causes of a more active nature than we behold in the lower orders. The power which the female of oviparous animals possesses of evolving the ova she contains when the season for fœcundation is present, does not extend to the animals of an higher class, by virtue of that power alone; a necessity absolutely exists that in them sexual union should take place, not only for the proper secretion of semen, but for the evolution of the ova. The excitement which the ovaria sustain during, and in consequence of that act, constitutes the only means by which the ova can evolve, and become separated from the capsules in which they are inclosed—in the lower orders, a total separation of the semen and of the ova ensues, although no sexual unions have happened has taken place.

[To be resumed in our next Number.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I TRANSMIT to you the following case of Hydrocephalus, for insertion (if it meets your approbation) in your valuable Journal. My attention has been too forcibly of late called to this subject, by the loss of a darling child. There was a degree of obscurity in the symptoms in this case, which might readily lead to a false judgment of the disease, and which, in fact, did induce a medical friend, whose aid I solicited, and on whose discernment I
had

had a strong reliance, to doubt of the real nature of the affection, for a considerable time after its commencement.

The diagnosis, if not the most difficult, is unquestionably one of the most important parts of medical science, for none has a greater influence on the event. I am willing to hope that the annexed case and remarks may, on some future occasion, lead to the more ready detection of a disease, which, I am persuaded, in children especially, is not unfrequently overlooked.

I am, with much respect, yours, &c.

WALBROOK, Sept. 16, 1799.

H. CLUTTERBUCK.

T. C. a little more than two years of age, for the last twelve months had enjoyed but an indifferent state of health. The abdomen was large, and the state of the bowels irregular. About two months preceding the present illness, he was affected with severe inflammation of the eyes, and which extended superficially over great part of the head and face, and left a scabby eruption on the scalp, which discharged considerably. On Thursday, the 4th of July, 1799, he was observed to droop, and to shew a disinclination for food. The following night he slept less soundly than usual, and vomited on being taken out of bed in the morning. The skin was hot, he was thirsty, and the tongue was covered with a whitish crust; he refused food, and the bowels were costive; the tendency to vomit was encouraged by giving a tea-spoonful of antimonial wine, which, at the same time, evacuated the bowels. On Saturday and Sunday the child continued as before, much indisposed, but with no other appearances than those common to children in a febrile state. The disorder was attributed to cold; and this opinion was confirmed by observing, that the head was inclined to the left shoulder, with some degree of rigidity, the child crying out when the neck was attempted to be straitened.

July 8th. On Monday the feverish symptoms had rather increased; the lips were parched, and the thirst was greater. I now first began to suspect some local affection of the head, and that a foundation was laying for hydrocephalus. There was an unusual appearance in the eyes, but which I could not well describe. I thought I observed a tendency to squinting at times, but this was so small and fleeting, as to be unnoticed by the by-standers, and was readily supposed to be the imaginary creature of my fears. There was no reason to think the power of vision impaired: the pupils contracted readily on exposure to light. The bowels were still costive. The pulse was regular and strong, and hardly quicker than in health. This state of the pulse, likewise, gave me some alarm; for it was less irritated than in proportion to the general disorder of the system.

There

There was, however, no preternatural slowness. The child shewed an unwillingness to be kept erect, was restless, fretted much, with a constant desire of changing his situation, and of being carried from place to place. The eruption on the scalp which before subsisted now became dry, and ceased to discharge altogether.

It became now a question in what light to view the disorder; whether as hydrocephalus, or as simple fever? For myself, I had adopted the former opinion; but it was imagined my fears had magnified the evil, and that the symptoms were no more than those common to children in the teething age. It was resolved, however, not to lose sight of the former supposition, and especially as the state of the pulse warranted the use of such evacuations as might be indicated. A blister was applied accordingly on the top of the head, and the dry scabs were rubbed with the ointment of cantharides, to solicit a return of the discharge. A purgative was given of scammony and calomel, which operated readily and freely. The room in which the child was kept was darkened, and the heat of the skin moderated by cool air and drinks.

On the 9th and 10th he continued much in the same way, without any material change of symptoms. His sleep at night was irregular and disturbed. The purgative was given daily, together with occasional small doses of antimony, to induce a moisture on the surface of the body. He took no food during this time, but drank freely of toast and water.

Thursday the 11th.—The child was restless the beginning of the night past, but slept soundly towards morning. To-day he appears considerably better; he is less hot, less fretful, and notices, with apparent satisfaction, those around him. The tongue is still white, but less dry. The appearance of the eyes is natural, and the pupils contract readily. The pulse is strong, and of the natural frequency*. The inappetency for food still continues.

Friday, 12th, morning.—The feverish symptoms increased towards evening yesterday: yet the night has been passed more quietly than before, with

* I have not thought it worth while to notice the exact number of pulsations in a minute, though they were actually measured. The frequency of the pulse is influenced by such trivial causes, and so often varies from change of posture, of respiration, &c. &c. that an actual enumeration may well be neglected, as affording no satisfactory conclusion, or guide to the judgment. Its general condition, with regard to frequency, may be ascertained with sufficient precision, without the aid of a stop-watch.

with a good deal of sound sleep. The heat of the skin is abated, and he has eaten, for the first time these four days, some bread soaked in tea, with much apparent relish. He is unwilling to be taken out of bed. The appearance of the eyes is natural. He is observed to keep his hand almost constantly applied over the right eye, which, however, with the other, has a natural appearance, and the countenance expresses no pain, and hardly differs from health, except in being somewhat flushed.

I was now ready to believe I had been mistaken in my suspicions of injury existing in the brain. The disorder seemed about to terminate in the most favourable manner. But a considerable change for the worse took place in the course of the day. The feverish symptoms increased considerably towards evening. He shewed great tendency to doze, but his sleep was unquiet and disturbed, and in it he moaned frequently and sighed. The pulse was not perceptibly altered, but there was a change in the manner of his breathing which greatly alarmed me. He breathed slowly, with long intervals, and expiration was frequently accompanied with a long-continued moan. (This symptom I had particularly remarked some time before, in the case of a young man, who had for several months laboured under symptoms of oppressed brain, and in whom I found a large accumulation of water after death.) An unusual appearance of the eyes again struck me; they seemed to be differently directed: but the change was so slight, as hardly to be perceived by the attendants, to whom I pointed it out. The pupils were not perceptibly enlarged, and contracted readily to the light. He had had two or three loose motions in the day, and as he appeared to be uneasy in his bowels, the antimonial was discontinued.

Saturday 13th, ten in the morning. The feverish symptoms ran high till three in the morning. He dozed constantly, with frequent moaning as before. At this time the scammony with calomel was repeated: he appeared better about five o'clock, and eat heartily of bread soaked in tea as before. He slept soundly after this for the space of two hours, without moaning. He is now heavy and drowsy, and his breathing continues slow, with moaning and sighing. The pupils are now evidently enlarged, and contract less readily than they did to the light. The eyes are at times slightly distorted. There is no tendency to delirium, nor any apparent defect of vision. There has been no evacuation by stool since yesterday morning, but he makes water frequently, though not involuntarily. The skin is hot and dry, and the face flushed: the features are composed, and betray no uneasiness. The posture in which he lies is perfectly natural and easy. The pulse is quicker than it was. The purgative was repeated.

Two o'clock, afternoon. Continues to doze; at times quietly, but for the
most

most part is restless, and moans frequently; respiration as before. Countenance exhibits more distress, and the muscular strength is evidently much impaired. He appears to be sensible to surrounding objects, but the eyes look dull, though without distortion: the pupils little, if at all, dilated. Has had two copious stools. The pulse is moderate in strength and frequency, is regular, but still what one would term slightly feverish. Tongue white. The feet and legs were ordered to be immersed in hot water, and a large blister to be applied to the occiput, and another to the nape of the neck.

Eleven at night. The heat of the skin is much increased, and the pulse and breathing are quickened. The dozing continues, but the child is evidently rendered uneasy by the blisters.

Sunday 14th, ten in the morning. He continued dozing till one in the morning, when he awoke, and took his bread and tea in a ravenous manner, the eyes appearing wild and distorted at the time. Had a lax motion soon afterwards, and slept pretty quietly for some hours. At this time his attention to what is passing around him shews him to be sensible, and he has replied feebly to some ordinary questions. The pupils are large, but they contract on exposure to light. The heat of the skin is considerable. The pulse is pretty strong, and regular, not exceeding 110 strokes in a minute. The blisters have discharged freely. The breathing is now quick and regular, without moaning, as in ordinary cases of accelerated circulation.

Monday 15th, noon. The whole of yesterday and last night have been passed more quietly than before. The child has dozed almost constantly, waking at intervals; but the sleep has been apparently more sound and natural. He has taken bread soaked in tea freely, every four or five hours, when offered him, but he does not ask for it. He refuses broths, and other animal food, but takes fruit eagerly. The febrile symptoms are more moderate than whilst the blisters were acting. The countenance is composed. The eyes are at times slightly distorted: the pupils are large, but contract to the light, though less readily than they did a day or two back, when the febrile symptoms ran higher.

Tuesday 16th, morning. The night has been passed in seemingly quiet sleep, waking now and then for a few minutes at a time. Pulse regular, but quicker, and more feeble. Heat of skin considerable. The eyes appear more insensible: the hearing and touch not visibly impaired.

Evening. Had a natural motion. Continues dozing as before, but takes food at regular intervals, when offered. In all other respects nearly as before. On being taken out of bed just now, and held erect on the nurse's

lap, he fainted almost immediately; the eyes became glassy, with cold sweats; and he appeared in danger of instant dissolution*. These symptoms soon went off on his being replaced in bed, but they left him evidently considerably more languid and weak than before.

Wednesday 17th, morning. He continued dozing till one o'clock in the morning, when on offering him his usual food, it was observed he had scarcely power to swallow, though he evidently wished to take it. Upon the whole, the child appeared to get rapidly worse. Slight convulsive motions of the eyes and mouth were observed to take place now and then; there was likewise some frothing at the mouth. The skin continues hot, and the face is flushed.

Ten at night. The pulse grows quicker and weaker: in other respects much the same.

Thursday 18th, morning. Stupor continues, Pulse quick, though tolerably strong. Swallows a little water occasionally when put in his mouth with a spoon. Appears wholly insensible.

Evening. The breathing has become quicker, and is performed with labour. Pulse very rapid and small. A good deal of brown frothy saliva has issued from the mouth. The heat of the extremities keeps up.

Friday morning. About the middle of the night the breathing became more laborious, with much rattling in the throat. Pulse nearly as before, rapid but regular, with clammy sweats, all foreboding speedy dissolution. Some efforts to cough were made, with the effect of removing the phlegm, and rendering the breathing more easy.

Evening. After some hours the breathing became again exceedingly laborious, the pulse too rapid and feeble to be counted, and death closed the scene about four in the afternoon, on the fifteenth day of the disease.

The

* Did this arise from the pressure of the water on the basis of the brain? Or was it simply faintness, such as we observe to take place on suddenly removing a person greatly debilitated, from the recumbent, to the erect posture, and which is probably owing to the vessels being unable to transmit the blood in a direction to which they have for some time been unaccustomed? A few months ago I met with a case much in point:—A little girl recovering from a malignant scarlet fever, and still too weak to quit her bed, was attacked with inflammation of the parotid gland, which, after three days of most acute pain, preventing sleep altogether, suppurated largely and burst. A few hours afterwards, on being taken suddenly out of bed, she dropped her head, and died instantly in the mother's arms, without a struggle, or convulsive motion of any kind.—This may suggest a caution in similar circumstances.

The equivocal nature of the symptoms, during a considerable part of the progress, made an examination after death much to be desired. For the following account I am indebted to the friendly offices of Mr. ASTLEY COOPER, Lecturer on Anatomy and Surgery, at St. Thomas's Hospital.

Appearances on Dissection.

“ As some suspicions had been entertained, that disease existed in the abdominal viscera, the abdomen was opened, but upon the most careful inspection, no diseased changes could be discovered. The viscera of the thorax were also all in a perfectly healthy state.

“ The head was next examined.—The different sinuses of the dura mater were larger than they are usually found at this child's age, and they contained more than the common quantity of blood.

“ The vessels of the pia-mater were unusually empty, but a serous fluid had been effused between the laminæ of which this membrane is composed.

“ When the superior part of the hemisphere of the brain was removed, the upper surface of the ventricles appeared more prominent than usual; and when this part was struck, a general undulatory motion of the brain was produced.

“ An opening was made into the right lateral ventricle, and five ounces of water were discharged from the four ventricles, leaving the parts which formed them widely separated.

“ The membrane which surrounds these cavities exhibited no sign of inflammation, and no other marks of disease could be detected.”

Hydrocephalus is a disease which, like many others, is so clearly and forcibly described in books, that one would suppose it might in all cases be readily recognised. It is the prominent features, however, alone that are thus laid down; the minuter shades are difficult, and often impossible to be well described in words. The eye easily sees what language is inadequate to paint. Hence it is, that a just knowledge of the nature of diseases is unattainable in any other way than by actual observation. But from the case above described, and from others which I have witnessed, I am convinced that hydrocephalus is often present, without being marked by those striking appearances which are supposed essentially to characterise it. Thus the symptoms which are laid down by the generality of writers as pathognomonic, as stupor, dilatation of the pupils, preternatural slowness of the pulse, and convulsions, were none of them present, in any remarkable degree, in the case above related,
till

till towards the close of the disease. At the same time, the resemblance to common fever was so strong, as to induce a hope, for a considerable time, that such was the real nature of it. That hydrocephalus commences often with the common symptoms of fever, and none other, I am well convinced. In one case which I examined after death, I continued under this mistake for the first week of the disease, when the nature of the complaint became evident, by the comatose and convulsive symptoms.

The most striking circumstances attending the above case were, the absence of delirium and convulsion, the contractility of the pupil of the eye, and the regularity of the pulse, which varied little from that of health for a long time, and was never intermittent or preternaturally slow. When these are present, together with the common febrile symptoms, it is not surprising that the nature of the disease should be overlooked, and the most favourable moments for relieving it lost.

Respecting the mode of treatment which was adopted, many, I have no doubt, will consider it as inert and trifling. It was, no doubt, influenced by the uncertainty which existed respecting the nature of the disorder. Whilst a hope remained that simple fever was present in a mild form, going on to its natural termination or crisis, very free evacuations or very active means of any kind, were hardly admissible; especially as the former were not indicated by any marks of active inflammation in the system. But even if there had been less doubt of the nature of the disease, and the marks of oppressed brain had been more apparent, I am not sure that I should have pursued a very different mode of practice from that which was actually employed. The effects of mercurials, and the other remedies commonly recommended for hydrocephalus, afford little encouragement to imitate them. If recoveries have sometimes followed their use, they have at least as often failed. Their powers, therefore, are at best equivocal, and possibly they may sometimes have done harm. Recoveries again have taken place where none, or comparatively inactive remedies, have been had recourse to. A few months back I had under my care, in the Dispensary, a boy of nine years of age, of a scrophulous habit, ill-fed, with a pale and fallow skin; in whom marks of irritated brain arose, but with some peculiarity of symptoms. The pulse and breathing were in this case both exceedingly rapid, the tongue was furred, bowels coctive, pupils exceedingly dilated, with great pain in the head, and confused vision; there was likewise some disorder of the intellect. Blisters were applied to the temples, and as there was a perpetual restlessness present. (he dozed and moaned frequently, but had no sound sleep), one drop of tincture of opium was given every two hours, and the feet were bathed in warm water. The bowels were opened by scammony
and

and calomel. By these means, in three or four days, the symptoms gradually disappeared, the quickness of pulse subsided, and the pupils recovered their contractility. The same symptoms returned about a fortnight afterwards, and again yielded to the repetition of blisters with opium.

The great fatality of hydrocephalus, in spite of the most powerful modes of treatment, may be gathered from the following statement, which I might easily have enlarged. Mr. I. PAISLEY relates a case, in the *Ed. Med. Eff.* v. 3. p. 23, in which blistering, cupping, and scarification of the head, with other remedies, were ineffectually employed. He mentions his having met with many similar cases, which terminated fatally. Dr. PERCIVAL, in a letter to Dr. DUNCAN, containing miscellaneous practical observations, has some remarks on hydrocephalus internus. (*Med. Comment.* v. 5. p. 174).

“The fatality (he says) of this disease has been acknowledged and lamented by the most experienced and intelligent physicians. The late Dr. WHYTT, of Edinburgh, has recorded twenty cases, which baffled all his skill and judgment; and a physician of the highest reputation, in his excellent remarks on this disease, candidly confesses, that it is not in his power to suggest any probable means of curing it; and that it has hitherto disappointed all his attempts, both when confided in alone, and in consultation with the ablest of the faculty. (*Med. Obj. & Inq.* v. 5. p. 40.)”

Such was the fatality of the disease before mercury was suggested for its cure by Dr. DOBSON; and we shall not find that it has been materially lessened since. The cases of success are few; those of failure are as numerous, and of these a few only have probably been recorded. Dr. S. F. SIMMONS, in a letter to Dr. Duncan (*Med. Com.* v. 5. p. 415), endeavours to shew that the good effects which have occasionally been observed to follow the use of mercury in this disease, are more attributable to the blisters, and other remedies, which have been employed in conjunction with it, than to the mercury itself. He remarks, that salivation by mercury is sometimes preceded by convulsions in very young subjects. He was informed by Dr. ODIER, of Geneva, that the practitioners of that city, had often succeeded by large blisters to the head. Dr. DAWSON lays great stress on opiates in these cases, for the purpose of obviating spasm. He advises to cover the whole head with blisters, and to apply them likewise behind the ears. In two cases which terminated successfully, he ascribed the cure to the Theriaca Andromachi; but blisters had been conjoined. Mr. WILMER, in his “*Cases and Remarks*,” records the unsuccessful employment of mercury, though salivation was induced by it. Dr. EASON, of Manchester, cured a case of hydrocephalus by mercury, but it was of the chronic kind (*Med. Com.*

Com. v. 8. p. 325). Dr. AERY, of Whitehaven, also succeeded by the use of mercury in one instance (*Ibid* 322). Dr. A. HUNTER, of York, relates a case which was cured by the vapour-bath; but this also was of the chronic species (*Ibid*). Dr. A. CAMPBELL, of Hereford, says: "In a long course of practice, I have attended many patients ill of hydrocephalus internus, and am sorry to say, I never knew more than one recover; a young man of twenty-five, who was recovered by repeated bleeding, and purging with salts." He then mentions two cases in which mercury was employed; one of which was cured, the other terminated fatally (*Med. Com. v. 9. p. 240**). A further inquiry into the event of cases recorded, would afford an equally unsatisfactory result with those above adduced.

From these, therefore, it is impossible to place much reliance on any of the modes of treatment which have been adopted hitherto, or to be very sanguine in our expectations of relief from art. We have seen the disease combated by very different means; by bleeding, and other evacuations; by blistering; by opium; and by mercury. Cures have succeeded to all, but they have all as frequently failed. Others again have recovered, where no active means were employed. In the last autumn, when the malignant fore-throat with scarlet eruption, was very prevalent and fatal in and about London, I attended, with Dr. SAUNDERS, a little girl about ten years of age, who, on the subsidence of the febrile symptoms, was attacked with anasarca. From the affection of the head, which now arose, and which kept pace exactly with the effusion in the cellular membrane, I have no doubt that effusion had equally taken place in the brain. Constant delirium was present, with little or no fever, and the pupils were greatly dilated. Violent convulsions also came on, and continued for many hours, when a purgative was given for the purpose of producing absorption: this end was effected in some degree, with proportional relief of the affection of the head; but a few hours again produced accumulation in the cellular membrane, and disturbance of the intellectual faculties. This change I observed more than once, and it is perfectly analogous to what takes place in dropsies, in debilitated habits, where purgatives relieve for the instant, but rather, by their weakening effects, favour further accumulation afterwards. It was determined, therefore, to leave the case to nature, in the expectation, that as the general strength returned, the extreme vessels would likewise recover their healthy action, and the superfluous fluid be removed. In this we were not deceived.

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* Dr. PATERSON found, on collecting the histories of hydrocephalus, in which mercury had been employed, that the number of patients who died was greater than those who recovered, under its administration, in the proportion of twenty-two to twenty. (*Vide* "Pateron's Letters to QUIN, on the Internal Dropsy of the Brain." Dublin. 1794.)

The anasarca and the affections of the head both gradually disappeared together; the mental faculties, however, remained for some time impaired, a degree of childishness and fatuity subsisting for several weeks.

Upon the whole, it is fair to conclude, that the recoveries which have actually taken place in this disease, are more owing to natural efforts, than to the interference of art. Hydrocephalus, like other diseases, differs greatly at different times, in degree of violence and of danger. It arises in subjects very opposite to each other, and therefore not likely to be benefited, exclusively, by any one mode of treatment. It would be well, however, if we knew more than we do of its intrinsic nature, or proximate cause. From its accompanying general anasarca, as it often does, it is, in such cases, probably founded in the same general causes, and calls for a similar mode of treatment. No one would think here of blood-letting, or other debilitating remedies. This, perhaps, is the species of the disease in which blistering promises most, and to which the use of mercury appears best adapted, from the power which these remedies possess of promoting absorption. Some, as Drs. WITHERING, QUIN, and others, consider hydrocephalus as originating in inflammation; and the accumulation as a consequence only of this. Traces of inflammation have not commonly been observed on dissection after death, though they sometimes have; yet there is little doubt that many cases of the disease are accompanied with an increased or inflammatory action of the vessels of the brain. This is evident from the head-ach, throbbing of the arteries, flushing of the face, parched tongue, and other febrile symptoms, which present themselves. Blood-letting and the antiphlogistic plan seem here to be particularly indicated, and have, no doubt, in such cases been successful: where, however, the general system partakes little of the inflammatory diathesis, and the pulse is little irritated (and that there are such cases, is proved by the one detailed above), I fear the effect of general evacuations will be less favourable. Hydrocephalus, too, most frequently occurs in scrophulous and rickety habits, which ill bear evacuations of any kind, to any extent. The tendency to disease, is in these cases so strong, and efforts of art in general so unavailing, that recoveries cannot be expected often to occur. This affection is well known frequently to pervade families, affecting all, or the greater part of the children, at a certain age. This shews how much it depends on general habit, rather than local affection; were it the result only of occasional or accidental causes, our efforts to relieve it would more frequently be attended with success.

Dr. Withering has suggested the employment of digitalis as a remedy in hydrocephalus; but it has not yet received the sanction of experience. To what particular state of the disease it may be adapted; whether it might

relieve by diminishing arterial action, or by its power as a diuretic, on the same principle that it succeeds in the cure of dropsy, is uncertain, and only to be determined by cautious experiment.

Hydrocephalus is especially liable to be overlooked in infancy, and to be passed by under the general, and, for the most part, unmeaning appellations of *teething* and *worms*. These are convenient terms for the indolence of the practitioner, and serve to satisfy the anxious mind of the parent. I am acquainted with two instances where the cases were thus lightly treated, and the danger overlooked, and that too by practitioners of some note, both of which terminated fatally in a few hours. Dissection afterwards pointed out their real nature. If the nature of this disease be such, as I fear it is, that it will in the majority of cases prove fatal, in spite of any treatment, it is still of importance that it should be early seen, and not confounded with others of little, or inferior magnitude. Both the character of the physician, and the happiness of families are implicated in this.

Farther Observations on the treatment of Hydrocephalus internus:—By MR. CHARLES BROWN, Surgeon.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

BY your permission, I continue my observations on the treatment of dropsy of the brain. Considering the treatment of *hydrocephalus internus* by no means so difficult as practitioners in general imagine, I presume the following remarks will not be found unworthy of insertion in your very useful publication, to which I wish all possible success; and remain, with the greatest respect,

Your most obedient servant,

NO. 25, HATTON GARDEN,

CHARLES BROWN.

Sept. 7th, 1799.

In reflecting, at various times, on the nature and treatment of hydrocephalus internus, some ideas have occurred to me which I have neither met with in conversation or books. Our imperfect knowledge of the structure of the brain, and of the diversified energy of the nerves, in their origin, progress, and termination, necessarily involves the disorders of the head in a
peculiar

peculiar degree of uncertainty; and it is often extremely difficult to discriminate even between the sympathetic and idiopathic affections of that important organ. It cannot, therefore, be surprising, that the causes of hydrocephalus have not hitherto been ascertained with any degree of accuracy or precision. The light which dissections afford is obtained only at the close of the malady; and the state of the encephalon may have undergone considerable changes, either by the operation of nature, or by the action of the medicines employed.

The *symptoms* of this complaint are:

At the beginning a pain in the head, generally confined to one side, especially above the eyes, and in a direction between the temples; then follow heaviness, loss of appetite, deafness, sickness at stomach, costiveness, stupor, and coma; there is fever, with a frequent, weak pulse; the skin is dry and hot, and there are frequent flushings in the cheeks. In the commencement of the disease, the pupils are very much contracted; but as the disease advances, a dilatation of the pupil takes place, chiefly in that eye on which side the fluid is collected. The child at intervals will scream out, and have frightful dreams; latterly it will pick the bed-clothes, have *subfultus tendinum*, and talk incoherently. In this state I lately attended a child (with a physician), who lingered out a fortnight, occasioning the most poignant distress to its parents. M. PETITE, in the "*Memoirs of the Academy of Sciences at Paris*," has remarked other symptoms at the commencement of the disease, which are worthy of attention: these are—convulsive motions of the lips and eye-lids; biting the lips; picking the nose; grinding the teeth; costiveness, or purging; languor of the eyes; paleness; debility; heaviness, and depression of spirits; sleepiness, with perpetual moaning; and sometimes inability to support the head upright. He observes, that the disease comes on after worms, painful dentition, and violent convulsions. Dr. FOTHERGILL adds, short and disturbed sleep, and towards the close of the disease, urine and stools come insensibly away; the iris immoveable; the heat great; breathing suspicious; the pulse trembling, and quick beyond the possibility of counting; after which a spasm puts a period to the gloomy scene.

The patients of M. Petite died convulsed, and he found water in the brain.

Hydrocephalus is distinguished from apoplexy by its being attended with fever, and from nervous fever by the paroxysms being very irregular, with perfect intermissions, many times a day. In nervous fever, the pain in the head generally affects the middle of the head—in hydrocephalus it is usually on one side; and I agree in opinion with Dr. DARWIN, that the great dis-
position

position in persons labouring under the disease to lye down immediately after having raised their heads from off the pillow, is owing to the pressure of the water on the large trunks of the blood-vessels entering the cavity, being more intolerable than on the smaller ones; for, if the large trunks are compressed, it must inconvenience the branches also; but if some of the small branches are compressed only, the trunks are not so immediately incommoded: and I think it is highly probable, that where one eye is affected, the disease exists in the ventricle of that side. In the chief number of cases of hydrocephalus I have had an opportunity of examining after death, I have found the fluid lodged in the cavities or ventricles of the brain. Authors have set it down as a great peculiarity, that the water has been collected within the brain in particular capsules. Once or twice it has been found above or upon the brain, between that and the finer *tunica* next to it; likewise between that *tunica* and the firmer exterior one, which also is said to have been separated from the interior vault of the cranium, and consequently to have given room to water; but in these very rare cases, the water has besides been found in the ventricles of the brain, where it probably first has been collected, and from thence found an issue. The late Mr. JOHN HUNTER supposed, that the fluid was always collected in the cerebrum *only*, and that the cerebellum never had any share in it. Children are sometimes born with the bregma stretched, and a pulsation felt through it; and where this part remains long unossified, AQUAPENDENTE advises us to discharge the water at this place. But this is dangerous; for so suddenly taking off a pressure the brain has long been accustomed to, may very likely kill the child. HIERONYMUS MERCURIALIS,* who wrote in the beginning of the sixteenth century, was perhaps the first who mentions the disease as having its seat in the ventricles. WEPFER also just says that water has been formed in the cavities of the brain.† BOERHAAVE, Petite, and others have likewise spoken of it; but no author, I believe, described it at all accurately before Dr. WHYTT, who expressly wrote on the internal watery head, anno 1768. But it has not been generally noticed, that the water lies sometimes between the pia-mater, and the brain, as it is found to do in maniacs‡; and Dr. UNDERWOOD has met with it both there and in the ventricles, in the same subject, and always in infants under two years old.¶

Of the Causes of Hydrocephalus.

On this head there are various and opposite opinions. Dr. PERCIVAL supposes this complaint to arise most commonly from glandular obstruction,
and

* 'Opuscula aurea, lib. de Morbis Fœuerorum.'

† 'Histor. Apoplect.'

‡ 'Haslam, on Insanity.'

¶ 'Diseases of Children, vol. i. p. 272.'

and either general or local plenitude. Dr. QUIN imagined it to arise from pressure on the brain, and fullness of the vascular system from other causes. The remote cause is attributed by an able surgeon in this city (Mr. EDWARD FORD) to an inflammation of the vessels of the pia-mater, which may owe its origin to the measles, small-pox, scrofula, and other complaints, which may affect the brain in the same manner they do the mesenteric and other glands. As to any hereditary disposition, no sound reasoning can be advanced in its favour*. I consider dropsy in the head to arise in the same manner as in other parts of the body. The ventricles of the brain, as well as all other cavities of the solid parts, either larger or smaller, are kept smooth by a subtle, aqueous vapour, which continually perspires from the blood-vessels. It is easy to conceive, that though the vapour be ever so subtle and imperceptible, within a short time, nevertheless, it would, not being carried off for some days, or months, be collected in a quantity, so as at last to disorder and flow over the place. Providence has prevented the disorder which would arise from hence, by furnishing the brain with innumerable lymphatic vessels, which being roused into action by proper and well-timed remedies, gradually absorb the fluid, after which these vessels carry it into the blood again, the superfluous parts of it being deposited and carried off by certain means provided for that purpose.

Under a state of disease of the nature of dropsy, the vapour is more copiously effused, and a collection of water is perceptible; this is universally the case in dropsy in what part soever it has its seat; therefore the *causa proxima* may be a fault either in the tubes that carry the vapour to and from the place, or in the quality of the vapour itself. Accumulations of water arise in any part of the system, whenever the internal vessels of exhalation are relaxed and dilated, so that they perspire more than a due quantity, and the process of absorption is more tardy. We know that most of the fluids secreted from the circulating mass, and poured into cavities, may be absorbed from these, and returned again by the lymphatics to the course of the circulation. But the same secreted fluids seem often to be returned also into the course of the circulation, or retrograde motion in the excretory and secretory vessels†.—As the disease may originate from such different causes, there can be no doubt but it may sometimes be a chronic disease, and its appearances very insidious.

[To be continued in our next Number.]

* I have already contended against hereditary diseases, in my work on Scrofulous Affections; 8vo.

† Cullen's Physiology,

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following case of extra uterine foetus, especially as it is attended with some circumstances tending to the relief of others (who may happen to be in a similar situation) at an earlier period, may not be deemed unworthy of a place in your useful publication.

Mrs. COOPER, of Lakenham, sent for a midwife on the 25th of December, 1798, who informed her, she would be delivered in a very short time, and caused her great pain, with a small discharge of blood, which continued for some days; I suppose, by endeavouring to rupture the membranes, mistaking the vagina, pressed down before the head of the child, for the membranes.

She was, at that time, at the full period of her reckoning. On the 7th of January, 1799, I was sent for, and as she had no pain, I waited a considerable time, and on examining her, found a globular substance very low in the pelvis, which I supposed to be the head of the child, but I could not discover the os uteri. I staid with her some time longer, and told her nothing could be done; but desired they would send for me if her labour came on. She was at that time past what she reckoned her full time, had bore children before, and had been accurate in her reckonings. Said she had felt the child, but thought it different from her former pregnancies, and had felt nothing of the child since Christmas day.

The very deep snow of 1799 falling soon after this time, rendered the roads from Norwich to Lakenham impassable for some days, and I thought she had been obliged to call in such assistance as could be procured in the town, till I was informed by one of her relations, whom I attended, that she was very unwell, but not delivered. I therefore called upon her on my way to Caistor, as I thought there must be something singular in the case. She told me, she had felt nothing of the child since Christmas day; but, that she was certain she had previous to that time, although different from her sensations on similar occasions. The body had nearly the same appearance as in natural pregnancy, with an uneveness a little above the os pubis. The whole had not exactly the usual globular form of the impregnated uterus. She had, at this time, exceeded her reckoning more than two months. I found the child's head pressing down very low, and could not discover the os tincæ in its usual situation, but thought I discovered it above the os pubis. On endeavouring to pass the finger towards the sacrum (the usual situation

of

of the mouth of the uterus where it lies high), it could not pass, owing to the vagina obstructing it in every direction backwards. I could pass the finger very high by the pubis, in which situation I found the os uteri as before described. I mentioned my suspicions of its being an extra-uterine fœtus to Mr. COOPER, surgeon of the third Lincoln militia, and requested him to see her with me: he thought it was the os uteri above the pubis, which could not be felt very distinctly, as it was situated very high. I examined her again, and concluded it was an extra-uterine fœtus, lying between the rectum and the womb, pressing the uterus up against, and chiefly above the pubis.

Mr. RIGBY (whose opinions upon these subjects are much to be respected) having seen her in the earlier part of her pregnancy, I mentioned the case to him, and asked him to see her with me. I was prevented being present at the time appointed, but requested he would examine her; his opinion was, that there was something extraordinary in the case, but was not fully confirmed that it was extra-uterine.

Her health was very much impaired, being affected with diarrhœa, for which, she occasionally took opiates and astringents. I was sent for, early in the morning, on the third of May, she being now, more than four months past her reckoning. I found her very weak and low, her mouth sore, pulse quick, and the diarrhœa continued; she had ejected during the night, a considerable quantity of fœtid, bloody water. On examining her, I found an opening unlike the os uteri, and my finger passed immediately into the head of the child; she had no pain except what I gave her, as I used some force, pressing upon the inside of the bones of the cranium, and endeavouring to dilate the opening. I left her, and told her I would call again, which I did, and took Mr. Rigby with me, who examined and brought away a portion of the cerebrum, which was very offensive. I afterwards brought away one of the parietal and the occipital bone, and also one of the temporal; she was very much exhausted and faint; we therefore left her, fearing it would be impossible to extract the whole of the fœtus. Mr. Rigby called on me on the fourth, and after some conversation, I saw Mrs. Cooper, and found the other parietal bone in the situation it was left on the third, or nearly so, which I with difficulty brought away. By introducing my fingers into the opening in the vagina, and fixing them upon the vertebrae of the neck, I brought two of them away; but finding the shoulders obstructed by a part of the vagina, I pushed my hand past it, got my finger into the arm-pit, and at last, succeeded in bringing away the remaining part of the fœtus, in a highly putrid state, no portion of the navel string remaining. It appeared to be a male child, at full time when it died, both from
the

the formation of the bones, and the size of the fœtus: the woman was so faint and exhausted, that I thought it more prudent to desist from introducing my hand to examine for the attachment of the placenta, concluding, that the least evil would be, to trust to nature for its expulsion, if it was not already dissolved, and in a state to come away with the discharge.

On the fifth I called, with Mr. ALDHOUSE, and found her very low and faint; she had purged, and her mouth was covered with aphthæ, the discharge considerable and very offensive; the womb was nearly in the situation before described, but lower, the opening in the vagina, through which the fœtus was extracted, extending nearly to the neck of the uterus; we could now distinguish the neck of the uterus, and the uterus itself, by the touch; the finger passing backwards into the large cavity from which the child was extracted. There was no doubt of a communication between the bowel and the cavity, as some seeds from a cake, eaten the day before, came away on Mr. ALDHOUSE's fingers, with a portion of fœces; some fœces passing likewise daily by the vagina, although she had a natural evacuation every day. She remained in the greatest danger for some time; her mouth very sore; purging at times; part of the excrements passing by the opening in the vagina, and part naturally by the rectum. Her plan of medicine was cordials, astringents, and opiates, as occasion required, with wine and nourishing soups, as the stomach would bear them.

She is at this time, August 16, 1799, able to manage her domestic affairs; she passes her stools naturally, but is obliged to wear a cloth, as some fœces pass by the opening in the vagina: the quantity which passes the latter way, being much lessened, within the last month, makes one entertain hopes that the opening into the bowel may close.

There are a sufficient number of cases on record of extra-uterine fœtus, both in English and French authors; and to render useful the publication of such occurrences, some rules might perhaps be established for the relief of those who may labour under such extraordinary cases, at the earliest period possible.

Great part of the distress and danger seems to arise from what the constitution suffers in ridding itself of the impediment, and the lodgment of so large a mass of putrid matter within the body. In the present instance, the woman, I think, must have died before the bones could have been discharged, as this opening into the bowels, must have been very high, and there could be no natural effort to propel the bones through the vagina.

If a case were to occur where the fœtus was situated the same as in Mrs. Cooper's, would it not be prudent to make an opening in the vagina, sufficient

cient to admit the extraction, by first perforating the head, and extracting by the crotchet and blunt hook; by which means, probably, the opening into the bowels might have been in this case prevented, and the woman not brought into such imminent danger by the putrefaction of the child?

NORWICH, Aug. 20, 1799.

E. COLMAN, Surgeon.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THOUGH criticisms on individual cases may not strictly come within the view of your publication, yet where error *may be* corrected, on a point of no small importance, perhaps a rigid adherence to a general rule may be well dispensed with.

The fifth Number of your *Journal* contains a striking fatal instance of blood-letting, related by Dr. VAUGHAN, who attributed the catastrophe to the introduction of *some* morbid poison into the system, through the medium of the lancet. I must be allowed to differ from the conclusion of Dr. Vaughan, and in doing this, I hope I may rest excused, having but one object in view—the truth. I cannot admit that the fatality of the case alluded to was owing to the action of *any* morbid poison. The case is clearly recorded; it stands on its own evidence—the symptoms; and in the perusal of it the medical reader must form his own judgment.

There are evil symptoms sometimes (though happily but seldom) following the use of the lancet, not depending on the action of any morbid poison; not resting on the unscientific conduct of the operator, but owing their appearance to a peculiarity (call it irritability if you please) of constitution. Sometimes an abscess forms in the cellular membrane around the puncture from the lancet, which commonly approaches to the size of a walnut; and if the habit be very bad, the inflammation will extend far around, and a considerable sloughing of the parts may be the consequence, inso-much as to render the removal of the limb a matter of necessity; and even after amputation, the stump will, in all probability, assume the like disposition to slough. In either case, the symptoms of irritation may be great enough to destroy life.

An inflammation of the reticular, or inner coat of the vein, is sometimes another ill consequence of blood-letting; the symptoms of which were erroneously considered as arising from a puncture of the tendon of the biceps muscle, or of the fascia of the arm, or of a nerve, till the keen, scrutinizing

knife of Mr. J. HUNTER, exhibited the disease in its proper colour. When the vein is disposed to inflammation, much pain is felt after bleeding, and shortly around the punctured part appears a redness and swelling, which soon extends along the arm, both above and below the elbow. The arm feels knotty, and pain is given on the touch. The inflammation and swelling will sometimes extend to the breast. The accompanying symptoms of irritation are always great, sometimes producing delirium, and even the death of the patient. It is said, that horses after bleeding are not unfrequently attacked with this affection of the vein. On dissection, pus has been found in the vein, and even in the heart. It has been imagined that the inflammation has been induced by the external orifice not being effectually closed, but this idea is by no means correct.

One or other of the above consequences of bleeding, I presume the case related by Dr. Vaughan to be; the former, I should imagine, as no inconvenience was experienced till the second day, and the affection did not extend below the punctured part; yet the rest of the symptoms would seem to favour the presence of the latter affection—the inflammation of the vein.

If the conclusion of Dr. Vaughan be erroneous, it ought to be corrected, as by that the poor barber stands convicted of having poisoned his neighbour; whereas I firmly believe, that if the surgeon himself had bled the man, the same would have been the issue. Justice is due to the barber, though I by no means am an advocate for his assuming the exercise of phlebotomy.

Believe me, Gentlemen,

BEDFORD,

Your obedient servant,

Sept. 8, 1797.

JOHN PULLEY.

P. S. Since penning the above observations, in perusing your sixth Number, I find that Mr. RING, in his remarks on the cow-pox, has noticed the case of Dr. Vaughan; and I am glad to observe, that he also rejects the presumed cause of the event. "I am rather inclined," says Mr. Ring, "to attribute the melancholy event to the length of the orifice, and to a neglect of closing it properly, and promoting union by the first intention." I have above observed, it has been imagined that the inflammation has been induced by the external orifice not being effectually closed; and I must now add, that, under that idea, it has been advised to close the orifice with sticking-plaster; this has been done with the most scrupulous exactness, and yet inflammation, with all its formidable consequences has supervened; still therefore, I must maintain, that we can only look for an explanation of the cause in the badness of the constitution: however, this does not preclude the propriety of properly closing the punctured part, yet the parade of sticking-plaster ought to be rejected.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I HAVE had, since you last heard from me, three cases of confirmed tubercular consumption; two of these were terminating the second stage, the third was advanced into the last. They were all exquisitely marked instances of the disease. The first, a young man about twenty-eight years of age, had lost a brother and a sister by the complaint; he had been under the care of two physicians* in this neighbourhood previous to my being called in, but so rapid had been the progress of the symptoms, that, though not three months had elapsed since the commencement of the disease, the second stage was far advanced, attended with copious expectoration, profuse colliquative sweats, and full-formed hectic; his pulse near 120. I pushed, in this case, the dose of tincture to 120 drops in twenty-four hours, but slight delirium supervening, I reduced it again to 90. The pulse one day sunk to 68, but, in general, during the whole time he was under the influence of the digitalis, seldom fell below 68, and never, except one day when it suddenly mounted to 120, rose above 90 †. The colliquative sweats and febrile exacerbations greatly abated, but the expectoration still continued purulent and copious, though not increasing. It was only through the assistance of opium, that I was able to give so large a dose of saturated tincture; it produced not much sickness, but considerable vertigo, excessive languor, and such universal torpor, that the patient, though sitting up, was unwilling either to speak or move. After being three weeks under the full influence of the digitalis, with the symptoms nearly stationary, he became averse towards prosecuting it further, nor could I persuade either him or his friends to permit a more extensive trial. On relinquishing the fox-glove, his pulse speedily returned to the former standard, and the other symptoms making their usual progression, he died in about five or six weeks after.

The second patient had been suffering under the complaint for nearly two years, and was certainly in the last stage; he was greatly emaciated, with purulent expectoration, profuse sweats, and a pulse between 120 and 130. By cautiously increasing the dose of tincture I was able to reduce
his

* Dr. MACLEAN and Dr. CLUBBE, by whom the digitalis, I understand, had been administered in the form of powder; the wished-for effect in consumption, however, can seldom be produced by the powder, though in dropsy it seems preferable to any other mode of exhibition.

† His surgeon, Mr. SALTER, of Boxford, was very attentive, during my absence, in noting the variations of his pulse.

his pulse to 80. Seventy drops, however, in twenty-four hours, formed the largest dose he could take; even with this quantity considerable pain in the head and eyes, with vertigo and sickness, took place, and he resolutely refused to continue the medicine. On taking my leave, I ordered the surgeon, Mr. NEWELL, of Colchester, to repeat the fox-glove, if possible, in a concealed way; this I understand was done, but a return of vertigo and pain again put a stop to the experiment. The expectoration was not diminished. He died about nine weeks after I last saw him.

The third, a man of fifty-two, was terminating the second stage when I was called in, and had lately lost a sister by the complaint. His expectoration was very purulent, his colliquative sweats excessive, and his hectic exacerbations strongly marked; cough and difficulty of breathing great; much emaciated, and his strength so reduced, that he cannot but with extreme difficulty quit his bed for many minutes. He resides at Hadleigh, and was therefore immediately under the daily attention of myself and Mr. BUNN, an active and intelligent surgeon of this place, and who threw into a tabular form the variations of his pulse, and the doses of his tincture. He took the digitalis in infusion of quassia for several weeks, and the tincture was gradually increased to 100 drops per day. His pulse was reduced from 120 to 50, and kept thus reduced for better than a fortnight, with little sickness, and with only slight attacks of vertigo. His expectoration rapidly decreased; his colliquative sweats, cough and dyspnoea gradually vanished; his appetite, which was so impaired that a small quantity of broth oppressed him, became keen; in short, the man is now in perfect health, and pursuing his usual occupation.

Thus of five cases of confirmed consumption (including those of GRIMES and MARRIS), three have been perfectly recovered. I have no expectation, however, that upon a larger scale, the proportion of fortunate to fatal result would be what my experience has given.

Two cases of cough, one of which was attended with evident purulent expectoration, and a case of vomica, have also occurred to me lately, and have been cured by the tincture of fox-glove, but in these no symptoms of phthisical predisposition were present.

It is singular that I have never yet had an opportunity of exhibiting the digitalis in incipient tubercular consumption, that is, previous to any ulceration. A fatal delusion seems hitherto to have prevented an early application to medicine in this most destructive of all diseases. As a proof, however, of what the digitalis can do, even in the very latest period of this complaint, I produce the following account:—In March last I was

desired

desired to visit BRIDGET BAKER, a poor girl of this place, aged seventeen, whom I found apparently dying. She had been for some time gradually sinking under a confirmed phthisis; was reduced to a mere shadow, confined to her bed, and only moved from thence by assistants to another, until the former should be made. Pulse 140; breathing laborious and painful, cough almost incessant; expectoration mere pus, and with difficulty ejected; it appeared that a few hours might decide her fate. Being urged, however, by her mother, I began with a small dose of the tincture twice a day. It seemed to give relief, and now anxious that it should be afforded to its utmost extent, I gave her the tincture with my own hands during the whole of her illness, twice or thrice a day, slowly encreasing the dose, until she took 90 drops per day. Her pulse was reduced to 56; her expectoration much diminished; her cough, pain, and perspiration, greatly abated, and she took some wine and food daily. She lived near five weeks, and I regularly gave her the tincture twice or thrice a day, as circumstances warranted. She had no vertigo, not much sickness, nor much irregularity of pulse. She acquired little strength it is true, and never left her bed; but she was easy and tranquil during the day, and for the most part passed the night in sleep; her intellects were perfect to the last moment; her death was free from struggle and from pain, so gentle and imperceptible indeed, that the transition was with difficulty marked.

I am, &c.

Gentlemen,

HADLEIGH,

Your's most sincerely,

August 9th, * 1799.

NATHAN DRAKE.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE remedies employed by the lower class of people for the cure of diseases, if carefully examined, and their effects properly explained, would afford considerable amusement to medical men, and perhaps be attended with some kind of instruction; but there would be some difficulty in procuring satisfactory information relative to every remedy which they use; some of them being handed down from generation to generation, as carefully as if it were a landed property, and the knowledge of the preparation and use is known only to the family to whom it belongs. In such a case, therefore,

* This interesting Letter was transmitted to us by a friend of Dr. Drake, so late that we received it only on the 18th of September.

fore, little advantage could be expected; except, from stating the effects which are produced from such means, we are able to imitate these with other remedies perhaps more efficacious.

The remedies which are used by the common people of this city for the cure of the tooth-ach, are very various; one of them, however, has appeared to many so extraordinary, having been practised only lately, that I must beg leave to mention it, as well as the explanation given by those who apply it.—I should first mention, that their idea of the cause of this disease is from a worm, or worms, being engendered in the tooth affected, and from this the pain is actually called the *worm*, which, unless this worm be dislodged, cannot be cured. The remedy I allude to is well calculated to support this idea, and very apt to deceive a superficial observer. It is applied in this way:—a small quantity of the seed of some plant is put into a metallic tube, shaped like a tobacco-pipe, in the bowl of which is put the seed, fire is then applied to it; the smoke which issues from the seeds is directed, by means of the tube to the hollow tooth, and being very acrid, causes a prodigious increase of secretion of saliva, which being preserved in a basin, and afterwards viewed with a magnifier, or even with the naked eye, is found to contain a quantity of small white threads, not unlike the ascarides, and these are said to be the worms from out of the tooth: a proof more convincing than ocular demonstration could scarcely be adduced, and of course, little reasoning was necessary to confirm the hypothesis; for facts being stubborn things, it seemed necessary to examine these *worms*, but nothing satisfactory appearing from them, it was most readily *swallowed* by those who had paid little attention to the construction of the human frame.

The only way that seemed to me probable, to explain this uncommon appearance was, that this particular species of seed (which, by the bye, they keep a secret), by having heat applied to it, thereby expelling a small quantity of water from those seeds that are nearest the heat, and softening those above, readily separates its fibrous germs, which, being carried through the tube by the condensed moisture, fall into the mouth, and are there carried off by the saliva into the basin, and are then shewn as the cause of all their distress.

The plant from which these seeds are produced, I have never been able to ascertain; but on looking into some old books, I found the following particulars:—“ This peyne doth come eyther by an humour discending out of the head to the teeth or gummes, or it may come by corrodng or eating of wormes, or it may come by drinking of hote wyne, eating of hote spices.”

spices, or eating of hote apples, peares, and such lykes, or it may come of a hote liver or stomake.

A REMEDY.

“First purge the head with pilles of cochæ, and use gargaries, and if it do come of any cold cause, chew in the mouth divers times, the rote of horehound. And if it come by wormes, make a candell of waxe with henbane seeds, and light it, and let the perfume of the candell enter into the tooth, and gape over a dish of cold water, and then may you take the wormes out of the water, and kill them on your naile; the worme is little greater than the worme in a man’s hand. And beware of pulling out any tooth, for pul out one, and pul out more. To mundify the teeth, washe them every morning with cold water, and a little roche alone*.”

From this extract, therefore, we find that the idea of worms being the cause of tooth-ach is of pretty old date; the book from which it is copied, was printed at London in the year 1575, and is intituled “*The Breviarie of Health; wherein doth follow, remedies for all maner of sicknesses and diseases, the which may be in man or woman. Expressing the obscure termes of Greke, Araby, Latin, Barbary, and English, concerning Physicke and Chirurgerie. Compiled by ANDREWE BOORDE, Doctor of Phisicke, an Englishman.*”

This book, which is a small quarto, and printed in the black letter, seems to have been entirely neglected, but as I find some account of the author written in the last page of the book, I have copied it, and is as follows:—

“Andrew Boorde practised physic in Hampshire, and was a man of great superstition, and of a weak and whimsical head. He frequented fairs and markets, and harangued the populace in public; and, to use the words of one of his contemporaries, “he made humourous speeches, couched in such language as caused mirth, and wonderfully propagated his fame. From the Doctor’s method of using such speeches at markets and fairs, it came that in after times, those who imitated the same humourous, jocosse language, were stiled *Merry Andrews.*”

Dr. Boorde was author of “The merry tales of the Wise Men of Gotham”—“The Introduction of Knowledge, a Poem”—“The Miller of Abington,” a poor imitation of Chaucer’s Miller’s Tale.—“The Principles of Astronomical Prognostications”—“The Doctrine of Health”—“The Promptuary of Medicine”—The Doctrine of Urins.” He lived in the days
of

* This method of curing the tooth-ach has long been practised in many parts of England. Some use cummin-seeds, some henbane, others aromatic herbs with a little salt, &c.

of HENRY VIII, EDWARD VI, and QUEEN MARY. Having been once a Carthusian, he continued ever after to profess celibacy, to drink water, and to wear a shirt of hair. The title-page of his "Introduction of Knowledge" runs thus: "The first booke of the Introduction of Knowledge, the which doth teach a man to speake parte of al maner of languages, and to know the usage and fashion of al maner of cuntryes, and for to know the most parte of al maner of coynes of money, the which is currant in every region." From this flaming title it appears, that the art of puffing was early known to authors and booksellers.

By the first opportunity, I intend to send you a paper on the instruments at present used in the practice of midwifery, with a description of a new one. I have lately tried the external application of opium in nephritic complaints, as well as ol. tereb. and æther, with the same good effects as Dr. WILlich mentions*.

I am, Gentlemen,

ABERDEEN,

Your's sincerely,

Sept. 14, 1799.

WILLIAM DYCE.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN looking over old Welsh manuscripts for selecting materials for the Welsh Archæology now printing, I casually met with the following fragment, which, as it relates to the history of the venereal disease, I have sent a translation of it to you, under the idea it might be an acceptable article in your valuable publication.

I remain, Gentlemen,

PENTON-STREET, PENTONVILLE,

Your's, &c.

Sept. 9, 1799.

WILLIAM OWEN.

A Remedy for the Great Pustulous Eruption, and its Degrees.

This remedy was sent by M. RY. TILER, a French physician, when it was the year of our Lord, one thousand and five hundred, save six years, to King HENRY the Seventh, the first person in this kingdom who was afflicted with that disease. It was turned into English by Mr. STRADLING; and DAVYDD AB MEIRIG DDU turned it into Welsh.

There

* See our Journal, No. V. page 507.

There are nine sorts of disorders of the great pustules ; and there are five of them irremediable, and not to be helped ; and there are four against which there is a certain remedy : and, of the nine, there never came but three into this island, and people have two of them frequently ; but the third, let it be guarded against, which is called in France *mabtai yfums yston* ; that is, the dry eruption, the basis of which proceeds from the heart.

The first of the three is of a cold and dry nature. Its symptoms are shivering and chilliness, and nevertheless sweaty ; pain in the shoulders, or in the other joints, from the loins upwards, and yet full of flesh, and craving for sweet things. In the height of the disorder, a kind of dry heads break out, with black eyes in them, and void of matter, growing bigger and bigger, from nipples to teats, like dry warts, in the end growing large and in irregular lumps, breaking into narrow wounds.

THIS IS THE REMEDY.

If the person is not freed from the pain in his joints, let him have this emetic : take a quantity of the bark of the walnut-tree *, throwing away the upper rind, then bruise it moderately small, and wash it in clean water ; then take a quart of Rhenish wine, or Malmsey, or old ale, and put the bark into it to stand for three hours, so that it becomes viscid, then strain it clean, and put it on the fire to be warmed a little, and when warm, throw into it three-pennyworth of long pepper. Put the patient in bed until nine o'clock, and then give him the above drink, and at eight at night, and the same time next morning, and he will discharge a cruel quantity of obnoxious matter and impurity. Take the weight of ij. drachms of spermaceti, and the weight of iiij. of pepper in powder, and throw it upon wine, or old ale, gently warmed, and give it to the patient to drink, and there will be an eruption of what lurks in the body.

Guard against applying too much ointment ; for the three evils attending the cure are, the extinction of the veins, sending away of the blood, and filling them with poison ; for it is dry and heating ; on that account, better is an emetic with the unction, for the strength of the person.

The salve for the pain of that pox is this : Take the leaf of fat of a red pig, and take away the membrane ; take two parts of it, and pound it in a mortar well, then take a pennyworth of quicksilver, and kill it well : this is the way it is to be killed ; take some urine in a cup and throw the quicksilver into it, and stir it with the finger, until it is seen to separate into particles like the heads of small pins, which are to be thrown into the mortar
with

* I am not certain whether the walnut or filbert-tree is meant, from the name given it here.

with the lard, and the whole to be beaten well together, until it appears blue, from the colour of the quicksilver. Then take the weight of iij. drachms of mastic, and pound it into fine powder, and take the weight of ij. drachms of spermaceti, and put these two things with what is above-mentioned, and pound them well a second time. Then take the third part of lard before reserved, and put in a pan on the fire to be melted with ij. drachms of camphire in it; and then pour what is melted into the mortar to the above ingredients, and let the whole be again well pounded and mixed in that manner. Take of the oil of bays two ounces, and two ounces of Exeter oil, and pound them also with the above in the mortar, until you see them of the colour of the Exeter oil, and then put the ointment in a box or other clean vessel, to be well kept. Put the sick person in bed, with sufficiency of cloaths on him to cause a gentle sweat.

[Here it breaks off, owing to there being leaves lost in the manuscript.]

W. O.

☞ We have inserted the above fragment, to shew the first preparations of mercury in the cure of lues.—EDITORS.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING read with pleasure, in your *Journal* for June, some observations on the subject of Quackery, by ALIQUIS, I have taken the liberty of making a few remarks on the same subject, by inserting which in your valuable work, you will oblige

Your most obedient servant,

ALIUS.

The subject which has occupied the attention, and engaged the pen of the writer referred to, is undoubtedly an important one, and the remarks which he has made upon it are just and pertinent. "That evils of such magnitude should be suffered to pass unnoticed" must excite wonder in the minds of those who are capable of judging concerning the extent of the mischief. The writer, at the same time, that he points out the evil to be dreaded, with great propriety repels the insinuation "that the regular professors of physic are interested in the dissemination of these spurious nostrums, the suppression of which would lessen the progress of disease, and of course diminish the number of patients who are ultimately compelled to seek relief from them, for the disorders brought on by quacks, mountebanks, empirics, &c."

The

The plan for erecting a public board for the examination of every new medicine is undoubtedly judicious, and, if properly executed, might contribute, *in a considerable degree*, to the prevention of at least a part of the mischief to be dreaded as the consequence of the unlimited indulgence which is at present afforded to the venders of these pretended remedies. But could this plan be carried into effect, according to the benevolent wish of your correspondent, would there not still remain a fruitful source of mischief to the public?

The author of these remarks makes a distinction between those medicines “the composition of which is known, and the venders of which are ignorant pretenders to medical knowledge, as being in situations of life remote from the profession of physic,” and those which come forth sanctioned by the name of a physician of known abilities and integrity. This distinction is undoubtedly well-founded, and the value of a medicine compounded under the direction of a man of science, must differ widely from that, the ingredients of which are put together in an unskilful manner, without any regard to the effect which the different articles may have upon each other, and by a person totally ignorant of the effects which the compound may produce on the constitution of the person who makes use of it. The latter may prove in every case inefficacious, and in some cases may be injurious, whereas the former when administered with judgment and design, with a proper regard to the known effects of its different ingredients, and the suitability of these to the removal of the symptoms, under which the patient labours, may prove a valuable medicine. But let us suppose that a method could be adopted to ascertain the ingredients of the medicines referred to, and that hereby the sale of “poison” in a thousand forms should be prevented—let us farther suppose that it should appear upon examination that they have been compounded with the greatest care and attention, according to the prescription of a most able physician, and that they are recommended to be used only in such complaints as they were originally designed to relieve—still but a partial removal of the evil of which the writer complains, would be obtained. It must be obvious not only to every man of *medical science*, but also to every man of *common sense*, who thinks closely on the subject, that a medicine which has proved effectual for the removal of some disease, may be very improper for a patient labouring under a disease bearing the same name. What would be proper in a particular *stage* of any disease, and under particular *circumstances* which may occur, would be highly improper and might prove injurious, or even fatal, at a different period, or under different circumstances; and it is particularly important to remark, that the more powerful and efficacious the medicine, and the more just and true the report
which

which is circulated of its surprising and sudden effect in curing disease, the more dangerous does the use of it become, if the application of it in any instance should be improper. The medical practitioner who, with great judgment orders a medicine to be taken *to-day*, may see it necessary to forbid the use of it *to-morrow*: it may have answered the purpose for which it was designed; but, that being accomplished, the repetition of it may be unnecessary, or may even be attended with inconvenience. It is not to the use of any specific medicine that the cure of a disease is to be attributed, but to a diligent and careful attention of the practitioner to the different symptoms which occur, and to a *change* of medicine, and variation of plan, according to the urgency of these symptoms, and the alterations taking place in the system in consequence of them.

That an individual, however, who with great labour and ingenuity had discovered some medical compound, should not fail to reap the advantage of such discovery, nor the public be deprived of what, upon proper examination, might prove a valuable remedy, let such a board as the writer proposes be instituted, and upon a report from this board, let the inventor receive from the public some valuable compensation for the discovery, or let him continue to be the sole proprietor and vender; but let it be sold **ONLY** to those who, knowing the effects which it is likely to produce, are the proper and the only judges of the instances in which it may be employed with safety and advantage.

Let the Apothecaries' Company, from time to time, purchase of the proprietor such a quantity as they may find necessary for their demand.—Let a quantity of it be found in the drawer or in the phial of every private apothecary, ready for use, when it may be directed as the whole, or the part of a medical prescription. In this way let the inventor receive a compensation for his diligence and ingenuity, and the public be secured from the dangerous effects of a compound, which, if it possess any powers, must, in many instances, though perhaps in a slow and secret manner, prove injurious to those who have made use of it.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I TAKE the liberty, through the medium of your valuable *Journal*, to correct a misstatement of Dr. DARWIN's principles, made by Mr. BROWN, the ingenious author of "*Observations on 'Zoonomia,'*" some time ago published
in

in Edinburgh. This misstatement occurs in the first chapter of that work, in which the author endeavours to prove, that according to Dr. Darwin's principles, the original production of sensorial power is impossible.

Dr. Darwin, supposes, "that sensorial power, or the spirit of animation, is the immediate cause of the contraction of animal fibres, and is liable to general or partial diminution, or accumulation; that the quantity expended in the continual motions of life, is supplied by the secretion or production of it in the brain and spinal marrow, while, at the same time, a certain quantity of sensorial power is necessary for the action of a hand." From these circumstances, Mr. Brown thinks that he can prove the fallacy of Dr. Darwin's reasoning. "For, (says he) in order to call sensorial power into existence, it is necessary that it previously exist in the brain and spinal marrow, as much as in the glands which secrete any other fluid. The thing secreted must therefore exist before the organ which secretes it can be called into action."

Mr. Brown is aware of an objection which may be opposed to his reasoning, viz. that the embryo may derive a small portion of sensorial power from the parent, and thus be capable of increasing the quantity by secretion. But this objection he thinks cannot be admitted, "because (says he) the embryo, according to Darwin, is a simple filament, without sensorial power, or the means of producing it."

In this, however, consists Mr. Brown's error; for on examining the chapter on Generation of the 'Zoonomia,' p. 480, he will find that Dr. Darwin thinks "that the embryo, at the earliest period of its existence, as secreted from the blood of the male, would seem to consist of a *living filament*, with certain capabilities of irritation, sensation, volition, and association," and this opinion he adopts, though he thinks it "difficult to be conceived how a living entity, which this embryo is, can be separated or produced from the blood by the action of a gland."

Another quotation from the 'Zoonomia,' p. 492, will still further prove Mr. Brown's misconception of Dr. Darwin's idea. "I conceive the primordium or rudiment of the embryo (says Dr. Darwin), as secreted from the blood of the parent, to consist of a *simple living filament*, as a muscular fibre, &c. and I suppose this living filament, of whatever form it may be, to be endowed with the capability of being excited into action by certain kinds of stimuli."

August 6th, 1799.

J. Y.

An Historical View of Surgery in the Sixteenth Century.

[Continued from our last Number, pp. 155—160.]

§ 12. **T**O become acquainted with the most celebrated surgeons of that century, we shall proceed in chronological order. One of the oldest chirurgical writers is **HIERON BRAUNSCHEWIG**, a surgeon who practised at Strasburg. His book contains but few original principles, as he does not enter upon the theory, and points out the means as well as the manual operations, rather in a mechanical manner. On the treatment of ulcers his ideas are generally correct; he does not absterge the pus with much solicitude, but, on the contrary, considers it as a healing balsam. He mentions a case of hydrophobia, the symptoms of which became manifest after twelve months had elapsed since the bite of the dog; and against which he prescribed cantharides internally. The external remedies he usually applied, were regulated conformably to the difference of climate, so that in a moist climate he used absorbents, while in a warm climate, he directed humid applications. In depressions of the cranium, he recommends an ointment of the white of eggs and oxycroceum, which he believed to be very efficacious.

The name of **JOHN DE VIGO**, a native of Rappali, in Genoa, and physician to the Pope, is no less celebrated. He wrote two Compendiums of Surgery, and I have already observed, that he was no advocate for operations; but he is the more liberal in his praise of medicinal substances, for instance, of a solution of white vitriol in rose-water, in epiphora; of the oleum elemi, &c. in wounds of the nerves. His literary knowledge was extremely defective, and his method of treating external diseases much too rash, as he was too profuse in the administration of wine. Yet we meet occasionally with interesting remarks in his works. He opens abscesses by the semilunar incision, gives a pretty correct account of the causes of gangrene, and teaches us to treat it with the actual cautery. He extirpated an encysted tumour under which the Pope had laboured, by the Egyptian ointment and sublimate. In a similar manner he treated scrophulous tumours, and the whitlow, while he likewise applied the actual cautery for these diseases, as well as for the fistula lachrymalis. According to the old practice, he began amputation with making an incision into the mortified part; but at the same time he dissuades the practitioner from prescribing opium during the operation. The doctrine relative to concussions of the brain, he has delivered with tolerable accuracy for those times; and he also observed, that bleeding of the nose in this case was critical. He attempted to cure wounds of the head merely with absorbent remedies; but he does not fail
likewise

likewise to recommend the application of the trepan as speedily as possible. On account of the double membranes of the brain, he objects to placing the trepan on the sutures of the cranium, as he had frequently observed, that, after wounds of the head were apparently healed, they were attended with a concealed inflammation of the dura and pia-mater, or of the cortical substance of the brain.

§ 13. The treatment of wounds would have experienced an entirely new epocha, if MICHAEL ANGELO BIONDO, of Venice, who practised successively at Naples, Venice, and Rome, had been a man of sufficient celebrity. He first recommended *cold water* to be indiscriminately used as the best remedy in all kinds of wounds, excepting those of the nerves and contusions; while he expected miraculous effects from this remedy, which it certainly has produced, according to modern experience, in numberless cases of injuries of the head. Indeed, Biondo attributed to his *oleum abietinum* almost equally powerful effects; but his book was too defective in composition and arrangement to be entitled to general approbation.

The large chirurgical work of JOH. ANDR. DA CROCE, had no stronger claim to professional support than the former. The author, who practised at Venice, was a mere compiler from the medical works of the Arabians: he also recommended the trepan in all cases of fractures of the cranium.

The doctrine respecting the injuries of the head, is however much indebted for its improvements to JAC. BERENGAR DE CARPI*, with whose character, as a distinguished anatomist, the reader will become acquainted in the sequel. He was the first who exposed the fallacy of the usual symptoms formerly observed in fractures of the cranium; for several cases had occurred to him in which the patients could bear considerable contusions. He doubted the reality of reciprocal or opposite fractures, when the power operates only on one side; but he observed a fracture of the interior table of the cranium, though the exterior table had been uninjured. He believed that depressions of the cranium could be healed by plasters; and ascribed most of the unfavourable symptoms arising from injuries of the head to the splinters of bones which irritated the brain and its membranes. In all such cases, he above all things, recommends the oil of roses, as well as the oil obtained from the husks of the grape, and likewise the dyers' weed.

§ 14. MARIANO SANTO DE BARLETTA, whom we already know as a celebrated lithotomist, practised surgery at Naples, and wrote, among other works,

* *Berengar, de Fracturis Cranii.* 8vo. Lugd. Batav. 1651.

tinued even after birth, and consequently to admit the perforation of the septum.

Next to Vesalius, MICHAEL SERVETO was the first who delivered the opinion relative to the complete impermeability of the septum, and ingeniously applied it to explain the circulation of the blood through the lungs; a discovery, the first traces of which appear in the writings of this author. He says, for instance, "the vital spirit of the arteries penetrates, through their anastomoses with the veins, into the latter; for, according to the previous assertion of Vesalius, every vein, in the different parts of the human body is most intimately connected with an artery. It is impossible that the blood can pass through the septum from the right into the left ventricle of the heart, because the former is quite impermeable: hence it must pass through the lungs; here it receives fresh vital spirits from the atmospheric air, and thus it again returns from the lungs to the heart." That the purpose of the pulmonary artery cannot be that alone of nourishing the lungs, Serveto concludes from this circumstance, in particular, that the artery in question is uncommonly large and wide in proportion to its vein, that it is accompanied throughout by the vein, and that there are other vessels designed by Nature for the support of the lungs. Nor is it conceivable, that the accession of vital spirit takes place in either of the two ventricles of the heart, as neither of them is sufficiently capacious for that purpose.*—In this passage, therefore, we recognize the first germ for discovering the circulation of the blood through the lungs. It was written about the year 1552, and the work of Serveto appeared in 1553.—It has indeed been maintained from a cotemporary work, written by JAMES RUEFF, a surgeon, at Zurich, and published in 1554, that he discovered the great circulation of the blood; but it can be attributed only to their total ignorance of literary history, and their defective explanations of difficult passages, that some French surgeons preposterously endeavoured to wrest the laurel from the immortal HARVEY, † and bestow it upon their countryman, Rueff. The passage to which GARENGEOT alludes, treats merely of the distribution of vital spirits through the whole body, by the arteries: ‡ It is, however, unnecessary to enter into farther particulars respecting this subject; as PORTAL § has amply refuted the last-mentioned writer.

[To be resumed in our next Number.]

* Servet. "Restitut. Christianism." Lib. v. p. 169. Edit. 1790

† Garengeot "Spanchnologie:" Vol. II. p. 156. & seq.

‡ Rueff "de Conceptu et Generat." Lib. i. cap. iv. f. 6. b.

§ Portal "Hist. de l'Anatom." Vol. I. p. 515.

HINTS AND IMPROVEMENTS
 IN THE PRACTICE OF
 MEDICINE AND SURGERY.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WITH the view of rendering as public as possible the easy means I have discovered of speedily subduing a very common, and, if treated in the common mode, a very dangerous disease, I avail myself of the extensive circulation of the "*Medical and Physical Journal*," and inclose the copy of a letter which I have this day written to His Royal Highness the Commander in Chief, on the "*Prevention and Cure of Dysentery*." The utility of the treatment I recommend is demonstrated by successful experience in a multitude of cases. It is consequently independent of any theory. It was, however, deduced from one simple as itself, and which, in its turn, it serves to support.

At some future period, when professional avocations are fewer and less pressing, I intend to submit to the public a more particular account both of my theory and practice, accompanied with a schedule, on a perfectly new plan, of the cases I have treated.

Wishing success to your valuable Journal,

H. M. S. *Atlas*, in

I am, Gentlemen,

TORBAY,

Your most obedient, humble servant,

10th of Aug. 1799.

D. WHYTE, M. D.

Copy of a Letter to His Royal Highness the DUKE of YORK.

10th Aug. 1799.

May it please your Royal Highness,

AS in the intended expedition much sickness must from fatigue and exposure necessarily ensue—and as, in the present season of the year, it is probable dysentery will be one of the most prevailing complaints, I conceive it a duty which I owe my country, to communicate to you a very simple method by which that otherwise dreadful disease may be, in a few hours, completely removed.

On the instant of attack let the belly of the patient be invested with five, ten, fifteen, or, if fewer will not suffice, twenty folds of a flannel bandage, whose breadth is from six to ten or twelve inches, or more—let the patient, moreover, be invested with a flannel shirt, or waistcoat with sleeves, and immediately put to bed.—If neither flannel shirt or waistcoat can be procured, the patient may turn into bed well buttoned up in a regimental jacket. If convenient, he will also do well to dilute with warm gruel, while perspiration, both general and topical, is further promoted by a covering of two, three, or four blankets, and by the exclusion of cold air, particularly partial currents.

If the purging and tormina still continue, or if the patient has head-ach, or any other symptom of general fever, no time must be lost in recurring to the lancet—and we must not be deterred by the low state of the pulse.—It is the removal of pain and purging that is required, and from successful experience in some hundred cases, I say confidently, that by such means we may always succeed. I have frequently taken from forty to fifty and sixty ounces of blood in a couple of hours, and in so doing, saved many valuable lives.

In most cases, however, the disease will yield to flannel rollers—and it will not even be always necessary to put the patient to bed.

In this disease all kinds of medicine do mischief. Wines and spirits are particularly injurious.

To prevent relapses, as well as first attacks, exposure to cold or moisture, or even to agreeably-cooling currents of air, is to be carefully avoided, especially when the body is warm and relaxed, as during sleep, or after fatigue.—In such circumstances, anointing the body with oil, and wearing warm clothing, particularly a flannel shirt, will be found useful.—I make a point of anointing all my patients on the removal of the rollers.

Among soldiers and sailors scurvy is the most common pre-disposing cause of this disease.

Scurvy is the product of nitrous or septic acid gas, of which foul air or azote is the principal constituent, and where people are crowded together is always more or less present. Although too frequently overlooked, I have found it as common in jails and camps, as on ship-board during long voyages. Of the cause I say nothing.—It is too well known to require comment.

Happy shall I be if the above rules should be acted upon, and prove the
means

means, as I am confident they will, of preventing the fatal consequences of one of the most dreadful maladies to which human nature is liable.

Trusting that the importance of the subject will excuse the liberty I have taken,

I have the honor to be your Royal Highness's

Most obedient, humble servant,

(Signed) D. WHYTE.

*His Royal Highness, Field-Marshal
the Duke of York.*

A Case of Inflammation on the Glutei Muscles, &c. of a threatening tendency, and accompanied with violent symptoms of general irritation, speedily repressed and cured by the combined internal and external use of cold water:—Communicated by ROBERT KINGLAKE, M. D.

WERE the subsequent case of external inflammation, rapidly subdued by the salutary influence of reduced temperature, a solitary instance of its curative agency, and did it not form a series of similar, though less striking occurrences in my experience (which on some future occasion will probably be detailed to the public), it would have less claim to be rescued from oblivion, and be less worthy of record in your practical collection, than from this consideration it would seem to merit.

Mr. B. aged about forty, and of an athletic constitution, was attacked, in the beginning of August, with rigor, succeeded by febrile symptoms, a sense of preternatural heat, throbbing, and visible tumefaction, occupying the glutei muscles, and extending to the anus, rectum, perinæum, and membranous part of the urethra. The inflammation had been progressively increasing forty-eight hours before I saw the patient: at that time the irritation of the system was extremely violent, pulse hard, full, and rapid, insatiable thirst, skin hot and dry, partial suppression of urine, constipation, incessant, painful, and fruitless efforts to empty the bladder and rectum, considerable tension of the lower region of the abdomen, &c.

The local irritation, and, consequently, the general symptoms excited by it, had been much aggravated by the injudicious application of warm cataplasms to the parts affected, the internal use of terebinthinate medicines, oppressive weight

weight of bed-clothes, unventilated room, &c. This noxious plan of treatment was by my direction reversed; the rigid discontinuance of whatever might inordinately excite, was enjoined; folded cloths, moistened in cold spring water were ordered to be applied to the inflamed parts, comprising the *membra genitalia externa* and abdomen, and to be renewed every half-hour or oftener, if a sense of unusual or inflammatory heat should sooner return.— To co-operate with this refrigerating plan, the patient was directed to dilute plentifully with cold water, drank in small quantities, at short intervals, and to persist in it as long as it proved grateful, or was demanded by febrile heat and thirst. The intestines and urinary bladder were copiously evacuated by divided doses of an aqueous solution of vitriolated soda, repeated, as long as necessary, at short intervals.

Immediate alleviation was afforded by the combined external and internal use of cold water, but the morbid sensations of the patient warranted its unremitting application for twelve hours, when the swelling, tension, and pain were so much diminished, as to admit of lengthening the intervals of its renewal. The succeeding forty-eight hours were employed in furthering the cure, by adapting the force of the reduced temperature to the decreasing influence of morbid heat, and on the third day inclusive from the commencement of this plan of treatment, the patient had no other remains of inflammation, than slight soreness of the part affected when pressed, and a livid hue on the surface. The general health, which suffered only from sympathetic irritation, also returned to its natural standard, and neither local nor constitutional inconvenience has since been experienced.

The salutary effects of refrigeration in attempering and correcting morbid heat, and obviating its probably suppurative, and possibly gangrenous consequences, were in this case very apparent. Had it been applied in less force, or uncombined with plentiful internal dilution, it most likely would not have proved equally effectual.

Farther experience will, perhaps, evince, that no principle of curing diseases is better founded, than that of combating redundant heat with proportionate cold, or, more pathologically speaking, of retrieving, by transferring media, the vitiated processes of organic action, which generate an undue and destructive temperature: nor are there, perhaps, any medicinal agents so uniformly operative, and so commensurate with the object to be attained, as cold water.

The patient's sensations afford a good practical rule in the application of
reduced

reduced temperature: when permanent chilliness is not induced, its operation can have no hurtful tendency, and *vice versa*.

The converse of the proposition, with regard to cold being salutary in repressing morbid heat, holds with respect to heat being beneficial in diseases of deficient temperature, such as febrile chills, paralytic affections, &c. and it will be accordingly found, that water, at the temperature of 100 degrees of Fahrenheit's thermometer, internally and externally employed, will, in suitable circumstances, prove the most efficient, durable, and congenial stimulant.

An Account of two Cases of Lithotomy, where the wounds were healed by the first Intention. By GRIFFITH ROWLANDS, Member of the Corporation of Surgeons, London, Surgeon to the Infirmary, and to the Lying-in Charity in Chester.

JOHN GOLATHAN, aged four years and eight months, admitted into the Chester Infirmary on June the 5th, 1787, was cut for the stone on the eighth, and discharged cured, on the 19th of the same month.

The lips of the wound were brought together with slips of sticking-plaster and dressed with ceratum spermaceti spread on lint; a compress of linen (sparingly moistened with spirits of wine *) was then applied, and retained with the T bandage. I took particular care in the application of the bandage, to make it support the lip of the wound next the raphé. My patient was placed in bed on his *right side*, a slip of old linen tied round his knees to keep them together, and pinned to the sheet, to prevent his turning on his back. He took eight drops of laudanum immediately after he was dressed, and very soon fell into a sound sleep; but this being my first attempt, after the operation of lithotomy, to deny the urine a passage through the wound, I was very watchful over him. I determined, if he did not pass his urine through the penis in four hours, to remove the dressings; but at the end of three hours, he made water freely, and went to sleep again, without disturbing the wound. I did not dress him until the 12th,

when

* In every case where it is my wish to unite wounds by the first intention, as after amputation, I always moisten the compress and external covering with spirit of wine or brandy, from which I have derived much advantage.

when I found the lips of the wound completely united, and on the 19th he quitted the Infirmary in perfect health.

On the 19th of September, 1795, I cut THOMAS SORTON, a child of three years of age, and took from him a stone weighing two drachms—he was treated in the same manner as Golathan, in regard to dressing and position in bed, and recovered without any interruption. He left the Infirmary in seventeen days from the operation.

Every experienced practitioner must be aware, that this plan can only answer in cases where the stone is easily extracted, and where there is a certainty that no fragments are left behind. I think, likewise, that it is more likely to succeed in children than adults, from the proportionable smallness of the wound, &c. &c.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

FROM the variety of new remedies lately introduced into the Medical World, and the consequent inquiries into their respective efficacies, made by Professors, I conceive that the successful application of any one of them, (as on the other hand its failure) should be communicated publicly and undisguisedly, by which means we shall be more certainly able to ascertain the advantages likely to result from their adoption and administration. Impressed with this idea, I venture to trouble you with a case in which great benefit seems to have been derived from the use of the *hepatised ammonia*.

A young man with whom I am acquainted, had been, from his infancy, troubled with an incontinence of urine, the discharge of which he was not at any time able to suppress, particularly during night. The copious evacuation of this secretion necessarily caused a constant and considerable degree of debility, but I never noticed any symptoms of hectic. A disease so distressing and unpleasant in itself, naturally induced his friends to seek every possible means of relief, by applying to several physicians of eminence, whose prescriptions and advice, although exactly followed, produced no good effect; on the contrary, the malady continued to increase with his years. I had heard much promised from the introduction of the *hepatised ammonia*, and was tempted in this instance to essay its virtue. I previously examined the state and appearance of the urine voided, and found it to possess both that peculiar smell and saccharine taste, so commonly distinguished in cases of diabetes. On holding it to the light in a glass vessel,

vessel, it exhibited the appearance of a bluish-red colour, which rendered it somewhat cloudy and opaque; placed in any other situation, it appeared perfectly limpid. He began according to my directions, with taking three drops of the specific, night and morning in a little water; this he gradually increased to twenty or twenty-five drops each dose: I also desired him to use animal, and abstain from vegetable food, and ordered for his common drink some water of an alkaline quality. In this regimen he punctually persisted, till he obtained the intended benefit: from the commencement of this course, he gradually amended, the evacuations of his urine became less frequent, and at length not involuntary; by degrees it perceptibly lost its unhealthy taste, smell, and colour, and in short, he is at this time entirely released from his disagreeable disorder, and seems to acquire daily his usual strength and vigour.

Should this simple relation afford satisfaction to any of your numerous readers, I shall feel myself favoured by its insertion in your very interesting Miscellany.

I am, Gentlemen,

BRADFORD, WILTS,

With respect,

Sept. 11, 1799.

Your obedient servant,

O. W. B.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS there are many practitioners in the daily habit of using the *aqua ammonia acetata* of the Dispensary, and who are much attached to its use as a febrile fuger medicine, the powers of which are considerably increased, and its efficacy improved, by the following mode of preparing it, I trust it will be found worthy of being inserted in your very useful and valuable Journal. I think it a duty incumbent upon me, to submit it to the medical practitioners, assuring them that it has all the efficacy of the former medicine, in addition to new acquired properties, one of which is its being infinitely more pleasant and agreeable to the taste.

I am, Gentlemen, with great respect,

No. 48, ALDERMANBURY,

Your humble servant,

August 12, 1799.

CHARLES LYNAM.

NUMBER VIII.

O o

A Cheap

A Cheap and expeditious way of saturating the Aq. Amm. Acet. with Carbonic Acid Gas.

Take a common stopper-bottle, the one which it is usually kept in the shop, and fill it about two thirds with acetum distillatum; then weigh the requisite proportion of ammonia, which break into lumps of a size sufficient to be admitted into the bottle, and put them in directly one after another; as, if the ammonia is broke too small, or put in too suddenly, it occasions too quick an extrication of the gas, and a quantity of it is lost. The stopper of the bottle must then be tied over with a piece of leather, and put in its usual place; interposing a substance between the top of the bottle and the superincumbent shelf, so as to fit tight, which considerably adds to the pressure, and tends to combine more intimately the carbonic acid gas; after having stood a few hours, the ammonia is dissolved, and the carbonic acid absorbed by the liquor.

The aqua ammoniæ acetata, thus prepared, is very strongly impregnated with carbonic acid gas; and is greatly deprived of that mawkish disagreeable taste which it has, when made in the usual way.

With respect to the properties of the aq. ammon. acet. as a medicine, it is unnecessary to particularize them, as they are so well known. The writer can, from experience, speak of its superior good effects as a febrifuge made as above, combined with carbonic acid gas, with this peculiar advantage, that it tends to keep the bowels open, even when under the influence of opiates.

It likewise fits easy upon most weak and irritable stomachs, when scarcely any other medicine would be retained; and as such might be used with propriety, in place of the saline draught, in a state of effervescence.

Its use as an external application has been often tried, with marked good effect, made in this manner; and from analogy, I conceive it might be adopted with great advantage in a variety of cases, the application of which must be determined by the practitioners.

According to BERGMAN, ammonia contains $\frac{4}{10}$ of carbonic acid, $\frac{4}{10}$ of pure ammonia, $\frac{1}{10}$ of water, that is nearly half its weight of air; so that in a pint of the aq. ammon. acet. in which 4 drachms of ammonia is used, there are about 108 grains weight of air, which, according to its specific gravity, will be equivalent to 159 $\frac{1}{10}$ cubic inches of carbonic acid, the greater part of which unites with the liquor; so that the materials made use of for one pint (without any expence) are capable of furnishing more than four times their

their bulk of carbonic acid, a quantity equal to any good effect, where it may be deemed useful to the stomach and bowels.

The intimate knowledge the writer has of the best manner of making the nephritic alkaline waters, first suggested to him the idea of combining the carbonic acid extricated from the ammonia, with the liquor itself, conceiving that it might be applied to some useful purpose. The nephritic alkaline waters, of themselves, are a sufficient proof of the antiseptic and good effects the carbonic acid has upon the animal economy; which waters, the writer has brought to the highest degree of perfection ever attained in this or any other country, by a machine, whose mechanical powers of pressure and retention cannot be exceeded; in which state he begs, through the medium of your valuable publication, to apprise the faculty, that the waters may be obtained, at his house in the city, with any proportion of alkali, as may be best suited to the peculiar circumstances of a patient's case.

Artificial Seltzer water, and other medicated waters, prepared upon the same principle, which are infinitely superior to the natural ones; containing more air, as well as a more select quantity of ingredients. It is unnecessary to particularize the virtues of the above waters, as no practitioner in medicine can be unacquainted with their high and valuable qualities.

Remarks on the Cure of Spasmodic Asthma.

[Concluded from our last Number, pp. 169, 170.]

IN spasmodic asthma, arising from tubercles of the lungs, a large blister applied to the shoulders gives ease to the breast, and promotes expectoration. After the paroxysm, emetics are useful; sometimes a purgative, consisting of manna, Glauber's salt, and soluble tartar, has speedily terminated the fit. A more immediate, though only temporary relief, may be given to the patient by spirit of hartshorn, essence of castoreum, or a solution of asa foetida in pennyroyal-water, of which, a table-spoonful must be given every five hours.

A more effectual method, however, ought to be adopted, in order to resolve gradually the tubercles of the lungs, and the viscid mucus secreted by the glands, which so frequently occasions asthmatic symptoms, and chronic dyspnoea. If the usual-resolvent salts should not produce the desired effect, a solution of the *muriate of barytes* must be administered in a proper vehicle. Indeed, pure water mixed with the eighth part of vinegar, and sweetened
with

with honey or sugar, has also proved beneficial in a paroxysm of asthma, if drank in sufficient quantity; but for patients with whom acids do not agree, neither this acidulated water, nor the oxymel of squills are proper, but the volatile alkali and asa fœtida are generally efficacious.

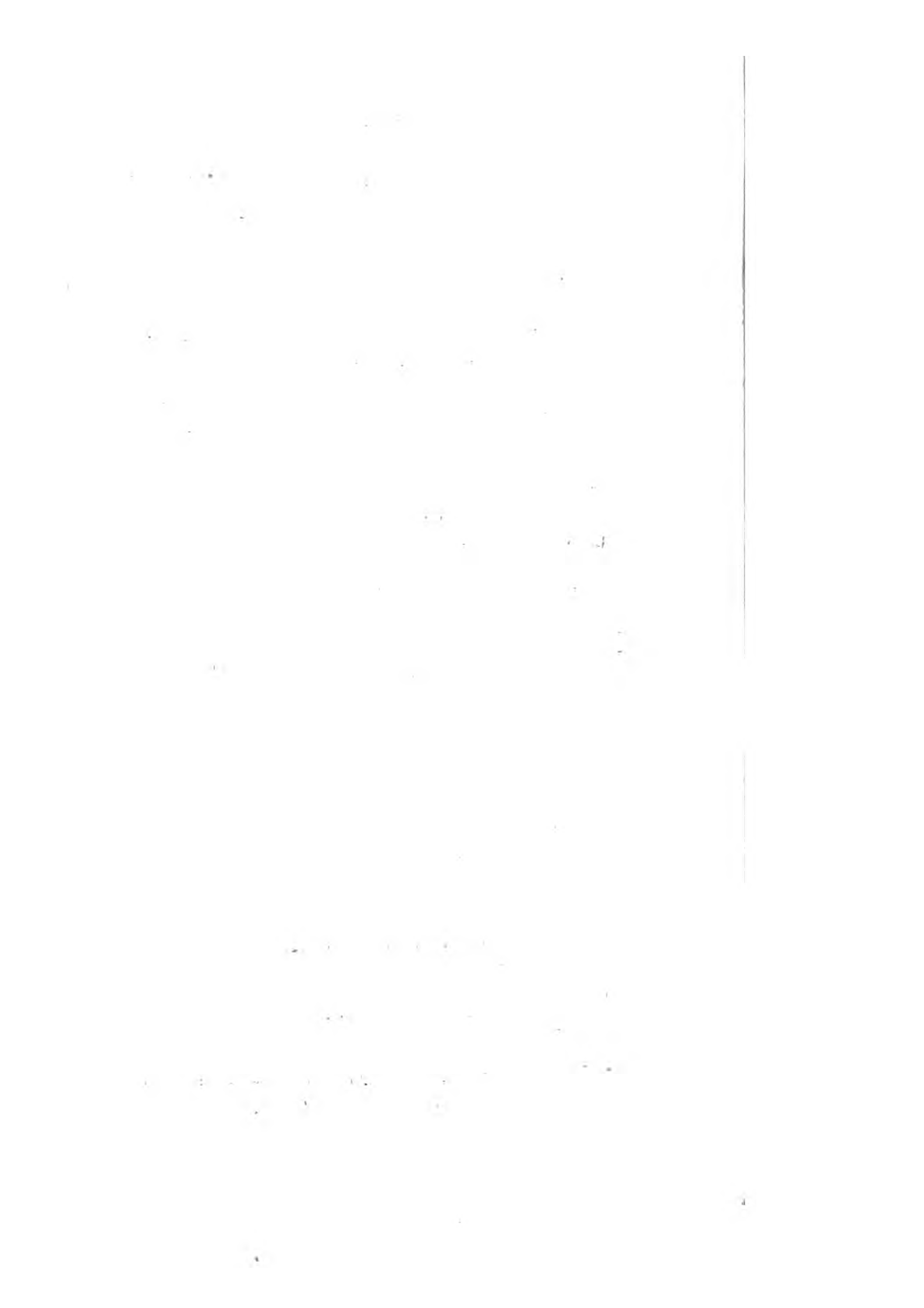
With a view to prevent the return of spasmodic asthma, a great variety of remedies have been prescribed with success, according to the different constitutions and circumstances of patients: the principal of these are, the bark, the chalybeates, vitriolic elixir, country air, equitation, a flannel waistcoat worn next the skin, setons, and the long continued use of the common pilulæ scillæ.

Diseases admitted as In and Out-Patients under the care of the Physicians of the Westminster Hospital, from the 20th of August to the 20th of September.

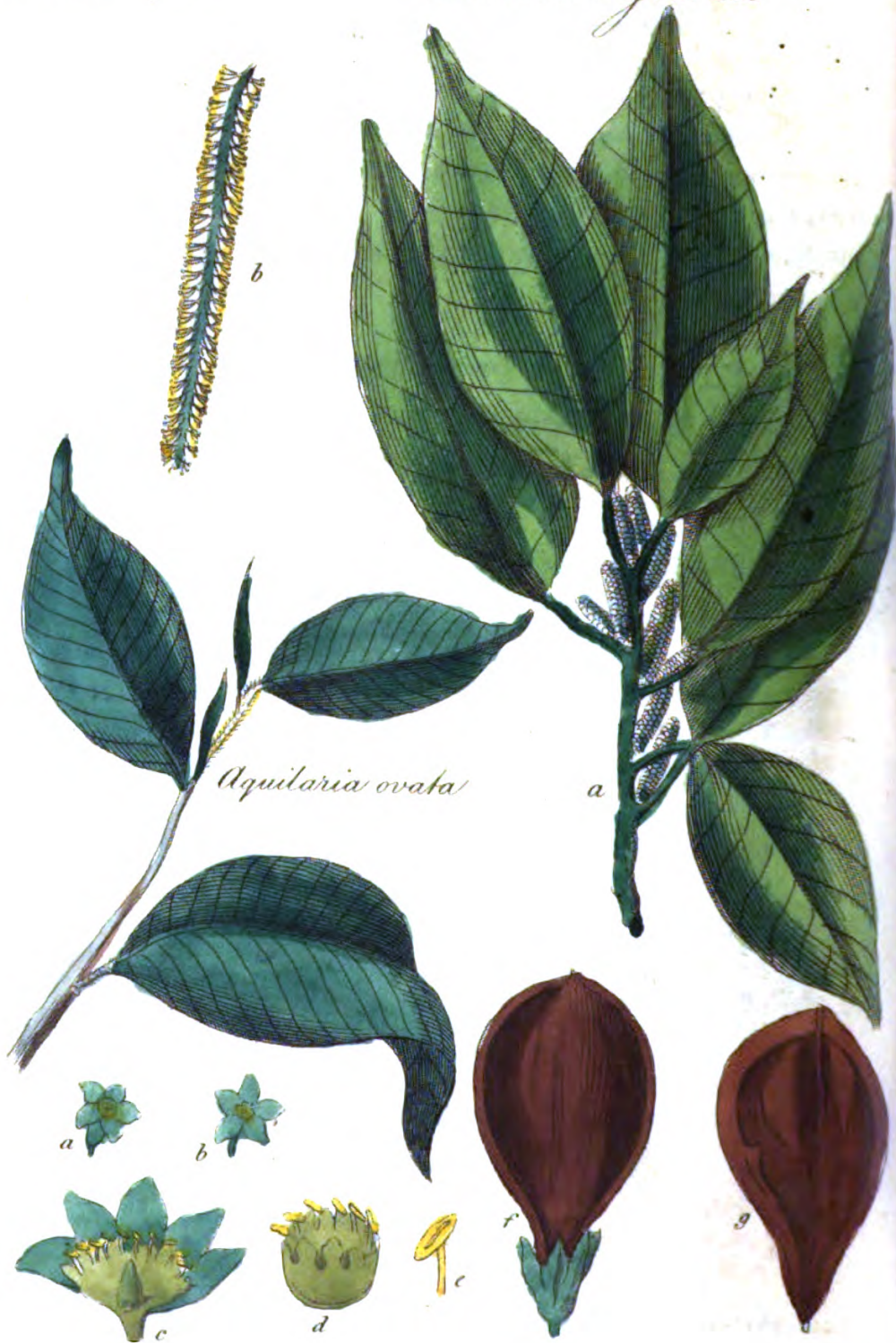
Fevers	-	-	-	11	Gastrodynia	-	-	-	2
Scarlatina	-	-	-	1	Hooping Cough	-	-	-	2
Amenorrhœa	-	-	-	4	Hemoptoe	-	-	-	4
Anasarca	-	-	-	5	Hypochondriasis	-	-	-	1
Ascites	-	-	-	2	Impetigo	-	-	-	1
Asthénia	-	-	-	1	Itch	-	-	-	8
Asthma	-	-	-	3	Jaundice	-	-	-	1
Catarrh	-	-	-	1	Phthisis	-	-	-	2
Cholera	-	-	-	1	Prolapsus	-	-	-	1
Colic	-	-	-	1	Paralysis	-	-	-	1
Cough	-	-	-	3	Pleurisy	-	-	-	1
Cephalæa	-	-	-	4	Quinsey	-	-	-	1
Diarrhœa	-	-	-	5	Rheumatism	-	-	-	7
Dyspepsia	-	-	-	2	Struma	-	-	-	3
Dysentery	-	-	-	2	Urticaria	-	-	-	1
Dysuria	-	-	-	1	Worms	-	-	-	5
Enterodynia	-	-	-	3	Vomiting	-	-	-	3

The fevers of this month have distinctly assumed the bilious character.

*** The third List of Diseases will, if it be found, appear in the next Number; as it has either been mislaid in the Printing-Office, or miscarried by the Penny-post.*



Excoecaria Agallocha



MEDICAL AND PHYSICAL
I N T E L L I G E N C E,
 (Original and Selected.)

On the aromatic Wood of Aloe, with a Botanical Description of the Excoecaria Agallocha, and the Aquilaria Ovata:—
 By Professor WILDENOW, of Berlin.

[Illustrated by a coloured Plate.]

THE agallochum, which is known by the name of aloe-wood, or the aromatic aloe, is one of the most valuable spices imported from the East, and has been in high estimation, even in the earliest ages. According to the different species of the plant, it is called *lignum aloes*, *agallochi veri*, *aquilæ*, and *calambac*, all of which differ remarkably in their sensible properties. It is, however, very difficult to ascertain the botanical character of these various species.

The aromatic wood of aloe is properly a resin, which has pervaded the pores of the tree. The genuine sort of this resinous wood is as precious as gold, and is used only by the great and affluent in the East-Indies, China, and Japan, as an agreeable perfume, with which they fumigate houses: hence it is but rarely imported into Europe. It is black, and variegated with grey veins, swims on water, and if strongly rubbed on glass, leaves behind resinous particles, which neither water, saliva, expressed oils, nor an alkaline lye, but spirit of wine only, will dissolve and remove. Its odour is very grateful.

This substance has, in former times, been much used as a medicine, not only in biliary complaints, diseases of the liver and stomach, and dysentery, but likewise as a remedy for the maw-worm; but at present it is entirely neglected—a revolution to which several of the ancient remedies have been subject, and which is likely to take place with many of the modern.

Father DE LOUREIRO assures us, that he discovered, in the province of Conchin-China, the tree which affords the true aloe. This aromatic wood is found in resinous masses, only in old, half-decayed, hollow trees. According to this writer, the tree belongs, in the system of LINNÆUS, to the first division of the tenth class, the Decandria Monogynia: he called it *Aloexylum Agallochum*. It grows on the highest mountains of Conchin-China, on the banks of the river Lav, which flows through the whole of that province. Loureiro had no opportunity of seeing the blossoms on the tree; he could only once obtain them dried, and transmitted by a friend, so that the parts of fructification were much bruised and lacerated on a long journey, and he could with difficulty give the following description:—

ALOEXYLIUM AGALLOCHUM,.

Differ. spec. *Aloe. foliis lanceolatis, alternis: pedunculis polyfloris, terminalibus,*

Hab.

Hab. *Arbor magna: trunco et ramis erectis, altissimis: cortice cannabino, fusco, glabro, nec crasso.*

Folia lanceolata, octo polyces longa, integerrima, plana, glabra, subcoriacea, alterna, petiolata. Flos terminalis, pedunculis polyfloris.

Ufus. Ligni hujus suffimenta inter omnia maximè æstimantur apud nationes Orientales. Ex arboris cortice fit vulgaris charta, in quâ Conchinenses scribunt, sicut in Japonia fit ex cortice Mori.

Virtus medica. Excitans, corroborans, cephalica, cardiaca. Suffitus valet contra vertiginem & paralyfim. Pulvis cohibet vomitum et fluxus ventris, præcipuè Lientricos, quod non propriè astringendo, sed corroborando agit.

This tree is not of a poisonous nature, and yields no milky sap when perforated. With respect to the genuine wood of aloe, Loureiro maintains that the various species differ remarkably, both in colour and flavour. By some botanists, this aromatic wood has been confounded with the *Lignum Aquilæ*, which is likewise esteemed for its agreeable odour, and like the *Agallochum verum*, Calambac, and Garo de Malacca, affords different species of perfume. KAEMPFER and LAMARCK have given a particular description of the genuine aromatic aloe. CAVANILLES, an eminent botanical writer, calls the plant that produces this valuable drug,

AQUILARIA OVATA.

Character genericus.

Calyx turbinatus, coriaceus, semiquinquepartitus, laciniis ovato-acutis patulis persistentibus.

Corolla nulla.

Stamina: urceolus calyci imo adhærens, monophyllus, quinquepartitus, laciniis crassis tomentosis profunde bifidis, adeo ut decemfidus appareat. Ex singulis divisionibus totidem adsurgunt filamenta brevissima squamulis breviora: antheræ decem, oblongæ versatiles.

Germe in squamulorum centro et fundo calycis, ovatum, coronatum stigmate brevi simplici.

Fructus: capsula pyriformis, lignosa, bivalvis, bilocularis: dissepimentum bipartibile, inascens valvis medio septiferis: futuram ambiente membranula brevi.

Semina solitaria nigra corpore spongioso circumdata; alterum sæpe abortivum.

Habitat in Malacæ montibus. *

Differ. Spec. A. Folijs alternis, ovatis, mucronatis.

Garo de Malaca. *Lamarck. Encycl. Tom. I. p. 49. Tom. II. p. 610.*

Arbor, cujus rami constant ligno albicante-luteo, cortice griseo tecti: villosique tenerrimis summitatibus.

Folia alterna, petiolis sustentata brevibus pilosis, ovata, terminata mucrone, integra, glaberrima, uninervia, nervo ramato, venisq; subtilissimis.

Stipulæ nullæ.

Florum situs et numerus mihi ignotus.

Of this plant we have given our readers an accurate copy taken from the work here quoted: and it is remarkable, that Loureiro describes probably the same plant in his "*Flora Conchinensis*," under the name of *Ophijpermum Chinenje*; as it differs from the former only by a long filiform style, and a bipartite stigma. Perhaps this apparent difference arises from the

* Vid. Cavanilles - *is.riet.* VII. pag. 377. tab. 224.

the flower of the plant described by CAVANILLES, having been injured by being dried and compressed between paper. He has given no description of the calyx, and is of opinion, that it does not exist. Professor WILDENOW, however, supposes that the specimen in question is in this respect incomplete. The fruit is a compact, ligneous, oviform, compressed, two-celled capsule. Each cell contains a seed with a fungous edge. According to LINNÆUS, this plant also belongs to the first order of the tenth class, the Decandria Monogynia.

SONNERAT and KÆMPFER assure us, that the genuine wood of aloe, which is so highly valued, is obtained from this tree; and it is nevertheless probable, that several trees afford that precious drug; for all writers on the subject observe, that the difference among them, both in scent and colour, is remarkably great. For the same reason, Professor Wildenow is inclined to believe that the *Excoecaria Agallocha* of Linnæus, yields a similar drug, which has been introduced into commerce, under the specious name of aromatic aloe.—The reader will find a sprig of this tree, with male flowers, on the annexed plate; and as the work of Linnæus is generally known, we shall, instead of transcribing his description, translate that given by Professor Wildenow, in German.

“ This tree (says he) grows wild in the East-Indies, and belongs to the third order of the twenty-second class of Linnæus, the Dioecia Triandria, that is, the male and female flowers grow on distinct stems, and the male flowers have three filaments. The trunk of this tree is of a very considerable size. The bark on the smaller branches is of a light brown colour, smooth, and somewhat cracked. The leaves come out alternate, are petiolate, ovate, sharp-pointed, entire, coriaceous, of a deep green colour, and glossy on the upper surface. The flowers are disposed axillary, in several spikelets. The male flowers are green, and, in their growing state, short and columnar. The filaments are gradually developed, become progressively longer, and have yellow anthers. Linnæus asserts, that the male catkins are composed of mere filaments, three of which uniformly stand together. But on the male flowers (which only the Professor had an opportunity of examining) he observed a roundish pointed scale, a small corolla of two petals, and three anthers.

“ The female flowers are green, arranged in catkins, and formed like the male flowers. The germ is round, and has three styles. The fruit is a three-celled capsule. On cutting the tree, a quantity of milky sap flows from the orifice of the wound, and, if it be brought in contact with the eye, occasions blindness. In very old hollow stems, there is a resin which has penetrated through the brittle wood, and is likewise known in commerce, by the name of lignum aloes.

“ From this account we may conclude, that the best and most valuable wood of aloe is obtained from the *Aloexylum Agallochum*; next to that, one of an inferior quality from the *Aquilaria Ovata*, and the most indifferent kind, from the *Excoecaria Agallocha*.

EXPLANATION OF THE PLATE.

Excoecaria Agallocha: a. A branch of the natural size, with the catkins just opened.

b. A catkin in full blossom.

Aquilaria Ovata: a foliated branch.

a. b. Two flowers of the natural size.

c. The flowers represented full blown, but somewhat magnified, so as to display the nectary, with the stamens, and the pedunculus.

d. The

- d. The nectary magnified with the filaments.
- e. A filament, with the anther much magnified.
- f. The fruit, with the calyx of the natural size.
- g. The same dissected.

We are indebted to a Correspondent whose paper is signed "PHILO," and is dated August 26, for the following communication, which, we presume, will not be overlooked by our botanical readers :

The subject is the *Mesembryanthemum Pinnatifidum*. See "Curtis's Botanical Magazine," pl. 67. If that excellent botanist had not published his account of this plant so soon, when he had only seen a very young specimen of it, he would probably have superseded what I have to say ; for whatever was curious seldom escaped the observation of his penetrating eye. I am not sufficiently acquainted with the genus *Mesembryanthemum*, to know to what degree the different species vary with regard to the form of the seed-vessels, but I believe the difference is very considerable, as in some species they are five-celled, in some four, and in some ten-celled, corresponding with the number of styles ; but having had one of this species stand in my window for some months this summer, I have had frequent opportunities of observing it. The whole habit of the plant, and even similar crystalline points all over the stalks, bespeak at first sight, it's near relationship to *Mesembryanthemum crystallinum*, or common ice-plant. Like this too, it is an annual, contrary to the generality of the genus. The young botanist, however, as yet unacquainted with the habits of plants, and their natural families, might be much puzzled to find it in his system, as it has for the most part only five, sometimes six stamens*. This circumstance seems to shew the natural affinity between the genus *crassula* and this. The petals are far less numerous than in most of the genus, generally sixteen.

Mr. Curtis has observed, that if the weather be fine, the blossoms open about two or three o'clock in the afternoon, most of the species open sooner, but in general not till about noon, whence the name, which signifies noon or mid-day flower. My plant stood in a bow-window fronting the East, and had the morning sun full upon it till twelve o'clock, and no longer, yet it never opened till two o'clock in the afternoon, at which time it was not exposed to the rays of the sun ; in its time of flowering, therefore, it appears to be influenced by some other cause than either heat or light, as are many other plants : see the *Horologium Floræ*, in Linnæus's *Philosophia Botanica*. But the circumstance which attracted my attention most, and indeed is the cause of my troubling you with these remarks was, the seed-vessel. This affords a good instance of what I understand by *capsula turbinate*. Its flat top, or umbilicus, is neatly marked with five rays, diverging from a point in the center ; as the capsule ripens it becomes somewhat dished, so that it will hold a little water, and the foot-stalk is bent up to hold it in a horizontal position. While the weather continues fine, the fruit dries, but does not open ; but when the rain falls, a little water lodges in the dished top, soaks in, and now the five triangular valves, the points of which before met in the center, by open, expand horizontally, and are even bent backwards, bringing with them an internal transparent membrane, neatly jagged at the edges, the whole having the appearance of a full blown flower, of which the outer valve forms the calyx, the inner membrane the corolla.

The

* It should be remarked, that this, and all the observations, were made upon one individual.

The cells containing the seeds are thus in part laid open, exposing them to be washed out by the rain and dispersed; I say in part, because they are not entirely uncovered, part of the inner membrane remaining attached to the divisions of the cells (dissepimenta), forming a five-radiated star, by which the seeds are prevented from being all suddenly washed away. When the rain ceases, and the capsule becomes dry, the valves close as before, and may be made to open at pleasure, by dropping a little water into the dished top of the capsule; as the water dries away, the valves close again, and thus this semblance of a flower may be made to expand or shut up at pleasure*. I made a little attempt to improve the spectacle by colouring the transparent membrane, to make it more nearly resemble a corolla, but for want of proper materials, I succeeded very badly. Could the outer valves be stained green, and the inner membrane crimson, yellow, or any other showy colour, in such a manner that the necessary wetting should not make the colours run one into another, it would make an amusing recreation.

Dr. SCHERER, of Jena, in a letter to VAN MONS, on the *chemical action of light*, observes that he inserted in the seventh Number of his Journal, a Memoir of Count RUMFORD, in which that philosopher expresses his doubts of light having the power to act chemically on bodies. Among the experiments he adduces to support this opinion, the most remarkable is that in which charcoal has effected, in darkness, as complete a reduction of the solution of gold, as it would have undergone in the presence of light.—“*Annales de Chimie*,” No. 91.

Dr. SCHERER also communicates an account of an apparatus, by means of which bleaching may be executed with the oxygenated muriatic acid alone, as well as by the addition of soda. He proves that the solution of indigo is less discoloured, in proportion as the acid is more saturated with this alkali. *Ibid.*

On the preparation of the *muriat of barytes*, the same chemist remarks that he found the operation considerably shortened by using, what he calls, the native carbonat of England, or the *witherite*. By this means, not only the difficulty of separating the barytes from the sulphat of this earth is avoided, but the salt is prepared at half the ordinary expence.—*Ibid.*

Mr. SMITH has some time since communicated, in the European Magazine, a very curious hypothesis respecting the production of sulphur; while he maintains that it is collected in Dumfriesshire, at Moffat, and Harrogate, from a soil composed of the remains of plants and vegetable earth; and that, during the act of vegetation, by some unknown process of nature, the sulphuric acid is generated, which combines either directly with some of the vegetable substances, or with soda, in the same manner as the different animal acids are formed.

“It is probable (remarks Dr. Scherer) that during putrefaction, the oxygen of the sulphuric acid is first volatilized by the carbon and hydrogen, as that effect takes place during combustion; with this difference, however, that in the latter operation the liberated sulphur is re-oxygenated, while during the former it combines with the ammonia, and consequently, when this combination disunites, it also combines with the hydrogen gas.—*Ibid.*”

M. FRIES,

* If put into warm water, the expansion will be performed quicker.

M. FRIES, of Rofingen, is preparing for the prefs, an Essay on the *Stoichiometry* of RICHTER, and also a continuation of his inquiry respecting the *application of mathematics to chemistry*. These researches are of greater importance than may be at first conceived; and the doctrine of affinities, in particular, will derive much advantage from them; for, in chemical action, the affinity of bodies depends more on their composition and decomposition, than on their occult qualities. The same idea has been formerly adopted by KIRWAN, but this learned chemist did not know how to make an extensive application of it, so that he failed in a great number of very delicate experiments.—*Ibid.*

M. JUCH has informed Dr. SCHERER, that he distinctly perceived the smell of *nitric acid* exhaled by the percussion of *sugar*. He imagines that the atmospheric air, by becoming partly difoxygenated, yields sufficient portions of azote and oxygen, to form this acid.—*Ibid.*

M. LENTIN, of Göttingen, asserts that the *falling star* is a new animal substance prepared in the stomach of some animal, where it acquires its gelatinous consistence. He found in several specimens of this substance the thighs and other parts of frogs: hence he concludes, that it may probably be the muscular fibre of that animal. The whole appeared, at first, to dissolve by distillation, and to form an aqueous, colourless liquid; but, towards the end of the experiment, there appeared a little empyreumatic oil, and a substance resembling carbon remained in the retort. The strained liquor had a very disagreeable smell: it imparted to the turnsol a red colour, and he believed that this effect was produced by the zoonic acid. M. Lentin remarks, as a singular circumstance, that this substance may remain for several months, exposed to the combined action of moisture and heat, without changing to a putrid state.—*Ibid.*

M. GAERTNER has lately communicated to Dr. SCHERER some interesting observations on the constituent parts of *urine*, and on the luminous property of *touchwood*. These remarks are contained in the *Chemical Journal* edited by Scherer, but which is not yet come to hand.—*Ibid.*

M. VON CRELL has lately announced in the last mentioned Journal, that *carbon* is the basis of the *boracic acid*.—*Ibid.*

Domestic Intelligence.

It having been suggested to us, that a concise Account of the different Hospitals, Infirmaries, and other Medical Institutions in Great Britain, would be acceptable to many of our Readers, and also tend to diffuse the benefits of the Healing Art; in compliance with this suggestion, we request our Correspondents to furnish us with such accounts of these Establishments, as may seem likely to answer useful Purposes. We submit the following outline of the Particulars: an Account of the Origin or Foundation of the Institution; a concise History of its Progress to the present Time; a Description of its present State, with respect to Direction, Medical Officers, number of Pupils, Patients, &c. annually admitted.

Dr. BRADLEY will recommence his Course of Lectures on the Theory and Practice of Physic, at the lecture-room, No. 102, Leadenhall-street, on Monday the 7th of October, at six o'clock in the afternoon.

Dr.

Dr. CRICHTON, of the Westminster Hospital, will commence his usual autumnal course of Lectures on the Theory and Practice of Physic, Chemistry, and Materia Medica, on Monday the 7th of October. These lectures will hereafter be delivered at No. 15, Clifford Street, Bond-Street.

Dr. DENNISON and Dr. SQUIRE, Men-midwives to the Lying-in Charity for delivering poor women at their own habitations, will commence their Lectures on the Theory and Practice of Midwifery, and the Diseases of Women and Children, in the first week of October, in the following order: Dr. Dennison at the London Hospital, and Dr. Squire at No. 2, Little Cloisters, under the Gate-way, West-Smithfield. These lectures will be continued through the year, and the day of beginning each course advertised in the public papers.

Gentlemen attending these lectures will find considerable advantages in real practical midwifery.

Dr. BATTY, of the British Lying-in Hospital, Brownlow-Street, and Physician to the Infant Asylum, will begin a Course of Lectures on the Theory and Practice of Midwifery, and the Diseases of women and children, on Monday, October 7, at his house in Great Marlborough-Street.

Mr. CRUIKSHANK and Mr. WILSON, will begin the winter course of their anatomical Lectures on Tuesday, October 1, at two o'clock, at their Anatomical Theatre, in Great Windmill-Street.

Mr. WILSON will begin his Lectures on the Principles and Practice of Surgery, on Monday, October the 7th, at seven o'clock in the evening, as usual.

Mr. JOHN PEARSON, Surgeon of the Lock Hospital, Asylum, and Public Dispensary, will commence his usual course of Autumnal Lectures, on the Principles and Practice of Surgery, on Monday, October 7, at seven o'clock in the evening, at his house in Golden-Square.—Gentlemen who attend these Lectures, may have the advantage of exemplifying the general doctrines they shall hear delivered, by attending the Chirurgical Practice at the Dispensary.

Of the late Professor GREN'S "*Elements of Chemistry*," in two volumes, which we have already noticed in our fifth Number, p. 514, we can now confidently promise a faithful and classical translation, from the joint efforts of two learned chemists, a German, and a native of this country. We have seen a specimen of the first sheets of this excellent Compendium, from the English press, and were informed that the work shall appear towards the end of the present year: the plates are engraving by that eminent artist, Mr. LOWRIE.

Dr. WILlich and the Rev. P. WILL propose speedily to publish a monthly work, entitled: *The Domestic Magazine and Review*—on a plan entirely new, and to be embellished with plates. Particulars are stated in a Prospectus, circulated by all booksellers of respectability in the three kingdoms.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.
[FOREIGN AND DOMESTIC.]

A Treatise on Febrile Diseases; including intermitting, remitting, and continued Fevers; eruptive Fevers, Inflammations, Hæmorrhagies, and the Profluvia: in which an Attempt is made to present at one View, whatever, in the present State of Medicine, it is requisite for the Physician to know respecting the Symptoms, Causes, and Cure of those Diseases. By A. P. WILSON, M. D. F. R. S. Ed. Physician to the County Hospital, at Winchester, &c. Vol. I. 8vo. pp. 729, London. Cadell and Davies.

THE author, in his Preface, gives the following account of his views in undertaking this work. "When I first turned my attention particularly to febrile diseases, I had no view of undertaking so laborious a work as that in which I am now engaged. For several years, I devoted the whole of my time to the study of these complaints, in order to qualify myself for reading lectures on them, which I did in the summer of 1796, at Edinburgh.

"My reasons for making choice of febrile diseases for the subject of my lectures were, that they form the most important branch of medicine, and that which is least generally understood. The practice in most other diseases is simple; but in febrile complaints the symptoms are infinitely varied; minute circumstances often point out essential differences in their nature, and consequently in the plan of treatment.

"A very infirm state of health has obliged me to abandon the plan of continuing to give lectures, and I am inclined to think that I may render the result of my studies useful to others, in another form.

"With regard to the extent of the work, as far as I can judge, five volumes will comprehend the whole of my plan. In the second, and part of the third volume, I shall finish the first part, that which treats of idiopathic fevers; and the second part, which treats of the symptomatic, will form the remainder of the third and the two last volumes. The present volume, however, forming a treatise on *intermittent, remittent, and continued fevers*, may be regarded as not essentially connected with the volumes which are to follow."

This first volume commences with an *Introduction*, which contains the author's *Nomenclature* of febrile diseases, not materially differing from that of Dr. CULLEN, but more correct in several of the definitions.

The first book is devoted to the consideration of *intermittent and remittent fevers*. In the treatment or cure of these, he lays down the conduct proper to be pursued during the paroxysm, and during the apyrexia, or remission.

During the cold stage, he recommends *external warmth* and blisters, but not internal stimulants of any kind, unless emetics may be comprehended under that title.

In the hot stage, the indication is to produce a copious perspiration as soon as possible; which is effected by removing irritation, as that of bile in the stomach;

Stomach; by diluents; by sudorifics; by supporting the action of the heart and arteries; and lastly, by moderating excitement. The means of fulfilling these are then explained, with an account of the *modus operandi* of the remedies.

During the *apyrexia*, the author gives directions relative to the diet and exercise, at considerable length; and then examines the several medicines and the best mode of administering them, viz. the barks, aromatics, Fowler's solution of arsenic, opium, mercury, &c.

The *second book* treats of *continued fevers*, in which Dr. Wilson considers the symptoms, causes, crises, prognosis, contagion, &c. and under the head of *Proximate Cause*, he examines Dr. CULLEN's hypothesis. This hypothesis, the invention of HOFFMAN, was slightly varied by Dr. Cullen, and has been so generally received by his pupils, that we apprehend our author will displease some of these, by the slight notice he takes of it, and the little importance he assigns to it.

The Brunonian doctrine is explained at greater length; its defects and errors are pointed out; its merit candidly appreciated and commented upon; and several means of correcting and extending its application suggested: we believe, however, that many of BROWN's partizans will not agree with our author in several of his objections to that system, nor in some of his proposed improvements.

Under the head of treatment or *cure* of continued fever, Dr. Wilson *first* considers the means of stopping a fever at its commencement, by inducing a *crisis*: and *secondly*, the treatment when we fail to induce a *crisis* at its commencement. On both these points, Dr. Wilson has exhibited the practice of the best authors; and his regular reference to them, through his whole work, considerably enhances its value to the young student; to whom we warmly recommend it as the best systematic introduction and guide we have seen.

Lectures on Diet and Regimen: being a systematic inquiry into the most rational means of preserving Health and prolonging Life; together with Physiological and Chemical Explanations, calculated chiefly for the use of families, in order to banish the prevailing abuses and prejudices in Medicine. The second Edition, improved and enlarged, with considerable additions. By A. F. M. WILlich, M. D. 8vo. 708 pages. (Price Nine Shillings in boards, or half a Guinea on fine paper) London. Longman and Rees. 1799.

The tendency of this work is sufficiently obvious from its title; and as it will not be expected that we shall here enter upon a critical examination of its merits or demerits, we trust to discharge our duty to the unprejudiced reader, by giving a short analysis of its various contents, together with a few extracts.

In an "Advertisement" prefixed to the first edition of these "*Lectures*," the author informs the public, that, with the exception of the eighth chapter "Of Evacuations," and the ninth "Of the Sexual Intercourse," they were delivered in the months of January and February, 1798, at Bath, and in the subsequent spring at Bristol, to numerous and respectable audiences. In the composition of this comprehensive work, he acknowledges his obligations to many English and German writers, and adds the following exordium: "Should the rules and cautions interspersed throughout, tend in the smallest degree to increase the knowledge of the inquisitive, dissuade the unwary from injurious habits, or rescue the sensualist from the brink of destruction, the exertions of the author will be amply compensated."

An "Analytical Table of Contents" is prefixed to the work, and an Alphabetical Index is added, to facilitate occasional reference.

In a general "Introduction," from page 25 to 98, the author explains the design of this publication; takes a cursory view of the general laws of Nature; and investigates the origin and causes of disease. The doctrine of temperaments he illustrates with some practical remarks of Professor SOEMMERING; from these we extract the following passages:

"There is," says that learned Professor, "a certain line observable in all the more perfect animals, by which Nature is regulated in performing the functions of body and mind; in preserving or impairing the health, and in exerting all those energies of life, on which the happiness of the creature depends. This line is various in different individuals, and the variety cannot be completely explained on the principle of the ancients, by a difference in the qualities of the blood alone; though a human body of a moderate size contain not less than thirty pounds weight of that fluid. Other terms must therefore be substituted for their sanguine, choleric, phlegmatic and melancholy temperaments," p. 40—After having taken a more extensive view of the economy of man, and investigated the remedies suited to the causes productive of a particular disposition of mind and body, Professor Soemmering attempts to classify and fix the characteristic marks of the different temperaments.

"All the modifications of temperaments," says he, "appear to be varieties of the *sanguine* and *phlegmatic*."

1. The sanguine is variable. It is marked by a lively complexion; the vessels are full of blood; and persons of this habit are seldom able to bear great warmth; they are predisposed to inflammations, and possess a high degree of irritability and sensibility. All is voluptuous in this temperament.

They are fickle in every thing they undertake; are affable, and soon become acquainted, but as soon forget their friends, and are suspicious of every body. Whatever requires industry they abhor, and hence they make little progress in science, till they advance in age.

"2. The sanguineo-choleric enjoys all the health and serenity of the sanguine, with all the perseverance of the choleric."

"3. In the choleric, the body is soft and flexible, without being dry and meagre, as in the melancholic; the skin has a tint of yellow; the hair is red, the eyes dark and moderately large, with a penetrating expression, and frequently a degree of wildness; the pulse full and quick; the muscular contractions in walking, speaking, &c. are rapid; the bile is copious and acrid, and hence the vermicular motion is active, and the body not liable to costiveness. Persons of this class are particularly fond of animal food: They possess great magnanimity, are fitted for laborious undertakings, and seem born to command."

"He whose temperament is hypochondriacal, is a burthen to himself and others. Persons of this class are subject to diseases of the liver, and hence have a fallow complexion. They are never content with their situation, and are a prey to envy and suspicion."

"The melancholic temperament is marked by a gloomy countenance, small, hollow blinking eyes; black hair; a rigid or tough skin, dry and meagre fibres. The pulse is weak and languid, the bile black, the vermicular motion slow. The perceptions of persons of this disposition are quick, they are fond of contemplation, and are slow in the execution of labour, which they patiently undertake; they bear with resolution the troubles of life; and, though not easily provoked, are nevertheless vindictive."

" The *bœotic*, or ruffic temperament, has many of the qualities of the sanguine, in common with many of those of the phlegmatic. The body is brawny, the muscles have but little irritability, the nerves are dull, the manners rude, and the powers of apprehension weak.

" The gentle temperament is a combination of the sanguine, choleric and phlegmatic. Universal benevolence is the distinguishing character of this class: their manners are soft and unruffled; they hate talkativeness; and if they apply to science, their progress is great, as they are persevering and contemplative. Lastly,

" The phlegmatic class is marked by a soft white skin, prominent eyes, a weak pulse, and languid gait. They speak slowly, are little hurt by the injuries of the weather, and seem born to obey. From their little irritability, they are not easily provoked, and soon return to their natural state of indifference and apathy." p. 47,

(To be continued in our next Number.)

Observations on the diseased and contracted Urinary Bladder, and frequent painful Micturition; with some Cautions respecting the Use of the caustic Bougie, in the Treatment of Strictures in the Urethra; to which are added, Observations on the Scirro-contracted Rectum, &c. By JOHN SHERWEN, M. D. Member of the Corporation of Surgeons, (1s. 6d.) London, Johnson. 1799.

The author justly observes, that the diseased and contracted urinary bladder, in some of its features, nearly resembles the scirrhus rectum, and like that produces a frequent and often fruitless stimulus to expulsion; and though, like the scirrhus rectum, it does not admit of being cured, it will sometimes admit of palliation.

After having given an accurate diagnosis of this disease, and investigated the predisposing causes, Dr. Sherwen points out the pathognomonic symptoms, by which it may be distinguished from *calculus*. He strongly recommends the use of the caustic or armed bougie, and faithfully describes the method of applying it with advantage.—His observations on the scirro-contracted rectum are pertinent and original: he illustrates them with the history of a fatal case, from which he draws the practical inference, that clysters, cathartics, and diluents are hurtful in this disease, while relief might be obtained from mechanical means—catheters and bougies. These, according to his directions, ought to be made of horn, or whalebone, smoothly polished; as this substance, by immersion in boiling water, becomes soft and pliant, and will retain its softness some time after it is removed from the boiling water. It will adapt itself to the natural curvature of the pelvis, and should be carried on to the obstructed part slowly, gently, and steadily, with the utmost tenderness and circumspection, but at the same time with sufficient force and resolution.

The "Postscript" contains some useful hints, which we here communicate to our readers:

" Since the publication of the above paper," says Dr. SHERWEN, " I have been consulted in several melancholy cases of this disease, and have, in some instances, promoted a discharge of thin fæces, by the introduction of a rectum probe, made of polished whalebone.

" In one unhappy case, that of the late Mr. HOARE, of Enfield, the purging had existed, and been managed with tolerable comfort, upwards of twenty years; but the gut became at last so much closed and diseased,

that

that the faces made a passage into the bladder; and, during the last month of his life, not a drop was discharged except through the penis, from which it was almost constantly oozing, mixed with urine.

“There are symptoms connected with a diseased bladder and rectum, which have been often erroneously ascribed, by medical men of high reputation and real abilities, to an enlargement of the prostate gland. It is therefore the duty of every practitioner, since that gland lies within the reach of his finger, to take the earliest opportunity of examining and ascertaining its condition. In those cases, which have fallen under my observation, I have most frequently found it in a state of extenuation.”

NEW MEDICAL PUBLICATIONS IN SEPTEMBER.

The first volume of the Medical and Physical Journal, containing the earliest information on subjects of Medicine, Surgery, Pharmacy, Chemistry, and Natural Philosophy; together with a Critical Retrospect of all new books in these departments of literature. Conducted by T. BRADLEY, M. D. and A. F. M. WILLICH, M. D. 8vo. 10s. boards. Phillips.

A Treatise on Febrile Diseases, including intermitting and continued fevers, eruptive fevers, inflammations, hæmorrhages, and the profluvia. By A. P. WILSON, M. D. 8vo. 9s. boards. Cadell and Davies.

A Synopsis of the Chemical Characters, adapted to the new Nomenclature proposed by Messrs. de Morveau, Lavoisier, Bertholet, and De Fourcroy, &c. &c. By W. JACKSON, Practical Chemist. On a whole sheet copper-plate. Price 2s. plain, and 2s. 6d. coloured. Symonds.

NEW MEDICAL PUBLICATIONS IN GERMANY.

Anatomische Tafeln.—Anatomical Tables, Part VI. Numb. I. Containing Angiology; with a Latin and German Text, (4 rix-doll. Sax. Curr. or about 15s. British) Weimar. Board of Industry.

Disquisitio botanico-medica Tremellæ Nostoch: cui accedit Tremellæ palmatæ descriptio. c. tab. aen. 4to. Lipsiæ. Barth.

Einschränkungen, &c. Strictures on the latest Essays relative to BROWN'S Theory of Excitement: By F. W. C. HUNNIUS, M. D. 8vo. (16 grosch. or about 2s. Id.) Weimar. Gœdicke.

TO CORRESPONDENTS.

We have received two communications relative to the discovery of musk and fult of hartshorn, in gangrene and sphacelus. As, however, this subject appears to us nearly exhausted, we are under the necessity of deferring them to a future Number, while we gratefully acknowledge the favours of our Correspondents.

The following papers have also been received, and shall, if room permit, be inserted in the next Number: “A favourable termination of an adhesion of the placenta after delivery.”—“Observations on one of the means by which the eye has been supposed to accommodate itself to the different distances of objects.”—“An Analysis of the Institutions of Practical Medicine, delivered in Lectures: By J. B. BURSERIUS DE KANIFELD, &c.”

The “Questions” addressed to us by our obliging Correspondent from Kidderminster, we must decline to answer; as they do not appear to involve a proposition connected either with medicine, or its “useful” auxiliary branches.

The anonymous letter from Stourbridge, addressed to Dr. W. was so complete a specimen of insanity, that it has been returned to the General Post Office, for the recovery of the postage; especially as the writer had the additional indiscretion to enclose it in a double cover, and to direct it to the care of a respectable bookseller in town.

Representation of the external organs of Generation in a Calf of unusual structure.



*No 1.
Side View.*

THE
Medical and Physical Journal.

VOL. II.]

NOVEMBER, 1799.

[NO. IX.

*A remarkable Structure and Appearance of the External
Organs of Generation in a Calf, with a Plate, communicated
by W. SANDFORD, Surgeon.*

To the Editors of the Medical and Physical Journal:

GENTLEMEN,

OBSERVING a Case of *Lusus Naturæ*, with a plate, in your Journal for August, it reminded me of one which I remarked about three years past, and of which I obtained a drawing. If you think it worth a place in your valuable Miscellany, it is at your service.

I am,

GENTLEMEN,

Your's, &c.

Worcester,

W. S.

Sept. 14, 1799.

TUESDAY, August 23, 1796; Mr. PAYNE, of Bridge-street, killed a calf ten weeks old, that was supposed to have in some respects the genital organs of both sexes united; and not being a twin calf, was on this account esteemed more remarkable.

On the first view the animal appeared to have testicles, which seemed disposed in a very singular manner, each testis having a compleat and separate scrotum, at a considerable distance from each other.

The penis, (as it afterwards proved to be) instead of proceeding in the usual direction along the abdomen of the calf, terminated in its sheath immediately between these apparent testicles, and in one point of

view resembled the vagina of a cow, with its *bearing* rather more dependent than usual.

This remarkable appearance seemed in some degree confirmed by the animal voiding its urine backwards, in the same manner as the cow.

Externally, and on each side the abdomen, in their usual situation, were two teats or nipples, at the distance of about three inches from the pouches or scrota, as is shewn in the drawing, No. 1.

In order to be fully satisfied that the substance resembling the penis of the bull, was not an elongated *clitoris*,* (a mistake that has sometimes happened,) I first examined with a probe, and finding it pervious, introduced a director, and then laid it open to the ramus of the ischium, and by this means traced the urethra along its course towards the bladder, as far as the instrument could be passed.

After this examination I dissected out the penis its whole length.

These circumstances were more than sufficient to remove all doubt with respect to its situation and appearance, as an *elongated clitoris*, and at the same time particularly to distinguish the sex.

The abdomen being then laid open, and the os-pubis carefully divided, I proceeded to examine the *internal* organs of generation, but found nothing in these by any means præternatural or confused.

The testes were within the abdomen, and were placed on each side, corresponding to the pouches, † into which they would most probably have descended, had the calf been reared.

The distance from the verge of the anus to the extremity of the sheath or vagina, measured nearly *twelve inches*.

The appearances that may, perhaps, be esteemed most worthy remark in the external genitals of this calf, are the situation and distinctness of
the

* In some instances the penis has been mistaken for the clitoris, as was the case in a child of *seven years* old, upon whom, at *this period*, Mr. BRAND performed an *operation*, and by this means transformed an apparent girl into a boy; for a description of which see "Case of a Boy mistaken for a Girl, with three Anatomical Views of the Parts, 4to printed for the author, *Soho-Square, London*. MURRAY, 1787."

† These, upon examination, were discovered to be formed of cellular and adipose membrane.

the two scrota, together with the singularity in appearance, and deficiency in length, of the penis, from which circumstances (had the calf grown up) it would assuredly have been prevented from copulating, and at the same time would have had the appearance of what is commonly called, an Hermaphrodite.

The *Free Martin*, (as it is usually filed) has, I believe, the external parts of generation, resembling most those of the common cow; the internal organs have been found to differ very materially. These anatomical peculiarities the late ingenious Mr. JOHN HUNTER * has given very accurate and satisfactory descriptions of, illustrated by excellent engravings of the generative organs of three differently formed *Free Martins*, that he had an opportunity of dissecting.

The circumstance of the *Free Martin* *never* having been known to breed, is by some experienced graziers said to be *false*. Others have asserted, that the bull calf, under this description of twin, will not procreate unless he chance to be the first twin calved; many other as extraordinary remarks have been made, that upon comparison appear too vague and contradictory to place any dependence upon. This peculiarity, therefore, in the animal œconomy, and the degree of generative power annexed to it, must remain in its present state of uncertainty till further experiments properly conducted, and respectably authenticated, shall be presented to the public.

EXPLANATION OF THE DRAWING,
No. I.

TO have a perfect idea of the parts described in this drawing, the spectator must imagine the leg and thigh on the left side of the animal removed. In this view the sheath, together with the hairs towards its point, appear to take their natural direction, and are of the same kind as those usually observed to grow upon this part when it terminates in its usual situation.

EXPLA-

* See his "Observations upon certain parts of the Animal Œconomy." 4to. p. 52.

In this Philosophical work, Mr. HUNTER has also given his ideas on the nature of Hermaphrodites; and remarks, that he has "frequently met with sheep, that appeared to be "imperfect males, having the penis terminating in the perinæum, the orifice of which appeared like the bearing in the female." p. 51.

This was precisely the case in Mr. PAYNE's calf, and is therefore more reconcileable to Mr. HUNTER's example of the *imperfect male* above described, than of the *Free Martin*.

EXPLANATION OF THE DRAWING,

No. 2.

THIS exhibits the external parts when dissected from the abdomen and part of the perinæum; they are extended and represented in their position, to shew the separate formation of the two scrota, and their distance from each other, which, by measurement when on the belly of the animal, was nearly six inches.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE etiquette of authorship, I suppose, requires me to answer the correspondent who, in your last Number, maintains that he has not *falsely* represented me. My answer is reducible to two short and easily proved propositions. 1. The quoted passages do not necessarily imply coincidence with Dr. GIRTANNER. 2. There has existed, for some years, incontrovertible proof that I always differed from him materially.

1. That hyperoxygenated blood is more stimulating, and hyperoxygenated muscle more irritable, I trust I have assisted in rendering probable. But if the oxydable animal base be altered by diminution or loss of any of its principles, the new compound, however charged with oxygen, may become less irritable, or altogether incapable of irritation. This was my view in penning the quoted passages: I had no idea of oxygen being the absolute principle of irritability. In saying that "attention is not less due to the other elements of organized bodies," I surely never dreamed of apologizing for a conjecture similar to MAYOW's, relative to muscular action.—The passage has nothing apologetical in sense or sound.—The conjecture needed no "kind of apology" at the time. It needs none now.

In what I first wrote, no man can find two opposite opinions. Any man might find much disagreement with Dr. GIRTANNER; and the question (if the philosophical linguist will allow the distinction) respects diversity, not opposition, of doctrine.

2. In your Journal (p. 203) a formal protest is mentioned, the term *formal* being interpolated by your correspondent. It is true, I do not any where say—

“ Know

“ Know all men by these presents, That I, THOMAS BEDDOES, M. D. do disagree with CHRISTOPHER GIRTANNER, M. D. in manner and form following.” But almost two years before the appearance of your correspondent’s book, I wrote as follows :

“ Mr. HERDMAN is said to have refuted the opinion that the excitability of the animal fibre depends on oxygene. Dr. GIRTANNER, with whom no individual perhaps in this country has expressed his concurrence, may indeed have been refuted. The task was truly easy. But that the oxygene received in respiration, and distributed to the muscles, combines with azote, hydrogene, and carbone, to form water and various saline compounds, is a supposition which no one has yet shewn to be at variance with fact. *The two hypotheses differ essentially.*” (*Conf. on Factitious Airs, Part last, or V. page 39.*) The passage respecting the other elements of organized bodies is then produced; and must it not be considered as thus converted into a protest, if any thing (which I do not admit) had been before wanting to its formality? — How far your correspondent’s remissness in not making himself acquainted with the latest explanations of those whom he quotes to refute, or as virtually refuted, may be culpable, or his assurance in persevering to fix upon one man the notions of another, may “ equal his other powers,” it is not for me to decide.

The term false I apprehend to be often synonymous with *erroneous* — *not just*. What is hinted about *irritation* is as irrelevant as it is unfounded in fact. — Among the misfortunes which I have learned to bear without impatience, I can honestly reckon the dissent or censure of authors of works like that on *Mental Derangement*.

Your correspondent’s smartness, or solemnity, I aspire not to imitate. It is not for me to summon the medical world to sit as jurors on the history or the nature of my opinions. The idle in general, and the curious about trifles, will be amused with a squabble like the present. — In my reply, and in the paper which occasioned it, they will find enough to inform their judgment; at least, I hope so; for I have done with the subject; and, in all brevity, remain,

GENTLEMEN,

Your’s,

THOMAS BEDDOES.

Oct. 4, 1799.

*Extracts of Letters on the Vaccine Inoculation, communicated
by Dr. WOODVILLE.*

FROM the various accounts in circulation, respecting the variolæ vaccinae, I felt anxious for an opportunity of observing the effects of a disease, which the introduction of as a substitute for the small-pox, seemed to promise so much benefit to mankind. In the beginning of May last, I was obligingly supplied with a piece of thread that had been impregnated with cow-pox virus, by a respectable surgeon* in the neighbourhood of Birmingham; with this I communicated the disease to two patients, whose cases are here related. Some time after I had commenced inoculation, I was favored with an additional supply of vaccine matter by the kind assistance of Dr. JENNER; with a view of giving it a fair trial, I was particularly careful in the choice of a lancet that had never been used for any other purpose.

On the 11th of May, Thomas and Mary Leicester were inoculated; the former aged two years and a half, and the latter four months. The thread was inserted into the left arm of each, by means of a superficial scratch, and secured upon the part with adhesive plaister.

14th. The arms of both the children appeared inflamed.

15th. The inflammation increased, and affected the boy's arm more extensively than the girl's.

16th. The cuticle in each began to rise into a vesicle; the boy's arm more forward than the girl's.

17th. The vesicles more elevated; the boy was seized at night with fever, and complained of foreness in the axillæ.

18th. The inflammation of the boy's arm considerably diminished, but the vesicle more prominent, and full of a limpid fluid, with about a dozen pustules surrounding the part. At night his fever entirely subsided.—This evening the girl became feverish and restless.

19th. A small quantity of fluid appeared in the vesicle on the girl's arm, with a slight efflorescence about the tumour, but much less than what appeared on the boy's.—The girl had many distinct pustules on different parts of her body.

* Mr. ADDINGTON, of West Bromwich.

20th. She continued indisposed till night, when all febrile symptoms disappeared. An elevated smooth brown scab remained for a considerable time upon each of the children's arms, after all discharge from the part had ceased. From the arms of the above patients I was supplied with matter enough to enable me to extend the practice; the progress of the disease, in general, was so similar, that a minute detail of each case would be tedious and uninteresting. Sixty-eight patients, from three months to 22 years of age, passed safely through the cow-pox under my care, without *one* alarming circumstance. Thirty-nine had an *eruption*, but only two whose pustules arrived to a state of maturation, and those imperfectly. After they were all recovered, I inoculated twelve of them with active variolous matter *without* effect. Their arms appeared inflamed for three or four days, and then gradually got well. I had no opportunity of inoculating a greater number with variolous virus, owing to the parents of the patients being so well satisfied with the first inoculation, from its similarity to the small-pox, that they thought a second trial totally unnecessary. Several of the patients slept with others who had full crops of small-pox pustules, without being in the least degree affected. The cow-pox patients had the disease in every instance less severely than those inoculated with the small-pox, although it was communicated at the same time, in the same family. A few of the patients inoculated with each disease had inflammations of their arms that appeared likely to be troublesome, which were soon subdued by rubbing into the part unguent. hydrarg. Whenever I have another opportunity of inoculating with vaccine matter, I shall be disposed to try Dr. JENNER's method of arresting the progress of the disease, by means of mild caustic applied to the pustule on the arm as soon as I perceive the system affected.

In consequence of the above experiments, and the confidence I have in the "Reports" of the extensive experience of my ingenious friend, Dr. WOODVILLE, on the subject, I am decidedly of opinion, that the cow-pox is a certain protection against the small-pox; that it is considerably more mild in its effects on the human system by inoculation, and under proper management may be safely introduced at any season of the year.

Twenty of the above patients had *no* apparent indisposition.

KETLEY, near SHIFFNAL, SHROPSHIRE,

Sept. 11, 1799.

IN compliance with your request I have to inform you that I began to inoculate on the 11th of May, and continued the practice till the latter end of June. The vaccine virus which I received from Mr. ADDINGTON, was originally sent to him by Dr. PEARSON, of St. George's Hospital. On the 8th of June I used that sent me by Dr. JENNER, and no other during the remainder of my practice. The appearance of an eruption on the two first patients surprised me greatly, as well as those subsequently inoculated, till I read your "Reports," when my mind was relieved; and after I was favoured with vaccine virus by Dr. JENNER, I was convinced, from the exact similarity of its effects, that what I had received from Mr. ADDINGTON was genuine. At the same time I inoculated 50 patients with variolous matter, that I might have an opportunity of observing the different effects of the two diseases. And whenever I had it in my power, I inoculated one part of a family with vaccine and the other part with variolous virus. The vaccine patients were sooner affected, their indisposition in general less severe, and the disease of much shorter duration than those inoculated with variolous virus. Those few patients whose arms were most inflamed were of the first that were infected, which I attributed to the cold north east wind that prevailed at that time, as they were disposed to become troublesome ulcers. An eminent surgeon in this county, who was employed in inoculating the children of several respectable families with *variolous* matter, postponed his practice for a month, on account of the great number of sore arms that his patients had. After the weather became milder, none of *my* patients gave me trouble, which seems as if the state of the atmosphere, at the commencement of the business, had some influence in producing that effect. As it may afford you more satisfaction to have a particular account of the number of pustules each patient had, I have written it in the same form that you did yours in the Reports of your Vaccine Inoculation. The greatest number of pustules was generally around the part where the matter was inserted; they had the appearance that the small pox has during the eruptive fever, and all (except what I have before mentioned) went off without arriving to a state of maturation.

With ardent wishes for a speedy restoration of your health,

I remain, dear Sir,

Your obliged and sincere friend,

KETLEY, Sept. 29th, 1799.

J. EVANS.

The following persons were inoculated with variolous matter without effect, after being affected with the vaccine :

Thomas Barnesley,
Ann Barnesley,
Martha Morgan,
Mary Phillips,
Eleanor Radcliffe,
John Radcliffe,

Thomas Onions,
Mary Plimmer,
Charles Plimmer,
Harriet Williams,
William Pinches,
John Silvester.

A List of those Persons who were inoculated with the Vaccine Virus.

	Years of Age.			No. of Pustules.		Years of Age.			No. of Pustules.
	Years.	Months.	Days indicated.			Years.	Months.	Days indicated.	
Thomas Leicester	2	6	1	12	Elizabeth Lloyd	3	6	1	3
Mary Leicester	—	4	2	40	Ann Roberts	5	6	2	40
Jane Stevens	2	6	2½	6	Mary Roberts	2	6	1	6
John Perry	1	6	1	16	Hugh Thomas	2	—	1	—
Charles Plimmer	10	—	1	30	Elizabeth Cadman	7	—	—	—
Thomas Plimmer	15	—	1	—	Morris Cadman	4	—	—	—
Mary Plimmer	12	—	2	—	James Cadman	3	—	3	—
Matthew Williams	—	7	—	—	Sarah Jones	4	—	3	—
Martha Morgan	—	9	2	—	William Jones	2	—	—	—
Mary Rofon, sen.	22	—	3	15	Thomas Cadman	1	—	—	—
Thomas Socket	9	—	—	—	Ann Jones	—	6	3	2
William Socket	5	6	—	—	Ann Barnesley	6	—	2	1
Joseph Socket	1	—	1	3	Thomas Barnesley	3	—	2	3
Thomas Onions	1	3	2	20	Thomas Pearce	2	—	3	1
Benjamin Burrowes	2	—	3	50	Maria Briscoe	1	6	2	20
Thomas Cranage	—	5	3	18	Mark Dod	3	—	2	1
Jane Jervis	1	—	2½	100	Martha Dod	1	6	1	50
Mary Phillips	2	—	2	50	Thomas Cooke	3	—	—	—
Harriet Williams	1	3	—	10	Elizabeth Cooke*	1	—	2	100
Hannah Aaron	3	—	3	2	Elizabeth Hill	—	6	1	—
John Cooke	2	—	1	12	Ann Trickett	—	7	1	—
Mary Bird	4	—	2	20	Elizabeth Hazle	3	—	—	—
Elizabeth Aston	1	—	—	4	Rebecca Hazle	—	9	—	—
Mary Rofon, jun.	—	4	1	6	William Onions	2	—	—	—
John Radcliffe	4	—	—	—	Jacob Brooks	1	6	—	—
Eleanor Radcliffe	2	6	—	—	Maria Brice	2	6	1	20
Stephen Smith	2	6	—	—	William Brice	1	—	½	30
James Burns	1	6	—	8	John Churm	4	—	1	—
William Dean	3	—	1	—	Thomas Churm	2	—	2	—
Ann Wright	1	6	2	5	James Churm	—	3	1	—
Ann Onions	—	8	—	8	Mary Ann Parker	—	10	½	12
Francis Gregory	7	—	2	6	John Hazle	3	—	2	100
Elizabeth Gregory	5	—	—	—	William Pinches	1	3	½	3
Robert Ellis	2	—	—	1	John Silvester	14	—	2	—

* Cutting teeth.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you are of opinion that the bad effects of a medicine merit as much observation in practice as its virtues, and think the following cases and remarks are deserving attention, I request you to insert them in your very useful and impartial publication. They are a few out of many cases of phthisis in which I had tried the power of fox-glove, but they are the only ones on which I could depend, from my actual observation of the progress and events.

I am, GENTLEMEN,

Your humble servant,

BIRMINGHAM, Oct. 12, 1799.

ROBERT BREE.

CASE I.—Mrs. B. aged 25, of a delicate habit and fair complexion, had long been disposed to phthisis: the present state was preceded by hæmoptoe, which had frequently returned in the last six months. She has now all the symptoms of the last stage, except diarrhœa; her pulse between the exacerbations of the hectic fever is never less than 110. She came out of the country for my attendance, and I had seen her very frequently in the last two months. May the 16th, I consulted with Dr. WITHERING* on the case as now stated. We prescribed pul. fol. digital. in pills with extract glycyrrhizæ, and directed two grains to be taken at eleven o'clock in the forenoon, and at five in the afternoon, with a saline draught. As her strength was greatly diminished, she was allowed some porter and a meat diet. I was to visit her as regularly as possible, to mark the effect of this plan, and particularly its influence on the pulse. May 17th her pulse was 102—the 18th, 110—the 19th, 97—20th, 98—21st, 96—22d, 92—23d, 87. She had been frequently harrassed with pains in her bowels, and she has now a tendency to diarrhœa, but without relief of pain. She has a total loss of appetite, and her weakness is increased. She has much aversion to medicine, but as the pulse is retarded, Dr. WITHERING united his persuasion to mine, and she promised to pursue the pills as before. A mixture with chalk was prescribed to be taken occasionally. May 24th, pulse 88.—She has constant anorexia.

* This excellent physician has since paid the debt of nature, to the general regret of science, and the particular loss of his medical brethren in this neighbourhood.

and frequent vertigo—her weakness is greater—her cough not less frequent—the hectic exacerbations as regular, and her sweats as profuse as ever. May 25.—She can no longer be prevailed upon to take the pills, but she has pursued them to this day—her pulse is 96—she has a sense of weight and oppression under the sternum, which before had preceded a great discharge of pus. May 26.—She throws up matter in large quantities, apparently from a new vomica. The next day her pulse rose to its former range, between 100 and 120—she would not consent to take any medicine except pills with opium after this date. In a fortnight she was so far recruited in strength as to be able to take a daily airing in a carriage for two or three hours, which practice she continued for a short time; she then returned to her home, and died with calmness in September.

CASE 2.—Mrs. C. a married lady from the country, aged 35, sent for me to her lodgings in this town, July 20th; I found that she had spit blood in April, after having been long subject to cough and pain of the side; she had received much medical advice with little relief; she had now every confirmed symptom of ulcerated lungs, but there was considerable strength left, and the body was fleshy—hectic fever was, however, regular in its accessions—her expectoration was very profuse, particularly in the night. I was convinced that it was purulent, from repeated examination. In the middle of the day, when she was least feverish, her pulse was never below 110. In the night, her difficulty of lying down, and want of rest, distressed her greatly. I directed a tincture to be prepared with half an ounce of powdered fox-glove leaves in two ounces of proof spirit, and two ounces of water, and she was to begin with only ten drops, and increase the dose every six hours.

I saw her every day once, and frequently twice, but I never found her pulse less frequent than 100 in a minute. Aug. 2d.—She took nearly 40 drops with almond milk every six hours; her appetite had been growing worse every day—it is now so impaired that she is disgusted with all food—she pukes very seldom—her strength is greatly declined—occasionally she has less cough, but then her difficulty of breathing is increased—her spirits are depressed, and she has hysterical fits of crying; she has loose stools frequently, which lower her greatly. I now prescribed an infusion of myrrh and columbo root, with a more cordial diet. I directed her drops to be still taken, as she had never yet rejected them from her stomach. Aug. 5.—Her strength and appetite are not improved—she has more heat and fever; she is also affected with vertigo, and occasional

casual confusion of mind—the pulse at 108—120. Aug. 6.—She is to omit the farther use of the tincture, as her strength and spirits are rather worse, and the nervous system greatly affected. In the evening of this day she was carried to her bed, perfectly helpless. She soon after requested to be placed in the night chair—her attendant complied with her wish, and she immediately died. The waste of flesh was not found so great as is usual in the end of a consumption; and it might be inferred, that she would have lasted longer if the force of her disease had been her only opponent.

CASE 3.—Mrs. H. between 40 and 50 years of age, has had many children, and been long phthical—in addition she has frequent discharges of matter from an abscess in the perinæum. July 23.—I directed a tincture of fox-glove, as follows:—℞. Fol. digital. purpur. ʒij. spiritus vini ten. aquæ fontis a. a. ʒi. digere per horas 24. et cola.

She at first took fifteen drops of this tincture twice in the day, and afterwards increased the dose. July 30.—She takes 30 drops in a dose, but there has been no change in the pulse, nor in the accessions of hectic chills and heats—her cough is less frequent, and she rests better in the night; this good symptom has before taken place when the abscess in perinæo discharged, which is now the case. Aug. 8.—She takes 40 drops, without puking; but her pulse is never less than 100—her appetite totally gone—her strength diminished, and her cough as bad as ever. Aug. 14.—She finds no amendment of particular symptoms, and much less feeling of comfort. She removed into the country, taking no medicine, and died a few weeks afterwards.

CASE 4.—WILLIAM HARRISON, aged 23, of a thin habit, and long disposed to symptoms of phthisis, was attacked with hæmoptoe a fortnight since, and spit blood five days. May 31.—His cough is frequent, with expectoration of frothy mucus, but no blood—he has a severe pain in his right side, and is often affected with rigors—he does not complain of succeeding heat or fever—p. 100. He was ordered to take two grains of pulv. fol. digital. every twelve hours, with a saline draught; a blister was to be applied to his side. June 10.—He has less cough, but the pulse is not retarded. I have seen him twice only since the 31st of May, but I have been assured that he has taken the medicines regularly. June 14.—Hæmoptoe returned—p. 120. June 19.—The spitting of blood ceased in two days—he has an acute pain in his left side—sickness and sometimes puking distress him—p. 120. His cough is increased, and the expectoration is more considerable—he has fever, with delirium, every night.

night. I thought myself no longer justified in pursuing the plan I had set out with, as he had taken above seventy grains of fox-glove, without any progress in removing pneumonia, or even hæmoptysis.

CASE 5.—JOHN PAIN, aged 36, had been affected with phthisis and hæmoptoe a year. He has a great expectoration of bloody pus, particularly in the night, with regular accessions of hectic fever—p. 120. June 28.—I directed a drachm of pulv. digital. to be made into 60 pills, and one to be taken every eight hours. After taking the whole number, his pulse was not retarded, nor any bad symptom removed.

CASE 6.—GEORGE UNDERHILL, aged 28, affected with hæmoptysis last year, with cough and pain of the side—his spitting of blood has recurred at intervals ever since, and has been constant for the last ten days—he has chills and heats, and night sweats—p. 120. July 8.—I directed the tincture of fox-glove to be taken in cold milk and water twice a day. He pursued this till anorexia and weakness made him lose all patience; in the mean time his disease advanced rapidly to the last stage, and I believe nothing stopped its progress, though I did not see him after he left off the tincture.

CASE 7.—MARY CLARK, aged 32, had been long in a confirmed phthisis—she had had much advice before she came to me, without benefit—she has no diarrhœa, but every other bad symptom. July 10.—I directed the tincture to be taken twice a day. July 12.—She complains of unusual pain and flatulence in the stomach and bowels—I directed pilul. galban. composit. to be taken twice a day with chamomile tea. July 17.—Her pulse is 100—she complains greatly of general weakness, anorexia and flatulence—she is always cold—her cough is as bad as ever, but her hoarseness is less. July 19.—She is now affected with heats as well as chills—p. 100; she is to continue the tincture, and to take it with a saline draught. July 24.—She cannot force herself to take any nutriment but tea, and such weak fluids—her weakness is extreme, and she attributes it in great measure to want of food—she has loose stools—other phthisical symptoms are not removed or lessened. July 31.—Nothing more favourable having appeared in the case, I ordered other medicines.

CASE 8.—Mrs. MOWSLEY, aged 35, has confirmed phthisis with every bad symptom except diarrhœa—it followed hæmoptysis seven months since. Sept. 2.—I directed powder of fox-glove to be taken
every

every eight hours in doses of one grain and a half each. She pursued this plan with great punctuality till Sept. 12, but her pulse has not been retarded, nor one bad symptom removed. At this date her debility and loss of appetite were so great that I directed a myrrh mixture with tincture of opium to be taken as well as the digitalis. After continuing these medicines a few days longer, without any good effect, she resigned herself to her fate, which is certain, if not yet arrived.

STATE OF DISEASES IN LONDON,

From the 20th of September to the 20th of October 1799; being the result of the public and private Practice of a Physician at the West End of the Town.

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Hydrocephalus	2
Contagious malignant Fever	13	Dyspepsia	16
Measles	5	Gastrodynia	10
Small-pox	2	Entrodynia	6
Scarlet Fever	1	Diarrhœa and Bilious Vomiting	14
Hooping Cough	6	Menorrhagia	4
Catarrh	13	Chlorosis and Amenorrhœa	7
Acute Rheumatism	2	Ischuria	1
Ophthalmia	3	Enuresis	1
Epistaxis	1	Fluor Albus	3
Hæmoptoe	1	Cancer	1
Intestinal Hemorrhagy	1	Tabes Mesenterica	2
Slow Fever	1	Worms	2
Hætic	3	Hernia	2
Childbed and Milk Fevers	5	Prolapsus Uteri	1
Acute Diseases of Infants	11	Scirrhus of the Liver	1
Erysipelas	1	Jaundice	1
Enteritis	1	Stricture of the Œsophagus	1
Cholera	1	Itch	6
CHRONIC DISEASES.		Prurigo	2
Cough and Dispnoea	20	Nettle Rash	2
Phthisis pulmonalis	8	Shingles	1
Chronic Rheumatism	5	Impetigo	1
Asthénia	24	Acne	1
Dropsey	6	Lupus	1
Scrophula	3	Erythema	2
Cephalœa	8	Porriço	5
Hysteria	2	Thrush	4
Epilepsy	1		

Account of Diseases in an Eastern District, from the 20th of September to the 20th of October.

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Dysentery	6
Typhus Mitior	5	Cholera Morbus	4
Peripneumonia	2	Hæmorrhoids	2
Hæmoptysis	2	Colica Pictonum	3
Quotidian	2	Menorrhagia	4
Acute Rheumatism	4	Amenorrhœa	5
CHRONIC DISEASES.		Chlorosis	7
Cough	14	Dysuria	5
Dyspnœa	8	Hysteria	6
Cough and Dyspnœa	12	Hypochondriasis	5
Phthisis Pulmonalis	6	Psoa	1
Hydrothorax	2	Prurigo	3
Pleurodynia	3	PUERPERAL DISEASES.	
Palpitatio	2	Low Fever	3
Leipothymia	1	Ephemera	4
Cephalœa	5	Mastodynia	7
Vertigo	3	Menorrhagia lochialis	4
Epilepsia	2	INFANTILE DISEASES.	
Apoplexia	1	Hooping Cough	5
Paralysis	2	Measles	8
Dyspepsia	7	Ophthalmia	3
Gastrodynia	5	Ophthalmia purulenta	2
Diarrhœa	13		

Diseases admitted under the care of the Physicians of the Westminster Hospital, from the 20th of September to the 20th of October.

Fevers	10	Erythema	2
Scarlatina	2	Gastrodynia	3
Small-pox	1	Hooping Cough	1
Amenorrhœa	6	Hæmoptoe	1
Anasarca	5	Hysteria	1
Ascites	2	Impetigo	3
Asthénia	1	Itch	3
Asthma	1	Leucorrhœa	2
Catarrh	1	Lumbago	2
Cholera	2	Phthisis	2
Colic	1	Pleurodynia	3
Cough	8	Rheumatism	9
Cephalœa	3	Struma	4
Diarrhœa	8	Vomiting	2
Dysentery	2	Worms	2
Enterodynia	1		

The tincture of digitalis, according to Dr. MACLEAN'S formula,* has been employed in hæmoptoe and phthisis with evident diminution of the expectoration; but we have not yet seen any case in which it has effected a cure of phthisis.

* Vide Journal, No. vii. p. 122.

The following List of Deaths is given by the Bills of Mortality for the last Three Months.

Abcess	-	-	4	French Pox	-	-	3
Abortive	-	-	7	Gout	-	-	16
Aged	-	-	226	Hooping Cough	-	-	47
Ague	-	-	1	Jaundice	-	-	22
Apoplexy	-	-	16	Inflammation	-	-	99
Asthma	-	-	70	Lunatic	-	-	23
Cancer	-	-	8	Measles	-	-	51
Childbed	-	-	22	Mortification	-	-	55
Colic	-	-	3	Palsy	-	-	35
Consumption	-	-	972	Pleurisy	-	-	2
Convulsions	-	-	785	Rupture	-	-	5
Croup	-	-	2	Small-pox	-	-	161
Dropfy	-	-	217	Still born	-	-	91
Evil	-	-	2	Suddenly	-	-	31
Fever	-	-	334	Teething	-	-	44
Flux	-	-	3	Water in the head	-	-	21

The diseases taken notice of in the last report still continue to prevail. Disorders of the bowels are very frequent, and, in some instances, obstinate. In most of the cases they constitute the principal disease; but in some few, they blend themselves with other diseases of the system. In addition to the diarrhœa and dysentery, which were mentioned before, some cases of cholera morbus have occurred. Several persons in one family were affected by it at the same time; the symptoms, however, were mild, and a recovery was soon obtained.

The hooping cough and measles have prevailed amongst children; but have not in general been attended with any formidable symptoms. The number of instances in which the former of these diseases has proved fatal, as stated in the list of deaths given by the Bills of Mortality for the last three months, as annexed to this Report, forms a pleasing comparison with the account of the same period in the last year. In the months of July, August, and September, 1798, 104 fell a sacrifice to this disease. In the same months of the present year only 47 died.

Mr. SAUMAREZ on Generation and the Principle of Life.

[Continued from p. 242—247 of our last Number.]

THE fact is proved by the pollen of vegetables, by the semen and ova of fish, and of the amphibia which I already stated. Being solicitous to see what change the ovaria underwent by the power of œstrum alone, I took a female rabbit that had the œstrum upon her, and had her fed upon oats, beans, cellery, and other kinds of food which the rabbit-keeper told me had the strongest tendency to increase that state. I had her placed before a buck; they were allowed to carefs each other whilst absolute union was prevented; I pursued this plan for a week, and at the time that the œstrum was at its highest pitch, she was killed. On examining the different organs subservient to the process of generation, I found them very different from what they are in a common state.—The external membrane by which the vagina is lined was swelled and distended, and had acquired a black mulberry colour; on examining the uterus, I found its colour had undergone an equal alteration; it was of a purple hue, evidently arising from a præternatural quantity of blood that had been determined upon it. There was a large vessel running up the middle of both fallopian tubes, enlarged to a considerable size, and completely distended with blood. The tubes before their termination at the fimbriæ were torquated and distorted in an extraordinary manner, having also a strong peristaltic motion—after running a short way above the ovaria, they bent downwards, terminating by a fimbriated expansion above the ovaria, a considerable portion of which they involved and enclosed. The ovaria appeared to have undergone a considerable degree of alteration also; the ova which the ovaria contained were swelled, and evidently more distinct than is usual, resembling in some degree the seed resident in the pericarpium of a ripe grape. Although it appeared very clear that some action had taken place in these parts, there was nothing like a separation from the capsule, as we observe in the ovarium of the hen, from the effect of œstrum alone, (without sexual union.) Œstrum alone therefore produces an evolution of the ova to a limited degree; it however appears from some experiments that were made by Mr. CRUIKSHANK and Dr. HAIGHTON, where one of the fallopian tubes of a rabbit had been divided and obliterated, and the other left perfect and entire, and sexual union allowed, that the increased excitement which the female had undergone was sufficient to evolve the ova completely, and separate them from the ovaria.

Although there were ova separated from the ovarium in the mutilated as in the perfect side, there was this grand and striking difference between both. In the perfect side where the semen could have access to the ovarium, there were fœtuses found as usual; on the mutilated side quite otherwise, there was not the least trace of a single fœtus to be discovered. Although there was not a single fœtus to be discovered in the mutilated side, both ovaria displayed the same appearance; the ova which the ovaria contained, I say, became equally evolved, the external tunic in both had burst, and several of the ova in both were discharged. The vesicles from whence the ova were discharged were consequently left hollow, their parieties or sides gradually thickened; and these thickened calyces constitute what Anatomists have called *corpora lutea*. The existence, therefore, of *corpora lutea* is a proof that the sexual act has been so far perfect as to produce this action within the vesicles; and that although it can take place without the application of semen to the ovaria, fœcundation is absolutely prevented without its palpable application. The conclusion therefore presses itself upon the mind with force irresistible, that, *the existence of corpora lutea is not the true and infallible test of animal impregnation*. It is not more the test of animal impregnation, than when we behold unfœcundated eggs expelled from the female of oviparous animals in general; in them, the separated part of the membrane is left jagged, and is exactly analagous to the corpus luteum of the higher order of animals.

If male and female fish, of the same species, are separated from each other, although the spawn will be shed, fœcundation will be effectually prevented. If birds that usually copulate together, are cooped up separate, although the eggs will evolve and be deposited, they will be totally different from what we find when the sexual act has been accomplished: in the one case, they become putrid without being prolific; in the other, they become prolific without being putrid. Although the shell of a perriwinkle and the hide of a buffalo are different in their structure, they are destined to the same use, serving to protect from the operation of external causes the internal organization of the animal to which it is subservient. We have no difficulty in admitting, that the cornuated uterus of a rabbit is destined for the same purpose as the oval uterus of the human species, the oviduct of a hen for the same purpose as the fallopian tube of a woman; must it not then be allowed, that the ovaria of the one are in nature the same as the ovaria of the other? and that since fœcundation cannot take place without the application of semen to the ovaria, although *corpora lutea* do exist, that the presence of these is not the test by which we are to judge that fœcundation has actually

tually taken place? The only certain test we can have that animal fœcundation has taken place, is by the actual existence of one or more fœtuses. It is not an effect produced from the energy of a power resident in one system or in one sex, but in two systems of different sexes; not in the male or female individually, but from the united action of both male and female together.

From the various facts I have stated, I think we are warranted in concluding,

1st. That the act of sexual intercourse is the immediate cause, by the power of which the several organs in the male and female are made to undergo their separate although correspondent changes.

2d. In the male the specific power of the testes is excited, and semen in consequence produced; which semen is the immediate agent that contains the characteristic properties of the masculine system, and is conveyed from the vagina of the female through the uterus, and received by the fallopian tubes. In the female, the increased vascularity not only of the vagina but of the uterus and tubes, proves the capacity these parts possess of sympathizing with the sexual organs of the male.

3d. That the fallopian tubes constitute the media of communication to convey the semen from the uterus to the ovaria, which they do by means of the peristaltic power which these tubes so eminently possess; that in proportion as the evolution which the ova sustain (in the vesicles of the ovaria) a correspondent change takes place in the fimbriæ; that the fimbriæ progressively grasp the ovaria, and immediately apply the semen to the ova; that by the union of both, fœcundation takes place, and which constitutes the proximate cause of animal impregnation.

In order to put so difficult a subject in as clear a point of view as I am capable, I shall state it in different words, viz. the different changes which the several parts in the male and female undergo, all tend to one end, namely, the immediate contact of the fimbriated extremity of the fallopian tubes to the surface of the ovaria; that an union might take place between the fluid which the fimbriæ convey, and the ova (of a mucus-like appearance) which the vesicles discharge; that it is the semen which communicates the characteristic properties of the male; and the fallopian tubes, the medium by which it is conveyed, in the same manner as the fluid which the vesicles discharge, contain and convey the characteristic properties of the female;—that the fimbriated extremity of the fallopian tubes, is the immediate seat where this effect takes place; that the union of both constitutes *conception*, or the immediate reception

of a *living principle*, in which the source and power of action essentially resides, and which participates the nature of both parents, by the combined action of whom it was produced.*

It is not the farinaceous matter of which a seed is composed, the animal gluten with which an egg is filled, or the atom of mucus in which the primordia of the embryo are contained, which constitutes the power by the energy of which organization is elaborated and action ultimately produced; each of these bodies is a chaos in all its parts, a *rudis indigestaque moles*; the mere matter of which they are composed, when deprived of this living principle, undergoes the usual changes of decomposition and decay, by the processes of putrefaction and fermentation, and yields nearly the same materials by chemical analysis.

It is the living principle which the seed of vegetables and the fecundated ova of animals contains, that constitutes the architect by which the machine is erected; it is the base on which the whole stands, it is the bond of its elementary parts, the cement that unites them in one whole;—it is the efficient and primary cause from whence the individuality of every system arises, and in which the form it assumes essentially resides;—it constitutes the power by which the human species differs from the brute, the brute from the vegetable, the vegetable itself from formless and inanimate matter;—it is the power by which formless and inanimate matter is converted into organs living and active, so that the various species of food which the vital power receives, are nothing more than the raw materials applied to it;—it is the manufacturer that converts these materials, without power, or intelligence into different systems—through which the acorn becomes evolved into an oak, the infant foliage expanded into leaves, and the final cause of vegetable existence attained;—it is by virtue of a power in essence the same, though in character different, that the embryo of animals becomes evolved out of matter in kind the same, and models a system consisting of organs and of fluids
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* That fecundation takes place either at the extremity of the fallopian tube, or in the very calyx itself, which is formed by the action of the vesicle after the sexual act, is not only very probable, from the appearance which the parts display, but the probability is greatly increased from the adventitious circumstances which sometimes happen, when a foetus is found resident either in the ovarium, or attached to the fimbriae, or lodged within the body of the tube itself; or, what perhaps less rarely happens, when the embryo drops from either of those situations, and becomes attached to some part of the abdominal cavity: These are called extra-uterine cases in general, each case receiving the particular denomination from the particular part in which it is found, as, abdominal, ovarial, fimbrial, and fallopial.

in their kind and operation totally different; and, finally, it is through the participation of this living power, which the organs and fluids have received, that they become the instruments or means by which it accomplishes the final cause of its existence:—*Life may therefore be defined—the principle (i. e. the efficient and primary cause) by the energy of which various species of matter are converted to one kind, under one system, so that the matter thus converted possesses the power of resisting the operation of external causes, and of preserving itself from putrefaction and decay.* It is to this power, I say, by the energy of which every living system is protected and preserved from decomposition and decay, and by which the different substances it receives are assimilated and changed, that I attach the idea of life.—The *Vis Medicatrix Naturæ* of STAHL, the *Vis Vitæ* of HALLER, the *Nisus Formativus* of BLUMENBACH, the *Living Principle* of MR. HUNTER, the *Excitability* of DR. BROWN, and, finally, “*Form*,” by that excellent philosopher MR. HARRIS:—The *Principle of Life*, therefore, as a cause, may be contemplated in the abstract, as separate and distinct from the matter into which it is received, and through which its actions are produced; it is by the evolution of the living principle which animated beings possess, from a state of *dormant capacity* into energy and action, that they are capable of converting to their own nature, the various substances on which they feed, and of making them assume the organization and form of the system to which they are applied. Bread of the same precise quality, cut from the same loaf, or water drawn from the same brook, given to a man and to a dog, after having been digested by the stomach of both, will contribute to the particular organization of each respective system. We behold a multitude of vegetables placed in the same medium, nourished and fed by water and air, in kind the same, and yet assuming an organization and form totally different.

If the power of organization and of life therefore resided in the food, every vegetable and every animal that fed upon the same materials would be fashioned and modelled alike; for in all chemical changes the same cause uniformly produces the same effect.—If it depended on a chemical cause, the changes which the food sustained would be regular and constant, the chyle produced, instead of being the same, would be generally different; it would vary in its properties according to the peculiar nature of the substances out of which it was formed; and, finally, if it depended on the mutual action of different parts of the food upon each other, independent of the digestive power of the organ itself, the change it sustained, like other chemical changes, would be constant

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and definite, and not liable to the remission we witness during the process of digestion;—it is therefore lawful, and we are from necessity, led to conclude, that the commutation food obtains in the living system, is a vital and not a chemical act; and that the efficient cause of this commutation does not arise from any active property which the food contains, but is owing to the vital power of the system in which it is received, and by which the new arrangement of its parts is formed; it is with a view of destroying these sensible qualities which different living systems receive, that their assimilating organs are essentially defenced; they are designed to reduce substances of different kinds to one, that this one substance may be in harmony with the system, that it may be fitted for being acted upon, and converted by the specific power of different organs into various shapes; the aptitude therefore of the matter which every living system receives, can only arise out of its weakness or total privation.—It is in this destitute state that we say matter is imbecile and inert, a mere *tabula rasa*, that has the aptitude of being acted upon without the power of resisting action; that has the power of being changed without the power of changing; of being modelled without the power of modelling, &c. it is thus that we can appreciate the dire ignorance of those materialists, who suppose that matter can convert *itself* into different organs, in fabric most delicate, in action most extensive, in form most diversified; that by the congregation of these organs a whole system is constituted; that the result of this organization is life, and out of this organized life, action and motion are produced, so that matter is the efficient cause, and life the effect only.

Equally absurd is the opinion of those pure defecated philosophers who suppose that the oxygenous matter which vegetables in the day are constantly discharging from the whole external surface of their foliage as urinous and dead, constitutes the principle of life, in which all power essentially resides—the immediate and proximate cause of irritability in man!

With still greater reason are we to deplore the Brunonian system, which proclaims life to be a *forced*, not an original state—that makes life the effect of action, instead of action the effect of life—that makes life to come out of the body instead of residing within it!—*that makes this action, or excitement, in which the true cause of life consists, the effect of the exciting powers acting on the excitability!* &c. &c.

Of the Intentions of Cure in Hydrocephalus.

[Continued from p. 258—261 of our last.]

THE remedies which have been most commonly resorted to for the cure of this complaint, are, mercury, internally, as calom pp^r; and, externally, by absorption, as, ungⁿ hydrargy, F.; blisters applied on the head, bleedings by leeches, and scarifications, squills, opium, fol. digit, pur, calx zinci; and lately, the fol. doron German, or German leopard's bane.

Of the first of these remedies, notwithstanding the respectable evidences of Drs. CARMICHAEL SMITH, DOBSON, QUIN, PERCIVAL, LETTSOM, JOHN HUNTER, HAYGARTH, MOSELY, and ARMSTRONG, other physicians and surgeons of eminence have not been so successful in the use of it. Salivation is not very easily raised in young children, especially in this disease.* In regard to venesection, either local or general, it is much to be regretted, that neither from the testimonies of authors, nor from any observations hitherto made, are we led to determine on its use. From Dr. QUIN's view of the complaint, we should be led to ascribe more to inflammation, than what appears to me to be the real state of the disease, and, consequently, ought to make us very cautious in the use of blood-letting, even in the primary stage; for the vessels of the brain seem quickly to lose their tone by distension, and great atony and torpor of the whole system succeed. If depletion, therefore, be indicated, it will be best accomplished by occasional mercurial purgatives, blisters in the direction of the futures, &c. &c. Practitioners know, that inflammation is often found to exist in relaxed habits, excited and kept up by the irritation of some peculiar acrimony, totally contrary and independent of any inflammatory diathesis, as in scrophula, lues venerea, &c. &c.

The remedies which I place my chief reliance on, are as follow; arranged in the order in which they will be wanted.

Calomel pp^r, to empty the bowels. The form I prescribe to a child of four years of age is this:

℞ calom pp^r—g^r iij, opii g^r β. cretæ pp^r, g^r vi m. f^r pulvis h. s. sumendus.

Blood-letting.—Leeches applied to the temples, and in a direction

* Dr. MICHAEL LEIB relates the case of a child, who took 112 grs. hydrar. muriat^s mitis in 16 days, with a hydrocephalus.

with the futures; v. sectio; to be repeated pro re natâ, in the first stage of the disease.

Blisters.—Cut in strips, about three quarters of an inch broad, and laid over the futures, the head being previously shaved. Also to be applied to the head, neck, and between the thighs.

To mitigate the pain and spasm—

Opium and digitalis combined.

In cases of stupor, coma, &c.—

Sal. c. c. vol. sp^m ætheris vitr. comp. musk, and camphor.

To promote absorption—

Tinctura cantharid. calx zinci, hydrar. mur. mit.; electricity, slight shocks passed in various directions through the head every four or six hours.

As an universal stimulus—

Oxygen-gas, diluted with atmospherical air,

A generous diet should be enjoined to invigorate the system and alimentary canal in particular.

When the bowels are obstinately costive, and there is a paucity of urine, I give the following:—

℞ Scillæ pulveris rec^t gr^r iij opii purif. gr^r ℥; calomel pp^t gr^r ij M. f. pulvis capiat bis vel. ter die.

Lastly, to strengthen the constitution, and prevent the re-accumulation of fluid, by giving the following medicine:—

℞ decoc^t cinchonæ, ℥ vij; tinc^t cantharid. ℥ ij tinc^t cinch. comp. ℥j M. f. mixtur capiat cochl. iij larg, ter die; for a child eight years of age.

I have been led to give the tinctura cantharidis in this complaint, from frequent experience of its efficacy in some cases of paralysis, and from reading a paper on its use in these cases, by my friend Dr. MAY, in some late publication. I have found it an excellent stimulus. I principally attribute the good effects of this medicine in hydrocephalus internus, to the general stimulant operation, and to the tendency it has of producing a determination to the skin; and to augment and diffuse the energy of the brain through the remoter extremities of the body; by joining the bals. Peruv. as below, with it, its virtue seems increased.

℞ bals.

℞ bals. Peruv. ℥i. vitelli ovi q. s. aq. menth. pip^r ʒvj. facch. alb. ℥i. tinc^r canth. g^{ss} xxiv. M. f^r haust, bis die capiendus. Dosis tincturæ cantharidis in præscripto novissimé haustu ad gutt. xxxvi augeatur.

The appearances on dissection are, water collected in greater or less quantity, with the fornix in the former case raised at its anterior extremity, in consequence of its accumulation; and an immediate opening of communication is thereby formed between the lateral ventricles. From this cause too, Dr. BAILEY observes,* a part of the water passes very readily into the third ventricle, and from thence into the fourth. To ascertain with any degree of precision whether children have had an accumulation of water in the brain, who have been supposed to have died of hydrocephalus internus, it is necessary their heads should be opened immediately after their deaths. It appears to me, that in many of the cases related by BONNETUS,† some deception might have arisen from a delay in opening the heads of many of his patients who died of an accumulation of water in the brain; for, independent of disease, I have found that the longer after death dissection is performed, the greater is the quantity of lymph; and SAUVAGES has noticed the same. He thus expresses himself somewhere: *Nihil vulgatius quam serum in sinibus cerebri reperiri, si longò post mortem tempore aperiatur cadaver: quò longius, eò uberius inveniatur serum.*

Such inquiries, however, must be pursued under proper restrictions, and we should with caution draw our conclusions, when we observe parts in a morbid condition, which we had no reason to suspect to be diseased from the symptoms or complaints which arose during the patient's illness. Some may, perhaps, be produced in *articulo mortis*; and others may have been the effects of a former disease, which nature, or strength of constitution at that time, happily overcame. Hence we should endeavour minutely to acquaint ourselves with the rise and progress, effects and symptoms of the disease, during the patient's illness, that, by considering them with the consequences produced upon the animal œconomy, we may fix the nature of the disease upon true and just principles. An inattention in this respect has frequently confounded and mistaken effects for causes, and ascribed appearances to complaints they were no ways concerned or connected with.

* Morbid Anatomy, p. 440.

† Bonneti Sepulchretum Anatomicum.

An Account of the Spontaneous Discharge of Water through the Navel, in a Case of Dropsy, by JOHN PEARSON, senior Surgeon of the Lock Hospital and Asylum, and of the Public Dispensary; Reader on the Principles and Practice of Surgery.

IN the month of June 1783, I was desired to visit Mrs. H. who was afflicted with a dropsy; she was forty-five years of age; the catamenia had ceased to appear during a few months, and she had lately become very corpulent. The operation of the paracentesis was the only probable mean of relieving her; but she was extremely averse to it, and continued to take various medicines till the month of September, when being much increased in size, and suffering great uneasiness, she consented to undergo the operation.

On examining the abdomen, I found on the left side, a large, hard, moveable tumour, which determined me to puncture the right side, and I drew off eight quarts of a greenish coloured water. She took the usual medicines, to prevent if possible a second collecting of the fluid; the remedies however proved ineffectual, and it became necessary to repeat the operation, at the latter end of December. About two gallons of a greenish water were again discharged; the tumour was much larger than in September, and it gave her so much trouble, that she found it very inconvenient either to walk or to sit.

Mrs. H. being anxious to avoid a repetition of the operation, by the advice of a female friend, applied a plaster of frankincense, large enough to cover the greater part of the abdomen. In the course of a few days, the navel acquired an unusual sensibility, and water was perpetually oozing from under the plaster; so that it became necessary for her to wear a sheet folded several times, in order to absorb it. The plaster was renewed once a week, and the water continued to flow through the navel; the discharge was not constant, but returned every five or six days, and from one to two pints was evacuated each day, during two, and sometimes three days successively. She complained that these periodical discharges of water produced great languor and feebleness; but they evidently prevented the accumulation of fluid in the cavity of the peritonæum. On examining the umbilicus, I found it very red, large, and prominent, resembling a raspberry on its external surface; and a great number of minute orifices could be distinguished, through which the water proceeded, as from a sponge. Mrs. H. was regularly

regularly relieved by this periodical evacuation of the water, from the latter end of December 1783, to the middle of March 1784; and during this period, she gained no addition to her size; but having become weary of the attention which this state of her disease required, by the advice of her apothecary, she discontinued the plaster, and washed the navel with port wine, in which a quantity of oak bark had been infused. This lotion restrained the discharge of water completely, nor could it ever be restored afterwards by the repeated application of the frankincense. From this period the water began to distend the abdomen, and on May the 11th I repeated the operation, and discharged twelve pints of a coffee coloured fluid, with a large bason full of jelly-like substance, mixed with pus. Her strength was at this time greatly reduced, and she only lived to the beginning of June. I was not permitted to open the body. The extraordinary effects which followed the application of frankincense in this instance, induced me to advise a trial of it in several cases of the ascites; but I have never seen the least advantage derived from the plaster to any patient since that time.

GOLDEN SQUARE, September 17, 1799.

Observations on one of the Means by which the Eye has been supposed to accomodate itself to the different Distances of Objects.

IN the late publication of Dr. MONRO on the brain, eye, and ear, after enumerating several means by which the eye accomodates itself to the different distances of objects; he concludes by pointing out one of the means which had been overlooked by authors, and which we employ when we view minute objects near the eye. This, he observes, occurred to him from the circumstance, that when we view minute objects near the eye, we are sensible that we bring the upper and under eye-lids nearer to each other, and then, by a considerable exertion, contract the parts about the eye. The effect produced, to wit, the seeing more distinctly, he attributes to the orbicularis muscle of the eye, by its pressure, making the upper and under parts of the cornea somewhat flatter, and of course protruding the middle part of the cornea between the edges of the eyelids, so as to render it more convex. Hence the refractive power of the eye is increased, and the pencils of rays which would have united beyond, are made to unite upon the retina. Dr. MONRO conceives his opinion confirmed by three experiments, which he made for the purpose of discovering whether or not it was well founded.

In the 1st, he placed his eyes so near a small printed book, placed opposite a window, as that the letters appeared indistinct. He found he could neither read the book when he kept the eyelids in their ordinary state, nor when he opened them wide.

But in the 2d experiment, on acting with the orbicularis palpebrarum, so as to bring the eyelids within a quarter of an inch of each other, and making an exertion to read, he found he could see the letters and words distinctly.

And in the 3d, instead of employing the muscular contraction of the orbicularis, when he brought the eyelids within a quarter of an inch of each other, by means of his fingers, and then stretched the edges, so as to make a pressure upon the cornea, he found the letters appear distinct. He concludes by observing, that there can be no doubt of this action of the orbicularis producing the effect he attributes to it, as the distance of the eye from the object and the quantity of light were the same; as no part of the pupil was covered by the eyelids, so as to cut off the most diverging rays; and as the object appeared confused when the orbicularis was not contracted, but distinct on its contracting.

These experiments, however, do not appear to me to prove the point which Dr. MONRO endeavours to establish. It is true, indeed, (as he remarks in the beginning of his Observations) that when we view small objects near the eye, we bring the upper and lower eyelids nearer each other, and by a forcible and rather painful exertion, contract the parts about the eyes. But these, I apprehend, we put in practice for a very different reason from that which Dr. MONRO assigns.

When a small object is near the eye, some of the rays which proceed from every point of the object, and fall on every point of the cornea, are so oblique, as to be unable to be brought into a focus on the retina, by the refractive powers of the humours of the eye. Hence the object is confused: but if by means of a small hole in a card, interposed between the eye and the object, the more diverging rays are cut off, and those only which are less oblique, allowed to reach the eye; then the humours are able to effect the proper degree of refraction, and the object appears distinct. Upon this ground, I conceive an explanation of the doctor's experiments may be given: Some of the rays from the printed book fell too obliquely upon the cornea, to suffer the proper refraction. On bringing the eyelids, however, nearer each other, these superfluous rays were cut off, and the object appeared more distinct: but in Dr. MONRO's experiments, it is said, that no part of the pupil was covered
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by the eyelids, so as to intercept the diverging rays, which might tend to render the object confused. When the experiments are repeated, however, it will be found necessary for the eyelids to be considerably within a quarter of an inch of each other, to render the object more distinct, and that the distinctness is greater, if part of the pupil be covered by the eyelids.

But though the pupil should not be at all covered by the eyelids, their being brought nearer each other than they usually are, will have a tendency to intercept oblique rays; since the refractive power of the cornea and aqueous humour can make rays enter the pupil which fall upon the cornea, beyond that part of it which answers to the pupil in distance.

With regard to the exertion we make in viewing a minute object, and the contraction we produce in the parts about the eye, which Dr. MONRO considers as proofs of the forcible action of the orbicularis, they seem to depend,

1st. Upon the necessity there is that the optic axes should unite in an object before we can have distinct single vision. And to produce this both eyes must be turned considerably inward, in viewing a minute object near the eye, which requires a painful exertion of the muscles of the eye-ball, certainly referred by us to the internal parts.

2d. Upon the action of the muscles of the eye-ball in increasing the convexity of the cornea, by pushing the aqueous humour forwards, which Dr. HOSACK and Mr. HOME have proved to be the usual method in which the eye accommodates itself to different distances, and to which Dr. MONRO imagines the action of the orbicularis is added.

3d. Upon the support which the neighbouring muscles when contracted give to the eye and its muscles, the continued action of which soon becomes painful.

Besides the circumstance that a considerable degree of pressure would be necessary to produce an alteration in the convexity of the cornea, such as the orbicularis does not seem able to give upon so firm and thick a membrane as the cornea, and which we should certainly feel if it were able to give it; I would observe, that simply bringing down the eye-lids with the fingers without stretching them, or without acting at all with the orbicularis, renders vision more distinct; and here it is evident, that there can be no such pressure as that for which Dr. MONRO contends.

To all these I would add, that myopes, or short sighted people, who have the refractive power of their eyes too considerable, almost always, in viewing an object, make the eye-lids approach more than the long-sighted, or those with vision in a healthy state; which should, according to the opinion of Dr. MONRO concerning the action of the orbicularis, increase the refractive power of their eyes, and consequently render their vision more imperfect, which by experience it is not found to do.

I. Y.

Analysis of the "Institutions of Practical Medicine, delivered in Lectures, by JO. BAPT. BURSERIUS DE KANILFELD," in Latin, 4 Vol. 8vo. Leipzig, 1798.

WE have just received a copy of the last edition of this truly valuable, and hitherto, in England, scarce work. We are sorry to observe, that the author did not live to complete his design, for the fourth volume, which was published after his death, concludes with the diseases of the abdomen. But before we commence any account of the work itself, we shall gratify our readers with such information as we have been able to procure respecting the medical character of the author. BURSERIUS was born at Trent, of an honourable family, and received his first rudiments of medicine from Felix Perger. He studied at the University of Padua for some time, and then removed to Bologna, where he devoted himself to the study of medicine under Laghi, Azzoguidi, Laurenti, Beccaria, and others. Here his progress was so rapid, that Bartholom Beccaria conceived the most flattering expectations of his future eminence; these expectations were more than realized. By the advice of Beccaria he settled as a physician in Fayence, where he continued to practise near twenty years, with every honourable mark of the approbation of his fellow citizens, and many princes of the sacred Roman empire, as, BARNI, CRESCENTI, SERRA, BOLOGNETTI, ODDI, STUPPANO, BORROMEO, and the Popes CLEMENT XIII. and XIV. the former of whom distinguished him by many honourable privileges, and the latter appointed him Professor of Medicine in the restored University of Ferrara. In this situation it is incredible what numbers of patients applied for his advice, both personally and by letter, not only from the adjacent but the most distant states of Italy, and even how many physicians of great reputation requested to meet him in consultations. By these means, and the frequent mention
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made of him by medical authors, his fame increased daily, till at length Charles Firmian, Embassador to the Queen Theresia, resolving to restore the celebrity of the University of Pavia, which had long fallen into neglect, invited Burserius by very honourable proposals to deliver public lectures on Chemistry and the Practice of Medicine, and also clinical lectures on the cases in the hospital, for the improvement of the pupils. With what exertion and with what success he discharged these important duties, no Italian is ignorant; not only his pupils, who came from the most distant countries for the sake of enjoying the advantage of his instructions, but also his professorial colleagues, who were much attached to him on account of his learning, elegant manners, and the candour of his mind, bore the most honourable testimony to his worth. The College of Physicians of Pavia elected him an honorary member of their body; the whole state and province were witnesses. But why should we dwell upon these external evidences of his high reputation? his own institutions on fevers, and other general diseases, afford the most decisive proofs of his merit.

During the ten years in which he discharged the duties of his Professorship, he was thrice unanimously elected Principal of the University, to the advancement and glory of which he contributed no less by his discipline than his learning. At length the Queen Theresia determined to commit the restoration of the health of her children Ferdinand and Beatrice Atestia to his care. This honourable appointment obliged him to leave the University of Pavia, where his loss was universally regretted, in order to reside at Milan, for the sake of being near the sick Princes. His anxiety night and day in the discharge of this duty contributed very materially to injure his own declining health, which the heart-felt thanks and princely gratitude of his royal patients and their parents, who imputed their recovery to his skill, could not restore. He resided seven years at court, caressed by his patrons, and universally esteemed and admired. He died Dec. 19, 1785, at the age of 61, of an abscess in the right kidney; the bladder was also said to be scirrhous, and the adjacent parts considerably diseased. His funeral, than which nothing could be more splendid or honourable, was personally attended by the young Princes. The loss of so great a man was severely felt by the whole city; for he was not more admired on account of his learning, than beloved for his polished manners and affability; so that he truly seemed to have been formed by nature to conciliate and secure the affections of all that knew him.

From the Introduction to the first volume, we give the following abridgement:

abridgement. "Medicine is properly enough divided into Theory and Practice." The former teaches those branches which may be deemed preparatory, and lays the foundations of the science; the latter comprises the whole art, and completes the superstructure.

The Theory is employed in delivering and explaining the general doctrines of anatomy, physiology, pathology, semeiotice, hygiene, and therapeutics, together with an enumeration of the *Instrumenta Medicinæ*, drawn from the three kingdoms of nature. And because this delivers the first rudiments of the art, and in every well regulated University, or school of medicine, is taught before the Practice, it has obtained the name of the *Institutions of Medicine*. How can it be expected that any one should conceive accurately of disease, its causes and effects, preserve health by a proper regimen, or restore it when lost, which are the objects of the practice of physic, unless he possess a competent knowledge of the animal fabric, the organization, powers, faculties and functions of life and health? When this introductory knowledge has been acquired, the path to the more useful and valuable part of medicine, distinguished by the title of *Practice*, becomes direct, plain, and easy. It is the business of this part to deliver the history, and explain the nature of every *genus* and *species* of disease; to investigate their manifold origin, to characterize their regular, peculiar, and diagnostic marks; to point out the prognosis; and, lastly, to lay down the most expedient indications of cure, deduced from reason and experience. By these steps we come to the bedside of the patient, called Clinical Practice, to which three branches are particularly subservient, Dietetics, Surgery, and Pharmacy, according as diet, operations, or medicines, may be indicated.

Of these two branches of the Science of Medicine, I propose to confine myself to the Practice solely, and to begin with FEVERS, not only as constituting the most common class of diseases, and being very often Idiopathic, but also most frequently combined with local affections. I am not insensible of the difficulty of the task I undertake, and perhaps have not sufficiently weighed

Nostri quid valeant humeri, quid ferre recusent.

For the more authors I consulted who had written on Fevers, the more was I involved in obscurity; some were for reducing the whole number to a few genera, others endeavoured to extend them by divisions and subdivisions, in a manner that baffled the memory and puzzled the understanding. This subject gave me no small trouble, but did not entirely discourage me. I determined to procure all the best authors I could find

on the subject of fever, and read them diligently once or twice, constantly noting the circumstances in which they agreed and in which they differed, as well as the causes of their difference. When I had continued this labour for several years, I then determined to try these opinions of the most celebrated authors by the Lydian stone of experience, in order to distinguish fact from opinion or hypothesis. Whatever therefore I have acquired by many years reading, meditation, and experience, that I believe may be relied on, is comprised in this volume, for the benefit of students in this science. I have not been biased by the tenets of any sect, nor even very solicitous whence doctrines or opinions came, but what they were, and by what evidence supported. *Formule*, or compositions of medicines, are rarely given, for many reasons, but chiefly that young men may not be induced to employ more time in copying *formule*, and committing them to memory, than in distinguishing diseases, and discovering indications, without which they must practise like empirics, to the disgrace of their profession. For it is the duty of a rational practitioner, having maturely weighed and settled the indications, judiciously to accommodate his simple medicines to them; or if compound forms should be necessary, he ought to mix and combine such as are adapted, not only to the particular disease and its causes, but to the age, sex, temperament, climate, season of the year, and other necessary circumstances: nor will this be very difficult for him to perform, who has stored his memory with the nature and powers of medicines, the forms of prescribing them, and the diet of the sick, all which are taught in the general doctrines of Therapeia or Pharmaceutics, which I suppose to have been previously acquired by the student.

With respect to the style, I have always preferred the plain and perspicuous, to the pompous, affected, or figurative, which I think very ill accommodated to the business of teaching. Ornamental periods, therefore, calculated to please the ear only, I have unreluctantly relinquished to those who are ambitious of the name of orators; for in teaching and explaining practical arts, we may say,

“*Ornari res ipsa negat contenta doceri.*”

It is a problem of no very obvious solution, to determine where a teacher of the practice of medicine ought to begin. The most usual mode is to begin with FEVERS. This appears to us like a person commencing a course of lectures on astronomy, with the construction of tables for calculating the motions of the moon, or a course of chemistry with the analysis of minerals.

BURSERIUS appears to have been sensible of this solecism, and therefore introduces his work with a *Dissertation* ON INFLAMMATION.

This arrangement appears to us highly judicious; for it is scarcely possible to treat of any fever, or even chronic disease, without frequent mention of Inflammation. He thus introduces the history of it, which we have considerably abridged. "When any PART of the body becomes preternaturally warm, red, tense, swelled, painful, or throbbing, it is said to be inflamed. The *proximate cause* of Inflammation is extremely obscure, and the investigation of it has engaged the attention of medical authors from the earliest ages of the science."

HIPPOCRATES, in the book on wounds of the head, says, *The parts surrounding an ulcer are inflamed, and become tumified by the influx of blood.* His disciples, however, either forgetting the influx of blood, or not believing it, imagined an acrid or glutinous determination to the part inflamed, and sometimes a pituitous and viscid defluxion on the part.

These opinions prevailed till Erasistratus imputed inflammation and its attendant fever to a transfusion of blood into those vessels which are naturally destined to circulate air. For the ancients imagined that the *arteries*, as being generally found void of blood after death, were designed during health to circulate *air*, instead of blood. This seems to have been the origin of the Boerhaavian *error loci*, as a cause of inflammation.

The next innovators were, Galen, Oribasius, Ætius, Paulus Ægineta, and the other supporters of the Galenic system, who made inflammation to consist in a determination of hot blood to the part affected, which *distilled* through the pores, and produced swelling, pain, and redness; nay, Oribasius contended, that a putrescent state of that fluid so determined, was the cause of the heat. But as soon as the chemical sect began to rival the Galenic, Willis suggested a *febrile effervescence* of the blood as the cause of phlegmonous inflammation; and the *alkalis* of Sylvius, his cotemporary, tended as little to illuminate this obscure subject. Such were the first feeble attempts to shake off the trammels of the Galenic school. ETTMULLER, apparently at different times, advanced two opinions on this subject: in the first, he considers the *increased heat* as the principal circumstance to be investigated; and in order to judge of the quantity or degree of increase as well as its cause, he institutes an inquiry into the cause of animal heat in general, during life and health,

health, and concludes, that it arises from the mutual action of a volatile aerial acid in its natural state and its proper alkali upon each other. But the increased heat of inflammation he derives from a different source, viz. an influx of spirit or gas, which increases the mutual action of the acid and alkali to a morbid degree. He therefore does not hesitate to consider the accumulation of blood in the inflamed part as an accessory symptom, not as the cause of the heat. For he says, the pain arising from the increased action of the acid and alkali produces a contraction of the fibres, hence the diameter of the veins is diminished, the return of the blood impeded, which produces stagnation, accumulation, and inflammation.

His other opinion was, that a congestion of blood in the capillary veins and cellular membranes produced heat and pain. The material proximate cause, therefore, of inflammation, he defines to be, blood collecting and stagnating in any part, on account of the incapacity of the veins to transmit it from the arteries as fast as it arrives. The other symptoms he endeavours to explain as follows, viz. Since the blood which causes inflammation is red, spirituous, and hot, wherever it accumulates there must be an increase of redness and heat; and since more blood flows into the part than can return by the veins, swelling must take place, the nervous fibres must be distended, hence pain and all the symptoms of inflammation.

SYDENHAM, who very seldom relies on the theoretical speculations of others, but is generally his own ætiologist, taking his causes from what he deemed observation and experience, believed he had discovered a peculiar diathesis, or state of the fluids, in inflammation; and he speaks of it as consisting in a conflagration and fervour of the blood itself. He is not solicitous to enquire whether its motion be accelerated or retarded in any part. The blood, however, being thus heated and effervescent, and carried to all parts of the body, he thinks some of its inflamed and heated particles are one while applied to the brain, sometimes to the pleura, or lungs, sometimes to the skin, and being there deposited produce phrenitis, pleuritis, pneumonia, or erysipelas. This translation, or deposition of inflammation, says BURSERIUS, may often take place in acute fevers, and I would grant also in most inflammations which arise without any antecedent disease; but if we investigate the matter more closely, we shall not find the same account of their origin applicable to all kinds, for frequently the inflammatory diathesis of the blood is only a consequence, not a cause of the disease.

We shall now take a view of their notions, who referred every thing

themselves to the new organization. Hence must arise an infinite diversity of pain, lancinating, shooting, gnawing, &c. according to the degree of inflammation, and the seat of the disease. Violent or continued pain, introduces spasm, whence the hard vibrating pulse so frequently observed to accompany inflammation.

[To be Continued.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the sixth number of the Medical Journal, your correspondent, Mr. SIMMONS, has informed you, that the late Dr. DARBEY was the first person who discovered the efficacy of musk and salt of hartshorn in gangrene and sphacelus. I have already observed to you, that Mr. WHITE, of Manchester, was author of the tract to which you allude in the fifth number of the same Journal, and, as I believed, the first practitioner who had noticed the good effects of the medicine there spoken of. I have but lately had an opportunity of referring to Dr. DARBEY'S Thesis; but by looking it over, I have fully satisfied myself that Mr. WHITE not only was the first who promulgated an account of that remedy, but that he also was the first that discovered its efficacy in those affections; and, by permitting me to make a few extracts from each of the publications in question, I think my persuasion will not appear to have been hasty, unless we are not allowed to credit the assertions of Mr. WHITE himself, whose respectability as a gentleman, and whose reputation as a practitioner, the medical world hath long acknowledged. In the advertisement prefixed to his pamphlet, Mr. WHITE says,—“The following observations were made in 1783, but the author
 “ was prevented publishing them, by many professional engagements
 “ and other avocations. They have now been revised, and, though
 “ many cases have since occurred in his practice, and been attended with
 “ the same success, no notice has been taken of them. On dubious
 “ points, too many cases can hardly be produced; but confirmed as he
 “ is of the facts which he has to relate, he considered it as totally un-
 “ necessary to multiply them, especially as they will receive additional
 “ strength from a Thesis, which his worthy friend, Mr. DARBEY, late
 “ apothecary and house-surgeon to the Manchester Infirmary, intends to
 “ support

“ support for a degree in medicine, and which will probably be submitted to public inspection.” In the pamphlet, p. 11, he says,—
“ The remedy I have to lay before the public, is a large and frequently-repeated dose of musk and salt of hartshorn, the use of which, like that of opium by Mr. POTT, *I discovered rather unexpectedly and by accident.*” Page 17, he observes,—When I first employed this medicine in the complaints to which this pamphlet relates, it was not from any expectations, I must own, of stopping their immediate progress, but merely to combat disagreeable symptoms, such as the singultus, subsultus tendinum, and other convulsive spasms. I soon found it not only removed these unpromising appearances, but also procured ease, sleep, and a gentle diaphoresis, whilst, at the same time, the mortification regularly stopped. The circumstance struck me, but I scarcely durst flatter myself the stoppage of the complaint itself, in the first instance, was owing to the medicine, till, from repeated trials of it, I observed the same uniform effects. In most of the cases in this species of mortification, that have fallen under my practice, it has succeeded to the utmost of my wishes, viz. when accompanied with or occasioned by convulsive spasms, or arising from local injury, producing irritation.” He relates four cases, in which the bark, and other medicines, were freely employed without advantage, when the patients were restored by the use of musk and volatile alkali. The second case, as it is short, and also as it was the first in the Infirmary, where the plan now under our notice was adopted, I will extract.—“JAMES OGDEN, of Manchester, aged forty-six, was, on the 6th of March, 1780, received into the Manchester Infirmary for a compound fracture of the leg: It soon became inflamed; swelled considerably, with much tension; shewed little signs of digestion; and, on the fifth, began to grow livid. The bark was given in considerable quantities; but, notwithstanding the use of it, the livid parts were completely mortified. His pulse beat 140 in a minute; his skin was hot and dry; and his tongue without moisture, brown and hard. A singultus and subsultus tendinum came on; he had a wildness in his looks, succeeded by a delirium. On the eighth from the accident, I directed him to take a bolus, containing 10 grains of musk with 10 grains of salt of hartshorn, made up with conserve of roses, every three hours. He slept better the following night than he had ever done since his misfortune, though he had no opiate; and the next morning he was in a breathing sweat. His symptoms gradually abated, but he continued the use of the bolus till he had taken two ounces and a half of musk, and as much salt of hartshorn. The
“ mortification

“ mortification stopped, and the dead parts separating from the living, came away in large sloughs ; but there was such a considerable loss of substance, that he was not able to leave the Infirmary till the 11th of December, upwards of nine months from the accident, when he was discharged with a very useful leg.” Allow me now to observe, that Dr. DARBEY graduated at Glasgow, in April 1790, and his Thesis was entitled, — “ *Dissertatio Medica quædam de moschi et salis alk. volat. usu, in febre nervosa et gangræna, proponens.*” — He has mentioned only one case of nervous fever, and that is without either date or the name of the person ; and, indeed, it could not have affected this enquiry had it been otherwise. The cases of gangrene are related more methodically, and are three in number: The first, page the 15th, was that of Mr. P. who was seized in the month of October 1781, with an erysipelatous inflammation of both legs, and one of them mortified. Mr. DARBEY proposed musk and salt of hartshorn, to the gentlemen who were concerned for the patient, in doses of 10 grains each, three times a day, which he said he had seen of service in cases not much unlike this. After observing that a variety of remedies had been used without effect, he proceeds, page 16, — “ *Hoc tempore primum forte hujusce casus historiam mecum communicarunt medici solertes Dr. HOULSTON, et Dom. PARK, qui medicina probe imbuti, plurima remedia incassum ægro præceperant. Signa, nempe, singultum, tendinum subsultum, somnolentiam, torporem, pulsus debiles, delirium sub noctem similiaque mecum in animo volvens, proximo die medicis illis, moschum et salem cornu cervi conjunctos, quos in exemplis non multum hujus disparibus proficere antea videram ægro adhibendos proposui. Aurem facilem præbuerunt propositaque acceperunt generosi supra dicti. Remedii utriusque grana decem ter in die adhibita sunt. Eventum ipsis verbis Dom. PARK auscultas, quæ, ex epistola ad Dom. WHITE, Mancunii chirurgum, missa, transcribenda curo. Post signorum quæ paulo supra comprehendi, relationem, progressus dicitur Dom. PARK.*” — Here follows the event of the case, in a letter from Mr. PARK to Mr. WHITE, which was in favor of the medicine. At the same time he remarks, that it was had recourse to in consequence of a suggestion from Mr. DARBEY, then apothecary at the Infirmary. It does not appear, from the Doctor’s account of this case, that he ever saw the patient, nor is it probable he should, as he was not permitted to have any private practice ; but this recommendation of the medicine was in a conversation he had with Dr. HOULSTON and Mr. PARK. The next case which he relates, page 18th, was that of J. Hurst, who was brought into the Manchester Infirmary on the 16th of March, 1789, for a fracture of the os humeri ; the arm mortified: He took, with success, musk and volatile

volatile alk. of each 10 grains, in a bolus, every three hours. The third case is much like the second, both as to the complaint and result. These are all the cases the Dr. has related of the employment of this remedy in gangrene. The first case Mr. WHITE gives us, and in which the discovery appears to have been made, was in Sept. 1778. The second is that of a patient of his in the Infirmary, March, 1780. Now, by the nature of his office, as Apothecary to the charity, Dr. DARBEY must have compounded the medicine which Mr. WHITE prescribed; and, as house-surgeon, he must have attended the patient: he, therefore, no doubt, had noticed the effect of the medicine in Ogden's case, which happened long before he suggested the use of it to Dr. HOULSTON and Mr. PARK; beside, the agreement in proportion, quantity, and the mode of exhibition, ought to be noticed.—Mr. WHITE's first case was in 1778; Dr. DARBEY's first case in 1781.—Mr. WHITE claims the discovery, in positive words, page 11th, and is not contradicted by Dr. DARBEY; there is, however, an apparent incongruity in two passages of the Thesis: Page the 2d, he says,—“*Nemo autem, quantum in memoria nunc teneo, suum animum directo ad effectus bonos, quos, in febre typhode atque membris gangræna affectis adhibita, præstiterunt alkali volat. et moschus, hætenus attendit*”.—Page 25,—“*Hæc exempla sunt pauca ex multis quæ proferre magnam ad utilitatem moschi et alkali volat. in febribus inæteratis et gangræna adhibitorum, confirmandam facile possum. Quicumque vero hujuscemodi plura videre cupiat, tractatum de partibus gangræna affectis earundemque curatione, a viro celeberrimo Carolo White arnigero, nosocomii Mancunienfis chirurgus, societatis regiæ Londinensis socio, &c. &c. cito edendum, consulat.*”

I have lately had many opportunities of exhibiting digitalis in whooping-cough, but the length of the above address will not allow me to take up any more room in your Journal; I shall therefore conclude with observing, that in some of the cases its good effects have surprised me; at the same time, from experience, I can assure you, that Dr. MACLEAN's observations, respecting the perishableness of digitalis, cannot be too much attended to, as I have frequently been much deceived by it, in consequence of that quality. If they appear to be worthy of your attention, I will send you more particularly my observations on its operation.

I am, GENTLEMEN,

With much respect,

Your obedient servant,

STOCKPORT, Sept. 14.

W. LOWE.

Remarks on the ill Consequences arising from unskilful Venæsection; by Mr. RING, Member of the Corporation of Surgeons.

To the Editors of the Medical and Physical Journal,

GENTLEMEN,

IN your last number appeared some Observations by Mr. PULLEY, of Bedford, on the Case of ill Effects produced by Venæsection, published by Dr. VAUGHAN, of Rochester; by which we learn, that Mr. P. agrees with me in rejecting the notion of a morbid poison; but not in the opinion, that the melancholy catastrophe was occasioned by the length of the orifice, and its not being properly closed.

Mr. P. thinks the inflammation which proved fatal, was owing to a peculiarity of constitution; which, he says, you may call irritability if you please. But, unfortunately for his argument, the man who lost his life on this occasion, is described by the learned gentleman who drew up the case, to have been athletic, in the prime of life; and from the opinion given by his surgeon previous to the operation, we may presume he was then in full health and vigour.

As Mr. P. alludes, with due respect to that celebrated anatomist and physiologist Mr. HUNTER, I shall appeal to the same authority. He says, in his Treatise on the Blood, Inflammation, &c. p. 230: "A wound made upon a person of a healthy constitution, and sound parts, will unite almost at once." This destroys every idea of an irritability, or any other manifest or occult quality, existing in a robust constitution, that can tend to prevent or retard union by the first intention.

It may then be asked, what impeded this salutary process in the case under consideration? To this I answer, The incision was *very large*; and when a surgeon was called in, the sides of the vein appeared to him not united, but inflamed and suppurated. In addition to the natural difficulty of keeping the lips of the wound in perfect contact, when it is immoderately long, its situation in the bend of the elbow is an impediment; for as often as the arm is put into a state of flexion, the orifice will have a tendency to open, in proportion to its length.

This

This opinion is not founded upon mere theory; I have seen repeated instances of considerable inflammation and suppuration, evidently arising from that cause.

Mr. P. doubts the propriety of Dr. VAUGHAN's decision; and says, justice ought to be done to the barber.—I hope no one will rashly condemn the barber;

For a barber to slay is a barbarous deed,

as the author of *Salmagundi* rightly observes. At the same time, I think Mr. P. rather over-rates the surgical skill of the barber. He says, he firmly believes, that if the surgeon had bled him himself, the same would have been the issue. If this opinion can be justified, it may prove a considerable saving to the public in these hard times; for it must be unnecessary to employ a surgeon, in cases requiring venæsection, if it can be performed full as well by a barber.

Having bled, and seen bled, numbers of persons endowed with every degree of irritability, I cannot recollect a single instance of any serious ill consequence arising from that cause; but I have known, on various occasions, the habit of the patient blamed by the surgeon, when the patient had much greater reason to blame the surgeon for his want of skill.

Mr. P. agrees with me, that in all probability the mischief was not produced by any poisonous matter. He thinks, as I do, that "the symptoms of such cases were erroneously considered, till the keen scrutinizing knife of Mr. HUNTER exhibited the disease in its proper colour."—If Mr. P. will allow the edge of Mr. HUNTER's wit to have been as keen as that of his knife, and that he was any judge of those cases to which he paid such particular attention, I shall convince him that his own opinion also is erroneous.

Mr. P. says, "It has been imagined, the inflammation has been induced by the external orifice not being effectually closed; but this idea is by no means correct." What says Mr. HUNTER? After observing that some have ascribed the bad consequences arising from venæsection, to the puncture of a nerve, aponeurosis, or tendon, he adds, "By a third set of physiologists, the constitution has been blamed; and the symptoms have been said to arise *only in bad habits*. But here also experience is on the opposite side; and a person who has before enjoyed the most perfect health, is just as liable to the accidents from bleeding, as one of a weakened or crazy constitution. And it may even be observed, that, where such accidents have happened, the patient has been bled in the opposite arm, without any inconvenience."

In the third volume of the Medical Commentaries, from which I extracted the foregoing paragraph, Dr. DUNCAN informs us, that for various reasons which he specifies, Mr. HUNTER concluded, that the mischief arose from an inflammation of the cavity of the vein. In a fatal case there mentioned, the orifice was, as in Dr. V's. case, still open.

“ Mr. HUNTER is disposed to think,” says Dr. DUNCAN, “ that the principal cause producing the inflammation of a vein after bleeding, is the want of disposition to heal. This may at first arise either from its being exposed, or in consequence of the lips of the orifice in the skin not being properly brought together. If an injury be done to one part of a cavity, the stimulus, which arises from its being an imperfect cavity, goes through the whole. Hence it inflames, and suppurates. In order to prevent mischief, Mr. HUNTER advises that the orifice should be closed as accurately as possible; and he recommends that the orifice in the skin should be drawn to one side of that in the vein, so as to make the skin do the office of a valve to the venal orifice.”

In Dr. VAUGHAN'S case, that the inflammation affected the lymphatics, and that matter was absorbed by those lymphatics, cannot be doubted; and I think there is no reason to doubt, that the matter was generated in the arm itself.

The man was bled on Sunday, and no pain was felt till Tuesday evening; when suppuration might not only be expected, but we are positively informed by Dr. V. that it had taken place, and was perceived by the surgeon. Dr. V's. account agrees with reason and experience, however erroneous his conclusion may be. He says, *the sides of the vein did not appear to be united, but inflamed and suppurated*: and again, that *the wound of the vein underwent inflammation and suppuration, and then the disease appeared,*

He says, “ Its appearance so soon after the application of the poison was probably owing to Mr. GREEN being naturally a healthy man; and to his labouring under *no other disease* at the same time.” — This remark alone is fatal to Mr. P's. hypothesis.

But so far from the time being remarkably short, for so formidable a disease to be occasioned by inflammation, suppuration, and absorption of matter; it is not a fortnight since I was called to a lady, in whose arm a considerable number of lymphatics, highly inflamed, might be traced up to the axilla, attended with violent pain. The cause was a
small

small whitlow, of no long standing, on the thumb. By opening it, removing a small portion of the skin, ensuring a free discharge, and cutting off the supply of matter; and, perhaps, full as much, by taking off tension and irritation by the means above mentioned, and the application of a poultice to the abscess, and cold water to the arm, all pain and mischief were soon removed. Similar ill effects, arising from confined matter in every part of the hand and arm, are too common, and too well known to every surgeon, to require a minute recital,

These remarks may to some readers appear superfluous; if they appear so to you, I beg you will suppress them; if not, you will oblige me by inserting them in the next Number of your respectable Journal.

I am, Gentlemen,

NEW STREET, HANOVER SQUARE,
Oct. 4, 1799.

Your obedient servant,
JOHN RING.

Observations upon Inveterate Ulcers; by J. VAGE, M. D.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE ingenious exertions of some of your correspondents for the cure of old ulcers, and particularly in the lower extremities, induces me to contribute my mite to this laudable intention. A great number of cases of this description has been, for several years past, under my care; and the inveteracy of some of them caused me to be somewhat experimental in their treatment. The result of my trials, both in respect of theory and practice, I shall communicate as briefly as I can for your useful publication. In this, however, I must beg leave to speak agreeably to the doctrines of the old school; for, though the present rage of applying the modern chemical discoveries to the practice of physic is highly commendable, yet as a warm controversy subsists between men of eminent abilities, not only about all the applications which have been made of these discoveries, but even about the discoveries themselves, it warrants me to decline them, until indubitable facts, and cool impartial testimonies, shall have decided the business on one side or other.

Ulcers

Ulcers have been long distinguished into benign and malignant, in proportion as they have yielded to or resisted the established methods of practice; for, indeed, whatever advancements medical knowledge may have received, in many points this branch of it appears to have so stubbornly retained its difficulties, that even at this time the ablest practitioners are frequently obliged to plead the defectiveness of the art. Formerly, the obstinacy of ulcers were acknowledged to be so great, as to be attributed to witchcraft. But when the progress of natural knowledge had dissipated the clouds of superstition, another asylum was founded for incapacity; and ulcers, whenever they baffled the surgeon's skill, were supposed to belong to diseases which are commonly esteemed incurable, and they were then denominated of a scrofulous, or cancerous nature, and the like. Many authors, with more reason and scientific latitude on their side, imagined that the malignity of such cases always proceeded from some bad habit of body, some depravation in the fluids and solids, and I was easily led to espouse this tenet; but observing still that many ulcers, which could not with any propriety be reckoned either scrofulous or cancerous, not only eluded the strictest regimen, and a perseverance in the most approved alterative courses of medicine, but were even aggravated in their condition, I began to suspect this doctrine too, and that instead of any general constitutional source, the cause of their malignity and obstinacy was chiefly of a local nature. A comparative view of a foul ulcer, with one in a healing state, seemed to correspond so exactly with this opinion, that, extraordinary as it appeared, I was encouraged to adopt it. In an inveterate ulcer, it is observable that the external parts about it, and, of course, the parts beneath its surface, are in a morbid state; and as the humours which constitute the discharge must pass through these parts, it is reasonable to suppose that they contract a degree of acrimony, or some quality inimical to the surface of the fore, and, consequently, become corrosive and painful. Upon any temporary cessation of this pain and corrosion, which is often procured by palliative applications, either a glossy, spongy, inorganized flesh springs up, or little callous granulations, at the bottom and sides of the ulcer. In a healing one, every thing is the reverse of this; the contiguous parts are in a sound condition, and have a natural complexion; the granulations, which gradually proceed to incarn the fore, have a healthy appearance, and are properly organized with vessels and nerves for a circulation in the future cicatrix; the discharge is a well-digested pus, which, instead of exciting pain, is nature's congenial balsam to sheath and cherish the tender germinations.

But

But what chiefly solicited my attention was, that all these appearances in malignant ulcers, their acrimony, the saniousness of the discharge, the corrosion, the spongy flesh, the callous granulations, &c. were always in proportion to the extent of the morbid circumjacent parts, and the extent itself, the product of habitual virulence. A sickly complexion, and a vitiated constitution, indeed, constantly attend ulcers of any considerable standing or magnitude; and hence, probably, arose the opinion that their malignity originated from that source. It is, however, pretty certain, that this depravation of the fluids and solids, though it may in its turn increase the obstinacy of ulcers, is yet, in general, the effect and not the cause of them, from an absorption of the morbid humours generated in and about them. If this is the case, there is much reason for thinking that artificial sores, if long continued, whatever advantage they afford at first, such as issues, setons, perpetual blisters, become hurtful to the constitution. And I am not without reasons for believing, that even the cicatrices of old ulcers long circulate and secrete humours injurious in some degree to the animal œconomy.

But to bring as near as possible to a proof, and to ascertain with some certainty what effects a reputed bad habit of body, or such a one as accompanies old ulcers, has in producing the acrimony of their discharge, I caused artificial sores to be made with caustics, in patients afflicted with such ulcers, and in similar parts of the body; for it appeared a fair conclusion, that where a putrid eschar was to be separated and digested off by an inflammation and a generation of sound flesh, the general depravity of the solids and fluids, if it was powerful enough to keep up the virulence of the old ulcer, would shew a similar disposition in and retard the cure of the new one. No such thing happened; but in many patients selected for the purpose, at different times, the eschars digested off, and the wounds healed as kindly, as they would have done in people without any previous ailment. What other inference, then, could be drawn from this, but that the malignity of old ulcers chiefly arises from the morbid circumjacent parts, and that the destruction of these parts, or, in other words, a reduction of such ulcers to the state of a fresh wound, would infallibly bring them to a healing condition? I made no scruple, therefore, to put this idea in execution, and always found where it could be perfectly done, it never failed of success. What are all the common modes of practice, in severe cases, but mere palliatives? It is easy to correct the discharge; farinaceous and vegetable cataplasms in a state of fermentation, several antiseptic liniments, and spirituous camphorated acetated dressings, will do it, and procure

a temporary relief; but that state is followed by nothing more than either the generation of that glossy spongy flesh already mentioned, or the callous knobby granulations, which are only as bad or worse variations of the complaint.

Long before I had adopted this way of thinking and practice, I knew that caustics would effectually stop and quickly heal some venereal chancres; but I remarked, at the same time, that some were so virulent as to resist them, which I was then at a loss to account for; but I now know to a certainty, that the failure arose from too superficial an application of them. The caustics which were then used, were the lunar, and a solution of argent viv. in the nitrous acid; and I, for some time, imagined, that the good effects were peculiar to these; but the strong caustic alkali answers better: it occasions less pain, as it instantly destroys the sensation of the parts, and, therefore, the stronger it is the better, if it is used with judgment.

Remarks on Mr. OWEN's Letter, relating to the History of the Venereal Disease, communicated by Mr. BLAIR, Surgeon of the Lock Hospital and the Finsbury Dispensary, &c. &c.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the last number of your Journal is a translation of an old Welch manuscript, supposed by Mr. OWEN and yourselves "to relate to the history of the venereal disease." It contains a prescription "for the great pustulous eruption and its degrees," as the manuscript informs us; and "this remedy was sent by Mr. RY. TILER, a French physician, when it was the year of our Lord one thousand and five hundred, save six years," (*i. e.* 1494) "to king Henry VII. the first person in this kingdom who was afflicted with that disease." Admitting, Gentlemen, that yourselves and your correspondent do not mistake the meaning of the original writer, I think the fragment in question must be considered as a complete refutation of all that has been hitherto advanced concerning the origin and progress of the lues venerea. But to

me it seems probable, that this fragment has no relation whatever to that disease; and my opinion is founded on the following considerations;

I. The phrase *venereal disease* does not occur in the Welch manuscript, nor is there any analogous expression which can be construed into a reference to that disorder.

II. The "great pustulous eruption" with which King Henry VII. was afflicted in 1494, is here described in such a manner as to prove its dissimilarity from the *lues venerea*.

III. Collateral evidence is entirely wanting of this disease having been introduced into England before the year 1497, so that the Welch fragment runs counter to all other historical evidence.

IV. Upon the supposition that Henry VII. had actually been infected with the syphilis, he was in too elevated a station to escape notice among English historians. Francis the First, Cæsar Borgia, Cardinal Wolfey, and other persons of rank, were in this predicament, and their respective cases have been recorded in history.

V. No presumption can be taken up in support of Mr. OWEN'S opinion, merely from the use of a mercurial ointment, since the same remedy was employed in that age against leprous affections of the skin.

VI. There is no existing proof in the annals of medicine, that mercury was used externally in syphilis so early as the year 1494.

On all these accounts, therefore, I think it may be fairly concluded, that the Welch manuscript has been misunderstood, and does not relate to the venereal disease.

May I be permitted, Gentlemen, to avail myself of the present opportunity of mentioning, for the information of medical men in general, that my *second* collection of cases to illustrate the anti-venereal effects of *nitrous acid*, is not quite completed; and that I shall be happy to receive any other cases which may tend to elucidate this practical enquiry. By inserting this notice in your next number, you will not only oblige a constant reader, but, I trust, will be serving a public cause.

O^c. 10, 1799,
Great Russel Street, Bloomsbury.

WILLIAM BLAIR.

Observations on the Mineral Waters of Moffat, in the County of Dumfries, Scotland, by T. GARNETT, M. D. Professor of Physics and Philosophy in ANDERSON'S University, Glasgow, &c.

THE village of Moffat is situated on a rising ground, at the head of a plain, or valley, extending more than twenty miles along the banks of the Annan. It is encompassed on the east, north, and west, by hills of different heights. It consists chiefly of one very spacious street, with two good inns, and several private lodging houses, which are let to invalids, who resort to this place during the summer, for the sake of its mineral waters. The church is a handsome building, surrounded by trees, which produce a good effect. Indeed, the view of the village from any part is far from unpicturesque. The number of inhabitants is something more than a thousand. Lord Hopeton has a house here, at which he occasionally resides.

Moffat has long been celebrated for its mineral waters, and may be denominated the Harrogate of Scotland; numbers of invalids from Edinburgh, Glasgow, Dumfries, and various parts of Scotland, resort to it every year; and though in winter a residence here would be very dull and dreary, in summer the village is all life.

The climate of Moffat is said to be remarkably healthy, and the air so extremely pure, as to occasion sneezing, and other marks of superoxygenation, in persons not accustomed to it, particularly if they have lived for some time in a large town, or a confined situation. Its effects are particularly exhilarating and bracing, as I have myself experienced; and though the showers of rain are frequent, and sometimes heavy, as might be expected in a mountainous country, yet a moist or foggy atmosphere is seldom seen. Every opening of the clouds discovers a sky of a beautiful azure, which, in a clear day, assumes a distinctness and brightness that might vie with an Italian sky. These circumstances, with exercise, contribute, perhaps, more than the waters, to restore the exhausted and debilitated constitution.

The mineral waters are of two kinds, sulphureous and chalybeate: The first has long been distinguished by the name of the Moffat well; and is situated about a mile and a half from the village. A good carriage road has been made to it, and there is a room and stables, near the

the well, for the accommodation of the company while drinking the waters.

The spring oozes out of a rock, at the distance of only two or three yards from a little rivulet; a few yards above it is a bog, from whence it probably derives its sulphureous impregnation. The well is covered over with a stone building, inclosing a pump. The water has a strong smell, resembling bilge water, or the scourings of a foul gun, like the sulphureous waters at Harrogate, though not quite so strong; it has a slight saline taste, and sparkles considerably when first taken from the spring, particularly when poured out of one glass into another. The sides of the well are lined with a whitish crust; and when the water has been suffered to stand for some days without pumping, it becomes covered with a white film; both these, when dried, burn with a bluish flame and suffocating smell, which indicate them to be sulphur.

On the 9th of October, when the temperature of the air was 54° , and that of the adjoining brook 48° , the temperature of the spring was 50° . The following experiments were made with a view of ascertaining the nature of its contents:

1. Characters written upon paper with *acetite of lead*, were rendered visible on being immersed in the water; the colour was at first brown, and on remaining longer quite black.
2. A solution of acetite of lead in distilled water, dropped into the water, caused a copious brown precipitate.
3. Tincture of galls produced no change.
4. Lime-water produced a very slight turbidness.
5. Tincture of turnsole produced scarcely any sensible redness.
6. Acid of sugar produced no change.
7. Muriat of barytes produced no effect.
8. Nitrat of silver caused a white cloudy appearance, with a copious precipitate.
9. When the water had been boiled for a few minutes, it was not changed by any of these precipitants, except the nitrat of silver.

From the first and second of these experiments, it appears that the water is impregnated with sulphurated hydrogen gas; the third shows it to contain no iron; the fourth and fifth indicate but a small quantity of carbonic acid; from the sixth it appears to contain no lime; and from the seventh no sulphuric acid; the eighth, however, discovers the muriatic acid, which we shall afterwards find is combined with soda.

10. By means of the pneumatic apparatus, which I described in a treatise I published some years ago on the Crescent water at Harrogate, and likewise in an early number, I think the second or third of the New London Medical Journal, printed for Deighton, Holborn, nineteen cubic inches of permanently elastic fluid were procured from a wine gallon of the Moffat water; of which, four were azotic gas; five carbonic acid, and ten sulphurated hydrogen gas,

11. A wine gallon of this water was evaporated very slowly to dryness, and 36 grains of muriat of soda were obtained, some of the crystals of which were very distinct.

Hence it may be concluded, that a wine gallon of the sulphur water at Moffat contains

Of muriat of soda	—	36	grains.	
Sulphurated hydrogen gas		10	} cubic inches.	
Azotic gas	—	4		
Carbonic acid gas	—	5		

This water will not keep; for though closely corked up in bottles, in the course of two or three days it is found to have lost the whole of its sulphureous smell.

The next water which I examined was the Hartfell Spa, which springs out of the base of a mountain of that name, and is nearly five miles distant from Moffat. It is found at the bottom of a deep and narrow ravine, or linn, the sides of which are entirely laid bare to the very top, and form a very interesting object to the mineralogist, as all the different strata can be distinctly seen. These strata dip towards the bottom of the mountain, and are inclined to the horizon in an angle of about 15°.

The lowest stratum is a black and soft kind of rock which easily crumbles to pieces, and consists of clay, with great quantities of sulphuret of iron and sulphuret of alumin; immediately above this stratum, which is several feet in thickness, lies another, composed chiefly of clay and argillaceous iron-stone; above this is another stratum of blackish shale, resembling the lowest; and above this another of argillaceous iron-stone, of a fine deep red. The ascent up this ravine is very difficult;—a little brook tumbles down it, forming some pretty cascades, and nearly at the foot of the glen is the mineral water, which seems to originate from water filtering through and dissolving the sulphats of iron and alumin of the rock; and in consequence of this it is, as might be expected, strongest after rains, contrary to most mineral waters.

waters. The whole brook deposits an ochre, or oxid of iron, which colours the rocky channel to a considerable distance. On some of the rocks above the spring I found some beautiful specimens of *alumen plumosum*, and a few green crystals of sulphats of iron,

In these schistous strata, the sulphurets are decomposed; by the action of the air, and the contact of water, the sulphur is converted into sulphuric acid, which combining with the iron and alumin, form the sulphats; these being soluble in water, are washed away, filter along the crevices, and issue in the form of a spring, which is covered by a small building.

This well was discovered in the year 1748, by JOHN WILLIAMSON, an excentric but benevolent character. He believed in the Pythagorean doctrine of the *metempsychosis*, or transmigration of the soul into the bodies of different animals; on this account he never tasted animal food for the last forty or fifty years of his life, nor would he suffer the smallest insect to be killed if he could prevent it. He drank this water constantly for many years.

The water is perfectly clear when taken from the well, but gradually deposits, even though sealed up, a little oxid of iron in the form of a fine sediment. It has a strong astringent taste like ink. The following is the result of the experiments which I made upon it;

1. Tincture of galls dropped into it produced a colour nearly as black as ink, and this colour was as deep when the experiment was made after the water had been boiled as it was before, which shows that the iron is not suspended by the carbonic but by a fixed acid.
2. Muriat of barytes produced a white coloured and a copious sediment.
3. Acid of sugar produced no change.
4. Acetite of lead produced a slight turbidness with a white precipitate.
5. Tincture of turnsole was rendered a little red.
6. Lime water produced a slight turbidness, with some precipitate of alumin.
7. By means of the machine, only five cubic inches of gas were expelled from a wine gallon of the water, which was chiefly azotic gas.
8. A wine gallon of the Hartfell water was made to boil gently; it soon became turbid, and deposited a brown powder, after which it was perfectly clear. The powder was collected by filtration, and found to weigh

weigh fifteen grains; it was of a yellowish colour, but changed to a beautiful red on exposure to a considerable heat: it was found to be oxid of iron.

The clear liquor was evaporated very gently to dryness, and the saline matter procured in this manner weighed 96 grains. This was found to consist of sulphat of iron, and sulphat of alumin. In order to discover the respective quantities of each of these salts, the whole was dissolved in water, and the iron precipitated by tincture of galls. When this was separated, a solution of salt of tartar (carbonat of potash) was added, which precipitated the alumin in a carbonated state, and from the quantity of carbonat of alumin, it was easy to calculate the sulphat of alumin, which I found to be 12 grains; the quantity of sulphat of iron must therefore be 84 grains.

This water tastes much stronger after it has stood two or three days, even in an open vessel, though it is in fact weaker, because it has lost part of its iron by standing. The sulphuric acid losing part of its iron, its taste becomes more sensible, and the water approaches nearer to a solution of sal martis.

From the preceding experiments, it appears that a wine gallon of the Hartfell water contains,

Of sulphat of iron,	—	—	84 grains.
Sulphat of alumin,	—	—	12 grains.
Azotic gas,	—	—	5 cubic inches,

Together with fifteen grains of oxid of iron, with which the sulphuric acid seems to be supersaturated, and which it gradually deposits on exposure to the air, and almost immediately if boiled.

As the principal mineralisers of this water are the sulphats of iron and alumin, it is evident, that if well corked, it will keep for months, and perhaps years, unimpaired in its qualities: hence it may be carried to a distance, better than most mineral waters, and its good effects need not be confined to Scotland, or even to Britain. When Dr. JOHNSTONE, a physician at Moffat, had the care of it, he sent it to many towns in England, and to the West Indies; but it is now in hands that render it of comparatively little benefit to the public. As this water keeps so well, it is not necessary to go to the spot to drink it, but it may be procured in Moffat in a very fresh state. It very much resembles the water of the Horley-Green Spa, near Halifax; of which I published

published an analysis in 1790; only the Horley-Green water is considerably stronger.

While rambling about Moffat, I one day observed a spring near the Evan Bridge, at the end of the town, beyond the Manse on the Dumfries road, which appeared to be chalybeate. On tasting it, I found it strongly resembled the chalybeates at High Harrogate; I therefore made some experiments with it, of which the following are the results:

1. Tincture of galls produced a beautiful purple colour, but not after the water had been boiled.
2. Lime water produced a slight cloud.
3. Muriat of barytes caused no change.
4. Acid of sugar produced no effect.
5. Tincture of turnsole caused a slight redness.
6. Acetite of lead produced no effect.

These experiments convinced me of its resemblance to the Harrogate chalybeates, in which the iron is suspended by carbonic acid, as is evidently the case here.

I next expelled the gas by means of the machine, which I found to amount to seventeen cubic inches, of which thirteen were carbonic acid, and three azotic gas.

A wine gallon of the water was next made to boil gently for a quarter of an hour, during which time it deposited a quantity of yellow sediment, which being collected by filtration, weighed two grains, and was evidently oxid of iron. The clear liquor which remained after filtration was not affected by any of the above tests.

Hence a wine gallon of this water must contain,

Of carbonat of iron,	—	—	2 grains.
Carbonic acid gas,	—	—	13 cubic inches.
Azotic gas,	—	—	3 ditto.

The quantities of iron and carbonic acid gas, which are the only substances of any consequence, are very nearly equal to those in the chalybeates at Harrogate. (See *Memoirs of the Medical Society of London*, Vol. V. and my *Treatise on the Mineral Waters of Harrogate*.) From this it cannot be doubted, that if this well were properly enclosed, which I was promised should be done, it would be a valuable addition to Moffat. It would agree with many constitutions, in which the Hartfell
water

water is improper, on account of its too great astringency and tonic power; and its vicinity to Moffat is a great advantage, as it can be drank on the spot by those who resort to this watering place.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN Duncan's Annals of Medicine for the last year, is a paper by Mr. C. FISCHER, on the air bladder of a fish; his observations gave rise to the following, which, if worthy of insertion in your Journal, will be deemed an honour,

By your most obedient,

Leicester Street, Leicester Square.

C. WILKINSON.

FISCHER supposes that this organ is destined to decompose water for the purpose of affording oxygen to the animal. If the oxygen is given out, only hydrogen ought to be found in the bladder: according to FISCHER, azotic and carbonic acid gas were more frequently discovered. To ascertain this, I tried the following experiments.

As trout possess a larger air bladder, in proportion to their size, than any other fish, I procured some of their bladders, as fresh as possible; I opened them so as to let the air enter into my eudiometer. In making use of the nitrous test, the same diminution took place as in atmospheric air.

I opened another bladder under my receiver, exposing the gas to lime water; no cretaceous precipitation ensued, which would necessarily, had it been carbonic acid gas.

In a small glass exploding vessel, I opened another, then mixed with it the proportionate part of hydrogen; on passing the electrical spark, the same explosion took place as is observed with hydrogen and atmospheric air.

I took particular care that the bladders were opened before the contained air could have undergone any change.

It is surprising that bladders filled with any kind of gas, placed in
a sur-

a surrounding medium of a different gas, will soon lose its own, and imbibe the surrounding.

I filled a bladder with hydrogen gas for the space of two hours; the gas did not appear to undergo any change; after three hours, the bladder increased insensibly in weight; on examining the air, it was found so much mixed with atmospheric air, as to be rendered explosive.

I placed a bladder distended with hydrogen, under a large receiver of carbonic acid gas; after six hours the bladder was nearly half filled with the carbonic acid gas.

These experiments will induce one to believe that the bladder is so pervious, as to let the contained air gradually escape; this would not appear so surprising, were it not that the bladder remains equally distended, mixed with air of the surrounding medium, so that the bladder imbibes a particle of air for every particle it evolves; thus imperceptibly changing till an equilibrium takes place.

From these circumstances, it requires the utmost caution to make any inference from experiments on airs, confined in bladders for any time.

The bladders appear to answer no other purpose than to regulate the buoyancy of the fish.

The bladder is composed of two portions or bags, one lying within the thorax, the other portion in the abdomen:

These portions communicate with each other; in the quiet state of the animal, neither of them are quite distended; the thoracic portion lying in a cavity arched by bone, no diminution takes place in the bulk of the thorax by any alteration of the thoracic vesicular portion.

The abdomen varies with the changes of its vesicular portion.

The animal when he wants to rise, compresses the thoracic portion; this determines the air into the abdominal portion, increases the bulk of the animal, and renders him specifically lighter than the water.

To effect this compression, the thoracic vesicular portion is surrounded with a strong muscular theca, which the abdominal portion has not.

I see no physiological purpose that could be answered, by supposing it to be destined to decompose water.

For every office of respiration the gills answer, and which are well
NUMBER IX. Z z known

known to correspond to our lungs, as they separate the air from the water.

Fishes soon die when placed in distilled water.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I HAVE sent the following Case to be inserted, if you approve of it, in your very useful Publication.

I am, GENTLEMEN,

Your most obliged humble servant,

DUDLEY, Oct. 9, 1799.

THOMAS WAINWRIGHT.

A Gentleman, in consequence of a fall from his horse, received a violent blow on the *scrob. cordis*; he immediately fainted, and lay for some time senseless. He walked home with great difficulty, and had nearly perished from the severity of the frost. In the morning the *scrob. cordis* was swelled, tense, and discoloured; the pain of it was increased by the slightest pressure; the pulse was hard, small, and frequent; the patient could only lie on his back, was restless and sleepless; the skin, eyes, and urinae were for several days tinged with bile; the pain was constant and very acute, and after some time extended gradually down the right side to the bottom of the belly, and from thence to the left side; the abdomen was now tumid, and an obscure fluctuation was felt. A frequent dry cough came on early in the disease, attended with a difficulty of breathing. Eight weeks after the accident, death kindly removed him from these dreadful sufferings, which he had borne with exemplary fortitude.

DISSECTION.

When the abdomen, which was swelled and tense, was laid open, a tumour of extraordinary size and appearance presented itself. It occupied the whole of the hypogastric, and part of the umbilical regions. The tumour was found to arise from a sac containing three or four gallons (by computation) of a grass-green coloured fluid, which was evidently mixed largely with bile, for it stained our hands and the linen, &c. yellow. This sac commenced from the inferior surface of the
liver,

liver, close to the *ductus hepaticus*, which duct was enlarged in its course into the substance of the liver to the diameter of two-thirds of an inch. From this origin the sac was traced under the diaphragm; the fluid contained having dissected the pleura from the ribs, and formed a tumour which compressed the right lobe of the lungs; thence descending in the reverse course of the ascending colon, and pushing the caput cœcum coli obliquely inwards, the sac passed into and completely filled the pelvis, pressing the urinary bladder into a very contracted space. Ascending from the pelvis, the sac followed the reverse course of the sigmoid flexure of the colon to the diaphragm, where it terminated. The right and left divisions of the sac communicated only in the pelvis, the spine of the back forming a barrier between them.

The sack was formed by a separation of the peritonæum from its adhesions to the posterior part of the pelvis, and to the psoas and intercostal muscles, and to the ribs on each side; the separated membrane being the anterior portion of the sac, and the cellular substance to which it had adhered the posterior. This was most probably effected by bile escaping from a rupture either of the hepatic duct, or of the *pori biliarii*, (the external covering which these parts receive from the peritonæum at the same time not being divided) and dissecting its way behind the peritonæum, the separation would be gradually made, and the sack consequently produced.

It is to be remarked, that the blow was received on the scrobiculus cordis, and this was also the seat of the pain at the commencement of the disease. The tenderness and deranged situation of the viscera, from the pressure and size of the tumour, rendered it impossible to detect any rupture which might have taken place either in the hepatic duct, or in the substance of the liver.

Inflammation had extended very generally throughout the cavity. The *omentum* adhered to the sac and to the liver. The intestines adhered very strongly to each other and to the peritonæum in contact. The intestines and peritonæum were covered with a thick layer of coagulated lymph of a dirty yellow colour, and in some parts were black and very easily torn. This state is perhaps the nearest the intestines approach to gangrene. The substance of the liver did not appear to be much diseased; it was not harder, but was perhaps of a deeper red colour, and fuller of blood than in a natural state. The coat of the superior surface of the liver was thickened, and adhered to the peritonæum. The membrane covering the inferior surface of the liver was thickened,

thickened, and much diseased and discoloured to the extent of two inches diameter, close to the ductus hepaticus, and formed indeed a portion of the sac. Near the hepatic duct, and in the substance of the liver, were found fragments of bile in a solid state, and of a dark green colour, weighing perhaps from three to six grains. The gall bladder was contracted, and contained a small quantity of light yellow-coloured bile. The kidneys, spleen, and pancreas were not diseased.

An Historical View of Surgery in the Sixteenth Century.

[Continued from our last Number, pp. 278—281.]

§ 15. **A**MONG the most learned surgeons of that century, we may doubtless mention FELIX WUERZ, of Basel, whose Manual of Surgery, in German, is so judiciously written for the age in which he lived, and contains so many excellent principles, never before developed, that even modern surgeons might derive much information from this elementary work. His valuable Treatise on concealed Ruptures deserves particular notice among the multiplicity of subjects, as it is the only dissertation of the kind we possess. He also controverts, in a variety of passages, the prevailing prejudices of his cotemporaries, condemns the stitching up of wounds, as well as cauterization in hemorrhages, while he disapproves of the frequent examination of ulcers by the probe, and the use of dilators.

FRANC. DE ARCE, of Frejenal in Seville, who practised surgery at Llerena and Valverde, in Estremadura, was so celebrated for the cure of fistulous ulcers, that patients from all parts of France, Italy, and Spain came to him in numbers, for the cure of those troublesome complaints. He principally used gum guajacum, and, instead of the usual oleaginous remedies, he recommended a balsam of his own invention, known by the name of *Balsamus Arcaei*. In malignant sores, he applied the actual cautery, and recommended the use of the trepan; which, however, in very severe and extensive fractures of the bones, and particularly in very young children, he considered as an unnecessary operation, because in these the fractured bones frequently re-unite without the aid of art.*

The

* FRANC. ARCEUS, *a most excellent and compendious method of curing wounds in the head and in other partes of the body*: Translated by J. READ. Vol. II. c. 2. f. 29. b. Quarto. London 1588. This Translation is very little known, and is not even mentioned by HALLER. Prof. SPRENGEL obtained a copy of it from Prof. MECKEL, the Anatomist of Halle.

The celebrated anatomist, JUL. CÆSAR. ARANZI, Professor at Bologna, wrote a Treatise on Ulcers, in which he first attempted to describe the distortion of the penis arising from a varicose dilatation of the vessels, after too frequent coition.* In hydrocephalus he bestows much praise on the external application of the *Empl. diapalma*, which produces a warm and general perspiration. The saccharine acid obtained from honey is, according to him, a mild caustic for removing the pterygium. He farther invented a peculiar forceps for the extirpation of nasal polypi, and was uncommonly successful in the operation for fistul vasculares. On the contrary, he treated aneurisms merely with astringent remedies, without the operation; and for the cure of cancerous ulcers he simply suggested mild remedies, such as the marsh-mallow root and oil of almonds.

§ 16. AMBROSIUS PARE' was unquestionably the most celebrated surgeon of the 16th century. He was a native of Laval, in the Province of Maine, had served as surgeon in several wars, particularly in the third campaign of Francis I. against the Emperor in Italy, and he likewise accompanied Henry II. in the battles near Renti and S. Quentin. He was afterwards successively first surgeon to the French Kings Francis II. and Charles IX. He gained the confidence of the latter to such a degree that he was the only person spared, and for whose safety the King was personally interested during the massacre of the Huguenots at Paris, in the well-known night of St. Bartholomew. PARE' evinced his gratitude to the king by the most solicitous attention to his health, and by so strict and honourable a fidelity, that even after the decease of that monarch he expressed himself with a prudent and becoming reserve, concerning the cause of his premature death.

Besides the improved treatment of gunshot-wounds, which he had the merit of introducing, together with many other peculiar methods in operative surgery, he has rendered essential service to different branches of that science. He treated, for instance, the hydrocele with a seton; as the dangerous consequences of incision were in that age more frequently observed than they are at present. He did not apply the actual cautery to wounded blood-vessels, according to the old practice, but secured them by the ligature. The fracture of the collum ossis femoris, formerly considered as a luxation of that bone, was first ascertained by him with accuracy: he also reprobated the frequent dressing of ulcers, and the application of the trepan to the sutures of the cranium and the temporal bones

* AURANTIUS *de tumoribus præternaturalibus.* C. 50. p. 245.—4to. Venet. 1595.

bones. He made very judicious remarks on concussions of the brain, of which Henry II. died, and on suppurations of the liver, arising from injuries of the head. Wounds of the throat, in which one of the jugular veins, and even the trachea was cut through, he did not consider as mortal. He successfully treated an injury of the *nervus medianus* from venesection, and thereby acquired the confidence of Charles IX. who had been subject to that dangerous accident. A person who, from losing a great part of his tongue, had been speechless for a considerable time, accidentally recovered the power of speech, by thrusting a table-spoon into his mouth: PARE' ingeniously imitated this method, by contriving an appropriate instrument.

§ 17. JACOB GUILLEMEAU, of Orleans, first surgeon to Henry the Great, and superintendant of the Hôtel-Dieu, was a pupil of PARE', and obtained reputation in the chirurgical world, chiefly by his improvements of the trepan. In order to prevent any injury of the brain and its membranes, in the application of the instrument, he fixed a *chapperon* under the crown of the trepan, by which its descent on the membranes of the brain should be checked; or he caused the crown of that instrument to be circularly indented, that the teeth may be uniformly applied to the bone, and thus prevent its descending farther than is necessary. This improvement was censured by JOH. PETER PASSERO, a surgeon of Bergamo; because the circumference of the bone was thereby made too rough to favour a speedy re-production of new substance: this addition to the trepan has, however, in later times, been almost generally adopted. But the *chapperon* of GUILLEMEAU is, in reality, an inconvenient and useless part of the instrument inasmuch that even after the late improvements attempted by KLINDWORD, it cannot be employed with advantage. The former made use of the exfoliating trepan in those cases where only the upper table of the cranium was injured, and where it became necessary to remove the blood stagnating in the *diploe*. When the *dura mater* was laid bare, and the pus could be freely discharged, GUILLEMEAU considered the application of the trepan altogether unnecessary. The vessels dissected in amputation, if accompanied with sphacelated parts, he treated with the actual cautery; while, in the contrary case, he applied the ligature. The paracentesis he performed at the distance of three fingers breadth below the umbilicus, in a lateral direction; which, however, in some cases, might be too near the navel. He deviated from the principles of his teacher in performing a radical cure of the hydrocele, and preferred the incision into the *tunica vaginalis testis* to the seton and the caustic. Another cotemporary surgeon,

FRANCO,

FRANCO, on the contrary, resorted to the *point doré*, or the lacing up the swollen parts with golden threads, without injuring the seminal vessels. GUILLEMEAU was an excellent operator for aneurisms, and he removed varicose nodules with caustics, for which he particularly recommended his favourite *cautere de velours*, prepared from the lees of soap-boilers; while FRANCO employed the actual cautery even in varicocele. In necrosis, Guillemeau likewise applied this violent remedy.

JOH. TAGAULT, of Amiens, who taught surgery both at Paris and Padua, is the author of a Compendium,* which, however, consists chiefly of an improved edition of that previously published by GUY OF CHAULIAC.

§ 18. JOH. PHILIP INGRASSIAS, of Rachalbuto, in Sicily, was a great anatomist who successively filled the Professorial Chair at Padua, Naples, and Palermo, and was appointed, by King Philip II. director of medicinal affairs in the Two Sicilies. He wrote a systematic work on ulcers, in which he added to the sixty-one kinds described by GALEN, 165 new species; but among these he included many chirurgical diseases which were improperly placed in that class. Among other errors, we may notice an observation occurring in his "*Iatropologia*," p. 170 (8vo. Panorm. 1546), in which he considers a fracture of the trochanter as a simple luxation. In the capacity of superintendant of medical affairs, he so far restricted the free exercise of the chirurgical art, that surgeons were obliged to proceed in their method of cure consistently with the indications formed by physicians. The causes of this restriction he fully explained in a particular work, where, among other modes of treatment peculiar to himself, he advises to perform amputation in the mortified part, and to cauterize the sound contiguous parts. He also wrote the history of the disease, of which he cured the Duke of Terranova, when several physicians of great eminence were consulted, whose opinions he communicated in a work, entitled, "*Ducis Terranovæ casus narratio et curatio*;" 4to. Venet. 1568. The disease here alluded to was a fracture of the ribs combined with an empyema, for which INGRASSIAS successfully employed the guajacum and caustics.

JOH. BAPT. CARCANO LEONE, of Milan, and Professor in Pavia, wrote a very imperfect work on wounds of the head, though he was a pupil not altogether unworthy of the great FALLOPIUS. Besides other proofs of his defective judgment, this work contains instructions for dividing

* *Tagaultii de Chirurgica Institutione, lib. vi. 8vo. Venet. 1549.*

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viding fractures of the cranium by wooden wedges, to promote the evacuation of pus. He raised the depressed bones with instruments; and cautions the reader against the application of the trepan. The removal of a part of the cortical substance of the brain is to him a dreadful attempt, and he at length ingenuously acknowledges, that he never succeeded in curing wounds of the head.

The theory and practice of curing the diseases of the eye were very little improved in that century; though towards its close there appeared a peculiar and celebrated work on the disorders of that organ, by GEORGE BARTISCH, of Königsbrück, oculist to the Electoral Court of Saxony. His propensity to superstitious opinions was so great, that he recommended strict attention to the influence of the planets, before any operations on the eyes could be undertaken with safety, or advantage. His theory of the cataract he had borrowed from the Arabian writers; and he admitted the existence of a film or web, which descends from the brain into the aqueous humour of the eye. According to him, there are five species of cataract; namely, the white, grey, blue, green, and yellow. He also asserts, that he has frequently observed the gutta serena to be an hereditary disease; and in every instance he advises the practitioner to puncture or press it down with a perfectly straight conical needle. For the cure of *ptosis*, he proposes an instrument, by which the skin of the eye-lid is compressed between two plates. VERDUYN has made an improvement on this instrument.

[To be concluded in our next Number.]

A Concise History of the Principal Discoveries in Anatomy.

[Continued from our last Number, pp. 281—282.]

§. 19. SIX years had elapsed after the publication of SERVETO's work, mentioned in the preceding number, when COLUMBUS, with great ostentation, according to his usual method, maintained that the doctrine of the smaller circulation of the blood through the lungs was his own discovery. We cannot, however, deny him the merit of having given a more distinct account of this important subject than SERVETO himself, who merely speaks of pure blood, while COLUMBUS maintains that the blood, mixed with animal spirits, returns from the lungs. ARANZI, speaking on this subject, candidly owns the difficulties which have induced him to disagree with

with COLUMBUS, and yet to hesitate in embracing the opinion, that the blood could exude or penetrate through the solid septum, from the right to the left ventricle of the heart. And if it should be granted that such an exudation were possible, or even really took place, he could not conceive why the blood did not *return* also to the right ventricle of the heart, through the same holes or pores hypothetically admitted; and thus perhaps disturb the order of nature. It was also inexplicable to him, what purpose the coronary veins, and still more the great pulmonary artery, could answer, if the blood was merely to penetrate through the septum from one ventricle into the other: nor could he comprehend why the pulmonary artery should be so capacious and extensive, if it were designed to convey only the air from the lungs, and not to conduct, at the same time, the blood to the heart. Nay, we even frequently find, after death, the pulmonary artery quite full of blood; and also the valves on the pulmonary veins and arteries. In short, it is obvious, that ARANZI is doubtful, which side of the question he ought to embrace; and he concludes with the common-place remark, "that many things happen in this sublunary world, of which philosophers could scarcely dream." VAROLI was also acquainted with the relation subsisting between the pulmonary artery and the pulmonary vein; but he does not enter upon a distinct explanation of the functions of these vessels.

ANDR. CAESALPINUS, of Arezzo, first physician to the Pope, was the next author who wrote a very detailed treatise on the passage of the blood through the lungs. He acquired very great reputation, by the original manner in which he illustrated the principles of the peripatetic philosophy, and by the contest he maintained on this subject with TAURELLUS.* CAESALPINUS proceeds on the principle, that the heart is not refrigerated during respiration; for, in cold water, the heart of animals is very soon deprived of its vital power, which it retains much longer in warm water; and, according to him, the lungs merely serve to cool the heated blood. This blood flows from the right ventricle of the heart into the pulmonary artery, and from this, by means of numerous anastomoses, it returns through the pulmonary vein to the left ventricle of the heart. The branches of the trachea run collateral with the ramifications of the pulmonary veins: the former do not form anastomoses with the latter, but merely serve, by the contact with atmospheric

* Compare the work entitled, "*Memorie degli uomini di Toscana*," vol. i. p. 93; also BAYLE, vol. ii. p. 118.—BRUCKER, vol. iv. p. 220; and NICERON *Memoires*, vol. xlii. p. 14.

air, to cool the sides of the vessels containing venous blood, and consequently that fluid itself. He farther asserts, that it is absurd to call the pulmonary artery *vena arteriosa*, merely because it, like the *vena cava*, is situated near the right ventricle of the heart; it is nevertheless a true artery, and bears the greatest resemblance to the *aorta*: the name of *arteria venosa*, which has been given to the pulmonary vein, is equally inconsistent; as this vessel, notwithstanding its termination in the left ventricle of the heart, possesses all the properties of a vein.

Although CAESALPINUS had such accurate ideas on the smaller circulation, he admits the exudation of the blood through the septum cordis.* This passage, however (in the opinion of Prof. SPRENGEL), very clearly demonstrates, that this learned physician was perfectly acquainted with the circulation of the blood through the lungs. CAESALPINUS likewise conceived the great circulation of the fluids through the whole body, the knowledge of which he certainly could not acquire from the works of either FABRICIUS or HARVEY; for we find remarkable proofs of this assertion in his other works. He first remarked the swelling of the veins between their terminations, and an applied ligature; whence he concluded, that the opinion commonly received, with respect to a progressive motion in the veins, rested upon an erroneous conjecture. But in the same passage he still indulges in speculations, which led him to compare the circulation of the blood through the veins to the flux and reflux of the sea; and not being acquainted with the valves which must necessarily obstruct the retrograde course of the blood through the veins, he does not appear to have had clear and fixed ideas on the subject.† In another work, however, he treats of the mere reflux of the blood through the veins, with such precision, that Prof. SPRENGEL would not hesitate a moment to consider him as the discoverer of the great circulation, if he were more consistent in his assertions, and if he had set out with the discovery of the valves in the veins. The following passage, which occurs in the work of CAESALPINUS "*De Plantis*," 4to, printed at Florence in 1583, is submitted to the consideration of the reader, whether, and how far, this author is entitled to that honour: "*Qua autem ratione fiat alimenti attractio nutritio in plantis, consideremus. Nam in animalibus videmus alimentum per venas duci ad cor, tanquam ad officinam caloris insiti, et adepta inibi ultima perfectione, per arterias in universum corpus distribui, agente spiritu, qui ex eodem alimento in corde gignitur.*" Lib. I.

c. 2.

* CAESALPINI *Quaestiones Peripateticæ*, lib. v. c. 4. p. 528. (Folios, Lugdun: 1588.)† CAESALPINI *Quaestiones Medicæ*, lib. II. cap. xvii. f. 234. (Quanto, Venet. 1593.)

c. 2. p. 3.—Prof. SPRENGEL candidly adds, that his veneration for the immortal HARVEY is too great to harbour the most distant suspicion, that this illustrious character would have condescended to usurp the honour of a discovery, if he had known, that an earlier inquirer had already anticipated the merit. It is, however, surprising that FABRICIUS,* the excellent anatomist, had not more perspicuous ideas on the functions of the pulmonary vessels, and that he was so invariably attached to the established errors and prejudices of his predecessors.

§ 20. The circulation of the blood in the human foetus was so thoroughly and successfully examined during the sixteenth century, that the *foramen ovale* between the two auricles of the heart was soon discovered by anatomists: they also observed that this foramen in the embryo leads from the cyst of the vena cava to the cyst of the pulmonary vein, and that it is closed by a valve which prevents the reflux of the blood; but that, in adults, it forms a cavity which is surrounded by an isthmus, and which is almost completely impermeable. This course of the blood in the foetus had already been noticed by GALEN;† and the passage below alluded to is so conclusive, and at the same time proves that this ancient writer possessed so correct a knowledge of the structure of the infantile body in the womb, that we cannot withhold from him our admiration. But GALEN had made still greater progress; he was acquainted with the arterial canal that receives and immediately conducts to the aorta the blood which proceeds from the head as well as the upper extremities of the child, and which cannot pass through the umbilical veins, nor through the foramen ovale, but which flows through the ascending vena cava into the sinus cordis dexter. GALEN was no stranger to this particular branch of the pulmonary artery; but he did not clearly understand its destination.

After the time of GALEN, FALLOPIUS was the first author who gave a distinct description of it; but he certainly betrayed his want of attention, by asserting that this branch proceeded as far as the ventricle of the heart; nor was he correct when he maintained that the blood from the aorta flowed through this channel, into the pulmonary artery, and into the heart, as it takes the direct contrary course.‡ VESALIUS himself had at first no knowledge of either the foramen ovale, or the arterial canal, and consequently does not mention them in his larger work. But after FRANC. ROTA had intimated to him in a friendly epistle,

* See his work "*De Respiratione*," cap. xii. p. 184.

† *De Ufu Part.* lib. xvi. p. 533.

‡ FALLOPII *Observat.* p. 399.

epistle, that the description of these parts of the embryo which were so well known to GALEN, is reluctantly omitted in his classical work, the attention of VESALIUS was thus roused: he afterwards more carefully examined these parts, discovered the valve in the foramen ovale, as well as the arterial canal,* and regrets in the passage here referred to, that he had not sooner applied himself to this important inquiry.

The next anatomical writer was ARANZI, who published a detailed and authentic history of the foramen ovale, of its valve, of the concretion of the former which takes place after birth, of the arterial canal, and its ligamentous structure in adults. But he likewise erred, as well as FALLOPIUS, in maintaining that the blood is conducted through this canal from the aorta to the lungs and the heart.

After these celebrated men had illustrated this subject, in a manner reflecting credit on the age in which they lived, there appeared a pseudo-discoverer of the name of BOTALLI, a pupil of the great FALLOPIUS, and who arrogantly appropriated to himself the respective discoveries of the foramen ovale, and the arterial canal: nay, some authors have, either from false liberality or ignorance, called these parts after his name.

VAROLI describes the foramen ovale and the arterial canal, in a manner exactly similar to that of his predecessors, and commits the same error with respect to the destination of the latter.† CARCANI adds no original remarks to the description of these parts, except the observation, that the arterial canal in the embryo is two fingers breadth from the basis of the heart; while in adults it is four.‡ ALBERTI,§ ULMUS,|| and DU LAURENS¶ made no improvements upon the previous description given by FALLOPIUS. It is to FABRICIUS we are indebted for the first drawings of these parts, which, with the exception of the sixth plate, fig. 15, E. F. representing the arterial canal, are faithful copies of nature.

The anatomists of this century bestowed considerable attention on the course of the venous duct, which empties itself from the umbilical vein into the vena cava, or into the hepatic vein. VESALIUS discovered this duct, and stated it to be only half the size of the umbilical vein from which it takes its origin.** Soon after it was discovered, EUSTA-

CHIUS

* *Vesal. Exam. Observat. Fallopij.* p. 798.

† *Carcani Anatomia*, p. 14. s. 23. 34. s.

‡ *De Lieut.* t. 21. 6. (Quarto, 1578.)

** *P. L. Exam. Observat. Fallopii*, p. 798.

† *Varoli Anatomia*, lib. iv. c. 5 p. 108.

§ *Alberti Historia Anatomia*, p. 155.

¶ *Laurent. Hister. Anatom.* lib. viii.

Quæst. 27. p. 684.

CHIUS caused an accurate representation of it to be published.* ARANZI observed a double duct of this kind, one leading to the vena portæ, the other to the vena cava; the latter has been denominated after him the venous duct of ARANZI.† FABRICIUS has furnished a more distinct delineation of this canal than his rival EUSTACHIUS.‡

[To be continued in our next Number.]

On the Treatment of Febrile Diseases, by Dr. EDWARD MILLER, of New York.

[Extracted from a Paper of the same Author, "on Cutaneous Perspiration, and the Operation and Uses of Specific Remedies." Comp. our Journ. Vol. I, No. III. p. 287.]

AFTER attempting to restrict the use of sudorific remedies to such narrow limits, it may not be improper to recall the reader's attention to a substitute better adapted to the nature, circumstances, and varieties of fevers. This substitute is water, of various temperature, taken into the stomach, injected into the bowels, and applied to the surface of the body. Many endeavours have been made to bring this inestimable remedy into more common use; hitherto, indeed, without much success; but it is to be hoped that the time now approaches, when its efficacy will no longer be disdained on account of its simplicity and cheapness.

The causes of fever would be infinitely less pernicious to the system, if the fever itself were repressed in its first movement, or annihilated in embryo. The cool treatment of the small pox, gives an example of this suppression of a disease; but physicians have never yet sufficiently availed themselves of the instruction it affords. Notwithstanding all the complicated maxims and rules of medical practice, the genuine treatment of fevers is simple; it chiefly consists in reducing the heat of the system, when too high, and increasing it when too low: the former will allay the excessive action, which threatens organic destruction of the more important and delicate viscera, or an eventual exhaustion of the principle of life; and the latter will obviate such accumulation of excitability, as may endanger the system from the violence of subsequent re-action.

[To be concluded in our next Number.]

* *Eustach. Tab. xvii. fig. 1. (w)*

† *Aranz. de human. foetu. c. 14. p. 40.*

‡ *De format foetu, Tab. vii. fig. 16. (j) Tab. viii. fig. 17. (c.)*

HINTS AND IMPROVEMENTS
 IN THE PRACTICE OF
 MEDICINE AND SURGERY.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ONE of your readers has solicited communications respecting the late introduction of yeast into the practice of medicine; should you, therefore, deem that the following remarks may have a tendency to induce others to investigate a practice which appears to be at least harmless, if not actively beneficial to those who suffer under the languor and wearisomeness of fever, you will, by their insertion, much oblige one who has long admired your valuable labours.

During three months of last year, I was called upon in routine, as one of the physicians to our Dispensary, to attend the Work-house of this town, among the children of which a fever had broken out to an alarming degree. Being encouraged by previous success, yeast was ordered to be administered in doses of from two tea spoons full to a meat spoon full three or four times a day; at the same time, the usual treatment observed with respect to the other invalids was extended to these. In a few days, on the comparison, I had the pleasure to observe some of our little patients much benefited by it; and was particularly struck with the speedy convalescence of one, whose symptoms had been most distressingly stationary.

The fevers of these children had, in several instances, been accompanied with a very remarkable dilatation of the pupils, and an irritability of the iris to the stimulus of light, nearly approaching to that of amaurosis. In other instances, the embarrassing symptom of local inflammation proved considerably alarming. In both descriptions of patients this practice appeared serviceable; in the former of which, the return of the iris to its natural state, together with somewhat more of the healthy lustre of the eye in general, were among the first symptoms of convalescence; this even took place before the commencement of appetite, or entire abatement of thirst. In one patient, the retina be-
 came

came too sensible to light. Some of these young sufferers, though at first averse to its administration, after a few doses reminded the nurse of it, as though apprehensive lest it should be omitted. A conspicuous advantage gained, was, that anodyne draughts became now superfluous, the irritability of the system being diminished. In those fevers accompanied with topical inflammation, on the whole, advantage resulted from it. Yet, in one case, the inflammatory symptoms, which were pulmonary, advanced so rapidly as to cause me to decline its continuance, till these symptoms were subdued; afterwards it was given without inducing a return of inflammation. In this case, the digitalis in tincture, combined with a few drops of T. opii, was of decisive benefit. That the increase of these symptoms had any connexion with the use of the yeast, a solitary fact will not warrant the conclusion.

The bowels were not affected by it, nor did the pulse alter for some days; yet I thought the cutaneous heat was relieved, though of this I speak with diffidence, as cold ablutions were strictly attended to, where requisite; a practice which cannot be too highly extolled, and which has been so ably treated of in a late very elegant and truly valuable publication.

In the first fever wherein I adopted this practice, the patient, a young woman of 19, of ruddy complexion, naturally plethoric, and liable to inflammatory ailments, was informed of its origin, and that it was far from being commonly in use, but that it would at least be harmless. The family possessing more good sense and energy of mind than generally happens to the uneducated, made none of those frivolous objections so often met with, where a patient is trusted with the knowledge of the medicine prescribed. She had taken the infection from her sister, whose case had been truly deplorable, and nearly desperate. The sisters were obliged to lie in one bed, and their diet had been latterly poor, as the mother was afflicted with dysentery during and prior to the sickness of her two fatherless daughters. Being patients belonging to the Dispensary, and the emetic which was ordered previously to any other medicine being lost, the circumstance was concealed till after recovery. She dreading a situation similar to that of her sister, whom she had watched night and day with all the assiduity of affection, took yeast to the amount of a meat spoon full four, five, and sometimes six times a day: Her natural colour returned in about five days; and, to my surprize, I found her affected with a slight, though complete cynanche tonsillaris; on which I omitted the medicines, and ordered merely gargles with an external

ternal liniment; and in a few days she was again able to return to the duties of a nurse to her sister, which the mother, though now recovered, was scarcely equal to perform. Some have complained much of an uneasy sense of distention arising from the medicine, a circumstance which has caused more than one patient to relinquish its use, as did this person on the last day of her taking it. I ought to add, that in some instances disappointment has attended its exhibition, though, save in hospitals, we cannot rely on the adoption of a practice which popular prejudice ridicules, or starts at. In some instances I have no doubt but deception has been practised. In a case of cynanche maligna, as a gargle, and internally administered, I thought it aided other remedies.

The case of the young woman recorded, if confirmed by future observations, will be replete with information.

ROBERT LEWIN.

LIVERPOOL, Oct. 12, 1799.

Observations on the Nature and Cure of the Gout.

IN the fifth volume of the "*Medical Inquiries and Observations*," by Dr. BENJAMIN RUSH, of Philadelphia, lately published, we meet with a number of striking and original remarks on that Proteus-like disorder. The conductors of the "*Medical Repository*" having, in the third number of their second volume, anticipated the account of this valuable work, we shall here avail ourselves of their labours, and furnish our readers with the following extracts on this subject.

So much has been offered to the public, concerning the Gout, by various authors, and at different times, that, if the actual developement of the disease had kept pace with the exertions made for this purpose, the subject might be now supposed to be nearly exhausted; on the contrary, the unsuccessful treatment of it has long been the reproach of medical imbecility; and whoever can throw any new light on this disease, will perform an acceptable service to that large class of society subjected to its tortures.

The author begins his observations on the gout, by delivering the following preliminary propositions: That it is a disease of the whole system;—that it is a primary disease only of the solids,—that it af-

affects most frequently persons of a sanguineous temperament; sometimes the nervous and phlegmatic, the idle and luxurious, rather than the temperate and laborious; and women as often as men, though commonly under feeble forms of morbid action, and not so often in their feet and limbs;—that its hereditary quality depends upon the propagation of a similar temperament from father to son;—and that it is always induced by general pre-disposing direct or indirect debility.

The remote causes of the gout, which induce this debility, are, indolence, great bodily labour, long protracted bodily exercise, intemperance in eating and in venery, acid aliments and drinks, strong tea and coffee, public and domestic vexation; the violent or long continued exercise of the understanding, imagination, and passions, in study, business, or pleasure; and lastly, the use of ardent and fermented liquors. The exciting causes of this disease are frequently a greater degree, or a sudden application of the remote and pre-disposing causes: To which may be added, sudden inanition from bleeding, purging, vomiting, and fasting; also cold, the debility left by the crisis of a fever; and all these aided by the additional direct debility induced upon the system by sleep; and the proximate cause is morbid excitement, accompanied with irregular action.

The gout affects most of the viscera. In the brain, it produces head-ach, vertigo, coma, apoplexy, and palsy. In the lungs, it produces pneumonia vera, notha, asthma, hæmoptysis, pulmonary consumption, and a short heaving cough. In the throat, it produces inflammatory angina. It affects the kidneys with inflammation, strangury, diabetes, and calculi. But of all the viscera, the liver suffers most from the gout; it produces in it inflammation, suppuration, melaina, scirrhus, gall-stones, jaundice, and an habitually increased secretion and excretion of bile.

The gout affects the alimentary canal from the stomach to the rectum. Flatulency, sickness, indigestion, pain, or vomiting, usually usher in a fit of the disease. Sick head-ach and dyspepsia are often the effects of this disease, concentrated in the stomach. The author asserts, he has seen a case in which the gout, by retreating to this viscus, produced the same burning sensation which is felt in the yellow fever. ~~Sick~~, dysentery, diarrhœa, piles, and a troublesome itching in the anus, are often produced by this disease.

This disease also affects the glands and lymphatics. It has been known to produce a ptyalism, and a bubo in the groin. The scrophula,

and all the various forms of dropsy, have been observed as the effects of its disposition to attack the lymphatic system.

Cases of the gout affecting the skin have been often recorded: Erysipelas, gangrene, and petechiæ, are the acute; tetter and running sores the usual chronic forms in which it invades this part.

Even the bones are not exempted from the ravages of the gout. The bones of the hands and feet have been sometimes dislocated by it; and one instance occurred of its dislocating the thigh bone.

In the next place, the author proceeds to treat of the method of cure. The remedies for the gout naturally divide themselves into the following heads: 1. Such as are proper in its approaching or forming state. 2. Such as are proper in *violent* morbid actions in the blood-vessels and viscera. 3. Such as are proper in a *feeble* morbid action in the same parts of the body. 4. Such as are proper to relieve certain local symptoms not accompanied by general morbid action. And, 5. Such as are proper to prevent its recurrence, or to eradicate it from the system.

1. The symptoms of an approaching fit of the gout, are languor, dulness, doziness, giddiness, wakefulness, or sleep disturbed by vivid dreams; a dryness, and sometimes a coldness, numbness, and prickling in the feet and legs; occasional chills, acidity, and flatulency in the stomach; with an increased, a weak, or a defective appetite. During the existence of these symptoms, the disease may be easily prevented by the loss of a few ounces of blood, or by a gentle dose of physic; and afterwards by bathing the feet in warm water, by a few drops of the spirit of hartshorn, a draught of wine-whey, or an opiate. To these remedies, it is conceived, an emetic might be very properly added; as the affection of the stomach is so steadily observed at the approach of the disease, and as the analogy of fever would strictly warrant the practice.

2. Among the remedies proper in cases of great morbid action in the blood-vessels and viscera, our author chiefly relies upon blood-letting. He combats with decisive force the objections to this remedy, urged on the ground of the gout being a disease of debility, and that bleeding disposes to more frequent returns of it. He states the advantages of it to be the removal or lessening of pain;—the preventing of congestion and effusion in the more important viscera;—the preventing of the premature wearing out of the system, and the shortening of the duration of the fit. Among the remedies of this head, he also enumerates cathartics, emetics, nitre, cool or cold air, and sometimes cold water applied

to the inflamed part; the antiphlogistic regimen with respect to diet, blisters, and the operation of fear and terror. Cautions are suggested with respect to the use of sweating, opium, and several local applications. Blisters and caustics, as well as molasses, applied to the part affected, are much commended. The early exercise of the lower limbs, by walking, is also particularly enjoined.

3. The author next enumerates the remedies proper in that state of the gout in which a *feeble* morbid action takes place in the blood-vessels and viscera. They are opium, Madeira or sherry wine, porter, ardent spirits in the form of grog or toddy, æther, volatile alkali, aromatics, oil of amber, Peruvian bark, the warm bath, mercury given to the extent of pyalism, and the local application of frictions with brandy and volatile liniment, blisters, and stimulating cataplasms,

4. The local symptoms of the gout are directed to be treated upon the common principles which are to be found in practical books,

5. The means of preventing the return of that state of the disease which is accompanied with violent action, are temperance, moderate labour and exercise, the avoiding of cold, moderation in the exercise of the understanding and passions, moderation in venereal indulgences, the avoiding of costiveness, and a stricter abstinence, as well as an attention to occasional evacuations by bleeding, &c. in the spring and autumn.

In the last place, the author mentions the remedies proper to obviate a return of that state of gout which is attended by a feeble morbid action in the blood-vessels and viscera. These are a gently stimulating diet; the use of chalybeate medicines; the volatile tincture of guajacum; the uniform application of warmth; the warm bath in winter, and the temperate or cold bath in summer; exercise; the avoiding of costiveness; the constant and agreeable employment of the understanding and passions, but without fatigue of body or mind; and, lastly, migration to a warmer climate.

We have thus delivered an outline of this valuable practical performance, in which the learned author has exploded much pernicious error, and introduced, illustrated, and forcibly enjoined, many important truths. The perusal, however, of the work itself, will afford a gratification which no reader can expect from this imperfect sketch,

On the Origin and Prevention of some of the Diseases of Human Teeth and Bones. By Dr. MITCHILL, of New-York.

IN the seventh Number of this Journal, under the section containing "Medical and Physical Intelligence," p. 183 and seq., we have already communicated to our readers the introductory part of an ingenious paper, "*On the Application of the Doctrine of the Septic Fluids, to explain some of the Diseases of Human Teeth and Bones.*" As the subsequent part of this inquiry is more immediately connected with medical practice than that formerly inserted, we think it entitled to a place in this department of our Journal.

Phosphoric acid prefers lime to alkalis, and therefore alkalis united with it are immediately rendered turbid by lime-water; and a saline powder, very difficultly soluble in water is deposited, consisting of lime saturated with phosphoric acid. Alkalis, therefore, whether fixed or volatile, would seem to be incapable of destroying the solid matter of the teeth, whatever their action may be upon the gums. Lime may be disengaged from its connexion with phosphoric acid by the oxalic, sulphuric, septic (nitric), and tartaric acids. Consequently, acid of sugar, spirit of vitriol, aquafortis, and cream of tartar, may decompose the teeth, by attracting the lime, and disengaging the phosphoric acid. The septic acid, after barytes, pot-ash, and soda, has the next strongest attraction for lime, and after this for magnesia, ammoniac, and clay.

Thus septic acid, if formed from the remains of animal and vegetable substances, lurking about or among the teeth, in attaching itself to the lime, will detach the acid of phosphorus. This, added to the matters already emitting their scents, will have a tendency to increase the offensiveness of the breath.

Whatever contributes to the accumulation of the matters from which septic acid is produced, may be expected to injure the teeth. Hence lying-in-women, and persons suffering long fits of sickness, are particularly exposed to the causes which destroy them; and this the more rapidly, because, in such situations, it often happens that little or no assistance is afforded by art, in removing those things which, by their presence and accumulation, occasion the mischief. When formed in the mouth, it may mingle likewise with the spittle, and vitiate the *gustatory powers of the tongue and palate*, and, when swallowed, may impede the *healthy functions of the stomach*. Hence may be explained one species of
anorexia,

anorexia, especially that mentioned by DARWIN (2. Zoonomia, class ii. ord. 2. gen. 2. sp. 1.), where "want of appetite is sometimes produced by the putrid matter from many decaying teeth, being perpetually mixed with the saliva, and thence affecting the organ of taste, and greatly injuring the digestion." The formation of such a substance in the mouth enters deeply into the explanation of the symptoms of fevers, particularly the condition of the teeth, gums, tongue, and throat; with vitiated taste, thirst, aphthæ, colour of the tongue, &c.

If an incrustation containing septic matter is thus formed, and is a calcareous composition, of a kind different from the teeth, it is possible to remove it by chemical agents, which have not the power of decomposing the teeth; for as barytes, pot-ash, and soda, can disengage the *septic acid* from the lime, so either of these substances may be serviceable in removing the concretion, and, at the same time, not endangering the teeth, whose *phosphoric acid* having a greater attraction for lime than for alkalies, is incapable of being displaced by them. Alkaline dentifrices would, therefore, appear capable of removing the calcareo-septic incrustations from the teeth, but incapable of corroding the teeth themselves. DEBOZE observes, that tobacco ashes (*La Pratique de Medecine de Laz. Reviere, &c. L. vi. ch. 2*) possess a surprising (*tres-merveilleuse*) power to cleanse and whiten the teeth. The active ingredient must be the pot-ash. The practice of some ladies of New-York confirms this.

As the septite of lime, however, is very deliquescent, there is, perhaps, only a moderate portion of the septic acid contained in the stony tartar of the teeth. There is another form in which it is peculiarly destructive. Dentists distinguish tartar into three species, viz. the *yellow*, the *black*, and the *green*: of these, the last is observed to be by far the most pernicious; it never forms a crust or petrification, but always appears like a *green stain*. The enamel of the teeth beneath it is generally corroded, and almost always eaten through, or destroyed. This is, doubtless, owing to the *septic acid* formed under the edge of the gum, or between the teeth, from the remains of food containing septon, which, aided by the heat and moisture of the mouth, affords that poisonous and destructive fluid, by uniting with oxygen. Dr. MITCHILL believes, that a small portion of this acid, formed thus in the mouth, and adhering to a sound tooth, is the cause of that violent and sometimes fatal disease, consequent upon transplanting these bony substances into the bleeding jaws of another person. The cases are seldom or never venereal.

But

But the septic acid formed in these instances, by corruption on the surface of a tooth, poisons the patient of the dentist when inserted into the fresh socket, in the same manner that it poisons dissectors when their wounded fingers receive it from the surface of a putrefying muscle.

The safe method of preparing teeth for transplanting, is to wash them repeatedly, *before* extraction, with a weak solution of carbonat of potash, in water, to remove the septic acid and other foul matters. This is, doubtless, preferable to washing the tooth in alkaline ley, *after* it has been drawn, as thereby its capability to grow fast would be endangered.

The septic acid being thus capable of corroding the teeth and the alveolar processes of the jaws, who shall affirm that its operation stops there? Is it not taken in with our air, food, and drink? Are there not instances of nodes and excrescences of bones, that are not wholly unlike the incrustations of the teeth? And are there not likewise instances of caries of the osseous parts, which have a near similitude to the rottenness of the instruments employed in chewing our food?

In addition to the diseases of the teeth and their sockets, from septic acid produced in the mouth, as already stated, and partly upon the interpretation of the facts of Mr. HUNTER; it would be very easy to quote many authorities from books. Instead, however, of displaying much reading, Prof. MITCHILL contents himself with referring to the authority of an intelligent and skilful surgeon, Mr. Russell, who published, in 1794, a Practical Essay on Necrosis, wherein a bone or part of a bone dies, and a new one is re-produced to supply its place. The *lower jaw-bone* is frequently disordered in this manner, (p. 87); its death and separation often take place from *disease in the teeth and gums*; which, from their situation, naturally determine the complaint to begin at the upper part, and proceed downwards, (p. 80); and cases of necrosis of the lower jaw may be traced to be the effects of blows, and of *tooth-ach*, especially if a violent attack of inflammation has been excited by the application of any *acrid substance* to a carious tooth, &c. (p. 98); and seldom happen to persons under 30 years of age, (p. 93).

It would seem, therefore, that the reasoning is fair and safe, to consider this caries of maxillary bone as of a nature quite similar to the decomposition of the teeth and disordered condition of their sockets, which has been shown to be connected with the formation of septic acid in the mouth, and its corroding effect there.

[To be concluded in our next.]

MEDICAL AND PHYSICAL
INTELLIGENCE,

(Original and Selected.)

Observations on Soda, the Alkaline Basis of Animal Gall and of Sea-Salt, and the Effects it produces in the Concoction of Food, and in preserving Provisions; in a Letter from Dr. MITCHILL to JAMES WOODHOUSE, M. D. Professor of Chemistry in the University of Pennsylvania, dated New-York, Dec. 23, 1798.

FROM the facts stated in his former essays, Dr. MITCHILL thinks the antiseptic powers of alkaline earths and salts are incontestably established. These substances seem to have been produced, in the œconomy of nature, to make a stand against that predominant acidity, which, without their interference, would threaten the animated world with ruin.

But alkaline substances are not only strewed over the face of the earth to exercise their neutralizing operation there; *soda* exists in the waters of the ocean, combined with muriatic acid, and in the gall of animals, united to an inflammable resin. And both sea-water and bile excite, though in different degrees, a bitter taste.

Many animals that have plenty of gall are greedy of sea-salt; even wild creatures in the American woods can be tempted by it to approach a man who carries salt in his hand. The instinctive appetite for this substance is a very remarkable thing, and is worthy of particular consideration. Sea-salt has been denominated *muriat of soda*; and for the sake of uniformity, and to make the subject a little clearer, Dr. MITCHILL, for want of a better name, and without contending for the propriety of it, calls bile, or gall, the *bitter of soda*. It cannot be improper to make an approximation in terms, where there exists a strong analogy in nature.

Dr. M. remembers, ever since his childhood, the custom of American bandmen to save the gall of the beeves they slaughtered for family use in autumn. A piece of the liver was cut out with the whole gall-bladder, and generally hung up on a neighbouring tree. Perhaps it was carried into the kitchen and stuck up there, or, perhaps, remained in the tree until the next summer. In either case, whether exposed to culinary warmth or wintry cold, the contents of the cyst underwent no sensible change, saving a thickening by the drying away of its moisture. There was never any putrefaction or sign of taint. The use for which they kept it was for plaisters to put on the feet of their children and labourers when wounded by nails and thorns; and Dr. M. questions whether pharmacy can furnish a better one.

In respect, then, to its uncorruptibility, the bitter of soda has a near resemblance to the *muriat of soda*; that is to say, it will remain an indefinite

Experiments with the Eudiometer, made at Martinique, by
 Dr. GEORGE DAVIDSON.

[Communicated to Dr. MITCHILL, in a Letter, dated Fort Royal, April 7th 1793.]

THERE is a large proportion of oxygen contained in the atmospheric air within the tropics. Having by accident broken the eudiometer which I had borrowed from Mr. BAKER, I wrote to my friend GEORGE WILSON, of Bedford Street, to send one to your address, and one out here. I have since repeated the experiment, both in the town of Fort-Royal, and the neighbouring heights. With equal measures of nitrous air, (obtained from brass wire) and atmospheric air, there was an absorption of 67.100; but with two measures of atmospheric air, there was somewhat less, from 52.100, to 58.100, that is to say, from three measures, or three hundred parts, there was left two and 42.100, to 48.100. I have also tried a mixture of sulphur and iron-filings, in a cylindrical glass tube, and found above four-tenths of the air diminished. As those experiments were made in the presence of a number of medical gentlemen, who have certified the fact, as they have observed it themselves, I can therefore with confidence speak to the result of our experiments.

We shall now be more easily able to account for the speedy rusting of metals, without having recourse to the action of supposed muriatic soda dissolved in the air. The rancidity of oils, and the speedy fermentation of vinous liquors, may, perhaps, be also owing to the greater heat of the climate; but metals would be less apt to contract rust from the greater heat, if the air contained only the proportion of oxygen, which it contains in Europe. Consumptions here are also more quickly fatal than they are in Europe. On some of the West India islands, such as Barbadoes and Antigua, where less rain falls, and where the heat of the air is kept at a steady temperature by their smallness, and the trade-winds blowing over the whole island, without being diverted by high or woody land, consumptions are not less fatal than in the larger and moister islands. This is a fact, of which all writers upon diseases of the West Indies take notice; and which we would principally endeavour to account for, from the air being more highly charged with oxygen, than it is in Europe. If people labouring under pulmonary consumption, are some times benefited by sea voyages within the tropics, we are to look for the temporary relief afforded in the sea-sickness; the irritable state of the stomach, by sympathy preventing the the lungs acting in decomposing and absorbing oxygen; and in the determination to the surface carrying off the redundancy by the skin. Their costive habit, whilst at sea, proves that there is more than usual determination to the surface — hence relief to the lungs.

To this Letter are subjoined the two following Certificates; the respectability of the witnesses, places the beforementioned facts beyond every doubt.—The first is from Dr. CHISHOLM.

[Within two miles of Fort Royal, upon an elevated situation.]

DEAR SIR,

IT is with pleasure I comply with your request, respecting the proportion of oxygen in the atmosphere at this place, as ascertained a few days ago, by means of your eudiometer, and by a composition of steel filings and sulphur. By the first, the quantity I think was about 56.100: for although 57 was given by one trial, yet the medium of all those made was no more than 56. A similar result was given by the common glass tube—a proof, I should imagine, of the accuracy of the experiment made with the eudiometer. The result of the trials with the filings of steel and sulphur, I think, was about 40.100 parts. It appears to me to be a singular circumstance, that, although the ground on which the Ordnance Hospital stands is a perfect morass, partially drained, yet a result almost exactly familiar to that given by the experiments made with the eudiometer at my house, should take place, with the same instrument, and under circumstances in no way different. The proportion at the Ordnance Hospital, I think, has been 58.100; and at your house in the Grand Rue, a situation less swampy, and nearer the sea, it has been 67.100.

The situation of this place is high, dry, and enjoys as pure an air as it is possible to have in this country. An explanation of so singular a result, in situations so different, is perhaps more to be wished for than expected.

I am, &c.

C. CHISHOLM, M. D.

Inspector of Ordnance Hospitals.

Dr. DAVIDSON, *Fort Royal.*

The second is from Capt. HARVEY and Surgeon LINDESAY.

WE whose names are hereunto subscribed, do certify, that we have seen the experiments mentioned in the former part of the letter, upon the composition of the atmospheric air; which were made both with FONTANA's eudiometer, and a cylindrical tube with nitrous air, obtained from the dissolution of brass in the nitrous acid; and that we found 57.100 of vital air absorbed in the former, and above half by the latter.

W. M. HARVEY, *Captain,* } *First West India Regt.*
JOHN LINDESAY, *Surgeon,* }

Miscellaneous Extracts.

Professor GÖTTLING makes the following remarks on the Origin of Carbon in consequence of treating Phosphorus with the Carbonat of Soda :

HE first observes that he has formerly, in his Chemical and Pharmaceutical Almanack, for 1796, mentioned the decomposition of phosphorus by the carbonat of lime, and the carbonat of soda, whence are produced carbon and the phosphat of lime, or mineral alkali. It is certainly true, that carbon will thus be obtained, and it is not even necessary to inclose phosphorus with calcareous earth, or fossil alkali, in glass tubes ; there is nothing farther required than to place a piece of phosphorus in a small glass vessel, to add a small portion of mineral alkali, dried in the air to a powder, and heat it gradually on a charcoal fire, till it become red hot : it is, however, necessary to increase the heat of the fire, by blowing it with a pair of bellows. The phosphorus will thus be kindled, and the greatest part of it consumed, without producing any farther effect on the mineral alkali. The residuum is of an uniform black colour ; and if its salt be dissolved in water, there remains an insoluble carbon, of a deep black colour. The carbonat of potash may be employed for the same purpose, and with similar effect. GÖTTLING'S *Almanach für Scheidekünstler und Apotheker*, 1798, p. 1—3.

On the precautions necessary in melting the heavy spar, the same author observes, that in melting this substance with the carbonated alkali, to separate the barytes, it is necessary to proceed very slowly ; as the mixture, in a glowing state, shoots out with violence, and renders the attention of the operator dangerous. A tough crust is formed on the surface of the melting mass ; and if at the bottom of the glowing mixture any humidity should remain, which could not escape during too quick a process, this circumstance may occasion the sudden expulsion of the uppermost crust in all directions, as the fluid assumes the elastic form of vapour.—*Ibid.* p. 13.

When Prof. GÖTTLING, in his last course of chemical lectures, was shewing by experiment, the usual mode of preparing the *Bononian phosphorus*, by exposing to a glowing heat gum tragacanth, and barytes reduced to powder and carefully separated from its iron, he observed that all the small cakes committed to the fire were melted into one mass, of the nature of enamel. It is well known that the usual phosphoric Bononian stones are more porous, and, if properly prepared, emit a red light in the dark, after having absorbed the rays of light during the day. Those, however, which the Professor obtained by the aforementioned process, afforded a white light, and acquired their luminous property in a very uncommon degree, by means of the electric spark.—*Ibid.* p. 14.

As the yellow colour of the muriatic acid is unquestionably owing to the particles of iron which it contains, the contrary effect taking place in many accurate chemical experiments must be ascribed to that ingredient. To effect, therefore, a separation of the iron, Prof. GÖTTLING adds to every

every pound of the common muriatic acid, free from the vitriolic, half a drachm of a dry prussiat of kali. The fluid soon assumes a perfectly blue colour, and afterwards gradually acquires the colour and transparency of pure water; depositing at the bottom of the vessel a considerable portion of Prussian blue. After this, the clear fluid is poured into a tubulated retort, and distilled over till about one ounce remains. Thus the rectified acid becomes perfectly white, without containing the least particle of iron.—*Ibid.* p. 6.

The pharmaceutical operator is sufficiently acquainted with the difficulty of combining *lard*, or *fat*, with *quicksilver*, by trituration. This process may be much expedited, by adding a very small proportion of the flowers of sulphur to the mercury; a discovery lately communicated to GÖTTLING, by M. BERNSTEIN, an eminent surgeon in Germany. A mixture consisting of two ounces of hog's-lard and six ounces of quicksilver, requires only six grains of the flowers of sulphur, and the combination will take place in a few minutes. As so very small a proportion of sulphur is not likely to affect the efficacy of the ointment, this practical hint deserves the attention of the pharmacopolist.—*Ibid.* p. 15.

As the ammonia checks the *luminous property of phosphorus in azotic gas*, it is obvious that phosphorus will not appear luminous in gas obtained by depriving atmospheric air of its oxygen, by the hepatized ammonia; because, in this process likewise, a small portion of ammonia remains behind in the azotic gas. But if, for this purpose, the fixed hepatic sulphuris be employed, the phosphorus will uniformly appear luminous. Prof. GÖTTLING observes, that he has kept azotic gas prepared from atmospheric air, for a whole year, over a solution of the liver of sulphur, which, in eudiometrical experiments, does not manifest the least trace of oxygen, and which, nevertheless, retains undiminished its power of producing the luminous appearance of phosphorus.—*Ibid.* p. 16.

The late Prof. GREN, of Halle, considers in his "Elements of Physics," third edition, 1797, *the combustion of phosphorus* as a gradual and slow process, which, in atmospheric air, though operating slowly, affords *the safest and most regular eudiometer*. He describes the necessary apparatus and regular process in the following manner: "An accurate cylindrical glass tube, with one end closed, must be procured, and divided by a scale into a sufficient number of small parts, at equal distances. This tube is filled with distilled or rain water; the air to be examined should be introduced in a tub, under water, and the quantity carefully marked, together with the state of the barometer and thermometer. Several needles are to be passed through a cork-stopper of a smaller diameter than the tube; on the projecting points of the needles is fixed a piece of pure and transparent phosphorus, while a linen thread is fastened to the lower end of the cork. This cork is placed under the mouth of the glass cylinder, in the water of which it will ascend, and the phosphorus on it will come in contact with the air contained in the cylinder. The apparatus is placed in a proper vessel with water, in which it is left standing. The phosphorus gradually melts, while it is luminous, and the cork may, from time to time, by means of the thread, be drawn under the water,

to wash away the acid adhering to the phosphorus, and thus render it more active. When, at length, all the oxygen gas is consumed, and when the remaining phosphorus is no longer luminous, the cork should be withdrawn, and the exact residue of the azotic gas, as well as the consumed oxygen gas, ought to be marked with the corresponding pressure of the barometer, and the degree of heat observed by the thermometer."

It must be admitted, says GÖTTLING, that this apparatus is very ingeniously contrived, but it would still be unsafe, if the remaining air should not be pure azote, but azotic gas filled with phosphoric vapours, and if that air should occupy a greater space than azotic gas alone; it is, at least, proved by the smell of this column of air, and the vapours arising after the admission of atmospheric air without the presence of phosphorus, that this body of air cannot be pure azote.—*Ibid.* p. 24—27.

M. SCHWARZ, a German apothecary, has lately observed, that, by dissolving ten grains of the nitrat of mercury in one ounce of distilled water, and adding two drachms of the mucilage of gum arabic, the nitrat is completely decomposed, while a copious grey precipitate is formed. M. JUCH, who was present during the experiment, is of opinion, that this decomposition must be ascribed to the astringent acid in the gum arabic; a fact of which he is sufficiently convinced by experience. Prof. GÖTTLING wishes that M. JUCH would give us a more satisfactory account of his experiments on this head, because he could not observe the least trace of an astringent acid in a gum perfectly transparent; or, at least, could not discover the presence of this acid, by treating gum arabic with a solution of the sulphat of iron. "Is it not possible," asks Prof. GÖTTLING, "that the nitrous acid here manifests a peculiar action on the gum; or that the gum is perhaps capable of depriving the mercurial calx of the nitrat of mercury, of a portion of its oxygen; and that it is thus reduced somewhat nearer to the metallic state?" He farther adds, that, in the course of his experiments, when mixing the nitrat of mercury with sugar, he once observed a similar decomposition take place, and that this circumstance tends to corroborate his conjecture.—*Ibid.* p. 28.

Several methods of separating the mineral alkali from common salt, and Glauber's salt, have lately been proposed; two of which have been noticed in the "Journal for Manufactures, Commerce, and Fashion," printed in German, for September, 1796. The first of these methods is that of Mr. HODSON, of Chester, who advises to treat common salt with powdered charcoal in a furnace of a peculiar construction. According to his opinion, the phlogiston of the carbon combines with the muriatic acid, which is thus reduced to a state in which it may, without difficulty, be volatilized. The other method is that suggested by M. BONEVIL, of Liverpool, who treats Glauber's salt with charcoal powder and iron, in a proper temperature. From the carbon and the vitriolic acid of the Glauber's salt, sulphur is said to be produced, and this again is to combine with the iron, and form an artificial, silicious sulphat. The disengaged mineral alkali is then obtained by elixation, after it has been allowed to crystallize.

Prof. GÖTTLING remarks, that he has endeavoured, by experiments conducted on a small scale, to ascertain the practicability of these methods

thods of disengaging the mineral alkali; but he found that the former was unsuccessful, and the latter unprofitable. *Ibid.* p. 31.

A more effectual and ingenious method of *separating the soda from sea-salt* has been proposed by Cit. VAN MONS.—By mixing twenty parts of common salt, and thirteen parts of the carbonat of potass, we obtain *digestive salt*, and carbonat of soda. But as these salts can only be separated with difficulty, VAN MONS first deprives the soda of its carbonic acid, by means of caustic lime: the soda thus rendered caustic remains uncrystallized in the ley, while the digestive salt forms crystals. The soda is then evaporated to dryness, and afterwards, with the addition of powdered charcoal, exposed to a red heat, in a crucible. By this process, it again becomes mild, and susceptible of crystallization, so that it may be completely purified. *Annals of Chemistry* (in German) Vol. I. p. 40.

In a similar manner, *potass may be effectually purified*, crystallized, and deprived of all its foreign, saline ingredients, without losing any part of its own substance. *Ibid.*

In the present dearth of medical information from the French Journals, whether tending to benefit or improve the practice of the healing art, we have not been able to supply our readers with interesting extracts, especially as our sources of domestic correspondence have lately been multiplied beyond example. Among the numerous Essays on subjects connected with medicine, we have, however, selected one, by J. J. VIREY, of the Val de Grace, read to the Medical Society of Paris, on the 7th of Messidor, in the 6th year, and entitled, “*General Reflections on the Aliment produced by the different Classes of the Animal Kingdom, and its Influence on the Human Body.*” Of this elaborate and curious paper we propose to give our Readers a satisfactory account, in a future Number of this Journal.

Domestic Intelligence.

HAVING heard it repeatedly asserted, that Dr. CROFT, of this City, had lost a child by the Vaccine Inoculation, we applied to him to learn the truth. He shewed us a letter that he had written to Mr. TRYB, of Gloucester, in answer to the same question, of which the following is an extract:

“Dear Sir,

“Hearing it is reported at Gloucester, that I have lost a child of my own, under inoculation for the Cow-pox, I am convinced it will afford you pleasure to know that the only one of my children which was inoculated for the cow-pox, went through the disease in the most desirable manner, and has ever since been in perfect health. About thirty children inoculated from his arm had the disease equally well, and without any subsequent illness, and I do believe that the whole number of children,

dren, who were most of them inoculated by Mr. KNIGHT, surgeon to the Duke of York, had not so much as one hour of indisposition, or a single pustule, except on the arm. I trouble you with this for the purpose of preventing any misrepresentation that might tend to lessen the value of Dr. JENNER's observations upon this important subject.

"I am, &c.

"RICHARD CROFT."

Old Burlington Street,
O^r. 20, 1799.

A correspondent recommends, and we cannot but agree in his sentiments, that in order to prevent, in some measure, a continuance of the delusion practised upon the credulous, by the venders of *quack-medicines*, an act of parliament should be solicited, that no certificate of a cure by such medicines be published in a newspaper, or pamphlet, unless certified by an affidavit before a magistrate; and enjoining also, that, if any vender of Patent, or other Quack Medicines, shall publish a false affidavit, or any certificate of a cure, not attested upon oath, he shall be liable to a severe penalty; and that every affidavit be registered in a particular office, previous to its publication. And if any suspicious person shall appear before a magistrate, he shall be authorized to require the affirmation, or even the affidavit, of a responsible person, respecting the character of him who proposes to swear to the cure.

The following Preamble to a Statute of Henry VIII. in favour of regular Physicians and Surgeons, is not inapplicable to the present *Age of Quackery*:—"Forasmuch as the science and cunning of Phycic and Surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the greater part have no insight in the same, nor in any other kind of learning; some also ken no letters on the book; so far forth, that common artificers, as smiths, weavers, and women boldly and accustomedly take upon them great cures, in which they partly use forcery and withcraft, partly apply such medicines to the disease as be very noious, and nothing meet, to the high displeasure of God, great infamy of the Faculty, and the grievous damage and destruction of divers of the King's people, &c. &c."

A Work on Infanity is now preparing for the press, by JOHN REID, M. D.

A. and C. R. AIKIN will resume their evening course of Lectures on Chemistry, with its application to arts and manufactures, in the middle of November next. Their morning course will commence later in the year. Further particulars may be known by applying to Mr. C. R. AIKIN, Surgeon, No. 4, Broad Street Buildings.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.
[FOREIGN AND DOMESTIC.]

A Third Dissertation on Fever, Part II. ; containing an Inquiry into the Effects of the Remedies which have been employed with a View to carry off regular continued Fever, without leaving it to pursue its ordinary Course. By G. FORDYCE, M.D. F.R.S. &c. 8vo. pp. 200. Johnson, 1799.

THE author of this Dissertation has long been known in the medical world, both as a writer and teacher. The volume before us does not appear, in any degree, to derogate from his well-earned fame.

The means of cutting short the progress of Fever, which Dr. F. examines, are, venæsection, cathartics, antimony, and its preparations, which he details, together with his opinion respecting their *modus operandi*.

He compares ipecacuanha, and combines it with emetic tartar; cold and warm water, internally and externally; on which last he places little reliance. The next means Dr. F. examines, are epispastics, stimulant sudorifics, antispasmodics, antiputrescents, astringents, and decoct. cinchonæ cum infus. rosæ. On all these remedies, their mode of exhibition and action, he makes such observations as will well reward the perusal.

Essay on the Causes, early Signs, and Prevention of Pulmonary Consumption: For the use of Parents and Preceptors. By THOMAS BEDDOES, M. D. Second edition, much enlarged, 8vo. pp. 340. Price 6s. Longman and Rees. 1799.

Our readers will conclude, from the title of this work, and the persons for whose use it is written, that the *cure* of consumption forms but a small part of the author's design. His object is a more important and useful one, viz. that of preventing the formation of the disease. On this subject, we might extract many valuable hints and admonitions respecting climate, particular professions or callings exempt from the disorder, others remarkably liable to it; diet, dress, age, habit of body, damp walls or beds, cautions, domestic rules for the prevention of consumption, &c. &c.; but as we think the work itself should be in the hands of all parents and guardians, we shall conclude with expressing our cordial approbation both of the design and execution.

Lectures on Diet and Regimen, &c. By Dr. WILlich.

[Continued from our last Number, pp. 301.]

After having commented at large on the mischievous tendency of patent or quack medicines, made some cursory observations on

fashionable complaints, and investigated the nature and functions of the skin, the author concludes the introduction with an Essay on the Physical Education of Children. From this last we shall quote the following passages:

“ There is no practice more detrimental to the powers and energy of man in the first period of his evolution, than that of immediately sinking the tender infant in a soft feather-bed. In this situation, all the organs become extremely relaxed, and we lay the foundation of a very serious malady — a *sweating skin*; the source of constant coids, tooth-achs, head-achs, catarrhs, and innumerable other complaints. For these, and similar reasons, I would advise parents to lay their children, from the very hour of their birth, on soft and cooling mattresses, under thin blanket covers, or cotton quilts, which do not incommode the body, leave the hands and arms at liberty, and are not liable to excite too great a degree of heat. In the intense cold of winter, an additional blanket may be used, which, however, should be removed when the weather turns milder, and the child grows stronger. But the greatest mischief arises from bolsters or pillows filled with feathers; which must, after a certain time, produce uncleanness and a disagreeable smell. Such a pillow is calculated to collect and retain mephitic vapours; and, for this obvious reason, it cannot but be unsafe to sleep for a whole twelvemonth with one's head reposed on such a mass of acrid exhalations. This inconvenience may be easily avoided, by furnishing children with cushions filled with horse-hair, or with the softest bran, previously well beaten; the best for this purpose is the bran of oats. The great advantage of these pillows is, that they admit moisture to pass through them, consequently they will always remain dry, and may from time to time be renewed, while they preserve a moderate and regular degree of warmth.

“ *Cleanliness*, in domestic life, is one of the cardinal virtues, and an essential requisite to the proper physical education of children. Indeed, I cannot help remarking, that this is, perhaps, the *only* province of parental care, in which we *never* can do *too much*. For this end, we ought not to neglect the article of linen, as the frequent change of it is of more consequence than many parents are aware of. A child is *much* more liable to perspire than an adult; the natural effect of which is, that its linen is more readily soiled, and rendered unfit for wearing. I would therefore advise all parents, who can afford it, to give their children clean dry linen *every day*. An undoubted proof of the utility of this practice is, that instances have occurred of children being cured of the rickets, when, from the first appearance of that complaint, they have been daily furnished with clean linen, well dried, and occasionally smoaked with juniper berries, frankincense, or other perfuming substances, in order to expel the moisture, which is absorbed by linen. But if a clean change cannot be conveniently had every day, the *night-shirt*, as well as that of the day, ought to be regularly dried and perfumed if necessary.

“ Lastly, let the dress of children be light; the head and breast, during the first months, may be covered, though very slightly; but as soon as the hair is sufficiently strong to afford protection, there is scarcely any necessity for hats or caps, unless in rainy or cold seasons. The breast and neck, too, acquire more firmness, and are rendered hardier by keeping them uncovered; as our frequent colds and sore throats, chiefly originate

originate from the absurd habit of wearing bosom friends and stiffened cravats.

“ I shall conclude these observations with an historical anecdote from **HERODOTUS**, which clearly illustrates the advantage attending the cool regimen of the head. This judicious and learned writer informs us, that, after the battle fought between the *Persians*, under **CAMBYSES**, and the *Egyptians*, the slain of both nations were separated; and upon examining the heads of the *Persians*, their skulls were found to be so thin and tender, that a small stone would immediately perforate them; while, on the other hand, the heads of the *Egyptians* were so firm, that they could scarcely be fractured by the largest stones. The cause of this remarkable difference, **HERODOTUS** ascribes to a custom the *Egyptians* had of shaving their heads from the earliest infancy, and going uncovered in all states of the weather; whereas the *Persians* always kept their heads warm, by wearing heavy turbans.—pp. 92—95.

The whole work is divided into twelve chapters: in the first, the author treats “ *On the Means of preserving Health and prolonging Life.*”—We extract the following passage from his enumeration of the conditions necessary to attain a long and healthy life.

“ *Fourthly*, A gradual, and not too precipitate culture of the physical and mental faculties may be properly considered as an excellent preliminary step towards prolonging life. The age of man bears a certain proportion to the growth of his various powers; and the longer we can protract the different stages of life, the more extended will be the whole compass of our existence. As it is evidently the design of nature, that man should live longer than most of the lower animals, he of course requires a greater space of time to develop the faculties both of mind and body. Animals, which arrive soon at the perfection of their nature and form, live but a short time. Man requires upwards of twenty, and, according to some, twenty-five years, before he attains to full maturity; and if it be a rule of nature, that animals in general live eight times the number of years which is requisite to the attainment of their perfect growth, a strong presumption arises, that the age of man might be extended to nearly two hundred years. In the works of the illustrious **BACON**, and particularly in his “ *Historical View of Life and Death,*” are given many strong arguments to confirm this assertion. “ Surprising as it may appear to some, there is a possibility, at least, if not a probability, that the term of human life might be still farther extended, if mankind could by any means be persuaded to return to that primeval state of nature, from which history and tradition have furnished us with such astonishing, and almost incredible instances of longevity. It is not my intention here to inquire into the degree of credit, which may be due to the accounts of some extraordinary facts of individual longevity recorded by the sacred historian; as the learned vary much in their opinion, relative to the mode of computation, and whether the Solar, the Arabic, or the Lunar year, or a still shorter measure of time, is alluded to. This, at least, seems to be generally admitted, that the antediluvians enjoyed an enviable, uninterrupted state of health; that their vegetable aliment, and general mode of living, were extremely simple and nowise prejudicial; that the constitution and temperature of the globe itself must have been greatly affected and deteriorated, in consequence of the flood, or other causes of which we are ignorant; and lastly, tha

those impetuous and inordinate appetites and passions, which, like flames, may now be said to consume the powers of life, were then either less violent, or exerted their baneful influence at a much later period of life."

[To be concluded in our next Number.]

Memoirs of the Medical Society of London, vol. v. 8vo. 470 pp. Johnson London, 1799.

When we commenced the analysis of this work, in the sixth number of our Journal for August, pp. 29—35, we were then assured, that it would be published in the course of that month. Unforeseen accidents, however, delayed the publication; and in the mean time, a case of Cæsarian section, from the Lying-in-Hospital at Manchester, was communicated to the Society, with an engraving representing the bones of the pelvis, which was thought proper to be annexed to the volume as an appendix. As we have already published several papers, tending to discourage and condemn this mode of delivery, we should think it but justice to the Gentlemen concerned in the present instance, to give a particular account of the case, and the dimensions of the pelvis; all which tend to shew that this section offered the only chance of saving the life of the mother. Want of room, at present, obliges us to postpone this act of justice.

Biographia Medica; or, Historical and Critical Memoirs of the Lives and Writings of the most eminent Medical Characters that have existed from the earliest Account of Time to the present Period, with a Catalogue of their Literary Productions; by BENJ. HUTCHINSON, 2 vol. 8vo. each 546 pages, 16s. Johnson. London. 1799.

In this work, the lives of the authors introduced are arranged in alphabetical order. The style is neat and unaffected, and biography has always charms sufficient to secure readers. On this account, as well as for the convenience of reference, we conclude that few Medical Libraries will be without the *Biographia Medica*.

Versuch einer Chronologischen Uebersicht, &c.—An attempt to exhibit the literary history of medical science, in chronological order, with a view to promote and facilitate its study, by Dr. J. G. KNEBEL, 8vo. xxxiv. and 377 pp. (1 rixd. 8 grosch. or 5s. 6d.) 1799. Breslau. Korn, senior.

Medicine has long felt the want of a work which would furnish the medical student with such information relative to this science, as is contained in "*Saxii Onomasticon*" with respect to the sciences in general. A work of this nature, however, should comprise somewhat more than a mere catalogue, in which the years of birth and death, the principal residence and public office held by physicians, or even their chief works, together with the best editions, are pompously recorded. Neither "*Matthiæ conspectus historiæ medicorum chronologicus*," nor KESTNER'S *Lexicon of Medical Literary Men*, nor ELOY'S work on the same subject, (both in German) are sufficient for that purpose; and the practitioner, who has not access to great libraries, and cannot afford to purchase one for his private use, is frequently at a loss, especially if he is desirous

desirous to make himself acquainted with the literary history of this science.

Dr. KNEBEL has arranged the present work in chronological order, and, in this respect, imitated Saxii Onomasticon. The whole of this chronological view is divided into four distinct periods: The first extends to HIPPOCRATES; the second to the death of GALEN; the third to PARACELSUS; and the fourth to the year 1797. The physicians still living are, however, not comprised in this retrospect, as the author generally begins his sections from the demise of medical writers. To every chronological table he has prefixed a summary recapitulation of the events and changes that have taken place during the period of which he treats; this retrospective account could be only brief and very imperfect. Several medical characters, among whom are some of considerable reputation, have been omitted; while others of little merit, particularly in the first period, have been inserted. Nor are the names of authors printed with uniform correctness, though the editor has not neglected to give an extensive list of *errata* and *addenda*; for instance, instead of LIPPENIUS we find *Lixenius*, and sometimes *Lipenius*; instead of ERASTUS, *Ernst*; for CHRISTOPH. DE HONESTIS, *de Honestiis*, &c.

Notwithstanding these errors and imperfections, we are not acquainted with a later and better historical work, or one which we might with more propriety recommend to the medical tyro. The author is, doubtless, entitled to some praise and encouragement, that he may, in a subsequent edition, improve his labours on this thorny path.

Tableau du regne végétal selon la méthode de Jussieu.—A View of the Vegetable Kingdom, according to the method of Jussieu; by E. P. VENTENAT, of the National Institut of France; and one of the librarians (conservateurs) at the Pantheon. Four volumes, together 2158 pp. and 24 plates; 8vo, Paris, an 7 (1799) price 21 livres, or 24 liv. free through all the departments. Publ. by the author and Drifonnier.

Although the system of the celebrated Jussieu is one of the most ingenious we possess in Botany, as this author has furnished us with excellent illustrations of many undetermined botanical characters, yet a work was still wanted for the elucidation of obscure passages, and the embellishment of others that were heavy and dry. M. VENTENAT, who is already known to the learned by his *Principes de la Botanique*, on which he gave public lectures in the *Lycée Republicain*, as well as by a variety of essays inserted in different periodical works, has here attempted to treat of all branches of botany in a comprehensive systematic work, grounded chiefly upon the principles of Jussieu. He has carefully availed himself of the observations made by cotemporary botanists, while he has also enriched it with his own remarks, for which he found an ample field in the extensive herbals at Paris, as well as in the celebrated botanical garden belonging to the Museum, and that of M. CEL.

The principal subjects contained in the first volume relate to the philosophy of botany. The author gives not only the terminology of plants, in alphabetical order, according to LINNÆUS, JUSSIEU, GAERTNER, and others, but he illustrates the terms with apposite examples, and accompanies the description of plants with physiological and æconomical remarks. The discoveries of GREW, MALPIGHI, DUHAMEL, BONNET, SAUSSURE, DAUBENTON, SENNEBIER, BERTHOLST, &c.

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are faithfully recorded; and that important branch of botany which relates to agriculture, has received many valuable additions from the useful researches of DUHAMEL, TILLET, TESSIER, ROZIER, PARMEN-TIER, and other bucolic writers.

The second and third volumes of this classical work contain the genera of plants, or the system itself, together with an account of some of the principal species rarely found in Europe. In describing the genera, our author has paid particular attention to those botanists who have determined them, as well as to those who have adopted and exhibited them in the most correct and conspicuous manner. He has also subjoined to every plant its synonymous and vernacular name. On the union of the different sexes of plants, and on the combination of those of the same sex, M. VENTENAT has made several very ingenious observations; and as the whole of botanical science consists in properly distinguishing these combinations and dissimilarities, he has developed this delicate subject in a manner almost completely satisfactory.

In the fourth volume, the author first treats of some plants which are remarkable by their peculiarities, and therefore appear to form new orders; but he likewise mentions several others which have already, by former botanists, been comprised in the number of certain families, for instance, the *Cuscuta*, *Tozzia*, *Globularia*, *Samolus*, &c. yet he does not neglect to state the causes which induced him to separate such plants from the families in which they had been placed by his predecessors. Next we meet with an appendix, containing the remarks that occurred to the author since the work has been committed to the press; to which is added, an index of the names, genera, species, and synonymous terms, in the Latin and French languages; together with a complete list of the authors and their works quoted in these volumes. The plates and the explanations annexed are executed in a superior style; they are drawn by the celebrated artist, J. H. REDOUTE', and engraved by SELLIER; our limits, however, do not permit us to detail their multifarious contents.

The whole is concluded with a methodical table, which greatly facilitates the retrospective view of the whole system, and enables the reader to find, without trouble, the proper place and destination for every plant. Indeed, the retrospect itself is equally easy; as the general table, in every instance, refers the reader to the following, which are more particularized: and this table, by comprising all the genera, renders the work peculiarly valuable; in the composition of which the industrious author has bestowed the attention requisite to a correct and elegant performance.

Grundriß der Physiologia Pathologica:—Elements of pathological physiology; or the doctrine of the structure, composition, and functions of the human body and its parts, in a preternatural state. Second and last volume, containing the Natural Functions, by E. F. HECKER, M. D., 8vo. 238. pp. Halle, Hemmerde, 1799.

The author began this useful small work with the first volume, published as late as the year 1791. In the present part, he treats, in his usual perspicacious manner, of the appetite for food; of mastication and deglutition; of the great stomachic gland; of the liver, bile, and gall-bladder, when he endeavours to prove at large, that the bile is subject to rancidity; of the spleen; the integuments of the abdomen, the peritonæum,

ritonæum, the mesentery, and the omentum; of the intestines; of the system of the lymphatics, where the author gives his opinion at some length, that the whole alimentary function principally depends upon the lymphatics;—of sanguification; of chylification; of the secretions; and, lastly, of the urinary organs—without however touching on the sexual functions. On every occasion, the learned author has illustrated his propositions by quotations from the latest and most eminent writers; while, under every head, he has added a list of the most important medical works relative to the subjects under consideration.

Schwedische Annalen, &c. The Swedish Annals of Medicine and Natural History: Edited by K. A. RUDOLPHI, M. D. &c. &c. Vol. I. No. I. 8vo. 16 sheets, price 20 grosch, or about 3s. Berlin, Lange, 1799.

The editor of these Annals is entitled to the thanks of the medical world, for having furnished us with a periodical work of such extensive and useful tendency. The literature of Sweden has but too long remained to us a *terra incognita*, although the learned of that country have always held a distinguished rank in the literary republic, especially in the departments of Natural History and Physics.

Dr. RUDOLPHI is very favourably situated for communicating to us from that quarter, whatever is valuable and interesting; he carries on active correspondence with several literary men of that kingdom; and the University library of Greifswalde, is daily open to his inspection; while a copy of every work printed in Sweden, is regularly transmitted to that German College, where he fills the place of Adjunct to the Medical Faculty, and Anatomical Dissector.

The first number of this work contains a great variety of essays, critical and analytical, as well as accounts and reviews of new medical works. The most remarkable among the former, are the following:

I. On the progress of anatomy in modern times, by ADOLPH MURRAY. II. A description of a collection of natural curiosities, by A. U. GRILL, of Söderfors; accounts of a living *Simia Apella*, a living *Cavia Aguti*, and an ostrich which died of too great obesity. III. On the history of zoological knowledge in Sweden, prior to the time of LINNÆUS; by GUST. PAYKULL. IV. A discourse on the establishment and improvement of medical science in Sweden, by I. G. ACREL. V. Analysis of the New Transactions of the Royal Academy of the Sciences at Stockholm, for 1797. VI. Analytical account of a work, entitled, "The Physician and Naturalist, Vol. XII." Among other instructive extracts from this work, we met with a letter from Tunis, written in 1795, by H. C. GERSONIUS, whose account of the plague is the more interesting, as he successfully employed the *arnica* against this formidable disease. We are anxious to see his account of the plague, and lues, which he has promised to transmit to the College of Physicians at Stockholm.

[To be continued in our next Number.]

NEW MEDICAL PUBLICATIONS IN OCTOBER.

Memoirs of the Medical Society of London, Vol. V. consisting of original Papers, and particular Cases of Disease; also the Natural History of human intestinal Worms; illustrated with Plates. 9s. 6d. boards

JOHNSON.

Experiments with the Metallic Tractors in various Diseases, as published by Surgeons HERHOLDT and RASN, of the Royal Academy of Sciences, Copenhagen; translated into English by Mr. C. KAMPFMULLER. Also, Reports of Cases in England, demonstrating the efficacy of the Metallic Practice in complaints, both upon the human body, and on horses, &c. by medical and other respectable characters: edited by BENJAMIN D. PERKINS, A. M. 5s. boards. JOHNSON.

Hints on Temperance and Exercise; shewing their advantages in the cure of disorders, and by which medicines are considerably lessened; by J. TWEEDIE, Surgeon, &c. 2s. 6d. WILLIAMS.

The Anatomy of the Gravid Uterus, with practical inferences relative to Pregnancy and Labour; by JOHN BURNS, Surgeon in Glasgow. 8vo. 6s. boards. LONGMAN and REES.

An Essay on the Properties of Digitalis Purpurea, or Foxglove, by JOHN FERRIAR, M. D. 1s. 6d. CADELL and DAVIES.

NEW PUBLICATIONS IN FRANCE.

Clinique Chirurgicale, relative aux plaies, &c. Clinical Surgery, as relating to wounds; intended as a Sequel to the Art of applying Bandages. By LOMBARD, Member of the National Institut. 8vo. (price 1 rix-dollar, 6 grosch, or about 5s.) Strasburg. Levrault.

Tableau élémentaire de la séméiotique, &c. Elements of Semiology; or, the Knowledge of the Signs of Diseases. By BROUSONNET. 8vo. (12 grosch, or 2s.) *Ibid.*

Elemens de Myologie, &c. Elements of Myology and Syndesmology. By TH. LAUTH. Two vols. 8vo. (price 2 rix-dollars, or 8s.) *Ibid.*

Elemens de la Médecine, Théoretique et Pratique, &c. Elements of the Theory and Practice of Medicine; containing the general pathology, the epidemic constitutions of Hippocrates, and their analysis, the doctrine of prognostics, and nosology. By TOURTELLE. Three vols. 8vo. (price 4 rix-dollars, or 16s.) *Ibid.*

NEW PUBLICATION IN GERMANY.

Über den Einfluss des Medicinalwesens auf den Staat, &c.—On the influence of medical affairs on the state; and on the neglected medical police in most of the German states: by the Aulic Counsellor SCHÖPF, president of a medical college, &c. 8vo. (pr. 6 grosch or 1s.) 1799.

TO CORRESPONDENTS.

We acknowledge the receipt of communications from Messrs. Spry, Fowler, Ayrton, Davies, Rowlands, Custance, Mills, Huggan, Reeve, Thackeray, T. P. Graham, F. A. Christie, Franks, Dr. Vaughan, &c. which shall be noticed without delay.

The letter, signed S. N. dated Oct. 9, 1799, cannot, for obvious reasons, be inserted; for although it contain perhaps a satisfactory answer to another letter marked with initials, yet it would be inconsistent with our plan, to extend anonymous disputes.

ERRATA.

P. 265, l. 34, for "reticular," read "cuticular."
 P. 284, l. 22, for "particularly injurious," read "equally deleterious."
 P. 284, l. 35, for "cause," read "cure."

THE
Medical and Physical Journal.

VOL. II.]

DECEMBER, 1799,

[NO. X.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the as yet undetermined state of the public mind, respecting the utility of inoculating with the infection of the cow-pox, you, and some other of my medical friends, thought that the inclosed narrative deserved publication; I therefore send it for insertion in your Journal. It is written by the Rev. Mr. HOLT, Rector of Finmere, near Buckingham, a gentleman whose character is highly estimable for benevolence, learning, and love of science. There is no medical practitioner in his parish, and the poor are, therefore, in some degree, precluded from the beneficial effects of variolous inoculation. In conversing with Mr. HOLT, last summer, on the subject of the cow-pox, the favourable report which I made of its effects from my own small experience and observations, induced him, as he takes a kind of parental interest in the sufferings and welfare of his parishioners, to inoculate some of them with this infection. The result of the experiment, and all circumstances relating to it, are explained in the inclosed letter.

I remain,

GENTLEMEN,

BEDFORD-ROW,

Nov. 9, 1799.

Your most obedient Servant,

JOHN ABERNETHY.

DEAR SIR,

IT gives me great pleasure that I am enabled to perform my promise of sending you an account of my success in inoculating for the cow-pox. The novelty of the experiment made me apprehensive that my parishioners would not readily submit to an operation which they might consider dangerous in its consequences, and doubtful in its effects; but

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these fears were soon removed, as I found them all impressed with the belief, that the cow-pox caught in the natural way were a certain preventative of the small-pox. This induced me to inquire into the grounds of this opinion, and I was soon furnished with a variety of names and cases, which, though probably authentic, I rejected, as some lived at too great a distance from me, and others had happened many years ago; and I determined to rely only on those instances in which I could ascertain the facts from the persons themselves, a list of whom I shall subjoin.

My first essay in inoculation was made upon Elizabeth Smith, aged about 25, whom I inoculated in both arms, to ensure as much as possible the probability of infection. On the sixth day she complained of head-ach and pain in the axillæ; the former was removed by a dose of salts the following morning, the latter continued several days: she had *no pustules*, except where I made the incisions, and their appearance and progress were exactly similar to the description and beautiful plate given by Dr. JENNER. She had no indisposition of consequence enough to prevent her performing her usual work with ease, and on the thirteenth day the pustules became dry, and peeled off. I have since inoculated upwards of three hundred, and, as I adopted Dr. WOODVILLE's excellent method, of stating when and from whom each person was inoculated, I was enabled to trace varieties up to their source. But, excepting four instances, my cases were all like each other, viz. pain in the axilla the seventh or eighth day, slight head-ach, sometimes attended with feverish shiverings, which invariably yielded to a dose of salts the day after; except in the case of Thomas Sheen, a baker, who was obliged to desist from his usual occupation for three days, in consequence of the pain and inflammation of his arm, which possibly might be increased by the heat to which he was so much exposed, as his is the only case in which the patient was prevented following his business as usual. One dose of salts, taken the morning after they complained of pain, was the only medicine which they had. The varieties which occurred were, Thomas Williams, aged 7 years, who had a small pustule, about two inches from the incision, resembling one of the plates in Dr. JENNER's publication. William Neil, aged 10 years, and Hannah Beal, aged 6 years, had each above *one hundred* pustules in different parts of their bodies, which assumed precisely the appearance of that given by inoculation, except that they were smaller: no complaint of more than ordinary indisposition was made in either case. In
order

order to ascertain whether there was any peculiar malignancy in the matter of these pustules, I inoculated eight children from them; but they all had the complaint in its mildest form, having neither any pustules, nor any indisposition more than the rest. My patients were of all ages, from seven weeks to sixty years; nor did diseased habits of body, or pregnancy, lessen the mildness of the infection. One circumstance occurred, which, perhaps, is too trivial to be mentioned: I inoculated near thirty, twice or thrice, apparently without effect, allowing an interval of five or six days; but though they sickened from the last incision, a pustule regularly appeared wherever I had formerly inoculated them, as if the dormant matter had been roused by the activity of that last inserted. At the expiration of three weeks, I inoculated six of my parishioners with variolous matter. On the third day I was not a little alarmed by a considerable degree of inflammation which appeared in all their arms, and which seemed to indicate the certainty of their having the small-pox; but in two or three days the whole disappeared, without any pustule being formed. It is my intention to inoculate others as often as I can conveniently procure variolous matter; and by the kindness of Mr. GRAY, an eminent surgeon and apothecary in Buckingham, I am promised some in a short time, the result of which you shall be informed of. Mr. GRAY, whose zeal for his profession is only equalled by his ability, has also allowed me to state his following case, which he had at Boreton, in Buckinghamshire:—A farmer and his sons, who had had the small-pox, did not receive any injury from milking the cows, though their teats were extremely ulcerated at the time; but a servant, who had not had the small-pox, caught from them the cow-pox, and was so dangerously ill that medical help was necessary for more than three weeks, and the effluvia from him was so very offensive, that every room in the house was strongly tainted with it. Notwithstanding this, none of his friends and acquaintance caught the infection, though they had had neither complaint. It would seem, then, that the advantages of the small and cow-pox are reciprocal, and that the effluvia of pure cow-pox matter is probably not infectious, even in its worst state.

I will now add the cases which I mentioned above, in which the cow-pox seem to have prevented variolous infection.

In the year 1785, Benjamin Cowley, aged 26, when servant to Mrs. Hodgekinson, of the New-Inn, near Stowe, had the cow-pox. About three years after, he entered into the Oxfordshire militia, in which
he

he remained five years, during this time he was three times inoculated by the surgeon of the regiment, without effect.

Richard Smith, aged 24, had the cow-pox at the same time and place: he has not since been inoculated, but his large family have at different times since had the small-pox, and he has not caught the infection.

Edward Stockley, aged 20, had the cow-pox when young; he was inoculated several times, about two years ago, for the small-pox, in this parish, but without effect.

A servant of Mr. Morris, of Water Stratford, had the cow-pox several years ago: he has been inoculated seventeen times since for the small-pox, but without effect.

Mrs. Malins had the cow-pox when young; she afterwards married, and her daughter had the small-pox so dreadfully in the natural way, that the mother tried to prevent her going blind, by moistening the corner of her eyes with saliva. In consequence of which, Mrs. M. had one large pustule upon her lip, occasioned by wetting her finger and applying it to the child, and two small ones upon her arm upon which the child lay; but she had no indisposition, and seems only to have experienced what nurses do in hospitals.

You may depend upon the authenticity of the above cases; and I could send you more, had I opportunity and leisure to go to the parties themselves.

My parishioners are fully sensible of their obligations to you, for enabling me to introduce this complaint among them; as the small-pox are so much dreaded in this neighbourhood, that all intercourse with the surrounding parishes is interrupted, when any one is infected with them; and I am convinced that the resident parochial clergy could not render a more essential service to the temporal interests of their flock, than by devoting a few days to this inoculation, which is attended with little trouble, and no expence.

I am, SIR,

Your affectionate

And very faithful friend,

ROBERT HOLT.

FINMERE, Nov. 6, 1799.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MR. PULLEY has animadverted, with great freedom, on my communication to you of the 21st of last May, possibly with the expectation of drawing from me a reply. And, although I dislike any thing like controversy, not being deeply grounded in logic and criticism, yet he shall not for once be disappointed, if you will again favour me by inserting this short letter in your Journal.

Let me premise, gentlemen, that the history of GREEN's case is composed without the smallest mixture of hypothesis. Mr. PULLEY acknowledges beside, that, "the case is clearly recorded." It is plain then, that I had the truth in view, and that I did not write, like the case-coiners, alluded to by Dr. CULLEN, *ut Famam mihi compararem* (*Prolegomena. Synopsis Nosologiae Methodicae.*)

But, gentlemen, if I have succeeded to Mr. PULLEY's mind, in the historical part of my communication, I have, it seems, fallen very short of success in the speculative. This I cannot help; it is not an unusual thing for men to reason differently, and to draw different conclusions from the same premises. I would not insinuate, that the profession of medicine is not eminently distinguished by variety of knowledge and correctness of composition; but I humbly imagine, that, as medical men speculate more than others, and as their speculations are more intricate, they have, consequently, more frequent opportunities of erring. Be this as it may, such is human nature, that, in philosophy or art, in all matters, except those of revelation and divine testimony, we arrive at perfection by very slow degrees.

My conclusion, however, that GREEN's disease and death depended on the absorption of a poison, accidentally introduced by the lancet of a barber, has displeased Mr. PULLEY; and he has been the more displeased, since, by my conclusion, "the poor barber stands convicted of having poisoned his neighbour." This then, the exculpation of "the poor barber," is, as Mr. PULLEY calls it, the "point of no small importance," for which my error ought to be corrected. Granted; whether for that reason, or for any other. But, if my reasoning have

been

been prejudicial to the barber, I could not help it; God forbid, that I should willingly do an injury to any man, in any manner.

As I could not form any notion of the origin of the supposed morbid poison, so I did not venture to guess at it's laws. The period between the insertion of the small-pox matter and the inflammation of the punctured part, is often less than three days; the period between the venesection of GREEN and the inflammation was three days. The period between the introduction of small-pox matter, and the suppuration of the punctured part, is often only four days: In GREEN's case it was only four days. So far there is some analogy between it and the small-pox, and the *variola vaccinae*: and I might trace the analogy in other respects; but I shall content myself, at present, by observing, that, if pain had attended the operation; if the inflammation had extended down the arm, as well as up; if there had been any induration of the venal tube; if the absorbents had not been evidently inflamed and indurated from the puncture upwards, towards the axilla; and if the constitutional affection had preceded the disease of the absorbents, I should not have thought of attributing GREEN's symptoms to a morbid poison. Every one knows, that the absorbent vessels are readily inflamed by virulent matter; and none who reflects on their superficial situation, appearance, course, &c. can suppose, that I mistook for an inflammation of them, an inflammation of the vein, or of the cellular membrane. After all, what I offered was mere conjecture; and I may add, that my practice would have been precisely the same, except in one particular, if I had not formed the conclusion that GREEN's symptoms proceeded from absorption;—if science alone ought to regulate practice: yet, when we cannot have scientific principles, we must content ourselves with hypothetical ones. I never expected, that my conclusion from GREEN's case would supply any one with a single principle of action: my conclusion is, therefore, harmless, if not strictly correct.

I remain, GENTLEMEN,

Your very obedient servant,

Rochester, Oct. 17, 1799.

WALTER VAUGHAN.

A Case of Concussion of the Brain, which terminated fatally.
 By Mr. CHARLES BROWN, Member of the Corporation
 of Surgeons, London.

LAST Tuesday evening, about six o'clock, I was sent for to a young gentleman in Guilford Street; who, by a fall from his horse, on the pavement in Finsbury Square, had received a violent blow upon the left parietal bone. When I arrived at his house, which was about two hours after the accident, (being then but just removed home) I found him lying in bed, vomiting every two minutes, and in a state of stupor. His extremities were cold, the pupils very much contracted, and he had a frown on his face, as if he knew his own complaint. Upon examining the head, I found the integuments much bruised; but the pericranium was not detached from the skull. I immediately took away sixteen ounces of blood from the temporal artery on the affected side; directed the head to be shaved, and applied a large blister all over it. The following mixture was prescribed; of which, I ordered three table spoonfuls to be taken every two hours, till it operated.

℞ Infus. fennæ ℥vij, tinc^r jalapii ℥ij, syr. e spin. cervin. ℥iss, kali tartar ℥ij, tinc^r lavend. c. ℥ss. M. f^r mixt. purg.

The next morning I found him more sensible; his pulse was still full and hard, and his breathing was laborious. He took the whole of the mixture, before it operated; he then had two stools: I repeated the mixture, and took away twelve ounces of blood from the median vein in his right arm: the blister was cut and dressed with the ung^r epispast. Before the evening, he had several stools, after which he was seized with shivering fits, and talked incoherently; I visited him at eleven o'clock this evening, and directed pul. ipecac. comp. gr. xv to be taken in a draught, with twenty drops of vini antim. tart. every six hours. The next day, I perceived no alteration; his pulse still hard and full; his medicines had sweated him profusely, and his extremities felt warm. He passed the whole of this day very restless, and died about ten o'clock at night, just as I was holding a consultation on his case with another surgeon. Having obtained permission, I opened his head next morning, and found both the vessels of the dura and pia mater very turgid with blood. A layer of coagulable lymph adhered upon

upon the inner surface of the dura mater, like an adventitious membrane. Suppuration had taken place, and a considerable quantity of pus lay between the membranes of the brain; the spinus or middle artery of the dura mater was uncommonly large in this subject.

Hatton Garden, Nov. 5, 1799.

CHARLES BROWN.

LIST OF DISEASES IN LONDON,

From the 20th of August to the 20th of September 1799; being the result of the public and private Practice of a Physician at the West End of the Town.

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Chronic Rheumatism	5
Contagious malignant Fever	19	Asthenia	19
Measles	14	Anasarca	8
Scarlatina	2	Paralysis	2
Small-pox	4	Dyspepsia	20
Whooping Cough	3	Gastrodynia	11
Catarrh	10	Enterodynia, and Colic	10
Pneumonic Inflammation	4	Constipatio	3
Acute Rheumatism	3	Bilious Vomiting, and Di-	
Erysipelas	1	arrhoea	22
Epistaxis	1	Chlorosis and Amenorrhœa	15
Hæmoptoe	2	Fluor Albus	4
Hæmatemesis	1	Menorrhagia	3
Intestinal Hemorrhagy	1	Prolapsus Uteri	1
Hectic	4	Scirrhus of the Uterus	2
Synochus, or Summer Fever	12	Scirrhus of the Liver	1
Cholera	2	Jaundice	2
Slow Fever	5	Tabes Mesenterica	3
Acute Diseases of Infants	15	Worms	3
Childbed and Milk Fevers	3	Dysury and Gravel	5
Apthous Fever	2	Lepra	3
Hydrophobia	1	Shingles	2
CHRONIC DISEASES.		Nettle Rash	1
Cough and Dispnoea	26	Erythema	1
Phthisis pulmonalis	10	Itch	6
Pleurodyne	1	Porriigo	3

The number of contagious fevers has been much increased during the month of September, either from a continuance of the causes assigned in the Journal, No. VIII. or from the general effect of the autumnal season on the human body, by which it is rendered more than usually susceptible of almost every species of infection. This effect is exemplified in the above statement of diseases, and further proved by the observation of practitioners

practitioners differently stationed; all of whom agree, that, along with malignant fevers, the measles, small-pox, scarlatina, &c. have begun to spread rapidly and widely.

Persons exposed, without shelter, to the vicissitudes of the atmosphere, have been affected with the synochus, with erysipelas, pneumonic inflammation, diarrhoea, cholera, and violent pain or inflammation of the bowels, disorders often endangering life in the present season of the year.

The case of hydrophobia occurred about the middle of August; the patient, a fine boy, ten years old, had been bitten by a dog in Fetter Lane, six weeks before the dread of water commenced. As he lived no more than two days after the appearance of this symptom, I had only an opportunity of paying him a single visit. His pulse was then hurried and irregular; his manner confused and agitated; his utterance rapid and abrupt; his eyes appeared bright and sparkling, and had a mixed expression of wildness and anxiety. He was perpetually hawking up some frothy phlegm, which seemed to irritate the larynx. When a glass of water was presented to him, a rattling and convulsive motion took place in his throat, rendering deglutition impracticable: the water, whether applied to his lips, or merely put in his sight, seemed to excite every mark of consternation and horror. All the above symptoms could, however, be produced by other means as strongly as by the application of liquids. When Mr. HEATHER, the attending surgeon, attempted, without any objection made by the patient, to examine the state of the tonsils, &c. the spoon no sooner approached his teeth, than the muscles of the throat were thrown into violent action, and he made a noise, which was aptly enough compared by those around him, to the snarling of a fierce dog about to receive chastisement. At the time of our visit to this wretched boy, he was more composed than he had been through the preceding night. He had, we were informed, had repeated fits of raving, in which he became almost unmanageable, and endeavoured to bite the hands of those who held him. In the evening after we saw him, he began to complain of pain in the head, and of violent pains in the stomach and bowels: his fever and other symptoms appeared to increase; and after enduring dreadful agony for several hours, he expired about two o'clock in the morning. The body was examined by an attentive and accurate observer, Mr. WHATLEY, of Bedford Row, to whom the Editors of the Medical and Physical Journal are obliged for the following detail of the appearances after death.

On opening the abdomen, all its contents appeared to be in a sound state, except the spleen, which adhered to all the parts with which it lies in contact; and was smaller, and more convex, on its external side, than it is usually found to be. These appearances in the spleen, had been evidently produced by an inflammation of that organ, some time before the illness, which was the immediate cause of the patient's death. From the external appearance of the stomach, it would have been thought free from disease; but on opening it, the whole of its villous coat was found to be greatly inflamed. The greatest degree of this inflammation was at the large extremity of the stomach, and particularly about the cardia, around which, to the extent of two or three inches, the villous coat was abraded. The inflammation did not extend to any part of the intestinal canal: it ceased at the pylorus; but it was continued from the cardia, along the œsophagus, to the pharynx. About two inches of the internal coat of that part of the œsophagus, which joins to the cardia, was also abraded. The inflammation upon the œsophagus, was not confined merely to its internal surface, but reached to its external coat, on which it was likewise continued through its whole extent; and in different parts of the cellular membrane adjoining to it, small quantities of effused blood were found. The pharynx was very slightly inflamed. The uvula, palatum molle, and tonsils, were intirely free from inflammation. The left lung was of a more solid texture, of a darker colour, and fuller of blood, than it is ever found to be in its natural state; all which circumstances may be considered as the effects of inflammation. About three or four ounces of bloody water were found in the right cavity of the chest. There was likewise a slight inflammation on the internal membrane of the trachea; but it ceased near the larynx, which, with the epiglottis, was intirely free from inflammation. There was some inflammation on the external surface of the heart, but it did not extend to the inner surface of the ventricles.

Sept. 23, 1799.

R. W.

*An Account of Diseases from the 20th of October to the 20th of November,
1799.*

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Peripneumony	3
Contagious malignant Fever	22	Peritoneal Inflammation	2
Scarlet Fever	15	Acute Rheumatism	7
Measles	12	Ophthalmia	2
Catarrh	18	Angina	2
		Erysipelas	

	No. of Cases.		No. of Cases
Erysipelas	1	Enterodynia	5
Acute Diseases of Infants	8	Hæmorrhoids	3
Hooping Cough	3	Worms	2
Childbed and Milk Fevers	5	Chlorosis and Amenorrhœa	11
Hæctic and Slow Fever	7	Menorrhagia	2
CHRONIC DISEASES.			
Cough and Dispnoea	32	Fluor Albus	3
Hæmoptoe	3	Prolapsus Uteri	1
Pulmonary Consumption	6	Scirrhus Uteri	2
Pleurodyne	3	Gravel Dysury	3
Chronic Rheumatism	14	Scirrhus of the Liver	1
Asthénia	16	Jaundice	2
Dropfy	6	Tabes Mesenterica	2
Cephalea	4	Rickets	4
Vertigo	2	Scrophula	6
Epilepsy	3	Lepra	2
Hysteria	1	Itch and Prurigo	10
Palsy	2	Impetigo	3
Hydrocephalus	1	Nettle Rash	1
Palpitatio	1	Herpes	1
Dyspepsia	11	Acne	5
Gastrodynia	7	Dandriff	2
Hæmatemesis	2	Porrigo	3
Bilious Vomiting, and Di-		Erythema	1
arrhœa	13	Purpura	1
		Lupus	1

The measles, though extensively diffused, have continued mild and moderate. The scarlet fever has increased, since the last report, both in extent and in the violence of its symptoms: but the typhus, or contagious malignant fever, has been the most frequent, as well as the most fatal, of all acute diseases. Of the number specified in the lists for the present and preceding month, ten patients died, whereas the usual proportion of deaths from this fever, westward of Temple Bar, is one in seventeen or eighteen cases. The habitations of the poor, within or adjoining to the city, have suffered most; and some, I am informed, have been nearly depopulated, the infection having extended to every inmate. The rumour of a plague was totally devoid of foundation: one of the persons said to have been affected with it from opening some bales of prize-cotton, died with the usual symptoms of a peripneumony. It was afterwards ascertained, by anatomical dissection, that his death was occasioned by a violent inflammation of the lungs, which seemed to have been brought on by intemperance in drinking, and exposure to a cold and damp air, at an unseasonable time of the night.

The typhus, or contagious malignant fever, was, in September, attended with a dull pain of the head, great debility, or a sense of lassitude,

tude, and pains referred to the bones, tremblings, restlessness with slight delirium, a querulous tone of voice, a small and frequent pulse, heat of the skin, thirst, a fur upon the tongue, first of a dirty white colour, but turning, in the latter stage of the disease, to a yellowish brown. In this form the fever continued thirteen days without any dangerous symptom, and then suddenly disappeared, leaving the patient for some time after languid and dispirited. All the individuals of a family were successively affected with the same train of symptoms, many of them so slightly as not to be much confined to their beds. To this contagious fever alone, Dr. CULLEN ought to have applied the denomination of typhus mitior: he has improperly comprised under it the slow or nervous fever described by HUXHAM and GILCHRIST, which may rather be considered as a species of hectic, and is not received by infection.

In October and November, the disease, as is usual, assumed its more dangerous form. The pain of the head was deep seated, and attended with great confusion of ideas; a total loss of strength suddenly took place, and the limbs felt sore, as if they had been all over bruised. The pulse was weak and irregular: a thick, sordid, brown fur covered all the upper part of the tongue; the tongue itself became hard, dry, and almost immoveable; and the teeth were also covered with a brown or black crust. There was a smarting or burning heat of the skin, which conveyed an unpleasant, benumbing sensation to the fingers and wrist of the practitioner who felt the pulse. The eyes were frequently suffused; the head ach terminated, during the second week, in coma or stupor, with great insensibility, deafness, &c. These symptoms were, however, more favourable than a state of agitation and watchfulness. In the fatal cases there occurred, a few hours before death, a laborious respiration, with a fluttering, irregular pulse, difficulty of swallowing, and sometimes hiccough. A favourable crisis was made by sweating, accompanied, in some instances, by a sensation of coldness: a diarrhoea took place only in one patient. The critical days seemed to be, the seventh, the eleventh, the thirteenth, the fifteenth, and the nineteenth, but the most numerous crises were on the eleventh and thirteenth. The changes, whether for recovery or death, took place very suddenly. I did not observe petechial spots in any of the cases; nor the alternations of cold shiverings with flushes of heat, which most practical writers describe as the primary symptoms of malignant fever.

The Peruvian bark was of no considerable advantage in the fever
above

above described, unless emetics had been administered before the end of the fourth day. Several of the patients were washed twice a day with cold water and vinegar, with only temporary relief. In the most unfavourable state of the disease, blisters were of great utility; they produced a remission of the fever, made the pulse more free and regular, and seemed to be the means of procuring rest. Some patients were relieved by them in whom the loss of sight, of speech, and of the power of deglutition seemed to threaten immediate dissolution. If two or three persons lie in one bed, which frequently happens in the crowded dwellings of the poor, some one almost certainly falls a victim to the fever; I am, however, happy to state, that a man and his wife, who had the fever in its most malignant form, and were confined to the same bed, have been restored during the present month, by the active exertions of a medical friend and assistant.*

The state of the atmosphere must have undoubtedly caused the great extension and aggravated symptoms of the malignant fever. On this subject it is proper to remark, that between the 22d of June and the 17th of November, in a period of 147 days, there were only eight days free from rain; a circumstance, perhaps, unparalleled in meteorological observations.

R. W.

Account of Diseases in an Eastern District of London, from the 20th of October to the 20th of November.

	No. of Cases.		No. of Cases.
ACUTE DISEASES.		Paralysis	1
Typhus Gravior	3	Epilepsia	1
Typhus Mitior	6	Amentia	1
Scarlatina	2	Dyspepsia	8
Scarlatina Anginosa	3	Vomitus	3
Peripneumonia	3	Diarrhœa	16
Acute Rheumatism	2	Dysenteria	4
CHRONIC DISEASES.		Colica	3
Peripneumonia notha	8	Colica Pictonum	2
Cough	12	Intestinal Hæmorrhagy	1
Dyspncea	9	Hepatalgia	1
Cough and Dyspncea	14	Nephralgia	1
Phthisis Pulmonalis	5	Amenorrhœa	6
Hæmoptoe	4	Chlorosis	9
Hydrothorax	2	Hysteria	4
Palpitatio	2	Chronic Rheumatism	12
Apoplexia	2		

PUER-

PUERPERAL DISEASES.		INFANTILE DISEASES.	
Ephemera	- - - 6	Measles	- - - 6
Menorrhagia lochialis	- 3	Hooping Cough	- - - 7
Dolor post partum	- 2	Tabes Mesenterica	- - 2
Rhagas papillæ	- - 2	Scrophula	- - - 2

Since the last report, there has been a train of diseases similar to those which were then taken notice of. Intestinal complaints continue to form a principal share of the list. The greatest number of these have proved rather tedious and troublesome than violent and alarming. The measles, which have, for some time, prevailed amongst children, occurs less frequently. This disease is likely to be succeeded by scarlatina, of which there are at present several instances.

It has hitherto appeared in a mild form. In some cases, the scarlet eruption has been attended with very slight affections of the throat, and the disease has very much resembled that which was described by Sydenham, and which, he observes, generally makes its appearance at the close of summer. The existence of the disease in this mild form, as noticed by Sydenham, has been questioned by some who have been always accustomed to consider the affections of the throat as a necessary characteristic of the disease. Others have spoken as confidently of the existence of it, as described by him, where the anginose symptoms, if they existed, were so slight as not to form a prominent symptom.

That this symptom did not form a part of the disease to which he refers may be taken for granted, when we recollect how acute his observation, and how accurate his description, of disease; but it is equally certain that, since his time, this symptom, in a more or less evident degree, has generally accompanied the complaint.

When children have been the subjects of this disease, it has more frequently appeared in its simple form, than when adults have been the subjects of it; and this circumstance serves to reconcile the observation of Sydenham with what takes place at present,—that, though it seizes whole families, children are more particularly liable to it.

This disease, as was before remarked, appeared in a mild form, in most of the instances referred to in the list. In one patient, however, a child of four years of age, the symptoms were more aggravated; the tonsils were considerably enlarged and inflamed; deglutition was difficult; a large secretion of tough mucus throughout the fauces, occasioned
a dif-

a difficulty of breathing, and a material change in the voice. All these symptoms were relieved by external suppuration taking place, and the patient soon recovered.

Diseases admitted under the care of the Physicians of the Westminster Hospital, from the 20th of October to the 20th of November 1799.

Fevers	-	-	13	Epistaxis	-	-	1
Pleurisy	-	-	1	Gastrodynia	-	-	4
Scarlatina	-	-	2	Hæmoptoe	-	-	4
Quinzey	-	-	2	Hæmorrhoids	-	-	1
Amenorrhœa	-	-	2	Hooping Cough	-	-	1
Anasarca	-	-	5	Hypochondriasis	-	-	1
Asthénia	-	-	5	Hysteria	-	-	1
Asthma	-	-	2	Impetigo	-	-	6
Catarrh	-	-	1	Itch	-	-	1
Convulsions	-	-	1	Lumbago	-	-	3
Colica Pictonum	-	-	1	Menorrhagia	-	-	1
Colic	-	-	1	Phthisis	-	-	2
Cough	-	-	4	Paralysis	-	-	3
Cephalá	-	-	4	Pleurodynia	-	-	1
Diarrhœa	-	-	3	Rheumatism	-	-	6
Dyspepsia	-	-	5	Struma	-	-	3
Dyspnœa	-	-	1	Tinea	-	-	2
Dysuria	-	-	1	Vomiting	-	-	1
Enterodynia	-	-	2	Worms	-	-	2
Epilepsy	-	-	1				

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS nobody, to my knowledge, has been moved by my exhortations, in *Considerations on Airs*, in the *W. C. Contributions*, and in my *Essay on Consumption*, to try the effect of living with cows in phthisis pulmonalis, I have lately, myself, put this practice to the test of experiment. I have gone to work on such a scale, that I shall, in no long time, be able to stand before the public, and to say whether this expedient will produce any beneficial effect or not. I do not expect to jump all at once into a cure for the majority of cases of true consumption; but, by the analysis, variation, and simplification of the method, I do certainly expect to discover something valuable, at least, in the way of relief.

Upon seeing one of my patients who had been subjected to the process

cells for about a month, an apothecary in Bristol has thought it worth while to imitate it; and I hope others will also follow the example, now it can be done without the opprobrium of innovation.

Before your next Number appears, I shall, probably, publish the first part of my reports.

Radney-Place, Clifton,
Nov. 21, 1799.

I am, GENTLEMEN,
Your most obedient servant,
THOMAS BEDDOES.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WITH respect to the Welch Historical Fragment upon the Syphilis, inserted in your Publication for October last, I had no idea that any remarks would have been made, except such as should result from the internal evidence of it; but as Mr. BLAIR has been induced to question the correctness of that piece, it is incumbent upon me to declare, from the plain stile of the original, that the translation conveys the meaning of it verbally throughout; only that, for the sake of giving a more decent title to the article, as it was thought, the *Brêç Vawur* has been rendered the *great pustulous eruption*, instead of the *great-pox*, which is the literal and popular import of the name.

I remain,

Penton-street, Pentonville,
Nov. 9, 1799.

GENTLEMEN,
Your humble servant,
WILLIAM OWEN.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS few objects, I should imagine, can be of greater importance, either to medical men or to the world at large, than the establishment of the anti-phthifical powers of the fox-glove, and as it is only by repeated and unequivocal instances of its salutary effects that so active an article of the *Materia Medica* can be brought into general and permanent use, I lately transmitted to you a case, in addition to those of Marris and Grimes, in which it had effected a perfect cure, and some in which it had relieved and rendered stationary the more prominent symptoms of the disease.

The experience I have now had, indeed, thoroughly convinces me that the digitalis will be found adequate to the cure of several cases of tubercular consumption, though advanced into the second stage; that it will, for a time, suspend the progress of the symptoms in almost every instance; and that in catarrh, in hæmoptoe, and in vomica, it will, in some measure, approach to what is commonly implied by the term specific; a word, however, which should be banished from medicine, when assuming the appellation of a science, it being obvious to every one acquainted with the phenomena and mutability of vital action, that no substance whatever can be supposed to operate on the human system in one uniform and undeviating manner.

Some apprehensions are nevertheless entertained, I perceive, that injury may accrue to medicine from the reports already published in favour of this plant. Your Journal for August contains an ingenious communication from Dr. MACLEAN, of Sudbury; in which, however, notwithstanding his own testimony to the good effects of the digitalis in consumption, he concludes a paragraph, and commences another in the following words: "I see," says he, "the most serious evils begin already to result from its not answering the high expectations that have been raised."—"Others begin to lose their confidence in it from similar failures; whereas, had it been brought forward with its true character stamped upon it, this would not be the case."

Now, in the "Contributions to Medical and Physical Knowledge," the digitalis is related to have been given with a view to cure *tubercular*

consumption; and if, by experience, it has been found beneficial in catarrh, hæmoptoe, and spasmodic asthma, does it follow that, should it fail in the former complaint, it must naturally fall into disrepute in the latter diseases? Surely Dr. MACLEAN should have treated with contempt those who are weak enough to think and argue in this manner. It has for several years been given in pulmonary hæmorrhage with effect, and certainly will continue to be, with the intelligent, whatever may be the result of its trial in phthisis. I am happy, however, to say, that the success which has hitherto attended the exhibition of the digitalis in phthisis has been considerable; several patients in its confirmed state have been cured by this remedy, almost all have been relieved; life has ever been protracted by it; and when death has taken place, whilst the system was under its influence, it has been free from pain or struggle; my expectations have been answered, and Dr. FOWLER, I understand, from further trials, is fixed in his former favourable opinion.

I may also with confidence affirm, that no evil of any magnitude can arise from the use of digitalis in tubercular consumption, if properly exhibited; and that he who shall hasten to employ it early in the disease, will, in proportion to his promptitude, be a benefactor to mankind. Every other medicine, when this complaint is once formed, has been found, by the experience of ages, worthless; many of them frivolous in the extreme; and to have recourse to the old inefficient plan, when the fox-glove is within reach, is wilfully to give up the patient to certain dissolution.

That there are many diseases which assume the form of phthisis, which may be removed by the customary methods, and in which the digitalis would be unnecessarily employed, I am well aware; I am likewise well convinced that mischief may, and will, probably, be produced by an injudicious and indiscriminate use of this active plant; but to what is this to be attributed? not so much to any thing deleterious in the fox-glove, as to the ignorance and inattention of the practitioner. A similar fate has awaited almost every valuable and active agent in the materia medica; but, as Dr. MACLEAN has very justly observed, at the close of his remarks on the effects of fox-glove, "It is unfair to argue of the use of any substance from the abuse of it."

The most unpleasant symptoms consequent on a liberal and long-continued use of this medicine, are vertigo, nausea, and sickness; to remove or mitigate these, therefore, without diminishing at the same time,
the

the effect upon the circulation, becomes an object of primary importance. A few drops of laudanum with each dose of the tincture of digitalis will sometimes prevent the rejection of the latter from the stomach, though I have not found it very effectual either in removing the sensation of languor, or the affection of the head. In producing these beneficial purposes, the vegetable acid has, with me, proved much more serviceable. I was induced to make use of it from recollecting its utility in preventing similar effects, in certain constitutions, from the administration of opium. Thirty or forty drops of laudanum in a table-spoonful or two of pure lemon juice, will generally procure refreshing sleep without either heating the body, or being followed the next morning by nausea or vertigo. In one case, where the stomach and head were soon disordered by even a small dose of the digitalis, the lemon-juice produced an immediate good effect, removing both the sickness and vertigo, and enabling me to throw in a larger quantity of the tincture with ease and safety. This, however, being the only instance in which I have employed it, future experience must decide with regard to its general utility. To another patient, with the same view, I likewise gave eight or ten drops of the diluted nitrous acid with every dose of tincture, but could not perceive that it moderated its action on the stomach. Though I have never made the experiment, I am inclined to think that the tepid bath, where not much debility is present, would assist greatly in promoting the retardation of the circulating fluids, and might supersede the necessity of using very large doses of the digitalis for this purpose. Water, when heated to 94 or 96 of Fahrenheit's thermometer, will frequently, and in the course of a very short time too, reduce the pulse ten, twenty, or sometimes even thirty strokes in the minute. Now, after the system has felt the influence of the digitalis, and in about an hour after taking a small dose of it, might not the tepid bath, thus assisted, produce such a depression of the pulse as could only be expected from a full dose of the tincture, or decoction. It would be acquired too, most probably, without either sickness or vertigo; but whether it would be equally permanent or not, remains to be decided. It is evident, also, that a tepid bath, morning and evening, can only be resorted to in incipient consumption, and where no colliquative perspiration has occurred.

My usual vehicle for the tincture of fox-glove has been the infusion of quassia, and, except in the case of Mr. BOUTILL, (the first of those described in my last communication) I have never seen it produce ex-

cessive languor. In four instances I have reduced the pulse to 40, 44, 50, and 56, with very little affection either of the head or stomach. With some patients, however, (see first and second cases of my last) these have proved so violent as to preclude the prosecution of the medicine. I have endeavoured, but hitherto in vain, to ascertain certain phænomena in the form, system and habits of the patient, which might lead the physician immediately to discriminate with accuracy those constitutions which are susceptible of the full and salutary influence of the digitalis from those which are not. It is a curious subject, and would carry the inquirer into a wide physiological field; the vast importance of such a discovery, however, should stimulate to further research.

As to the preparation of fox-glove best adapted to ensure the requisite effect in consumption, I must, from attentive experience, give a decided preference to the tincture, when thrown into comparison with the powder. Not only a larger quantity of the former can be *gradually* introduced into the system with safety, but it likewise acts more powerfully and uniformly in retarding the circulation. A material difference, too, may be observed in their mode of operation; for, whilst the powder usually increases, and changes in point of colour the evacuation of urine, I have never, but in one instance, and that in a very slight degree, perceived a similar effect from the use of the tincture. Of the infusion or decoction, from my own observation, I can say nothing, not having yet applied either in this complaint; their efficacy in anasarca, however, I know to be great, and the success of Dr. FOWLER has sufficiently proved that they are not less efficient in phthisis.

I perfectly agree with Dr. MACLEAN, in thinking it a matter of the first consequence, that an uniform and standard tincture should be established by authority. I am also of opinion, that the *saturated* tincture, when duly prepared, will best answer this intention. I have lately made use of five ounces of proof spirit to one ounce of the leaves coarsely powdered, without any dilution of the colour, or diminution of strength or taste. Beyond this, however, it can offer no claim to the term *saturated*, as it becomes not only paler in colour, but weaker in flavour, and a larger quantity is required to produce a given depression of the pulse. Provided the digitalis be good, and the spirit accurately proof, the tincture, in the proportion of five to one, will be fully saturated, and will be, therefore, always of an uniform strength. Thus made, it appears of a deep brown colour approaching toward black, yet tinging
paper

paper or linen, when immersed in it, of a beautiful green hue; it has a strong narcotic odour, and leaves a nauseous and very bitter flavour on the palate. I have more than once, I am sorry to say, met with the tincture so improperly made, that it has been not much deeper in colour than brandy, and possessing little smell or taste. The *saturated* tincture should be closely confined from the air, and kept in a mild temperature; for, when exposed to any great degree of cold, it loses its transparency, and deposits a part of the digitalis in the form of a very fine powder. Another circumstance to be attended to in exhibiting the tincture is, that it be always dropped from the same phial, an ounce or two-ounce one, for instance, as the drop will be larger or smaller in proportion to the size of the rim of the phial.

With regard to the plant itself, I can assure Dr. MACLEAN, he is deceived in supposing it to acquire greater vigour from cultivation in a garden. Nineteen times out of twenty he will find the reverse to be the event. The 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 paler green. Dr. MACLEAN's house at Sudbury, is certainly situated low, not far from the river, and in the immediate neighbourhood of large chalk-beds; on such a soil, it is evident, none of the habitudes of the plant can be gratified; and by the usual modes of improving a garden, the ground will be rendered still less fit for promoting its growth and strength. I have repeatedly seen it cherished in shrubberies for the beauty of its flowers, but never yet saw it attain the height and strength of the wild plant. In last July, I gathered at Bergholt, about six miles from this town, in company with Mr. TRAVIS, the surgeon of the above place, and Mr. BUNN, of Hadleigh, a very large quantity of the digitalis. It grows in profusion in this district, from the adaptation of the soil; and we nearly filled a common sized cart with plants gathered from the hedges of one field. A vast number of these were from five to six feet in height, and with stems and leaves of proportional size; the latter frequently of a dark dusky green, approximating to brown, exhaling a strong smell something similar to tobacco, and possessing an intensely nauseous bitter taste. The leaves of a brighter green, were smaller, and had *comparatively* little odour or flavour; the dark and dusky leaves too, were usually found upon the tallest and strongest plants. I have been the more particular in mentioning these circumstances, with a view to prevent, unless where the soil and situation are congenial to the fox-glove,

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its cultivation on garden ground, and, therefore, its consequent degeneracy.

The inferences which I have drawn from some well-known facts in physiology, and to which I am indebted for the use of digitalis in consumption, appear to me to have been misunderstood by Dr. MACLEAN, and to have been objected to upon insufficient grounds. In the present state of medical science, no man, who has duly cultivated it, and who wishes to distinguish his practice from empiricism, can or ought to exhibit a new and powerful agent without founding such exhibition on the deductions of science and analogy. What I have delivered in the "Medical Contributions," on the probable action of the digitalis, is the mere chain of analogical reasoning, which induced me, when called to Mr. MARRIS, first to prescribe the fox-glove in consumption. When I reflect on the event of this case, and of some others which have since occurred, I may be allowed, I think, from motives of pure benevolence, to look back upon this association of idea with mingled emotions of pleasure and gratitude.

"There are some modern practitioners," observes Dr. DARWIN, "who declaim against medical theory in general, not considering that to think is to theorize; and that no one can direct a method of cure to a person labouring under disease without thinking, that is, without theorizing; and happy, therefore, is the patient, whose physician possesses the best theory."*

Impressed with the truth of this observation, I shall attempt to prove, and it will be no difficult task, I think, that what has been termed "a theory totally inadmissible," is but, in short, a statement of facts, drawn from broad experience, and that the only part which can merit the appellation of theory, is a mere analogical deduction arising from these facts. In order to render this more clear, I shall state, in numerical order, the different data. 1. Pus is a secreted fluid, the consequence of certain diseased motions of the extremities of the blood-vessels. 2. Hectic fever arises only from the matter of an open ulcer. 3. What is termed laudable pus, when secluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it rests. 4. When pus is exposed to atmospheric air,
it

* Zoonomia, vol. i. preface, page 2.

it rapidly attracts oxygen, and an acid of a peculiar kind is generated.
5. Hætic fever is the effect of the absorption of aerated matter.

Now, should it be made to appear, that there is just ground for thinking these affirmations to be matters of fact, no one will, probably, deny that the curative processes are legitimately deduced, namely, either to promote absorption so rapidly from the surface of the diseased parts, that the pus shall be taken up as soon as secreted, and, consequently, its combination with oxygen prevented; or so powerfully to retard the motion of the heart and circulating fluids, that the irritating and morbid action of the extremities of the blood-vessels, and, therefore, secretion, as its immediate effect, should be considerably diminished, or altogether suspended.

As Dr. M. has admitted the probable truth of the first and fourth of these data, it will not be expected that I should occupy any portion of my paper in an attempt to prove what he himself has not chosen to controvert. It may, however, be of use to observe, that ample information may be obtained on these topics from BRUGMAN,* EVERARD HOME,† and DARWIN.‡ With regard to the second datum, namely, that hætic fever arises only from the matter of an open ulcer, Dr. MACLEAN affirms, that “daily observation contradicts it, and that in the early stages of consumption it is well known, that the hætic fever is often clearly and distinctly marked, without any increased expectoration, and when the tubercles are still in their infancy, and, consequently, before they have suppurated.” And in a subsequent page, “that hætic arises from collections of matter in different parts of the body, and more especially from vomicæ in the lungs themselves, without any communication with the external air.”

That fever frequently arises during the formation of tubercles in the lungs, or from indurations of the lymphatic glands of the mesentery, and sometimes from encysted and unexposed matter, either owing to an inflammation of the walls of the vomica, or to the distension and gravity of the secreted fluid, is a circumstance of daily observation; but that this fever is one and the same with what is termed hætic fever, and which arises from aerated pus, the experience of the most celebrated practitioners will, I think, positively contradict. “The hætic now de-
scribed,”

* Inaugural Dissertation, Leyden, 1787.

† Dissertation on the Properties of Pus, 1788.

‡ Zoonomi, vol. i. and ii.

“scribed,” says CULLEN, “as accompanying a purulent state of the lungs, is, perhaps, the case in which it most frequently appears; but I have never seen it in any case when there was not evidently, or when I had not ground to suppose, there was a permanent purulency or ulceration in some external or internal part. Indeed, it appears to me to be always the effect of an acrimony absorbed from abscesses or ulcers, although it is not equally the effect of every sort of acrimony; for the scorbutic and cancerous kinds often subsist long in the body without producing a hectic.”*

So essentially different did these fevers appear to Dr. DARWIN, both in their causes and symptoms, that he has given them distinct appellations, and arranged them as distinct species, under the terms FEBRIS A PURE CLAUISO, and FEBRIS A PURE AERATO. “The former is distinguished,” he observes, “from the fever from aerated matter in open ulcers, because there are seldom any night sweats or colliquative diarrhœa in this, as in the latter. The pulse is also harder, and requires occasional venæsection, and cathartics, to abate the inflammatory fever, which is liable to increase again every three or four days; till at length, unless the matter has an exit, it destroys the patient. In this fever, the matter, not having been exposed to the air, has not acquired oxygenation, in which a new acid is produced, which acts like contagion on the constitution, inducing fever fits, called hectic fever, which terminate with sweats or diarrhœa; whereas, the matter in the closed abscess is either not absorbed, or does not so affect the circulation as to produce diurnal or hectic fever fits; but the stimulus of the abscess excites so much sensation as to induce perpetual pyrexia, or inflammatory fever, without such marked remissions. Nevertheless, there sometimes is no fever produced, when the matter is lodged in a part of little sensibility.”† On the FEBRIS A PURE AERATO, he says, “a great collection of matter often continues a long time, and is sometimes totally absorbed, even from venereal buboes, without producing any disorder in the arterial system. At length, if the ulcer has been opened, so that any part of it has been exposed to the air for but one day, a hectic fever is produced. Whence the utility arises of opening large abscesses by setons, as, in that case, little or no hectic fever is induced; because the matter is squeezed out by the side of the spongy threads of cotton, and little or

“ no

* First Lines, vol. ii. p. 86r.

† Zoonomia, vol. ii. p. 232.

“ no air is admitted ; or by tapping the abscess with a trochar. In this
“ fever, the pulse is about 120 in a minute, and its access is generally
“ in an evening, and sometimes about noon also, with sweats or purging
“ towards morning, or urine with pus-like sediment ; and the patients
“ bear this fever better than any other with so quick a pulse.”* In
speaking, too, of the FEBRIS MESENTERICA arising from matter form-
ed in the mesenteric glands, he remarks, that the patient is destroyed by
the continuance of simple pyrexia, or inflammatory fever ; for, “ as
“ the matter is not exposed to the air, no hectic fever, properly so
“ called, is induced.”†

I have had several opportunities of attending closely to the fever arising from mesenteric induration, both previous to and long after open ulceration had taken place among the muscles of the back, and I have observed an essential difference in the nature of the fever accompanying these opposite states. One melancholy case was under my daily observation in this place for more than four years. The patient was about sixteen, when I first saw him ; was of a very scrofulous habit ; and was supposed to have laboured many years under mesenteric indurations, and with all the symptoms likewise of tubercles in the lungs. His friends informed me, that several years ago, but long after his indisposition commenced, a considerable tumor appeared among the muscles of the back and loins, and which terminated in suppuration, and a large open ulcer : He was then attacked with all the symptoms of hectic fever, and it was the opinion of his medical attendants, that he could not survive long. Contrary to their expectations, however, the ulcer healed ; the hectic disappeared ; and he arrived in Hadleigh, I was told, precisely in the situation he had been in, previous to the suppurative process ; that is, he had difficulty of breathing upon motion ; an almost perpetual teasing cough, but no expectoration ; an emaciated and contracted form ; little thirst ; great appetite ; and an uniform, slight, and continued fever. In this state he remained for about three years, when two considerable tumours were again formed among the muscles of the back ; and in spite of every preventive mean, suppuration largely followed, and with great pain. On consultation with Dr. GIBBONS, of this place, it was thought adviseable, as the matter pointed outwardly, and occasioned much irritation, to evacuate the pus of both abscesses ; they were accordingly

* *Zoonomia*, vol. ii. p. 282.† *Zoonomia*, vol. ii. p. 284.

opened by his surgeon, Mr. BUNN, and hectic fever with strong exacerbations, and all its train of symptoms, shortly followed, and terminated in his death about a twelvemonth after; the ulcers, notwithstanding every effort to promote inflammation, absorption, and consequent adhesion, never healing. This remarkable case always appeared to me, and long before I had seen the *Zoonomia* of Dr. DARWIN, as a decisive proof, that the fever following open ulceration, was essentially different in its nature from that which existed previous to it.

As to the third affirmation, namely, that what is termed laudable pus, when secluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it rests; it should be observed, that pus, when first secreted, has been found by very accurate experiments to be a transparent fluid, and to assume the globular and opaque form only after it has rested for some time on the surface of the sore; when secluded from the air, fifteen or twenty-five minutes are required to effect this change, which seems, in a great measure, the consequence of the absorption of the inner parts. It is perfectly mild, and free from any corrosive properties, and following the laws of all secreted fluids, never affects, whilst in its original pure state, the surface which produced it. "It is always in harmony," says Mr. HOME, with the parts which form it, having no power of irritating them, even when the surrounding parts are affected by it.—This seems peculiar to secretions, and arises from the parts themselves not being susceptible of irritation from their own matter.* The absorption of pus in this its native state, produces no effect whatever upon the animal economy, whence the utility of stimulating the absorbents to take it up previous to any vitiation, or any exposure to the air. That fever, however, frequently arises from the formation of pure pus, is undoubtedly true; it is always preceded by inflammation, and sometimes by great pain; by its gravity also, and distension among neighbouring parts of great sensibility, the same effect will often be produced. This pyrexia, however, the result of the physical, not chemical properties of pus, may be accurately distinguished from hectic fever. Pus also is susceptible of many vitiated states, though secluded from the air; but the fever thence arising, and which is termed by DARWIN, FEBRIS A PURE CONTAGIOSO, presents no one characteristic of hectic.

In noticing the fifth and last division, namely, that hectic fever is
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* On the properties of pus, pages 59 and 61.

the effect of the absorption of aerated matter, I must refer to what has been already written under the second, what is there said being equally applicable to the present subject. It is of great importance, however, to add, that Dr. PRIESTLEY has by experiment discovered, that oxygen so greedily unites with animal substances, that it will pass through a moist bladder to combine with them; that BRUGMAN in his Thesis, likewise by experiment, found that pus when exposed to the air in a moderate heat becomes acidified; and that Dr. BEDDOES, from close attention to a variety of curious and minute phænomena, with great probability infers, that the state of body predisposing to phthisis, and which continues during the progress of the disease, is a state of hyper-oxygenation.*

Before I dismiss the subject, however, I cannot avoid commenting upon two remaining objections of Dr. MACLEAN, and which appear to be founded on mistaken and partial views. "If this were the case," observed Dr. M. (viz. that hectic fever is the effect of the absorption of aerated matter) "the thick bland matter secreted from every wound or ulcer, when exposed to a stream of air, would become an ichorous poison, and be productive of the effects mentioned by Dr. DRAKE; but that this does not in reality happen, daily observation sufficiently evinces." Now it occurs very unfortunately for this objection, that the recent improvement in the treatment of ulcers and abscesses, is precisely that of avoiding exposure to the air, and the consequent vitiation of the pus; for it has been the result of universal experience, I believe, that the action of the air on ulcers, in a greater or less degree, always produces acrimony of the purulent matter. "It is remarkable", says DARWIN, "that matter produced by suppuration, will lie concealed in the body many weeks, or even months, without producing hectic fever; but as soon as the wound is opened, so as to admit air to the surface of the ulcer, a hectic fever supervenes, even in a very few hours.—Hence, when ulcers are to be healed, it is necessary, carefully to exclude the air from them. Hence we have one cause which prevents pulmonary ulcers from healing, which is, their being perpetually exposed to the air."† Mr. ABERNETHY, who has met with great success in the treatment of lumbar abscess, by gradually evacuating the pus with a trochar, and thence excluding the admission of air, attributes the hectic fever which follows, when air is incautiously

* Observations on Consumption, 93. † Zoonomia, vol. i. p. 299, 300

incautiously admitted, to mere inflammation of the walls of the abscess; but it remains to be proved, that simple inflammation has ever yet given rise to hectic fever. Were this the case, inflammation of the abdomen and of the tunica vaginalis testis from the admission of air, and of the coats of a vein after bleeding, would produce hectic fever; it should be recollected, that inflammation is the sole cause of the secretion of healthy pus; and when air is admitted to the sides of an abscess, it can only act upon their surface as a simple stimulus, occasioning fresh inflammation, and a further secretion of pure pus; these are, however, of themselves frequently sufficient to exhaust a patient already debilitated; but as hectic fever and a vitiated purulency are almost always the consequence of the exposure of an abscess or ulcer to the atmosphere, it would clearly seem to follow, that hectic fever is the effect of the absorption of pus, after it has received from the air some noxious material.

The last objection which Dr. MACLEAN has brought forward to the doctrine of the absorption of matter in phthisis, is, that ulcers are never healed by absorption, and that the surgeon should not endeavour to promote it. "Good pus," the Dr. remarks, "he would look for as a necessary consequence; nor would he, under any circumstances, endeavour to promote its absorption." This objection appears to me the more extraordinary, as it is the language of medical men, that no ulcer can be healed without absorption; nay, this process is absolutely necessary to the production of what is called laudable pus; for when first secreted, it is transparent and comparatively thin, and only acquires its opacity and consistence from the absorption of the more fluid parts; and even this laudable pus must disappear, though at first necessary to granulation, before the ulcer can heal. The following passages place this matter in a very clear light. "The art of healing ulcers," says the author of *Zoonomia*, "consists in producing a tendency to absorption in the wound greater than the deposition. Thus when an ill-conditioned ulcer separates a copious and thin discharge, by the use of any stimulus, as of salts of lead, &c. externally applied, the discharge becomes diminished in quantity, and it becomes thicker, as the thinner parts are first absorbed. But nothing so much contributes to increase the absorption in a wound, as covering the whole limb above the sore with a bandage; by this artificial tightness of the skin, the arterial pulsations act with double their usual power in promoting the ascending current of the fluid in the valvular lymphatics. Internally, the absorption from ulcers should be promot-

“ ed first by evacuation, then by opium, bark, mercury, steel.”
Again, “ no ulcer can heal, unless the absorption from it is as great as
“ the deposition in it ;” that is, ulcers cannot heal when “ the secre-
“ tion of matter in them continues to be greater than the absorption
“ of it.”*

From the whole of what has been now said, the two curative indications in phthisis, namely, either to promote the absorption of pus previous to its aeration, or so to retard the circulation as altogether to preclude the purulent secretion, will appear, I should hope, both obviously and accurately deduced. As to the digitalis, it has been found, by repeated experiments, to effect in curing consumption, either one or both these purposes, and even in incipient tubercular phthisis before ulceration has taken place ; I suspect the great benefit received from the employment of this medicine, may arise from the absorption of the tubercles themselves. “ In what I have judged imminent consumption,” “ says Dr. BEDDOES, “ the digitalis has produced the most salutary effects in at least as many cases as it has failed. The fatal consequences “ of hæmoptoe have been prevented ; and either the symptoms associated “ with tubercles removed, or (what I am disposed to believe, but time “ alone can fully decide) absorption of the tubercles themselves has ta- “ ken place. An assertion like this, is, I am well aware, liable to be “ controverted ; and it is incapable of absolute proof, since it is impossi- “ ble to take tubercles out of a diseased thorax and exhibit them. “ The probability indeed of their existence is not always equal ; but of “ the nature of the disorder, in most cases, I feel confident—so exactly “ similar were the appearances to those which I had so often observed “ before ulceration of the lungs in other cases ; and it is scarce possible “ I should have misjudged in many of the instances : of this, not only “ the perfect identity of symptoms, but the coinciding opinion of more “ than one medical man, afforded security.” †

I have thus, in as brief a manner as possible, endeavoured to prove, that the opinions and deductions brought forward in the paper on phthisis, in the Medical Contributions, were not built upon slight grounds, but were the result of a survey of many physiological facts, which, when thrown together, appeared to me satisfactorily to account for both the salutary effects of digitalis, and the state of the system in phthisis. I
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* Zoonomia, vol. i. 410 ; vol. ii. 730.

† Essay on Consumption, 2d edition, page 303.

with it, however, to be recollected; that no obliquity or subserviency can attach to practice in consumption, in consequence of what has been delivered; the two facts with regard to digitalis, viz. its powers of promoting absorption, and its dominion over the heart and arteries, stand prominent and insulated from any fet of opinions; and the cases too, in which its salutary agency has been recorded, can admit of no modification. The attempt to throw light upon the nature of an obscure but destructive disease, and to account for the effects of the most powerful agent yet employed in removing this disease, can only be productive of benefit: should it fail, it may have the merit of eliciting further and more successful inquiry; but should it approximate toward the truth, incalculable may be the utility conferred upon mankind.

I am, GENTLEMEN,

With great respect,

Yours, &c. &c.

Hadleigh, Suffolk, Oct. 28, 1799.

NATHAN DRAKE.

*On the Use of Digitalis in Consumption: by DR. BREE,
of Birmingham.*

[Continued from p. 314—318 of our last Number.]

CASE 9.—Mr. Ralph Ward, aged 30, tall and thin, with a long neck, was attacked in Sept. 1798, with pneumonia, which I treated in the usual manner. In the beginning of the winter, I found his pulse nearly as quick as when I prescribed for him in Sept. He had a short cough, and a tightness in his breast; he had been subject to a cuticular eruption, which I then endeavoured to promote; but though it appeared very plentifully all over his body, there was not the relief which I expected in his breast; his pulse was never slower than 96, generally 100, and he had a good deal of languor. In April 1799, he spat bloody mucus for a few days.

1799, May 21st. He has a short and frequent cough—shooting pains in his breast—his pulse at 96—his belly costive—he has very bad nights from the cough—he does not complain of heat or chilliness. I prescribed pulv. fol. digital. in pills with extract. glycyrrhizæ: he was to take a grain and a half twice in 24 hours. I also directed equal parts

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of camphorated tincture of opium and oxymel of squills, to be taken at bed time, and occasionally in barley water.

June 20th, I had seen this patient at least four times a week, as he was diligent in his calls at my house since May 21st. I have not yet observed his pulse to be retarded; but yesterday the stricture over his breast was very troublesome—he had shiverings in the day and sweats in the night—his cough as troublesome as ever—he has some sickness at his stomach, with foreness in his chest and between his shoulders—his tongue is white—his belly costive—pulse 120. As this case was favourable, I had expected a different set of symptoms after so long an exhibition of fox-glove; I therefore reflected on the propriety of abandoning it for a more certain practice; but finally resolved to pursue the trial till his stomach was more affected, or his pulse became slower. I directed a blister to be applied to the breast, and the pills to be continued. June 23d, his pulse is slower than it has been, in all probability, since October last—it is only 68. His cough is less frequent in the day, but very troublesome in the night, with perspiration—June 24, pulse 62. I now changed the pills for a tincture of fox-glove, that he might modify the dose according to his pulse, or feelings of the stomach.—June 25, p. 60.—June 26, p. 54. The complaints of his chest and cough are nearly gone; his spitting was yesterday very slightly tinged with blood. Notwithstanding the progress of the case, he has no sickness of the stomach, nor any particular want of appetite. June 29, p. at 42; and with this altered state of the circulation, he has no particular inconvenience to complain of, he only feels generally low. July 7th, his pulse is at 40. I have seen him every day of this month, and have not found it to be more than 50 in any observation. He now took a better diet, with meat and porter sparingly; he continued the drops for several weeks, and his complaints have not returned.

In considering the above cases, a few reflections suggest themselves:

1. The cases of William Harrison and George Underhill were incipient, and the case of Mr. Ward was incipient. The two former were preceded by hæmoptysis, which continued occasionally in the progress: the latter was in my opinion tubercular, and the hæmoptoe was inconsiderable.

However well recommended digitalis may have been in hæmoptoe, it had no material influence in checking the advance of phthisis in Harrison and Underhill, and the symptoms of pulmonic inflammation appeared

appeared to increase under its use in their cases, though the hæmorrhage abated. In the case of Mr. Ward, the quickness of the pulse was for many months the strongest indication of this insidious disease: we might have suspected the growing mischief from his short cough, and occasional slight pains of the thorax, accompanied by a pulse of 100 in a minute during the whole winter, even if his first attack in September had not been pneumonia, and required repeated bleeding. — A violent cough, with pain and expectoration, and a pulse of 80, would have given little alarm; when a short cough, trifling stitches, and no expectoration, were very alarming with a pulse generally above 100, and the heat of the body natural. In this state the power of digitalis may be said to have demanded the confidence of the practitioner in similar cases: the circulation was retarded without inconvenience to the patient, beyond my expectation; in fact, it acted as a regulator of the pulsations of the heart. If Mr. Ward took 30 drops of the tincture twice a day, his pulse was sure to be nearer 40 than 50 in a minute; if he omitted one dose in 24 hours, or diminished each of the doses to half, his pulse increased to 50 beats or a few more, and during this state of the circulation all his complaints disappeared.

The remaining six cases were too far advanced to have been capable of cure from any medicine; but it perhaps may be worthy of the humane practitioner's attention, that considerable distress was added by the effects of the digitalis on the nervous system, and function of the stomach: such effects are indeed looked for in some instances, when the pulse begins to correspond with the intention of the physician. In the case of Mrs. B. it is probable, that the continuance of the plan might have brought the pulse to 60; but she was not better for the alteration which had taken place; and the increase of strength after the medicine was left off, too plainly declared the cause of her rapid decline during its use. It was Dr. WITHERING'S opinion, the 23d of May, that the anorexia was not owing to the influence of digitalis, because the pulse should have been slower than its natural standard, to correspond with the state of the stomach as proceeding from that cause. Facts are however opposite to this decision in all the above cases, excepting in that of Mr. Ward.

But when the function of the stomach is greatly injured, and little progress is made in retarding the actions of the heart, a considerate man will weigh with great caution the benefit he speculates upon, against the positive mischief in his view. In my opinion the future prospect
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may frequently turn the ſcale, and the patient may enjoy comparative eaſe in his laſt days, if he have his digeſtion not worſe than his diſeaſe may make it, and his ſtrength and ſpirits only waſted in the gentle gradation which is the conſequence of phthiſis.

In ſupport of this cautionary remark, the ſecond, third, ſeventh and eighth caſes are ſtrictly in point. I would, however, more particularly attend to the ſecond.—Mrs. C. had the appearance of living months longer, if the fullneſs of her muſcles be conſidered. An internal hæmorrhage may have cut ſhort the diſeaſe, but there was no evidence of ſuch a cauſe; and the loſs of irritability ſeemed to accompany the exhibition of the medicine, with the ſame characteriſtic marks of its injurious influence on the digeſtive organs as appeared in the other patients.

However painful it may be to take this retroſpect, in which the good to be obtained from the remedy does not appear in ſo ſtriking a light as in former accounts of practitioners, I join in the general acknowledgment of thanks to the ingenious phyſicians who have lately excited the attention of their brethren to a remedy for phthiſis. It muſt however be allowed, that haſty concluſions are of no trifling moment to the peace of relatives and the comfort of patients; and with a view to prevent theſe, I have not been ſolicitous to conceal my want of ſucceſs in the uſe of digitalis.

BIRMINGHAM, Oct. 12, 1799.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,*

NOT having read any one of the pamphlets that have been publiſhed by Mr. HULL or Mr. SIMMONS, on the ſubject of the Cæſarean Operation, I have no intention in what follows to enter the liſts in favour of theſe diſputants. But what has been advanced by the latter gentleman, in the laſt Number of your uſeful Journal, appears to me to re-

* We were under the unpleaſant neceſſity of omitting this valuable communication in our laſt, on account of the great preſs of matter previously received.—EDITORS.

quire some notice, as it tends to overturn an established rule of practice, by which our conduct ought perhaps on some occasions to be regulated.

I agree with him, that the only case in which a thought of the *Cæsarean* operation can be reasonably entertained, is, where the pelvis of a woman is so distorted as to prevent the delivery of a child, in any way, through its contracted aperture, and consequently where, if nothing be done, the woman must die undelivered, and the child of course, though known to be alive, must perish with her. I am willing too to concede, that from all experience hitherto had in this country, the operation will certainly be fatal; yet still the question is not brought to the point, as he has stated it; *whether the mother's life shall be sacrificed to save her child?* because such a question necessarily involves in it, at least a tacit acknowledgement, that the mother's life can be saved, if no regard be paid to that of the child; for how can that be said to be sacrificed, which is already allowed to be devoted to certain destruction? If the question be fairly stated, it amounts to this: *When the mother's life cannot possibly be preserved beyond an existence miserably protracted for a few days, is it allowable to run the risk of shortening this period for the sake of preserving the life of a child, which must otherwise perish with her?* Perhaps, when the question is thus put, Mr. SIMMONS will not so readily anticipate an answer in the negative. It is not improbable that *Eliz. Thompson*, the poor woman on whom the operation was performed at Manchester, survived as long as she would have done, if she had been permitted to perish undelivered, and suffered infinitely less both in body and mind. Human imagination can hardly conceive any thing more dreadful than the distressing anxiety of a woman in the pangs of labour, without hope of delivery: the few hours of her existence after the birth of her infant must have been comparatively happy.

What Mr. SIMMONS has said respecting laws human and divine, is totally irrelevant; none of your readers need be told, that taking away life does not in all cases constitute murder; and his whole reasoning on this point, applies with equal force against destroying the child, where that may be necessary, to save the mother.

Through the goodness of Providence, a pelvis so deformed, that a woman cannot, under any management, be delivered of a living child, is comparatively a rare occurrence; but one distorted to such a degree, as not to admit of delivery, even when no regard is paid to the life of the child, is so very rare, that I have never, nor I trust never shall meet with it. But as it is impossible to say what may happen, every practitioner

practitioner should have in his mind certain principles by which his conduct may be regulated under all circumstances. It may then, I believe, be laid down as a rule of practice generally followed in this country, that in no case shall the life of the unborn child be put in competition with that of the mother. The questions really occurring are therefore, Is the danger to the mother's life, such as to call for the sacrifice of that of the child? or, on the other hand, Is there good ground to believe that such sacrifice will be effectual in preserving the life of the mother? But not to take up your room unnecessarily, I beg leave to refer to Dr. DENMAN's excellent Introduction to Midwifery; a book that is, or ought to be, read by every practitioner in this country; where this whole business is discussed in so clear and comprehensive a manner, as I should have thought might have precluded all dispute, and will conclude this part of the subject in his words: "I am not willing to accept any other principle but necessity, as a justification of the Cæsarean operation; that is, whenever it is proposed, there shall be no other way or method, by which the life, either of the mother or child, can possibly be preserved; and the impossibility shall be confirmed, not by the opinion of one, but as many competent judges as can be procured. I should then consider this operation justified by every principle of religion, and the laws of civil society, by as decisive and satisfactory evidence, as any other operation, which we never hesitate to propose or to perform."

Thus far I have proceeded upon the supposition, that the operation is to be considered as certainly fatal to the woman upon whom it is performed; but although it has uniformly proved so in the cases that have occurred in this country,* these cases, about twelve in number, are by no means sufficient to warrant a conclusion, that there is no possibility of a more favourable event. A rupture of the uterus has been generally considered to be certainly mortal, and probably has proved so in twelve times twelve successive cases; yet we now know that women have repeatedly recovered from this most dangerous accident. A wound of the uterus then is not, nor can we conclude from twelve, twenty, or even fifty unsuccessful cases, that the Cæsarean operation is, in its nature, necessarily mortal. In so deplorable a situation therefore, even when we speak of the mother only, and set aside all consideration about the child,

* It has been said to have been twice successfully performed in England; but as I have not seen any satisfactory evidence of such operation, I forbear to mention these cases.

we may apply CELSUS's rule, *Melius est anceps quam nullum experiri remedium.*

Having then, I trust, brought the business fairly to this issue, that as cases have occurred,* and may occur again, which allow of no other possible way of delivery than the Cæsarean operation, and that as this operation affords an opportunity of preserving the child, and though a very remote, yet the only, chance of saving the life of the mother also, therefore this operation may be justifiable and necessary: It remains next to consider, whether the operation has been conducted in the best possible manner? or whether means may not be devised of affording a somewhat better chance of recovery to the unfortunate patient than has been hitherto done?

We can infer a priori, that wounds penetrating the cavity of the heart must necessarily be fatal, but no such reasoning will apply to wounds of the uterus; we must therefore seek for some other cause for the fatal termination of this operation. This perhaps may be found in the consideration that the subjects are generally such as no one would select to try the success of any operation upon; that this too is to be undergone in the time of labour, when the irritability of the constitution is very much increased. These circumstances, joined to the baneful effect of atinospherical air admitted into the cavity of the abdomen, may perhaps be sufficient to account for the general want of success. With regard to the subject on whom the operation is to be performed, all that can be in our power is, to take care that it be executed as early in the labour as possible. But to prevent the admission of air into the cavity of the abdomen, it appears to me something essential may be done which has not, as far as I know, been hitherto attempted. As, for instance, all the parts
concerned

* It has not appeared to me necessary to prove that such cases have occurred, because in the paper published in the last Number of the Journal, Mr. Simmons seems to allow this. But the Monthly Reviewers, in their criticism on another publication of his, Art. 8, for September, say, that they coincide with him in opinion, that this operation is now superseded by safer means, alluding to the remarkable case published by Dr. Osborne. Where these safer means can be applied, I perfectly agree with this opinion; but surely, in such a case as that of Eliz. Thompson, where no part of the child could be touched with a finger, even when the whole hand was introduced into the vagina, no one acquainted with such operations can believe, that the greatest skill could, by any known means, have extracted a full-grown child through such a pelvis. I have by me casts of the pelvis of two subjects upon whom the operation was performed in London, a mere inspection of which will lead to the same conclusion.

concerned in the operation might be kept under water of a temperature duly regulated, not only during the performance of it, but until the wounds were healed, the process for which would probably go on as well under water as we know it does under a poultice; at the same time a free outlet would by these means be given to the discharges from the vagina. If this scheme should be thought impracticable, still an attempt might be made, though in a less perfect way, to exclude the atmospheric air. When the line of incision through the integuments should be fixed upon, two slips of adhesive plaster, spread upon thick, soft, and elastic leather, such as doe or buck skin, of a sufficient breadth to secure a firm hold of the skin, might be fixed close to this line; and immediately after the operation, these strips of leather might be neatly sewed together with a glover's needle, and the future covered with wax softened with oil. Or perhaps it may be thought better to cover a large portion of the abdomen with such a plaster, and to make the incision through the leather and the integuments at the same time, sewing the edges of the leather together after the operation as before proposed. Nor is it sufficient to guard against the admission of air by the incision made through the integuments; this will likewise readily find its way up the vagina, and through the wound in the uterus. This would be effectually prevented by the first scheme of keeping the parts immersed in water; or the air might be in a great measure excluded, by keeping the external parts closely covered with any oval vessel filled with a soft poultice, that might fit close and sit easy. Wishing only to give the principle of what is to be done, and to leave the means of executing it to the ingenuity of the operator, these hints may suffice.

NEW BRIDGE STREET,

JOHN SIMS.

O^r. 21, 1799.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IT was my original intention, in discussing the subject, not to advert to any particular instance of the Cesarean operation; but, in consequence of the introduction of my name, and that of Mr. OGDEN, into the account of the case lately published by Mr. WOOD, in the fifth volume of the "Memoirs of the Medical Society of London," I feel myself called

called upon to ſay a few words in reply. It is the more neceſſary, in the preſent inſtance, as ſome facts are omitted which bear materially on his concluſion; and as the propriety or impropriety of performing this operation muſt reſt on the reſult of well-authenticated caſes, the public have a right to expect the full-eſt evidence upon each of them reſpectively. At the requeſt of Mr. OGDEN, I viſited the poor woman, as ſtated by Mr. WOOD, and from the information I gained upon an inquiry, it appeared to me to be one of Dr. OSBORN'S crotch-et-caſes; this was the opinion I gave to Mr. OGDEN, who thereon determined, for reaſons of a private nature, in which I was perſonally unconcerned, to ſend her to the Lying-in-Hoſpital in Mancheſter; of courſe, no attempt was made to deliver her.

From the manner in which our names are introduced, coupled with his remarks on the caſe, Mr. OGDEN and myſelf are compelled to infer, that it was the writer's intention to impute the woman's death to our miſmanagement. Whether this imputation be well founded, the public will now be enabled to determine.

She was conveyed in a cart, as ſtated; but it ſhould have been alſo inſerted, that ſhe was placed on a feather-bed, which was ſlung with cords in imitation of a hammock, by which the ruggedneſs of the road would be counteracted. Mr. WOOD'S general concluſion is, that "her death was not occaſioned by the operation, but by a gangrene that had taken place in the *cervix uteri*, which in my [his] opinion, muſt have been occaſioned by the preſſure of the child's head prior to the operation; and I am induced to believe, had the operation been performed earlier, and at the patient's houſe, ſhe would have ſtood a great chance of recovering."

We are ſtill left to conjecture what time is deemed early enough to give the patient a "great chance of recovering" after this operation; twenty-four hours is uſually deemed the term of a natural labour, when no adventitious help is required. This woman was taken in labour about one o'clock on the Monday morning;—I ſaw her, in company with Mr. OGDEN, at nine;—ſhe arrived at the Lying-in-Hoſpital about one; and the operation was performed at nine the ſame evening. The delay then occaſioned by her removal was *four* hours;—the time that elapſed after her arrival at the Lying in-Hoſpital, before the operation was performed, was *eight* hours;—and from the commencement of labour to the time of the operation was *twenty* hours.

If

If inflammation had existed prior to the operation, as Mr. WOOD has stated, it must have been marked by the usual symptoms; Mr. OGDEN and myself are certain that it did not exist at the time we saw her, both from the calm state of her pulse, and the perfect intermission between the pains. No notice is taken by Mr. WOOD of the state of the pulse prior to the operation; nor is it observed that the pains had any peculiar character, which must have been the case, had inflammation existed from the cause alledged; it is simply stated, that they were *very frequent*.

But, if inflammation of the uterus had come on after we saw her, yet previous to the operation, how comes it that it was not discovered? The day after the operation, she was thought to be in no danger; and twenty-five hours from the time of performing it, her pulse beat only 108 strokes in a minute. The following morning, we find that the pulse had increased to 120; at noon of the same day it beat 144; and on Thursday morning, at seven o'clock, it beat 150. Thus most distinctly marking the progressive increase of the disease, as caused by the operation; for it is impossible that the pulse should have continued at so low a number, for so long a time, if inflammation of the uterus had existed prior to it.

Gangrene is said to have been discovered, on dissection, in the "inferior portion of the body and *cervix uteri*." If it had been occasioned by the pressure of the child's head, as asserted, it must have had an appearance corresponding to the form of the body which produced it; but this circumstance, which would have been almost decisive of the cause, is not alluded to. That it should have been occasioned by the pressure of the child's head, is, indeed, extraordinary. In other instances, the head shall be jammed in between the bones of the pelvis, for twice the length of time that elapsed from the coming on of labour to the performance of this operation, without any material inconvenience ensuing to the mother after her delivery. In this case, in Mr. WOOD's opinion, and I should be sorry to mis-state it,—the intermitting contractions of the uterus, pressing the child's head against a part of its own body at each contraction, which was again resisted by the soft, elastic substance of the abdominal muscles, brought on inflammation, terminating in gangrene, though suffered to continue but for a few hours. It should be remembered, too, that the upper part of the head of a child, at the time of birth, is composed of distinct bones so loosely connected together as to admit of being lapped over each other when compressed, and yet so elastic as soon to recover its original shape on removal of the pressure,
which

which must materially lessen the chance of mischief from its acting mechanically. And from the position of the child in utero, and the peculiar curvature of the spine, it is highly probable that the mere weight of the lower parts of its body, would retract the head from pressing against the uterus, at each interval between the pains. Yet this was the part, according to Mr. Wood, that by its pressure for so short a time, produced gangrene of the uterus. It is obvious, from the extreme narrowness of the pelvis, that the head could not descend, so as to press the uterus against any of the bones of which it is composed. Mr. Wood does not mention that the natural shape of the head was at all changed.

In performing the operation, Mr. Wood made an incision through the common integument and abdominal muscles, to the extent of six inches; he then made a corresponding incision through the body of the uterus. An incision of the nature of the former, as largely exposing the cavity of the abdomen, has been usually deemed dangerous; and a large wound of the uterus has been commonly looked upon as mortal. The diseased appearances observed in the abdomen prove the existence of peritoneal inflammation, and of inflammation of the intestines; ten or twelve ounces of bloody serum were found extravasated into the cavity, together with some coagulated blood. By referring the cause of her death to inflammation of the uterus, terminating in gangrene, and caused as abovementioned, Mr. Wood has regarded these appearances as of little moment, though peritoneal inflammation, or inflammation of the intestines, when singly existing, proves frequently mortal, even when not attended with any extravasation of blood.

The quantity of blood lost during the operation was about eight ounces; how it was disposed of, he does not tell us; neither does he mention how long the cavity of the abdomen was exposed; nor whether the epigastric artery was divided in the operation, which is probable from the direction of the incision; yet these are points which some may think material, as tending to ascertain the real cause of her death.

But admitting that inflammation existed in the uterus prior to the operation, let us next inquire into the propriety of the after-treatment, under these circumstances of accumulated danger. In inflammation of the uterus, as well as of the intestines, the disease is most powerfully combated by bleeding, which is directed to be employed in such cases, as far as the constitution of the patient and strength of the pulse will bear. It is observed that the pulse was *hard* at different periods of the disease,

disease, yet both general and topical bleeding were entirely omitted. In inflammation of the uterus, and of the intestines, the frequent injection of clysters is generally insisted on. In this case, though inflammation of the uterus is said to have existed at the time of the operation, the first clyster was not injected sooner than seventeen hours; the second, not till Wednesday noon, after an interval of thirty-nine hours; and forty-eight hours had elapsed from the time of the operation, when the blistering plaister was directed to be applied to the abdomen. Indeed, it does not appear that the precaution of injecting a clyster previous to the operation had been attended to, though the woman had been then eight hours in the hospital.

Upon the mature consideration of the above, which are the leading circumstances of this case, the professional reader will be enabled to decide upon the probable cause of the patient's death; and whether it was occasioned by gangrene of the uterus, brought on by pressure of the child's head prior to the operation; or what greater chance for success there would have been, had the operation been performed earlier, and at her own house.

Mr. Wood's opinion pre-supposes little danger to attach to the operation itself, as her recovery would, in that case, have been confidently reckoned upon. A large incision made into the uterus and its consequences, extravasation into the cavity of the abdomen, peritoneal inflammation, and inflammation of the intestines, are as confidently rejected, as being insufficient to account for her death.

Upon such inconsequent reasoning is this operation to be persisted in? an operation which, in my opinion, is *in itself mortal*, and which has certainly proved mortal in this country in every instance. When a question is to be decided by numbers, the voice of an individual will be of trivial import; but whether this operation will be permitted to be performed in opposition to reason and fact, time will shew.

These observations would have been more properly placed in the volume containing Mr. Wood's account; but as that is now impracticable, I am persuaded, from the zeal to promote the true interests of the profession which you have manifested, and from your candour and impartiality, that you will give them insertion in an early number of your publication.

MANCHESTER, Oct. 27, 1799.

W. SIMMONS.

NUMBER X.

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To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AFTER the embarkation of the continental expedition, under the orders of His Excellency, Sir RALPH ABERCROMBIE, the command of which has since been assumed by His Royal Highness the Duke of YORK, I conceived the thought of sending occasionally, for insertion in your extensive Miscellany, such cases of the gun-shot kind worthy of remark as should come within my observation; such, I presume, must also have been the determination of many of the medical men employed on this service; and, most probably, ere now, you may have from this quarter, communications before you: still, however, should room be found, even in a secondary way, for these, I shall feel my purpose completely fulfilled.

I am, GENTLEMEN,

Your most obedient and humble servant,

Schagen, North Holland,

J. CHRISTIE, 27th Foot.

October 16, 1799.

Before entering on my plan, I must first beg your indulgence to introduce here a few prefatory observations, not unconnected with the subject, together with remarks on gun-shot wounds in general; and although I am afraid these by some will be thought strange and foreign, still I conceive them, in some measure, necessary, for reasons that may presently appear. First of all, I must not raise the hope, or express the assurance, that what I may have to say on this subject, has not before been handled in a much abler manner by other pens: of this I am fully aware, although some of those hints may have escaped writers, or have been thought by them of so little importance as to be unworthy of notice. Great allowances will, I am sure, be made for the circumstances of local situation; for here we are removed from the assistance of men or books—I have neither to consult; it may therefore happen that, while I am buoying myself up with the thought of some of my remarks being *original*, the public eye may regard them only as hints borrowed, at the same time that their importance is but little. In meeting this last opinion, however true, I would here beg leave to reply, that in very many situations in which man must act his part, too little attention has frequently

frequently been paid to matters considered small, and the expression—“ Take care of small things, the great will take care of themselves,” is neither without it's meaning or importance. What one man does, I maintain it, another may. The slightest actions, or even expressions of an individual, have frequently marked his true character, as certainly as if all his motions had been observed, and all his thoughts been revealed from his cradle to his manhood:—to speak plainly, the surgeon who applies a bandage clumsily, or uses his lancet awkwardly, I should be by no means ready to come under the *cut* of his great knife.

Hoping, as I confidently do, that allowances will be made for any inaccuracy or deficiency that may happen in consequence of local situation, (and few are the leisure hours) I must likewise not forget to intreat consideration on account of personal circumstances for the regimental practitioner. It must be obvious, that he has but few advantages, and but little opportunity for observation; since, as you well know, on all services, the worst cases are intrusted to the staff of the hospital department; and as a great majority of the wounded here have been sent to the different military hospitals in England, my views will be in some measure retarded, since those were principally to observe the progress and termination of hurts in all their varieties, and through all their stages. It is, however, principally the trammels of a subordinate station, that I have most to regret, in preventing those remarks from being so useful as could be wished.

In barbarous times, among savage nations, it had been customary for the combatants in war to poison their weapons of destruction; such has been said to have been practised in later times, and among people dignifying themselves with the name of civilized and polished. It was from this source, no doubt, that the idea of the nature and treatment of gun-shot wounds being mysterious, had first arisen; and even still, among ourselves, I cannot help remarking it, a remnant of that pedantic sort of importance, nourished by narrowness of soul, may be seen occasionally wielding her dark implements: but as the reign of superstition draws to a close, that of reason hath generally succeeded, and gun-shot wounds have been long known, at least in Europe, to require no other treatment but that of contused and lacerated injuries. In some respects, however, they are certainly different as to their mode of infliction; the course a musquet-ball sometimes takes, is so remarkable as to describe almost the half circle of the body, sometimes winding, sometimes even retrograde;

retrograde; and this singularity hath been long ago observed by army surgeons, and even noticed by that favourite of nature and ornament of art, Mr. JOHN HUNTER.

The turning course, which a musquet-ball frequently takes on entering the body, may be accounted for by a fact well known to the artillery-men and *sharp-shooters*.* A cannon or musquet-ball, in its passage through the air, hitting some firm resisting body, shall be seen to move directly out of its straight course, and to take one laterally, or ascendingly. By way of illustration, let us suppose the head of a pin fixed on a billiard-table, and struck by the moving ball centrally, its straight course would be altered to an ascending one; if the ball strikes more or less laterally, so will its course be altered more or less oppositely. Thus it is with cannon and musquet-shot; for, during the action which happened upon our landing, the 27th of August, on that bloody shore bordering the Texel, the sand hills afforded a sort of covering for the combatants; a convenient retreat for the medical people to dress their wounded; yet, still, behind those protecting eminences, I was surprised to find an accident or two from shot, at the very instant of dressing. I looked to my right, there was the sea, from which a gun-boat or two only plyed well their carronades; on my left was a plain, on which the enemy's cavalry were placed to watch our motions; from neither of those quarters could the balls have proceeded. I now observed several men wounded by the enemy in front, although placed in a situation where no shots could have reached us, but by this turning sort of course I have attempted to describe. Now, a ball striking the head, a rib, or any other bone, and glancing along them, as it frequently does, without any material injury, must undoubtedly be owing to its meeting laterally the resisting body, by which its force will be but partially impeded. Thus I have been sometimes surprised to find in gun-shot wounds in the extremities, that the bone remained sound, where the ball had *seemingly* entered directly upon it, passing over it.—It is therefore probable,

* These last are light armed infantry, generally using rifled pieces, and dressed in green cloathing. They are detached among woods and on road sides, for the purpose of scouring and preventing surprize; they are called by the Dutch and Germans, *Jägers*, and *Grün Jägers*; for steadiness and precision they are said to be vastly superior to other troops; and our continental friends, as well as enemies, seem to employ more of those riflemen than the English. This is by no means fair; for these fellows, skulking in woods and thickets, like serpents, prepare and send their deadly messengers on many an open and unwary soldier with dreadful exactness.

bable, that in shots from musquets, the bone is seldom fractured, unless the ball strikes centrally. Hard and firm bodies frequently alter the course of balls, so that death or injury is sometimes prevented; we also know that elastic substances, particularly when lubricated, possess this quality in a very eminent degree. It seems extremely likely, in many of those lucky shots which had penetrated the cavities of the thorax or abdomen, mischief had been prevented by the yielding quality of the lungs or intestines; and thus, in some way, the course of the ball changed, and prevented from entering their substance, analogous to packed wool or hair, &c. which are known to resist powerfully the entrance of penetrating round bodies. When we reflect for a moment on the maternal care by which Nature has so admirably provided against accidents to important parts; the serpentine course the carotids assume on visiting the most wonderfully intricate and essential part of all animal machines; and, indeed, the provident manner in which the whole arterial system is distributed, and the thousand other accommodations she universally provides for the preservation of the animal: it is not at all an improbable conjecture, that the omentum may be placed on the intestines, partly for the defence we have been speaking of, since in most animals it became indispensably necessary, that the abdomen should have fleshy walls.

Although experience may have taught, that the lungs and abdominal viscera may be penetrated by bullets, and followed by recovery, I believe the well authenticated cases on record are but few, and that many of those at least, which had passed in from one side, so as to come out at the other, had left the viscera unhurt; for it is to be observed in gun-shot wounds, that there must be always a considerable destruction of the surrounding parts, unavoidably arising from laceration; and thus, the sloughing must be both certain and extensive.—The velocity with which balls enter, may tend, in wounds of the thorax and abdomen, to prevent mischief by little or no opportunity being given for the entrance of the external air—the wound closing like a valve—the consequent coagulable effusion and inflammation continuing in a great measure afterwards to shut up the orifice.

An officer of rank in the army, while serving in the West Indies in 1796, received a musquet ball, which lamed his hand; and almost immediately afterwards, another entered a little to the right of the left breast, i. e. between it and the sternum, the ball carrying along with it a piece of shirt and flannel waistcoat; it came out almost opposite,
but

but more outwardly, i. e. about two hand breadths from the spine.—The consequence of this wound was great oppression, difficulty of breathing, and occasional bloody spitting. Both orifices continued long to discharge, and he returning to England soon after, apparently in a state of consumption, was desired by the first medical advice in the kingdom, to adhere to a proper diet, chiefly consisting of milk and vegetables, and to trust the cure to Nature.—There was not any emphysematous appearance; but after twelve months languishing with distressing pain, cough, and dyspnoea, he was reduced to a mere skeleton—his spirits fled—he became peevish—refused nourishment, and was given up for lost; until an extraordinary accident, which, if it were not well authenticated, I should hardly be ready to communicate. The house in which he resided having been extraordinarily illuminated, on account of the victory gained by Lord DUNCAN over the Dutch in 1797, and the room in which he slept being in an high situation of the house, the smoke of the candles brought on such an intolerable fit of coughing, that a great quantity of frothy, bloody matter (or as he himself expressed it, all kinds of devils) came up, which had nearly suffocated him. Although his room was almost immediately changed, he remained the whole night, and for several days afterwards, in the greatest distress from the cough and dyspnoea.—After this, however, he gradually recovered—his cough left him, and with it all expectoration—he regained his appetite and strength—one wound entirely healed—the other continued to discharge, and occasionally to exfoliate a little bone. Twelve months after the accident, it discharged a hard substance, which was afterwards found to be a bit of flannel waistcoat, encrusted with an earthy kind of matter.—After this, he perfectly recovered, with only a slight hollowness of voice, and occasional pain in the side, on any extraordinary exertion. From the imperfection in the voice, it is probable, the substance of the lungs had been penetrated. The same officer, in the action on the coast of Holland, on the 27th of August, received a musquet shot, which glanced along the squamous portion of the temporal bone, carried away a portion of the orbit, and entirely destroyed the left eye; and although he is thus, as it were, broken winded, blind, and lame from wounds, he is yet healthy, active, vigorous, and in good spirits!

When speaking of the eye, I would here beg to mention, that very obstinate ophthalmies were frequently occasioned on the coast of Holland, by the sand blowing between and within the eye-lids.—This sand

fluid was so fine and penetrating, that I believe it insinuated itself into every aperture of the human body: I have observed in those, as well as other ophthalmies, that resist for a time the antiphlogistic plan, as bleeding, saturnine applications, &c. another sort of treatment soon becomes necessary—the division of the turgid vessels on the conjunctiva, by the edge of a lancet, as mentioned by Dr. CULLEN, I have constantly found, *at first*, to afford considerable temporary relief, as well as leeching and cupping. Blistering is almost always very serviceable, but principally after the disease has been of some standing, and then it appears to be useful by its stimulating quality; for the vessels, after having been long turgid, become languid and inactive; and being principally connected to an unyielding substance, they lose the power of lessening their diameters to their original size.

In obstinate ophthalmies, I have frequently admired the care which Nature has seemingly taken to prevent suppuration; for here its formation is both less frequent, and less extensive, than we would à priori expect; and it appears to me, by no means unlikely, that the blood, on entering the coats of the eye and its appendages, may undergo such a change, as to render it less fit for the formation of pus; it may possibly part with its coagulable lymph; and, from the astonishing secretion that sometimes happens in the lachrymal glands of children and hysterical women, we would be led to imagine, that there was an excess of the watery part in these vessels.

[To be continued in our next Number.]

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS there are not many cases on record, similar to the one described in the annexed paper, you possibly may think it worthy a place in your valuable Publication.

I am, GENTLEMEN,

With great respect,

Your most obedient humble servant,

Croom's Hill, Oct. 12, 1799.

S. GILLAM MILLS.

SOME time in July 1797, I was casually consulted by a lady, who imagined herself two or three months gone with child; her complaints were

were pains in the back, attended at times with the sense of bearing down, and appearances of catamenia; hence she imagined she was about miscarrying. Knowing her aversion to any medical regimen, I only advised her to keep as much as possible in an horizontal position, and to pay due attention to the state of her bowels. Several weeks after I had given this advice, I met her maid, who informed me, that her mistress continued much as when I saw her; from this, I hinted as my opinion, that she was not pregnant.

When my patient had supposed herself to be five or six months gone, I was desired (unknown to her) to visit her; she was then on the bed, and told me she had had throughout the day regular pains, with some discharge; but as she thought the pains were not sufficient to require my assistance, she had neither sent to me or the nurse, being strongly averse to having either with her till absolutely necessary. I desired the family would immediately send for the nurse, to whom I gave directions that were proper, for obtaining a due information respecting the nature and quantity of the discharge. In a little time, I was convinced that the flooding was considerable, particularly in time of pain; I took the earliest opportunity to examine my patient by the touch, and found the vagina filled with what I imagined to be coagulated blood. The os uteri low down, lax, and dilated about the size of half a crown. After this examination, the hæmorrhage nearly ceased, but soon returning to an alarming degree, I determined to seek for the fœtus and deliver. On introducing my hand for that purpose, the uterus forcibly contracted, and filled my hand with what I thought clots of blood: at that instant my patient was seized (as she called it) with a most violent cramp in her belly, and was attacked with an universal rigor; under these circumstances, and sensible that the flooding had ceased, I desisted from pursuing my intention of delivering, and administered wine and such other remedies as the occasion seemed immediately to require. At this time, the rigor and coldness were like the paroxysm of a severe ague, but the pulse, though quick, was not alarmingly low. When my patient had regained her natural warmth, I was solicitous to ascertain the state of the uterine discharge; I found hardly any, I therefore employed myself in clearing the bed from the collected coagula; when, to my surprise, I nearly filled a basin with innumerable hydatids, of various sizes, from a large Portugal grape to a small pin's head. The whole, so cleared, measured three pints and four ounces. The lady recovered her accustomed state of health, as patients usually do after violent floodings, and she has not proved pregnant since. She has
had

had many children. After the birth of the two last, her life was in imminent danger, from a flooding that ensued soon after the expulsion of the placenta:—I say the expulsion of the placenta, because it came away each time with scarce any assistance beyond the natural pains.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOU did me the favour to insert in the second number of the Medical and Physical Journal, some Observations on the Brunonian system of medicine; which were made in consequence of reading an article in the first Number of this Journal, extracted from an essay written by Professor HUFELAND, of Jena, intitled, “Remarks on the Influence of the Brunonian System on the Practice of Medicine.” Since that time a very valuable work has engaged my attention; it is a Treatise on Febrile Diseases, by Doctor WILSON, Physician to the County Hospital at Winchester. In this work are some observations on the above system. It will be observed, that Dr. WILSON is an advocate for this system of medicine, although he differs in opinion with the author, in several particulars,

I could wish to offer some farther remarks on this subject; for either my perceptions of the Brunonian doctrine are incorrect, or Dr. WILSON has charged the author of it with some inconsistencies, of which he may be acquitted.

SECTION II. page 460 of the above TREATISE.

“ OF THE BRUNONIAN DOCTRINE.”

“ Of the medical systems which have been proposed to the world, BROWN’S alone is in a great measure founded on observation; many parts of it are simple deductions from facts, which must be admitted, independent of all hypothesis. In a more advanced state of our science, when the systems of STAHL, HOFFMAN, BOERHAAVE, and CULLEN are forgotten, there will still remain enough of the Brunonian doctrines to preserve the memory of their Author.”

This quotation proves that Dr. WILSON is friendly to the general plan of the doctrine. I shall now state some parts of it where material differences of opinion are found to occur.

OF THE EXCITABILITY.

Page 473.—“ One of the most striking inconsistencies in the writings of Dr. BROWN is his supposition, that every living body, at the commencement of its existence, receives a certain quantity of excitability, which, if not extinguished by violent stimuli, or by too great an abstraction of stimuli, will last for a certain length of time. The quantity received (he supposes) determines the natural duration of life, it being impossible to protract it after that quantity is exhausted.”

I have very little to offer with respect to the essence of excitability, it being one of those things which must ever remain above the reach of human comprehension. Yet I think, that Dr. BROWN'S ideas of the vital principle, founded on excitability, assists us in accounting for the different phenomena which attend the living state, better than any other supposition with which I am acquainted.

Such, however, is the imperfect state of human knowledge, that it is possible his supposition—that every living body, at the commencement of its existence, receives a certain quantity of excitability which determines the duration of life—may be erroneous; but whether this supposition be just or erroneous, is not of importance with regard to the general principle or practice. Whilst life remains, the property which distinguishes it from dead matter exists in the system, and will be forced into action, if excitement can be effected; for, the only difference between apparent and positive death consists in the presence or absence of excitability.

“ We know not,” Dr. BROWN observes, “ what excitability is, or in what manner it is effected by the exciting powers. But whatever it be, whether a quality or a substance, a certain portion is assigned to every being upon the commencement of its living state. The quantity or energy is different in different animals, and in the same animal at different times.”

OF EXCITEMENT.

Page 506.—“ By excitement,” Dr. WILSON observes, “ is not necessarily implied contraction, because the term is not confined to the muscular system; the nervous system, however, cannot be excited, without occasioning a corresponding change in the muscular.”

The

The means used for the recovery of persons apparently dead from submerſion, ſerve to ſhew that it is the muſcular fibres of the heart and arterial ſyſtem, which muſt firſt be excited to enſure ſucceſs. When excitement is produced in this ſyſtem, which may be conſidered as muſcular, then a correſponding change is occaſioned in the nervous ſyſtem, and *ſenſation* returns.

The blood having loſt its ſtimulating effect, in conſequence of the communication with the air of the atmosphere being interrupted, is the immediate cauſe of death after ſubmerſion; for, according to Dr. CRAWFORD's experiments, the heat contained in arterial blood, compared with the heat in venous blood, is as 1.0300 to .8928;—the left auricle and ventricle having been accuſtomed to a ſtimulus derived from an external agent equal to 1.0300 will not contract upon the application of a ſtimulus only equal to .8928, and poſitive death will be the conſequence, unleſs we, by inflation of the lungs, ſucceed in reſtoring the loſt degrees of ſtimulus, before the excitability is too far withdrawn.

If by excitement, contraction is not neceſſarily implied, it muſt be included in the effect, contraction being a principal and conſtant effect produced during life by a ſtimulus in the blood, and regulated by the degrees of it; for according to the degree is the excitability inherent in the muſcular coat of the arteries forced to make regular or healthy contractions, or irregular and unhealthy.

Dr. WILSON does not approve of Dr. BROWN's definition of excitement, page 516.—“ I do not adopt Dr. BROWN's definition of excitement, that it is the effect of agents on the living ſolid, becauſe they often produce a ſtate very different from excitement—Atony.”

Dr. BROWN's ſyſtem of Medicine is remarkable for the ſimplicity of diſtinctions and terms of ſcience; the diſtinctions apply to practice, and the new terms, which are few in number, convey clear ideas.

The imperfect ſtate in which this author found the ſcience, made it abſolutely neceſſary for him to employ terms which were not till then in uſe, and which I think are unexceptionable.

The diviſion of univerſal diſeaſes (diſeaſes of the ſyſtem) is allowed to be correct, and I think the words which he has uſed to mark the diſtinction here made, could not have been more appropriate,—Sthenic, Aſthenic.

Dr. WILSON defines excitement to be “ a state of activity, and atony a state of inactivity ; that is, of debility, &c.”

I do not agree with Dr. WILSON, that the exciting powers produce different states, therefore do not see any necessity to contrast the words atony and excitement.

If Dr. BROWN, to express a weak stimulant, as water, &c. had employed the word *sedative*, by contrasting the terms *stimulant* and *sedative*, a false idea would have been inculcated ; therefore it is preferable to reject the term *sedative*, and to say that water, although a very weak, is still a stimulant.

“ Distilled spirits,” Dr. WILSON observes, page 479, “ received into the stomach, occasion excitement ; and, to a certain extent, the greater the quantity, the greater the excitement. But the immediate effect of a large quantity of distilled spirits, suddenly received into the stomach, has often been instant death. Is this excitement ?”

There does not appear any thing favourable to the supposition of atony from this argument. In these cases, a degree of stimulant power is suddenly applied, which is found to be incompatible with the excitability, and, on that account, life is extinguished—were it compatible with life, the term excitement would be allowed by Dr. WILSON.

The electric fluid is a stimulant of the most powerful kind ; the greatest degree of excitement, consistent with life, may be communicated by this agent. But such a degree of stimulus may be suddenly derived from the electric fluid as to put a period to excitement, because the excitability is totally destroyed by the sudden and violent shock, to which it is unequal, and which it could not sustain for a moment.

From considerations of this kind, I think that the term atony, when opposed to excitement, either conveys an erroneous idea, or is without a signification.

[To be Continued.]

An Historical View of Surgery in the Sixteenth Century.

[Concluded from p. 364—368 of our last Number.]

THE obstetric art, this important branch of surgery, began to emerge from its barbarity during the sixteenth century, and to excite the attention of surgeons more than it had hitherto done. There appeared several introductions to midwifery, the greater number of which, however, contained much useless and abstruse reasoning on the generation of man, and the vitality of the embryo in certain months, while they were extremely deficient in well-founded and practical rules for facilitating delivery.

Most of the writers of that century followed the principles of EUCHARIUS RÖSSLIN, sometimes called RHODION; who wrote, in the German language, a work printed at Augsburg, in 1551, 8vo. entitled; “*The Garden of Roses for Pregnant Ladies and Midwives.*” His representations of the preternatural situation of the child; his proposals for accelerating the expulsion of the fœtus by emollient external applications, and stimulants administered internally; his advice to pay constant attention, that the child’s head may be protruded first; and lastly, his rule that the dead child should be extracted with hooks, knives, and other dangerous instruments;—all these particulars have been repeated by the obstetric writers of that age, without any essential improvement. Thus, VALLERIOLA* praises the surgeons in Provence, who handled these destructive weapons with great skill and ability.

JASON A PRATIS† also wrote a Treatise on Midwifery, which abounds in whimsical and absurd notions; insomuch, that it scarcely contains one original or sensible idea. Not less inconsistent is the Treatise entitled, “*The Book for Midwives,*” written in German, by WALTER HERMAN RYFF, printed at Frankfort, 8vo. 1569. JACOB RUEFF, a surgeon at Zürich, on the contrary, is the author of a work, which, besides the principles of the Arabian writers borrowed from RÖSSLIN, contains a delineation of the first forceps, which, however, can be applied only to dead children, for the compression of the head.‡ RUEFF likewise

* *Observ. Medic. lib. v. c. 2. p. 319.*† *De pariente et partu*, 12mo. Amstfeld, 1657.‡ *De conceptu & generatione hominis*, f. 30. 4to. Tigur. 1554.

likewise treats, with considerable accuracy, on the causes to which the retention of the secundines* is to be ascribed. In the works of MERCURIALIS† and PARE,‡ we meet with similar principles and precepts. The latter of these writers is particularly apprehensive of the dangerous consequences arising from the retention of the placenta.§

§. 20. JACOB GUILLEMEAU excels all the writers hitherto mentioned, both in fundamental erudition and rational principles, tending to facilitate the delivery of parturient women. Although he still proposes the old fashioned instruments for dilating the vagina, and is not sufficiently acquainted with the turnings of the child, as he in many cases prefers the delivery by the feet to natural birth; yet his animadversions on the surgeons, for neglecting the study of midwifery,|| are truly laudable; and his method of effecting the *accouchement forcé*, in flooding cases, has been renewed and confirmed by the works of later writers on that subject.¶ He also seriously dissuades the practitioner from attempting to promote the discharge of the after-birth, by violent means.**

HIERONIMUS MERCURIALIS, of Rome, likewise deserves to be included among the better class of surgical writers, though he is still attached to superstitious notions and established prejudices. He was a pupil of ARANZI, but had embraced the religious order of predicants, and at the same time practised surgery at Milan: yet, as this profession was considered as incompatible with the dignity of a religious order, he abandoned the monastery, and travelling through many cities of Italy, he exercised his favourite art without molestation from the monks. His longest residence was at Peschiera and Civita Vecchia: and after having visited France and Spain, he at length returned to the fraternity of his order, at an advanced age. His book, which he published under the name of SCIPIO MERCURIO, has been translated into most languages, and chiefly contains a collection of the principles and observations

* *De conceptu & generatione hominis*, lib. iii. c. 4. f. 25. a.

† *De morb. mulier.* lib. ii. c. 2. p. 49; in BAUHIN. *Gynaec.* vol. ii.

‡ *Oeuvres d'Ambr. Paré.* liv. xxiv. ch. 33. p. 608.

§ *Ibid.* ch. 18. p. 602.

|| *Guillemeau, de la grossesse et de l'accouchem. des femmes*, p. 258.—*Oeuvres*, fol. Paris, 1598.

¶ *Rigby von Mutter-Blutflüssen.* 8vo. Leipzig, 1786.

** *Guillemeau*, p. 280.

observations of his predecessors. He differs, however, from them in many essential points: thus, he censures RUEFF, for preferring the delivery by the feet to that in the natural way.* The head usually presents itself in such a manner, that the face is behind, but frequently the contrary takes place, and even then, it is not a preternatural case.† He endeavours to prove, by a very curious and whimsical calculation, that children born in the eighth month, cannot live;‡ a superstitious notion entertained by the antients.—The situation in which he places the mother, in preternatural births, is truly shocking; for he causes a number of pillows to be placed under her back, and piled up so high, that the head entirely declines, and the legs likewise are placed in a recumbent posture.

§ 21. As MERCURIALIS forcibly recommends the *Cæsarean section*, and has been an eye witness to a successful case in that operation, the historian is naturally led to investigate its antiquity. Prof. SPRENGEL observes, that he has endeavoured to shew, in his former disquisitions relative to this subject,|| that Nature has probably pointed out to mankind the necessity of this operation; as there are several cases on record, where, in a *partus extra-uterinus*, an external ulcer appeared on the abdomen, and thus the dead body of the child was discharged. In the sequel of these pages, we shall have occasion to mention some interesting cases of this nature, from the writers of the sixteenth century.

It may farther be easily conceived, that this operation was undertaken in the earliest times, from a natural love and sympathy for a living being, especially if the pregnant mother had recently died: and thus, the first traces of this practice are, perhaps, to be found in fabulous history. The Greeks relate, that Jupiter, when on a visit to Semele, one of the daughters of Cadmus, having brought down his thunder-bolts from
Olympus,

* *Mercurii la commare ó raccogliatrice*, lib. ii. c. 5. p. 120.—4to. Verona, 1662.

† *Ibid.* p. 26.

‡ *Ibid.* lib. i. c. 8. p. 39. "The fœtus," says he, "is formed either in 35 or 45 days. Its formation, therefore, is always imperfect, when accomplished in forty days. The double number of days requisite to form the fœtus, points out the time of motion; and this, if multiplied with 3, gives the time of birth. Thus is $40 \div 2 = 80$, and $80 \div 3 = 240 =$ eight months. Ergo.

§ The professor here refers the reader to his elaborate *Treatise on the Cæsarean section*, inserted in PVL's *Repertory of Medical and Political Jurisprudence*, (in German,) part of vol. ii. numb. i. p. 116. and seq.

Olympus, he handled them with so little circumspection, that a flash of lightning struck the house of Semele, and burnt it together with her person. In great haste, on the spur of this emergency, Jupiter commanded Hermes to rescue the imperfect fœtus, then seven months old, by cutting it from the burning body of Semele. Jove concealed the child in his hip for nearly three months, and afterward produced Dionysos or Bacchus*. The Roman mythology informs us, with respect to Æsculapius, that his father, Apollo, had cut him out of the womb of his mother, Coronis, when she was placed on the funeral pile; † and that Æneas combated one of his adversaries, named Lychas, who had been born in a similar manner, and, on that account, was sacred to Apollo. ‡

The Cæsarean section must have been successfully performed at a very early period of time; as Numa Pompilius enacted the *lex regia*, § that no pregnant woman should be buried before the fœtus had been extracted by dissection. Conformably to this law, PLINY || relates, that Claudius, the first of the Cæsars, and a certain Cæso, of the family of Fabius, had thus been given to the world; and that from this remarkable circumstance they had received their names. We are farther told, that MANILLUS, who conquered Carthage in the third Punic war, and SCIPIO AFRICANUS, came into the world in a similar manner. ¶ The same royal law has been repeatedly enforced by the Church of Rome; a fact for which the authority here quoted, will be deemed sufficient evidence.**

§ 22. We find by the first instance on historical record, that the Cæsarean operation had been performed on a living subject, in the beginning of the sixteenth century. It is, however, to be regretted,

* *Lucian. Dialog. Neptun. et Mercur.* p. 202. Opp. vol. i. ed. *Græv.* 8vo. Amstel. 1687.

† *Ovid. Metamorph.* lib. ii. fab. ix. v. 680.

‡ *Virgil. Æneid.* lib. x v. 315. "Inde Lycham ferit, exsectum jam matre parentâ
" Et tibi Phœbe sacrum."

§ *Digest.* lib. xi. tit. 8. *De mortuo inferendo*, l. 2. "Mulier quæ prægnans mortua,
" ne humator antequam partus ei excidatur, quei fecus faxit spei animantis cum gra-
" vida occisæ reus estod."

|| *Plin. Hist. Natur.* lib. vii. c. 9.

¶ *Harduin. not. et emendat. ad Plin.* p. 432.

** *Martens et Durande Collect. amplifs.* vol. vii. p. 1282.

gretted, that most of the surgical operations have been first attempted by ignorant men: such was NUFER,* of Turgau, by profession a fow-gelder, who had the resolution to undertake that dangerous section on the body of his wife, with the happiest success. It is farther asserted, that the illustrious ANDREW DORIA was born by the aid of the Cæsarean section.†

Towards the middle of that century, a remarkable case happened at Vienna, which obviously proved that, in extra-uterine conception, or if the foetus by a rupture of the womb enters the abdomen, Nature herself appears to point out the Cæsarean operation. The following is a short history of the case: The wife of Wolczer, an innkeeper, after having been delivered of several children, became pregnant in 1545. When the time of childbirth approached, and the pains became violent, she made great exertions. On a sudden, a report was heard, as if something had burst within her body, and the milk flowed to the breast. The pains from that time ceased, but the child did not appear, and the abdomen increased in size. She became cachetic, and had a fetid discharge from the vagina: at length, in 1548, an abscess took place in the abdomen, from which a similar ichor, and, in 1549, even a bone was evacuated. As the patient grew progressively worse, surgeons and physicians were consulted. MATTH. CORNAX, Prof. at Vienna,‡ followed the parental hints of Nature, enlarged the orifice of the abscess, and successfully extracted the child, in a semi-putrid state! The mother, after this period, so completely recovered that within the next two years she again became pregnant. When the time of her delivery approached, the child, upon examination, was found to be in full vigour, but the natural passages were remarkably narrow; while the cicatrix of the old wound was moist and apparently opening of itself, Cornax proposed to open it by incision; but the woman's mother opposed this rational step. The judicious practitioner was consequently obliged to leave the unfortunate patient without a prospect of relief, and she expired in a very short time. After her demise, the old wound was opened, and the child extracted, which appeared to have but recently died.§

* *Bauhin in Append. ad Roussseti hysteratomot.* p. 37.

† *Venefla discorsis interno alla generazione e nascimento degli uomini*, p. 47. 8vo. Venez. 1562.

‡ *Eley*, vol. i. p. 711.

§ *Dodon. exempl. medic. observ.* p. 306 et seq.—*Marcell. Donat. lib. iv. c. 22. f. 239.*—*Diom. Cornar. histor. admir.* 6. p. 13.

Similar cases were, in that age, observed by ÆGID. HERTOGE, of Brussels,* and ACHILLES PIRMINIUS GASSARUS, a very learned Physician at Augsburg.† FIORAVANTI, an Italian charlatan, also relates a case in which the Cæsarean section was performed with tolerable success, so that the patient was only troubled afterwards with a *prolapsus uteri et vesicæ*.‡ The celebrated PARE was likewise acquainted with several successful cases of this kind, yet he does not recommend the operation forcibly; as the life of the mother is always in danger.§ The earliest scientific treatise on this subject, illustrated by figures, we find in CHARLES ETIENNE;|| and FELIX PLATER quotes a remarkable case in which a dead fœtus was extracted by section from the body of a living mother.¶ Several other instances of a similar nature were also collected by MORITZ CORDÆUS.**

§ 23. The Cæsarean operation excited the greatest attention among medical men, when FRANC. ROUSSET, surgeon to the Duke of Savoy, wrote a masterly performance in its vindication. He first appeals to experience, respecting the success of the operation observed partly by others, and partly by himself. The history of the first case he relates, is by far the most curious and memorable ever recorded. A woman, near Milly, was SIX TIMES successfully delivered by the Cæsarean section, but died with her seventh child; as the surgeon who had formerly performed that operation, was no more.†† ROUSSET next endeavours to prove from analogy, that wounds of the abdominal muscles, and the peritonæum, are not more dangerous than injuries of the uterus itself:‡‡ he farther maintains, that in cases of mal-conformation of the pelvis, too large a size of the child, or extra-uterine conception, there remain no other means of accomplishing delivery than the Cæsarean operation.||||

The assertion of SUE, the younger, in his superficial History of Midwifery, that ROUSSET has borrowed his remarks from PLATER, is groundless;

* *Dedon. exempl. medic. observ.* p. 321.

† *Ibid.* p. 328.—Vid. his Biography in *Adami*, p. 233.

‡ *Tesoro della vita umana*, p. 170. 8vo. Venez. 1570.

§ *Liv. xxiv. ch. 33*, p. 608.

|| *De dissect. part. corp. human.* Lib. iii. cap. 1, p. 261. fol. Paris, 1546.

¶ *Observat. med. lib. i.* p. 212.

** *Commentar. in Hippocrat. libr. de morb. mul. lib. ii.* p. 250.

†† *Hysterotomotokia*, S. I. c. 5, p. 504.—In *Bauhin's Gynaec.* vol. ii.

‡‡ *Ibid.* S. II. p. 511.

|||| *Ibid.* S. I. c. 3, p. 502.—S. II. p. 535.

less; as this writer published his observations two years after the work of ROUSSET. In 1582, BAUHIN published a Latin translation of the last mentioned work, corroborated the opinion of ROUSSET, and was so warm an advocate for the Cæsarean operation, that after this period it was performed by various surgeons in France. But, as they did not always proceed upon an accurate diagnosis, they consequently did not meet with uniform success. A work written by GUILLEMEAU,* in which five fatal cases of the Cæsarean section are recorded, induced ROUSSET to publish a defence of that operation: † here he treats the subject with such acuteness and ingenuity, as cannot fail to insure the approbation of the reader. Soon after this, JAC. MARCHAND compelled him, by an undeserved libel, ‡ to answer the objections of his adversaries a second time, and with much severity. § We are assured by Mercurialis, || that this operation was then very common in France, though his veracity is questionable, from the extravagance of his expressions. It was also introduced into Italy by JUL. CÆS. ARANZI, who was a successful operator: ¶ — CORN. GEMMA,** and HOR. AUGENIUS, †† relate similar instances of operations which had a fortunate issue in that country.

A Concise History of the Principal Discoveries in Anatomy.

[Continued from our last Number, pp. 368 — 373.]

§ 21. **H**AVING given a brief account of that important discovery, the circulation of the blood, we shall now proceed to examine the leading opinions and discoveries, which relate to particular branches of the arterial and venous systems. — With respect to the course of the *aorta*, this artery, when proceeding from the heart, was, in the times of VESALIUS divided into the ascending and descending; though the former is a non-

* De la grossesse et de l'accouchement des femmes, p. 190.

† *Rousseti assertio historica et dialog. apologeticus pro cæsareo partu*, 8vo. Paris 1590.

‡ *Marchand in Rousseti apologiam declamatio*, 8vo. Paris, 1598.

§ *Rousseti brevis apologia pro partu cæsareo in dicacis cujusdam chirurgi theatrali in-vektivam*, 8vo. Paris, 1598.

|| *Mercurii la commare o raccogliatrice*, Lib. II. c. 28, p. 169. — "The Cæsarean section," says he, "is as common in France, as venesection for the head-ach is in Italy."

¶ *Craton. Epist. Lib. V. p. 297.*

** *Cyclognom. Lib. II. c. 6. p. 74.*

†† *Epistol. Lib. V. 2. p. 379.*

non-entity,* because this artery branches into the carotids, and into the subclavian arteries in the arch itself. This error was, without ostentation, first corrected by EUSTACHIUS;† and, afterwards, by FABRICIUS.‡ The skilful anatomists, BERENGAR and VESALIUS, were the first who controverted the erroneous opinion, that the carotid artery, at its entrance into the brain near the *glandula pituitaria cerebri*, forms a *reticular texture*. Mean time Vesalius himself had, consistently with truth, admitted a connection and anastomoses between the carotids and the vertebral arteries; from which circumstance he explained the continuation of life, even after the carotids had been divided.|| And these anastomoses, (of which the immortal Fallopius gave a masterly description, and added to them the anastomosis with the basilic artery) he considered as the true *rete mirabile* that deserves the admiration of the observer, in a degree at least equal to those windings of the carotids in animals.¶ Columbus endeavoured to defend Galen against Vesalius, by applying the assertion of the former, respecting the carotid, to the vertebral artery; which, when entering the great foramen of the occiput, obviously forms four considerable turnings, besides many anastomoses with the carotid and basilic arteries, as well as with the *arteria communicans*.** KOYTER indulged his speculations for defending Galen still farther, when he referred the explanations given by that ancient writer, respecting the *rete* of the carotids, to the ramification of the third (fifth) pair of nerves in the basis of the brain.††

§ 22. VESALIUS had observed the alternate swelling and sinking of the brain, during inspiration and expiration. As he was unacquainted with the larger circulation of the blood, he could not explain this phenomenon in any other manner, than by conjecturing that the blood vessels in the brain were of an arterial nature; while he believed, that the arteries emptied themselves into the latter.‡‡ Although FALLOPIUS||| and COLUMBUS ¶¶ discovered that the blood vessels of the brain belong to the venous system, yet the changes of the brain during respiration, which KOYTER *** likewise observed, could not be satisfactorily explained previous to the discovery of the circulation.

EUSTACHIUS

* *Vesal. Exam. Observ. Fallop. lib. iii. c. 12. p. 341.*

† *Eustach. Tab. xv. fig. 2, 4, 6.*

‡ *Vesal. Lib. iii. c. 12. p. 342.*

** *Columb. Lib. vii. p. 337.*

†† *Vesal. Lib. iii. c. 14. p. 350.*

¶¶ *Columb. Lib. viii. p. 349.*

‡ *De format. foet. p. 52. Tab. vi. fig. 15.*

¶¶ *Fallop. Observ. p. 400.*

†† *Cæter. Observ. p. 123.*

||| *Fallop. Infit. p. 458.*

*** *Cœter. Observ. p. 122.*

EUSTACHIUS very accurately pointed out the origin of the *arteria ethmoidea anterior*, from the *arteria ophthalmica orbitalis*.*

The spinal artery, which derives its origin from the *arteria cerebitalis profunda*, or from the vertebral artery, and which proceeds downwards along the *tunica arachnoidea* of the *medulla spinalis*, had been noticed by BERENGAR, as a white shining line; † and STEPHANUS was at a loss, whether to consider it as a nerve running parallel with the spinal marrow. ‡ This mistake is very pardonable, for even modern anatomists have considered this vessel as a ligament. § The posterior arteries of the ear were perhaps first represented by GUIDI. || Both VESALIUS and EUSTACHIUS made inquiries relative to the progress of the subclavian and axillary arteries and veins: the former reproached GALEN for his superficial investigation of the branches belonging to the deep axillary vein, and demonstrated the branches proceeding from this vessel, and communicating with the common cutaneous veins. ¶ EUSTACHIUS, on the contrary, endeavoured to prove, that GALEN had doubtless known these veins; and the former described the anastomoses of the basilic, cephalic, and median veins.** But it must be admitted, that EUSTACHIUS was not sufficiently acquainted with the division of the humeral artery; as he asserts, that the arteries of the radius and ulna, arise from the former only below the elbow; while it is certain, that these arteries frequently begin above the ancon; and his drawing of the axillary vein is not altogether a faithful copy from nature. † †

The origin of the left gastro-epiploic artery, VESALIUS pretty accurately deduced from the splenic artery. † † His error, however, that the external jugular veins were larger and more capacious than the internal, was corrected with great accuracy by FALLOPIUS, who proved the contrary. § § VESALIUS, and several other cotemporary anatomists, had erroneously derived the arteries of the penis from the vesical artery: FALLOPIUS corrected this mistake also, by proving that those

* Obs. exan. p. 172.

† Stephan. de dissect. p. 342.

‡ Vid. lib. iii. tab. 27. fig. 1. (99) p. 124.

** Eustach. Opusc. p. 292.

† † Lib. v. c. 4. p. 423. fig. 2. (R.)

§ § Vesal. lib. iii. c. 7. p. 327.—Fallop. Observ. p. 397.

† Comment. in Mundin. f. 496. b.

§ Haller Element. Physiol. vol. iv. p. 136.

¶ Vesal. lib. iii. c. 8. p. 329.

† † Tab. xxvi. No. 1. (v.).

those vessels really originated from the *arteria pudenda* & *arteria pelvis*: the former, or the *pudenda communis*, he called *hypocystica*.*

VESALIUS, the immortal father of modern anatomists, appeared at length with a discovery which excited great attention, in consequence of the incorrect notions then prevalent, with respect to the circulation of the blood in the veins. He demonstrated, that the *vena sine pari*, which arises from the intercostal muscles and the pleura, terminates only in the right vena cava; or, as it was then expressed, that it originates from the latter, and proceeds to the pleura. If, therefore, this membrane were affected, the blood may be emptied by the nearest canal, if in such a case the axillary vein of the right arm were opened; because this vessel arises from the vena cava, near the *vena sine pari*.†

He refuted GALEN, who had maintained, that the last mentioned vein uniformly empties itself into the vena cava, in the cavity of the pericardium. SYLVIUS, the adversary of VESALIUS, could not produce any valid objections against ocular demonstration; but, in order to save the credit of his favourite GALEN, he made use of his usual, though absurd evasion, that the human body, in ancient times, had been larger, consequently the cavity of the thorax had also been longer.‡ EUSTACHIUS, however, inquired more minutely into this subject, and made interesting remarks on the anastomoses of the *vena sine pari* with the renal veins, the truth of which was farther confirmed by FALLOPIUS:§ he also commented with ability on the occasionally double formation of this vein;|| on the *hemiasyga*,¶ and on the division of the *vena sine pari* near the eighth and ninth ribs.** He admitted that the azygos does not uniformly empty itself into the vena cava, within the pericardium; but maintained, that this efflux takes place *in the vicinity of the pericardium*.†† Lastly, ARANTIUS likewise observed the anastomoses of the *vena sine pari* with the intercostal and axillary veins.‡‡

§ 23.

* Fallop. Observ. p. 419.

† Vesal. Epistol. de usu radic. Chyn. p. 641.—*Id.* de corp. human. fabric. lib. iii. c. 7. p. 323. (edit. Albin. fol. L. B. 1725.) But VESALIUS had even, in the year 1539, written a particular epistle or treatise on this subject.

‡ Sylv. vesan. calumn. depuls. p. 98.—Comp. Putei apolog. f. 137. 6.

§ Eustach. de vena sine pari, p. 103, 109, 110.—Fallop. Intit. p. 443.—Comp. Morgagni adversar. anat. vol. v p. 86.

|| Eustach. Ibid. p. 279.

¶ Ibid. p. 275.

** Ibid. p. 290.

†† Ibid. p. 244.

‡‡ Arant. Observ. c. 32. p. 90.

§ 23. The first trace of the knowledge of the *lymphatic vessels*, we find in HEROPHILUS;* but this discovery was very little cultivated in a century, which produced so many eminent anatomists; and the doctrine of the lacteals and lymphatics made less progress, comparatively, than any other branch of anatomy. MASSA observed ducts proceeding upwards from the mouth of the renal vessels, so early as the year 1532; and these ducts, probably, were lymphatics.† FALLOPIUS still more plainly discovered canals, which proceeded from the surface of the liver to the pancreas, and were filled with a yellowish humour.‡ At length, EUSTACHIUS discovered, in horses, the principal trunk of the lacteals, or the *ductus thoracicus*.§ “From the inner part of the subclavian vein,” says he, “there extends in these animals, downwards, a large vessel, the orifice of which is closed by a femilunar valve. This duct is white, and contains a watery humour. Near its origin, it branches into two divisions, which afterwards unite; and, without forming any other branches, the principal trunk proceeds on the left side of the dorsal vertebræ, through the diaphragm, to the middle of the lumbar region, where it dilates considerably, surrounds the great artery, and terminates in a manner hitherto unknown to me.” Our ancestors had advanced thus far in the knowledge of the lymphatics, at the conclusion of the sixteenth century.

[Want of room, occasioned by the influx of many valuable original communications, has obliged us to limit the extent of foreign articles accordingly. Hence the reader will, doubtless, excuse us for continuing this comprehensive and important article, through the whole of the next volume. The following branches of the History of Anatomy remain, therefore, to be detailed in future Numbers of this work, viz. Splanchnology—Organs of Generation—Structure of the Brain,—and Distribution of the Nerves.]

* Galen de usu part. lib. iv. p. 417.
 † Fallop. Observ. p. 395.

‡ Sylv. Method. f. 32. b.
 § Eustach, de vena sine pari. p. 280.

HINTS AND IMPROVEMENTS
 IN THE PRACTICE OF
 MEDICINE AND SURGERY.

*On the Origin and Prevention of some of the Diseases of Human
 Teeth and Bones. By Dr. MITCHILL, of New-York.*

[Concluded from p. 380—382 of our last Number.]

THE factor of the breath has an analogy, in such cases, with the offensiveness of matter discharged from deceased bone, which, in general, is discoloured, and not thick; owing to a separation of the phosphoric acid of the bone from its calcareous base, now combined with septic acid, and running away with the other fluids, in the form of a thin and sanious discharge; or occasionally bringing on, when absorbed, that form of quotidian intermitting fever, called the *hectic*, as in other cases of abscess and ulcer.

RUSSEL considers necrosis, whether happening in the tibia, femur, lower jaw, clavicle, humerus, fibula, radius, or ulna, as the same kind of disease, (p. 86.) If then, his classification of morbid affections be correct, and my application of principle to explain the phenomena be accurate, it will be proved, that the same septic poison which destroys the teeth, corrupts the jaw; and from the same cause which disorganizes the jaw, proceeds the decay of the rest of the bones; and this same agent, which works the destruction of the rest of the bones, is the irritating matter that kindles up hectic fever.

I would not wish to be understood as affirming that *all* caries of the teeth, jaws, and bones, arise from this sole cause. Far from it. The amount of my reasoning is simply this; that, from the most accurate survey I have been able to take of the subject, there does appear to be, in *some instances*, a decomposition of bone, by means of septic acid, absorbed from without, [or formed, by union of septon with oxygen, within the constitution; and when this acid, mingled with other animal fluids, is carried into the blood-vessels, and exerts its noxious pow-

ers upon the heart, brain, and lungs, it may be the cause of febrile inquietude.

How far this principle may extend, if properly applied, I know not. I suspect that *sphilitic, cancerous, and scrophulous* ulcerations will be found to have a near alliance, as to their cause, with caries of teeth and necrosis of bone now under consideration. But time, with farther observation and experiment, is necessary to refute or verify this conjecture. Be the result as it may, I think, as the game is started, and the track is fresh and warm, it would betray less than a sportsman's spirit to be discouraged, on account of the doublings and windings of the chace, and give out before the object of pursuit is hunted down, or day-light let in upon its dark abode.

On the Dolor Faciei, observed by Fothergill.

It is generally believed that this disease has been scarcely, if at all, known to practitioners, before the late Dr. FOTHERGILL described its nature and medical treatment.

In the Tenth Number of the "*Journal der Erfindungen,*" however, we meet with the following account relative to this subject: Prof. SIEBOLD, jun. of Würzburg, shewed in a Treatise, entitled, "*Doloris Faciei, morbi rarioris, atque atrocis observationibus illustrati adumbratio,*" 4to. 1795; that this singular disease was observed and described by BAUSCH, the founder and first president of the *Acad. Natur. Curiosor.* who died in the year 1655. This writer was himself subject to the disease, and gave an account of it, in the *Ephemer. Nat. Cur. Dec. I. Ann. II.* where he delivers the history of the academy. A similar case occurs in the next volume of these Ephemerides, p. 455; but the most accurate and complete description of this painful affection is furnished by DEGNER, in the *Aq. Natur. Cur. Vol. I. p. 347*—half a century prior to FOTHERGILL. A French surgeon of the name of ANDRE likewise observed the disease in the year 1756, and gave it the name of *tic*.

"After having mentioned all the modern writers on the subject, Prof. SIEBOLD adds, that he himself has observed the *dolor faciei* in a female, without being able to trace any cause of that complaint. The patient was successively treated with cicuta, bark, and valerian, while vesicatories and mercurial frictions were applied externally: she at length tolerably recovered."

The reviewer of this article, in the Journal above mentioned, informs us, that he has only once met with the troublesome malady, which the Germans call "*the Fothergillian face-ach.*" His patient was a lady of a sound constitution, about forty years of age, and mother of several children. She had been tormented with this pain for eighteen months, during which time she submitted to the ineffectual treatment of several physicians, as no determinate cause of it could be discovered. He was at length induced to prescribe as follows:—R. Pulv. Folior. Belladonn. gr. v. Rad. Rhei gr. iij, Sacchar alb. ʒss. M. D. tales dos. No. viii. One of these powders was directed to be taken every other night; and this obstinate case, according to the German account, yielded completely to that remedy!

Miscellaneous Facts and Remarks.

Dr. FERRO, of Vienna, in consequence of an Essay published in the 5th Number of the *Journal der Erfindungen*, relative to the treatment of the *nervous fever*, by Dr. BRANDIS, observes, that he has likewise found the *luke-warm bath* to be the safest and most effectual remedy against that fatal disease, which, at Vienna, every winter, destroys many persons in the bloom and prime of life.—*Journ. der Erfind.* No. VI. p. 135.

Dr. L. FRANK, of Milan, coincides in opinion with Dr. Ferro, and has published, some time ago, in the Medical and Chirurgical Gazette of Salzburg, some excellent remarks *on the bracing virtues of the warm bath, and on Moscati's mercurial calx.* The tonic powers attributed to the tepid bath by Dr. MARCARD, in his late and classical work, are particularly obvious in that singular disease called *Pellagra*, where great and general debility is the principal symptom.—Moscati's oxyd of mercury consists merely of calomel digested in an alkaline ley, and thus deprived of its acid, while it assumes a black colour. Dr. Frank prefers this to other mercurial preparations, because it operates more gently, with equal safety, and is seldom attended with ptyalism. He also prescribes it externally, in the form of mercurial ointment for friction.—*Ibid.* No. X. p. 133.

The medicinal virtues of certain vegetable substances (though we do not wish to increase the *Materia Medica* in quantity so much as in quality) certainly appear to deserve every attention. Among this number are the leaves of the *Ilex Aquifolium*, LINN. The last treatise on this subject

subject was published at Halle, in 1789, by A. D. BANDELOW, and entitled: *De foliorum Ilicis Aquifolii analysi et virtute medica*, 8vo.—The author maintains, that the leaves of the holy-oak produce a tonic and resolvent effect, that they promote secretions and evacuations, particularly by diaphoresis. From one to two ounces of the leaves (it is not said whether dry or fresh) are boiled in a quart of beer or water, and this decoction is gradually drank through the day. According to Mr. B. this remedy, in a short time, cured obstinate rheumatic and arthritic pains. He also recommends it for the cure of intermittents; and as we are frequently baffled in those diseases with our present stock, perhaps these leaves would deserve a fair trial in this country, both on account of their cheapness, and the easy method of preparing them as a medicine.—*Ibid.* No. VI. p. 138.

Citizen BERLINGHERI has presented to the Philomatic Society of Paris, three memoirs extracted from the works of Dr. CHIARENTI.—The first contains observations on the use of the gastric juice, in diseases of the stomach. CHIARENTI successfully repeated the experiments on digestion, made by SPALLANZANI and REAUMUR, and likewise attempted some new ones: he treated several diseases of the stomach with success, by administering the gastric juice of a variety of animals in different doses. The second memoir relates to opium, and its action on the animal œconomy.—CHIARENTI was of opinion, in consequence of repeated experiments, that opium does not operate like common emetics; and that it continues inactive, till, having combined with the gastric juice in the stomach, it is digested and passed into circulation. Consistently with this conjecture, he formed a mixture of opium, of gastric juice, and pomatum, which he applied by friction, on the skin of man and animals; and in this manner he ascertained the effects of opium taken internally. Thus, opium may be administered in the most critical diseases of the stomach, and even to infants of the most tender age. CHIARENTI also applied it with success, as a local remedy, in acute diseases; such as the *gout*, the *odontalgia*, and even in diseases of the breast. The third memoir is an attempt to prove that the gastric juice is destined by Nature to promote the absorption of many substances. He mixed the gastric juice with squills, rhubarb, and bark; and the frictions with these mixtures produced effects similar to those resulting from these substances, when taken internally.

Several Italian physicians, in repeating these experiments, have observed

served analogous effects: some of them attempted to substitute saliva, instead of the gastric juice, which, according to their assertion, answered the same purpose: hence they conclude, that all the animalised liquids might afford the necessary modification to medical substances, to introduce them by the cutaneous vessels.

CITIZENS ALIBERT and DUMERIL have repeated these experiments, at the request of the Philomatic Society. They administered several purgatives by friction, and the bark thus applied has succeeded in the treatment of obstinate quartan fevers; the squill cured a child, the whole of whose body was œdematous. They are now continuing these experiments, and hope to be able to announce, that the gastric juice has no influence whatever on the effects of remedies, and that any other vehicle may be substituted.—*Rapport General des Travaux de la Société Philomatique de Paris*, Vol. I. p. 132.

CITIZEN MARSILLAC read a memoir to the Society, respecting a man, who, with a view to inoculate his two children, spread some scabs of the variolous matter between slices of bread and butter; the children ate it, and gave a piece to a dog; they had a very mild small-pox, and the dog, at the end of the 4th day, had a complete variolous eruption: on the 9th the pustules were at their height, soon became dry, and fell off in the usual manner. An English Author has asserted, that he observed the variolous epidemic among a flock of sheep; but perhaps this author has confounded the scab with the small-pox, as there is a great analogy between these two diseases.—*Ibid.* p. 136.

CITIZEN CHAUSSIER addressed some observations to the Society, on a specific against the hydrophobia, sold at Paris and Lyons, under the name of the *Ormskirk Remedy*. He observes, that this pretended specific has long been employed in England, under the inspection of several of the most celebrated physicians, and always without success. He adds, that its composition is known: It is prepared of an absorbent earth, the recipe of which is contained in the “*Researches of Citizen Andry, on Hydrophobia.*” Chaussier is of opinion, that the only means of preventing the consequences of this disease is to check the absorption of the virus, by cauterising the bitten part, and producing an abundant suppuration.—*Ibid.* p. 135.

CITIZEN BELLOT transmitted some observations on hydrophobia;
in

in which he considers soap as the best preservative and curative substance for the bite of mad animals. He cited several instances, in which the application of a lixivium of soap and water proved successful.—*Ibid.* p. 130.

The same member also sent several memoirs on various diseases of patients admitted into the hospitals of Laon and Senlis, in the second year of the Republic, particularly a case of *ascites*, the subject of which had suddenly swelled to a dreadful size; but the swelling disappeared in fifteen days, after an application of two large blisters to the thighs, and the administration of an emetic, composed of two grains of tartarized antimony, and half an ounce of the sulphat of soda in a little milk; with this treatment, he conjoined the tonic pills of Bacher.—*Ibid.*

Citizens LEVEILLE and LARREY made reports on the use of the muriat of barytes. The former employed it in the treatment of an *osteo-sarcoma* in the lower part of the leg, on which this salt, taken internally by the patient, produced no good effect. The latter asserted, that this substance was inefficacious in the treatment of scrofulous tumours. A patient, after having taken it during forty days, experienced distressing symptoms in the stomach, accompanied with an obstinate diarrhœa, and a fever which continued while that remedy was administered, leaving him in a state of great debility.—*Ibid.*

Citizen ALIBERT read a memoir on odours, and their effects as medicines. He mentioned several facts to which he was a witness, proving the multiplied relations between odours and the different morbid states of the human body, particularly their influence on hysterical and consumptive diseases. He is of opinion that this object is worthy of the researches of physicians and philosophers, and solicited the Society to take notice of the corroborating accounts of others, and determine accordingly.—*Ibid.* p. 131.

Citizen BENON read a memoir on the advantages of treating venereal diseases by corrosive sublimate applied externally, and by injections. He was induced to judge of the good effects of this remedy, in consequence of the successful treatment of a delicate woman, who had a confirmed venereal disease.—*Ibid.* p. 136.

MEDICAL AND PHYSICAL
INTELLIGENCE,
 (Original and Selected.)

Observations on Soda, the Alkaline Basis of Animal Gall and of Sea-Salt, &c. by Dr. MITCHILL of New-York.

[Concluded from our last Number, p. p. 383—385.]

SODA alone then can preserve the flesh of an animal from corruption; and if mere preservation was all that was intended, this alkali would, by itself, answer the purpose; and so would pot-ash. But there is some quality in the muriatic acid which makes the compound, which it forms with soda, a far preferable substance to prevent the corruption of meat intended to be eaten.

In order to understand what effect the muriate of soda has, it will be proper to consider what change the piece of meat in the larder was undergoing, which could be arrested by the sea-salt. The flesh of animals (I mean, particularly, the muscular or lean parts) may be considered as verging towards a putrefactive state from the time the fibres lose their irritability, and become rigid. And one of the signs of incipient putrefaction, under circumstances favourable to that process, is sometimes a *sourness* or *production of acidity* in the substance; (4 Fourcroy, chap. xvi.) and this acidity is inherent in the meat, and quite another thing from fixed air. What I mean is the *septic acid*, which sometimes poisons dissectors, and which, when volatilized into gas, and diffused through the atmosphere, causes violent endemic distempers. When produced, it is formed early in the putrefactive process, and before the whole flesh has undergone total disorganization. But, fortunately for mankind, it is not *always* engendered during the putrefaction, even of those substances which contain its basis, septon. This radical frequently escapes in the form of azotic air, without combining with oxygen at all, and, in such cases, the exact matter of pestilential fluids is not formed.

In cases where the septic acid is formed in salted meat, the muriat of soda is decomposed; and while the alkali attracts the destructive septic acid to itself, it parts with the muriatic. The flesh, in proportion as it becomes impregnated with this new and preserving ingredient, progresses, afterwards, slowly towards decomposition, because it is enveloped with a liquid acting feebly upon it, and upon which it can exert, in its turn, but a feeble action. Hence, when beef, or any other lean meat, is plentifully charged and surrounded with salt, there is enough of soda to neutralize the acid of putrefaction, should any be formed, and there is also a corresponding proportion of the spirit of salt disengaged; from which latter proceeds, in a certain degree, the agreeable smell and pleasant taste of well-salted provisions.

To

To preserve the flesh of animals, there must, therefore, be not only salt enough in the barrel, but this salt must be applied to every part of the meat, by cutting it into pieces of a moderate size, and by rubbing in the salt with a strong hand, as well as by the application of brine or pickle. When too little salt is applied, and provisions are become tainted or corrupt, there is not soda enough to arrest the septic acid, nor a sufficiency of muriatic acid extricated to impregnate and preserve the remainder of the meat. From this septic matter, disengaged with a portion of hydrogen, phosphorus, &c. proceeds the disgusting flavour and sickly nauseating fœtor of badly-cured provisions. Thus I account for the production of a large proportion of the pestilential air evolved from stinking *beef, hides, and fish*, which almost depopulated New-York this year. An alkali could have staid the whole mischief.

Soda may be thus considered not merely as an antiseptic, but as a substance remarkably friendly, and even necessary to the constitution of the more perfect animals, and especially of man. We are now able to judge a little more clearly and consistently concerning the operation of the various preparations of that alkali upon the alimentary canal. The neutral salts, with this basis, are among the most mild and agreeably-efficacious articles of the shops. The *tartaric of soda* (Rochelle salt) is an elegant remedy, and one which I have employed with much satisfaction to keep the intestines free from noxious matter, in our pestilential and other fevers. The *phosphat of soda* (soda phosphorata) is, perhaps, a yet more elegant medicine, readily soluble in water, easy to be taken, and not difficult to be decomposed in the bowels. The *carbonat of soda*, dissolved in water, and taken into the stomach at the rate of from four to eight grains in two or three hours, is a most gentle and efficacious remedy in dysenteries, and in cholera infantum. If tenesmus is violent, clysters of soda often afford almost instant relief. Laudanum, if necessary, may be joined with it in both cases. Indeed, in the three enumerated forms, soda is capable of attracting the septic acid, which, no doubt, is a frequent exciting cause of dysentery. The *sulphat of soda* is the WONDERFUL SALT OF GLAUBER, and familiar to physicians, and indeed to housekeepers: I shall, therefore, only remark upon it, for the information of chemists, that, contrary to the arrangement in the common tables of elective attractions, M. CHAPTAL has shewn, (*Memoire sur la Decomposition a Froid, &c. 1 Memoires de Chimie, p. 47.*) that the nitrous (septous) acid can decompose the vitriolic salts, that is, those saline compositions which contain the sulphuric acid: and he enumerates by name Glauber's salt, or sulphat of soda, as one of the vitriolic salts capable of being thus decomposed. The *muriat of soda* has likewise, of late, been highly extolled as a valuable anti-dysenteric remedy.

But what signifies it to enlarge on the preferableness of this alkali, in medical prescriptions, to either of the other alkalies? The very name it now bears is *SODA*, a word synonymous with *pyrosis* and *cardialgia*, and signifying that disorder in the stomach called, by the speakers of the English language, "heart-burn." When I first became acquainted with it, the officinal name was *sal sodæ*, or *salt for the heart-burn*. Latterly, the name "soda" has been transferred from the disease to the substance used in curing it; in which it has been so firmly established since its introduction into chemical nomenclature, that many of the younger class

of modern inquirers have to find out, by searching their dictionaries, that soda had ever any other meaning than the one it at present bears. It will appear from these remarks, that soda was, a considerable time since, thought a good thing for the alimentary canal, and the reason of this was what I have attempted to assign and illustrate.

This theory of bile and sea-salt will be called visionary by some, perhaps the greater part of those who peruse it, especially if they glance at it superficially. To this treatment reformers must submit. Their whole employment is like pulling against the tide, and sometimes beating against the wind too. They should remember the words of the poet, and be meek:

“ Truths would you teach, or save a sinking land,
“ All fear, none aid you, and few understand.”

A further Statement of the Case of Elizabeth Thompson, upon whom the Cesarean Operation was performed in the Manchester Lying-in Hospital; in addition to that published by Mr. WOOD, in the Memoirs of the Medical Society of London, Vol. 5th, by CHARLES WHITE, and RICHARD HALL, Men-midwives Extraordinary; GEORGE TOMLINSON, and JOHN THORP, Men-midwives in Ordinary to that Charity.

MANCHESTER, November 8, 1799.

AS a difference of opinion has taken place before the public, between two medical gentlemen, on the subject of a case of Cesarean operation lately performed in the Lying-in Hospital at Manchester, and the facts of it being variously represented by them, the men-midwives of that institution feel it their duty to the profession, to state their opinion and the circumstances of this interesting case.

On Monday the 24th of June last, about one o'clock P. M. Mr. White received a letter from Mr. Ogden, a surgeon at Ashton-under-Line, which we have subjoined, together with Mr. White's answer.*

About two o'clock, Elizabeth Thompson was brought to the Lying-in Hospital

* MR. OGDEN'S LETTER.

CHARLES WHITE, Esq. King-street, Manchester.

DEAR SIR,

Though I am not acquainted with all the rules of the Lying-in-Hospital, yet, I trust, I am acting in conformity with their spirit, in sending the poor woman, who is the object of this address, to the Charity in question. I have no doubt, you will receive her with cheerfulness; and tho' I am afraid there will be much, both, of difficulty and danger in the case, yet it will be some consolation to me, to reflect, that every possible care will be taken of the poor patient; living as she does, at a distance from all obstetrical assistance, it would be impossible, under all the circumstances of the case, to render her all the necessary aid and accommodation at home; humanity therefore requires me to act as I am doing. Permit me
further

Hospital,* and as soon as she arrived, Mrs. Turner, the matron and midwife, sent for Mr. Wood, the man-midwife in ordinary, for the week, who saw her about three o'clock. He finding the case a very difficult and dangerous one, desired a consultation, when the men-midwives extraordinary, and in ordinary, were immediately sent for; four of whom attended. Mr. Nansan was at Buxton, and Mr. White was gone a few miles out of town; but a messenger was dispatched after him, to request his attendance. He immediately came to town, and arrived at the hospital about half past eight o'clock; where he found Messrs. Hall, Tomlinson, Wood, and Thorp. After having examined the poor woman, their opinions were taken separately, and given to Mr. Wood, without any previous communication with each other; when they were unanimous, that the pelvis was so much distorted, that none of them could perceive either the child, the *os tincæ*, or any part of the uterus; that nothing but the Cæsarean operation could give any chance either to the mother or the child, and that no time ought to be lost in performing it.—The pulse, previous to the operation, beat 120 in a minute.

The plan laid for the operation, was, to pay no regard to the epigastric artery, as it could be of no consequence in a large wound, to

further to request, that, should the Cæsarean Section be deemed expedient, in the present case, you will inform me of it, in order that I may be present at the operation.

With becoming respect, I remain,

Dear Sir, your most obedient servant,

JAMES OGDEN.

Ashton, 24th June, 1799.

MR. WHITE'S ANSWER.

MR. OGDEN, Surgeon, Ashton-under-Line.

DEAR SIR,

Immediately upon the receipt of your letter, yesterday, I sent it down to the Lying-in-Hospital, and along with it, a recommendation for the poor woman; but she was not then arrived, and I was obliged to go out of town; but Mr. Wood, under whose care she fell, finding the case a very deplorable one, called a consultation, and a special messenger was dispatched after me, to request my attendance. When I arrived, betwixt eight and nine o'clock, I found Messrs. Hall, Tomlinson, Wood and Thorp; we were all unanimous, that no relief could be obtained for the poor woman, except by the Cæsarean Operation, which she consented to without the least hesitation, and it was performed by Mr. Wood without any accident or disappointment. The child is alive and hearty, and was christened this morning by the name of Julius Cæsar. The poor woman has had a very good night, and is as well in every respect as can possibly be expected. She bore the operation without a complaint, and says it was a much easier labour than her former one.

It gave us all great concern that we had not time to send for you, but the lateness of the hour when the consultation took place, and the great consequence it might be of to the poor woman to have delayed the operation, we hope will be a sufficient apology for not requesting your attendance, but we shall be extremely happy if you will have the goodness to attend our consultation at the Hospital to-morrow morning at a quarter before seven o'clock.

Manchester,

June 25th, 1799.

I am, yours most sincerely,

C. WHITE.

Mr. Ogden attended the consultation at the time appointed.

* We find, upon inquiry, that she was brought in a cart, placed on a feather bed which was slung with cords, in imitation of a hammock; but the mode which we recommend for conveying women in labour, from a distance, is a sling, carried by two men; it is easily constructed in any country place, with two poles and a couple of licks.

One upon this construction is kept in the Hospital, for that purpose, and may be had when applied for.

men accustomed to perform operations, and who knew the use of the needle and tenaculum. The place of election for the incision appeared to them to be, where the child could be most easily perceived, where they were not likely to meet either with intestines or placenta, or any intervening substance of consequence. The operation was well performed, and with great steadiness, by Mr. Wood, in the presence of Messrs. White, Hall, Tomlinson, and Thorp, of Mr. Chippindall, the apothecary to the charity, Mr. Barlow, Mr. Wood's assistant, and Mrs. Turner, the midwife. The epigastric artery was not wounded; the incision in the uterus was not more than sufficient to extract the child; there was no hæmorrhage to threaten life, or to impede her recovery; and what blood was shed into the cavity, was taken up by a sponge. The child lay upon its right side, with its head, in the neck of the uterus, resting on the fourth vertebra of the loins, and on the right ilium and pubis, completely above the superior aperture. Whoever will be at the trouble of applying a fœtal skull to this distorted pelvis, will be convinced, that it could not take any other position, the head could not descend so low as to be jammed in between the bones of the pelvis: it could not even descend so low as the fifth vertebra of the loins; so that the *cervix uteri* appears to have been forced, at every pain, against the *os innominatum* on the right side, and the fourth vertebra of the loins. *The natural shape of the head was not at all changed* from its round form to an oblong or sugar-loaf form; and it is impossible that it should have so changed, because the superior aperture was too narrow, and too distorted, to admit of its descending through any part of that aperture; and as the bones of the pelvis could not give way, the child's head, by every labour pain, would drive the *cervix uteri* against the solid bone, and produce an alarming degree of contusion—thence the danger.

We attended the patient three times a day, as long as she lived; and we are satisfied, that the after-treatment was right and proper in every respect. But thus far we may say, that, though she did not lose so much blood as to endanger her life or impede her recovery, we were of opinion, that, taking more, either generally or locally, would, on account of her previous indisposition, have occasioned too great a debility. We thought seventeen hours after the operation early enough to inject a clyster; as the intestines had been sufficiently emptied, a little while before the operation, by a violent diarrhœa. *We never, at any one time, thought her free from danger.* She died an easy death, and was extremely thankful for what had been done for her; and we hesitate not to give it as our opinion, that, performing the operation was the greatest act of humanity that could be done to the poor creature, who was labouring under as excruciating pains as we ever knew to fall to the lot of a human being.

The body was opened by Mr. Wood, in the presence of the Medical Committee of the hospital. The gentlemen who attended were, Dr. Cowling, Messrs. White, Hall, Thorp, Foxley, Brigham, Ollier, and Clough; Mr. Chippindall and Mr. Barlow were also present.

There were about ten ounces of bloody serum, with a little coagulated blood, (not more than an ounce) in the cavity of the abdomen.

The intestines were much distended with wind; but very few fœces were contained in them, and none of them were hardened.

There was no appearance of peritoneal, or intestinal inflammation;

no

no inflammatory exudation; no flakes of coagulable lymph; nor any extravasated fluid, of the nature of milk, resembling unclarified whey, containing flakes of curd-like matter, adhering to the intestines; nor had the intestines formed any adhesions; nor were there any unfavourable appearances about the wound in the uterus, or in that of the integuments.

The uterus was taken out of the body, and the *os tincæ* was found dilated to about two inches and a half in diameter; but still nothing could be discovered that could possibly account for her death, until it was cut open, when the inside being carefully washed with a sponge and warm water, a gangrene appeared quite round the inside of the neck of the uterus, rising higher in nearly a circular form, in the fore part, where the child's head was believed to have pressed it against the elevated part of the *ossa pubis*. This mortification* in the neck of the womb, which was totally unconnected with the incision in that organ, we consider as sufficient in itself to account for the death of the woman.

As soon as the uterus and pelvis were removed from the body, Mr. Wood, sent round to the physicians and surgeons of the Manchester Infirmary, and to several other medical gentlemen, who had not attended the dissection, to request their attendance at the hospital, where the uterus and pelvis were left for their inspection. In the course of that day, the following gentlemen attended, and saw the uterus and pelvis.

Dr. Holme, physician to the Infirmary; Dr. Hull; Mr. Bill, Mr. Killer, Mr. Ward, and Mr. Hamilton, surgeons to the Infirmary; Mr. Taunton, surgeon to the Cornwall Fencibles, at the Barracks; and Mr. William Henry.

* Mortification frequently takes place without any inflammation preceding; and, that mortification of the uterus will happen, without much previous warning, will appear from a case which Mr. White published in the appendix to his Treatise on the Management of Pregnant and Lying-in Women, ed. 5th. page 443, of a lady who died on the 8th day after delivery, of a mortification of the uterus, but had made no complaint till within six hours of her death.

The uterus is an organ which is not absolutely necessary to life, since many animals have been known to live after it has been taken out. *Ætius* and *Paulus Ægineta* say, that they have known even women recover, when the uterus had been extirpated on account of an inversion; and the same is mentioned by *Paré*. A very interesting case of this kind is related by *Prof. Wrisberg* of *Göttingen* (*Com. Soc. Reg. Sc. Got. tom. 8.*) *Mary Dorothy Ude* was delivered by a midwife of her first child on the 5th of June, 1780, who used so much violence in attempting to bring away the placenta, that she inverted the uterus, and immediately afterwards cut it away with a knife, exactly in the part where it is connected with the vagina. The poor woman was greatly endangered by the hemorrhage, but recovered completely. In September 1786, the aperture, which before that time would admit a finger, was become almost closed.

Dr. Holme, Physician to the Manchester Infirmary, saw and examined this woman in the year 1790, at *Göttingen*.

N. B. Casts of the pelvis, taken in plaister of Paris, by Mr. Sardini, may be had of him in London, and of Mr. Chippindall, the Apothecary at the Lying in Hospital in Manchester, where practitioners may have an opportunity of convincing themselves of the utter impossibility of delivering, where there are such distorted pelvises, by any other means than the *Cæsarean Operation*. We have the satisfaction to say, that the child is very strong and hearty.

From the prior account given by Mr. Wood, in the *Memoirs of the London Medical Society*, Vol. V. p. 475, relative to the dimensions of the pelvis, in the subject here alluded to, it appears, that the largest circle which could be formed in any part of the superior aperture, did not exceed one inch in diameter.—Ed:

Dr.

Dr. Percival called on Mr. White, in order to have gone with him to the hospital; but not finding him at home, and other circumstances occurring, prevented the Doctor from seeing the uterus at that time, but he afterwards saw it at Mr. Wood's.

Mr. Simmons, in a note to Mr. Wood, thanks him for his polite attention, but declines in the present instance accepting his invitation.

The Cæsarean operation has been successfully performed in Ireland; in the West Indies; frequently upon the Continent of Europe; and within these six years at Blackrod in this county. The only matter of dispute, in this last instance, is, whether the uterus was cut open with a knife, or was burst. The operator says it was cut open, the assistant says it was burst. We are not aware that a lacerated wound has any advantage over an incised one, except in preventing hæmorrhage, which we do not find to be a material objection to the operation.

We believe that the Cæsarean operation, and cutting the symphysis of the pubis, have frequently been unnecessarily performed upon the Continent, in cases where an English Accoucheur would never have thought of having recourse to either; and, on the contrary, we believe that many lives have been lost in this kingdom, for want of the Cæsarean operation being performed, and that some have been lost from its having been too long delayed. But, we should be much concerned to find it ever become other than a rare operation.

It should never be resorted to, when milder means will answer; nor should the life of the child be put in competition with that of the mother; nor should it in any case be performed, without a consultation of the most eminent practitioners in the neighbourhood.

Many women's lives have been saved by the crotchet in distorted pelvis; but there are some cases, where it cannot possibly be used; six having occurred in this town, within our knowledge, in which the delivery could not be accomplished by means of this instrument, and the Cæsarean operation, not being had recourse to, all the mothers and children perished.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the fifth volume of the London Medical Memoirs, just published, there is a paper from Mr. Wood, of Manchester, surgeon, relating a case of the Cæsarean operation, which he has lately performed in the Lying-in hospital of that town, and in which it was my fortune to be somewhat concerned. As Mr. W. in this paper, has drawn some inferences which may, and which I suspect were meant to, convey a censure as well upon Mr. Simmons as myself, I trust you will give a place, in the next number of your Journal, to the following statement and remarks.

On Monday the 24th of June last, between two and three o'clock in the morning, I was called up to go and visit the wife of John Thompson, of Hazlehurst, in this parish, as being then in labour. The distance from my house is about two miles. I went immediately; and on my arrival there, was informed that the poor woman, who was quite

quite a stranger to me, had then been in labour about two hours. After examining her per vaginam in the first instance, and interrogating her afterwards respecting her former labours, her general state of health, &c. I informed her husband that she could not be delivered either very soon or very easily, and that I wished to have a consultation on her case with a friend of mine from Manchester. I desired him to get a horse as soon as possible, and follow me home, where I would have a letter ready for him accordingly. He did so. This letter I addressed to Mr. Simmons, who came, and saw the woman along with me before nine o'clock, A. M. After a cautious examination, Mr. S. was of opinion that the case was one of Dr. Osborne's crotchet cases. The woman's pains at this time recurred very regularly; her skin was cool, her pulse calm, and, abstracted from the obvious deformity of the pelvis, there was nothing to excite either alarm or suspicion. As it was impossible for Mr. S. to undertake the case at such a distance from home, and as I had many reasons for declining it myself, the Lying-in hospital occurred to me as the most proper for the occasion. I immediately communicated this suggestion to both the husband and his wife, who acceded to it without hesitation. I then ordered a cart to be fitted up with ropes, in such a manner that a bed could be suspended by them without resting on the cart; and on a bed slung in this way the woman was conveyed to the Lying-in hospital, and, as the husband informed me soon afterwards, with more ease, convenience and expedition than could have been expected. She arrived at the hospital about one o'clock, P. M. Along with the patient I sent a letter to Mr. White, as senior accoucheur to the charity, requesting admission for her: and fearing Mr. W. might not be at home on its arrival, I sent my letter open, with a verbal instruction to the bearer, that, in such case, he should take it to Mr. Hall (the next in seniority to Mr. W.), who would be able to see its contents and act accordingly. I requested farther, in my letter to Mr. W. that should the Cæsarean section be deemed expedient, he would let me know, in order that I might be present at the operation. I heard no more of the case until ten o'clock in the evening of the next day, the 25th, when I received a letter from Mr. W. dated the same day, stating, that the Cæsarean operation had been performed the evening before, at nine o'clock; that the child was alive and healthy, and that the mother was in a very promising situation. And as an apology, I suppose, for not advising me of the operation prior to its being done, Mr. W. expressed a wish to see me at the hospital the following morning at seven o'clock, being the hour agreed upon for consultation. Believing the poor woman would certainly die, in consequence of the operation, and being extremely anxious to see her while living, I set out for Manchester the same night, and arrived at the hospital soon after midnight. I met the gentlemen of the hospital the next morning, the 26th, at seven o'clock, as desired, when their opinion still was, that if a passage could be procured per anum, the patient would do well. It was mentioned too, incidentally, that at some period subsequent to the operation, (I do not remember precisely when, and therefore I dare not say) her pulse had been below 100. I mention these circumstances merely to shew, that, in the opinion of the accoucheurs of the hospital, no inflammation of any sort existed either before the operation or on the day following it, and that even on the morning of the second day after the operation, they were scarcely,

if

if at all, alarmed for the patient's safety. My own opinion, it is true, was widely different from theirs, and I declared it to them accordingly. I remained in town a few hours longer, purposely to watch the progression of symptoms; and when I saw her for the third and last time, about one o'clock, I did not consider her recovery as a possible occurrence. She died about 36 hours afterwards.

In giving an account of the dissection, Mr. Wood attributes the woman's death to a gangrene about the cervix uteri; and this gangrene, he chooses to say, was occasioned by the pressure of the child's head, as impelled merely by the pains of labour, assisted, perhaps, by some rugged concussions of her bed, while travelling in the cart. Now when it is considered, how often cases of this sort have been *undecided for many days successively*, without the patient's suffering any material injury simply from the delay, during all which time it has been usual, also, to employ some other violent means to accomplish the delivery, I put it to the candour and good sense of the medical world at large, whether it is at all probable, that the woman's death, in question, was occasioned by the causes as accounted for by Mr. Wood. But I will *suppose* the case to be as Mr. W. wishes us to believe, that a mortal inflammation of the uterus was excited, no matter how, *before* the operation, pray what can excuse his performing so serious an operation under such a circumstance? Had a disease so truly formidable *no* symptoms, either general or characteristic? Is it even possible for such a disease to be excited in so few hours, in the way suggested, and to elude discovery? If so, I should be glad to know from Mr. W. or from his associates, *when* we can be certain that such a disease does *not* exist? and whether, on such a supposition, we can ever be justified in performing the operation at all, *except as a preventative before the coming on of labour?* Mr. Wood chooses to say farther, that if the operation had been performed sooner, and at the patient's home, she would probably have recovered. Supposing this to be true, it is very much to be lamented that the poor woman should have been *eight* hours in the hospital, before the operation was performed. The public, I am confident, will easily see that no time was lost in getting her there. I do not wish to say any thing respecting the *treatment* of the case. Mr. Wood's account of it is before the public: it is all the account which the public is likely to receive, and, for aught I know, it may be correct as far as it goes. But I must be permitted to ask, if it was of so much importance to empty the bowels very soon after the operation in question, as undoubtedly it was, why was nothing of this sort done *before* the operation? The operation was performed on the Monday evening at nine o'clock, and the patient had had no stool from the afternoon of the day preceding. I do not mean to infer much from this omission, though I do think it ought to have been most studiously guarded against. It is very unphilosophical, to say the least of it, to seek for, or to rest upon, minor circumstances as occasioning the woman's death, when we have *one* so abundantly sufficient to account for it, and which has occasioned the death of every other woman in this country in the same situation;—*I mean, the operation itself.*

Having thus shewn that the poor woman's death not only was not, but could not be, occasioned in the way, and as explained by Mr. Wood, the only inference which I can draw from the case is, and the public at large, I am persuaded, will draw the same — *that the Cæsarean operation*
ought

ought never to be performed at all, in any case whatsoever, during the life of the mother.

I am, GENTLEMEN,
Your most obedient servant,
JAMES OGDEN.

Ashton-under-Line,
Nov. 5, 1799.

P. S. Since writing the above, I have seen the statement, as drawn up by Mr. Simmons, and which he intends, I believe, for publication in your Journal. It is only necessary to observe, respecting Mr. S's account, that the facts stated in it are strictly true.

Miscellaneous Extracts.

Citizens DUMERIL, CHAUSSIER, and DUMAS have communicated to the *Philomatic Society*, various plans of an Anatomical Nomenclature. The first plan is founded on the termination of nouns; and the author adopts, as the radical, that name of the bone which is surrounded by the parts to be described; and the termination alone indicates, whether the name belongs to a muscle, an artery, a vein, or a nerve, &c. The methodical classification and nomenclature presented by the second Citizen possess great advantages over those hitherto used; as more uniformity in the designations has long been a desideratum. The Nomenclature proposed by Cit. Dumas, differs but little from that of Citizen Chaussier; it is composed of names which the author has endeavoured to define, but they are often formed of words rather difficult to be remembered. The eight chapters in which he comprises the introduction to this work, are written with clearness and precision, and abound in philosophic reflections.—*Rapport Général des Travaux de la Société Philomatique de Paris*, 1798. vol. i. p. 143.

Citizen L'VEILLE has laid before the Society, several reports relative to the inquiries made by him in conjunction with Citizens LARREY and DUMERIL, to authenticate the observation made by Dr. SOEMMERING, professor of anatomy at Mentz, on the retina of the human eye. He has discovered a yellow speck situated in the axis of the eye, near the insertion of the optic nerve, and which has an aperture in its centre, not before observed by anatomists. L'Eveillé has found this speck, with its aperture, in several human subjects; he imagines it to be destined for the modification of light, when its impression on the retina is too vivid; a circumstance of which Soemmering takes no notice.—*Ibid.* p. 144.

The same member has communicated to the Society, an observation which he made respecting an infant born with an imperforate anus; and whose rectum communicated with the bladder. The surgeons had in vain attempted to make an artificial anus in this subject.—*Ibid.* p. 145.

He also gave an account of a foetus, six months old, having only one eye, situated immediately above the nose: This eye contained two transparent corneâ, separated from each other by two opaque corneâ; it had

had two optic nerves; but he could not discover the smallest trace of the nasal cavities.—*Ibid.*

The same anatomist relates the dissection of a subject twelve years of age, in which he found the pericardium adhering to the heart, and entirely in a state of suppuration. This subject had died in consequence of frequent convulsions over the whole body; and had suffered much pain on being touched.—*Ibid.*

Citizen HALLE has given a description of an extraordinary fœtus, in which the brain had formed a hernia across the cranium. On the right side, the ribs were separated from the sternum; the whole of the right arm was formed of two bones end to end, terminating in a single finger. The clavicle was found articulated with the os humeri and the sternum. This fœtus had no skin on its belly. All the inferior viscera were displaced from its abdomen; nor had it a gall bladder: it was furnished with only one leg.—*Ibid.* p. 147.

Citizen CUVIER informed the Society, that he had received a description of a subject which had neither head nor heart. Its body was divided into three lobes, two of which represented the thighs and legs, and the third the trunk. Citizen Brongniart had formerly given the Society an account of a child born without head, arms, heart, lungs, or stomach, and wanting several other parts essentially necessary to a fœtus.—*Ibid.*

Citizen L'ÉVEILLE opened a female subject that had been treated for an internal complaint, at the Hotel Dieu, at Paris. She was eight months gone with child, and the ovarium of the right side formed a considerable tumour, containing a mole as big as a hen's egg, and a well-formed fœtus, apparently three months and a half old; its various limbs, as well as its placenta and umbilical cord, could be easily distinguished.—*Ibid.* p. 146.

Citizen BRONGNIART read a memoir to the Society, on his dissections of several apes; *Simia cinocephalos, capusina, æthiops, memon, & sabæa*. He compared the myology of these species together, and with that of man. Hence he concludes, that apes have a greater number of muscles than the human species; that these muscles are more fleshy, and often more elongated; but that, in general, the tendons and aponeuroses are much less; that the muscles of the pelvis, and of the posterior extremities, are so situated as to oppose themselves, in apes, to the long-continued vertical position; but that their form and arrangement enable these animals to jump and climb with extraordinary agility. In short, he is of opinion, that apes resemble quadrupeds in their muscular organization much more than they resemble man.—*Ibid.* p. 150.

Citizen CUVIER read a memoir on the hearing faculty of whales, and presented to the Society the auricular bone of one of these animals. This bone does not form an essential part of the cranium, but is suspended by muscles and ligaments. He distinctly saw, in the fœtus of the whale, the circular canals, the existence of which in cetaceous animals, has been denied

denied by Camper. To this memoir is added a table of the characters of the internal ear, in all the classes which are provided with that organ; whence it appears, that the essential part of the ear is a kind of transparent gluten, into which the auditory nerve seems to resolve itself.—*Ibid.* p. 148.

Citizen LATREILLE transmitted to the Society, some observations on the organs of generation of the *Julus complanatus*, L. The male of this insect has sixty feet, and the female sixty-two. Instead of the two which are wanting in the male, are two yellow, transparent, and projecting feet, which belong to the organs of generation, and are not externally perceptible. In the female, the genitals dilate only in coition, being imperceptible at any other time: these insects copulate front to front.—*Ibid.*

Citizen L'ÉVEILLE made a report on a new attempt to perform the Cæsarean section. The woman who underwent this operation died immediately. On dissecting the body, Citizen L'Éveille found the aperture of the uterus exactly parallel to that of the abdominal integuments, contrary to the opinion of several authors, who assert, that on the birth of the child, the uterus returns to its natural situation.—*Ibid.* p. 152.

The same member mentioned an observation he had made on an *aneurism* of the aorta. On the left side of the breast, a tumour appeared about five inches long, and three and a half broad: it had very frequent pulsations, resembling a settled palpitation; the pulse on the side of the aneurism was almost imperceptible; the patient soon expired, being suffocated by the quantity of blood discharged from the tumour, which instantly disappeared; the intercostal muscles had degenerated into a cartilaginous substance; the third true rib was entirely destroyed by a caries which had attacked the second and fourth ribs. The author observes, that it is very difficult to determine the cause of this disease, which of late has become very frequent.—*Ibid.* p. 152.

Citizen LACROIX read an observation on an extra-uterine conception. The patient, only by the suppression of her menses, discovered her pregnancy, five months after which she perceived some internal motions. At the end of seven months, the fœtus ceased to move. A considerable discharge, attended with painful symptoms, induced Citizens Baudeloque and Lacroix to suspect an extra-uterine conception. This woman died soon afterwards, and, on opening the body, they found the large ligament and the Fallopian tube blended in a sac, formed by the epiploon; there was likewise a fœtus lying towards the left side of the belly, in the usual posture; the uterus was in its natural state; the dilatation of the Fallopian tube, in which the fœtus had grown, was one inch from it; the skin and the cellular membrane of the child had changed their nature, and when pressed by the thumb, appeared like fat; they were similar to the fat of dead bodies found in the cemetery of the Innocents, except that, in the analysis, they did not afford any ammonia.—*Ibid.* p. 156.

Citizen L'ÉVEILLE communicated some observations on a tetanus which succeeded a wound of the finger. To avoid a fall from a ladder,

the patient caught a hook, by which he remained suspended: this made a deep wound in the anterior part of the middle finger, which cicatrized in a few days; but soon afterwards the patient felt such acute pains in the face, and diaphragm, that he was obliged to apply to the hospital. The tetanus now appeared; his jaws were completely locked; the recti muscles were rigid and projecting; his back was concave, and his breast convex. On touching his belly, the muscles of the neck became contracted. Citizen PELLETON cured this man in twenty-one days, by the frequent use of baths, and the administration of laudanum.—*Ibid.* p. 153.

Citizen DUMERIL communicated the result of an experiment he had recently made. It had been formerly observed, that when the bones became accidentally dislocated, new articular cavities were formed in the place where they touched. An attempt was made to repeat this experiment upon animals. After having dislocated the thigh of a young dog, and amputated the extremity of the femur, below the trochanter, the animal was allowed to walk about. A short time after, on opening the body, it was observed that a new articular cavity was formed; from this fact it was inferred, that in a case where a caries would render it necessary to extract a part of human bone, the carious part might be removed, as the re-union of the two healthy parts would form a new articular cavity, and the patient would experience no other inconvenience than the shortening of the limb.—*Ibid.* p. 154.

Citizen LARREY read an observation on a considerable tumour, the nature of which was mistaken before and after the death of the patient. The origin of this disease was ascribed to flying rheumatic pains which settled in the knee. The patient having had a fall on that part, felt a crack in the joint, and was unable to rise; inflammation succeeded, and, notwithstanding the aid of medicine, he daily grew worse. Citizen PELLETON, who supposed this disorder to be a *spina ventosa*, proposed the amputation of the thigh: some other practitioners considering the tumour as lymphatic, determined to open it with a trochar. Two incisions were made, from which issued a fetid gas and sanious ichor, but the patient died the second day after the operation. On opening the body, the femur, near the condyles, was found in blackish fragments, and corroded by the caries; the marrow was black and disorganized; the periosteum partly detached, and the surrounding soft parts reduced to a spongy substance, which had been penetrated by several splinters of the thigh bone.—*Ibid.* p. 155.

Domestic Intelligence.

A few botanical friends have formed a plan of a popular work, by which they propose to rescue the *Science of Botany* from the libraries of the learned, and to substitute for all the *technical* terms, hitherto used in elementary works, apposite English names and phrases, such as are easily understood by every reader of a cultivated mind. Their principal aim

is, to investigate, ascertain, and apply the properties of all native plants to some useful end, or purpose. While other botanists have successfully laboured to furnish us with accurate descriptions and faithful delineations of plants, the aim of this Society will be directed to the more practical, or economical part of Botany: by pointing out, in familiar language, whether, and in what degree, our indigenous plants may afford fuel, meal, oil, salt, soap, colouring matter, glue and paste, rosin, wax, paper, chocolate, and tobacco, or whether they may be more profitably employed in the different processes of fermentation, for making wine or vinegar, brewing beer, distilling spirits; or for manufacturing linen, cotton, and silk cloths; for the various arts of dying, varnishing, tanning, &c. It is superfluous to mention that this comprehensive work, so much wanted in an age of the strictest economy, will appear under the auspices of the most illustrious characters in this country; and, as a farther account of it is intended to be given in future Numbers of our Journal, we shall only add, that it is to be entitled, THE BRITISH ENCYCLOPEDIA BOTANICA.

Mr. PARKINSON, whose Medical Admonitions were mentioned in our Journal for May and July, has, we understand, in the press, besides the *Memoranda Chémica*, which we announced some time since, a popular medical work, intended for that class of society who can seldom purchase medical aid. The health and happiness of these he means to promote by pointing out, in a familiar lecture, rules for the prosecution of labour and of recreation; the injuries to health arising from irregularities; the duties due from parents to children; the means of removing the first symptoms of disease, &c.

Dr. DARWIN's new work, entitled, "Phytologia, or the Philosophy of Agriculture and Gardening, with the Theory of Draining Morasses, and an improved Construction of the Drill Plough, is so far advanced at the press, that it may be expected before Christmas; it will form a large quarto volume, illustrated with plates.

Dr. BEDDOES, who is indefatigable in the cause of useful science, announces the early publication of a popular medical work, in which he intends to unfold that portion of the order of Nature, which regulates the movements of the animal machine, and along with the principles, to state explicitly those practices relative to the preservation and recovery of health, upon which alone unprofessional readers can safely venture. Dr. Beddoes benevolently "wishes to render health a main object of education; to deter the ignorant from tampering with the sick; and to curtail the dominion of empirical imposture." The first number of this work will appear after Christmas, and the whole will be of considerable extent, and be enriched with engravings.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE,
[FOREIGN AND DOMESTIC.]

M E D I C I N E.

Annales Instituti Medico-Clinici Wirceburgensis : Redegit & Observationibus Illustravit J. N. THOMANN, M. D. &c. vol. i. cum. v. figuris aeri incisis. lxxviii & 229. pp. *Wirceburgi* apud A. M. Kōl. 1799.

In this volume, which is written with perspicuity, the author communicates to us, 1st. A concise history of the origin and progress of that excellent institution, the magnificent hospital at Würzburg, founded by prince-bishop Julius, towards the conclusion of the sixteenth century, at first for the reception of two hundred patients. 2d. Meteorological observations. 3d. Lists of diseases from the 1st of April to the 31st of December, 1798; and, 4th. Medical observations on the most interesting cases.

As the last part will be chiefly interesting to the medical reader, we shall extract a few passages from the most remarkable cases, in the author's own words.

After giving a general description of the Intermittents which prevailed at Würzburg, in July last, and their treatment, the author makes the following remarks:—"Morbi in universum non multi fuere, maxima parte chronici hoc mense vulgares, quorum nonnullos, licet minus graves, notabiliores tamen, hoc tempore grassantes exponam.

"Diarrhœa habitualis iure potentiis debilitantibus prægressis, præcipue purgationi nimiae adscribitur, quæ sæpissime a Medicis et Medicis sine omni discrimine ordinatur. Non curant monita nostro tempore varijs in libris novellisq; literarijs adlata, quibus abusus ac tumultuaria purgantium exhibitio damnatur; et, spernentes ulteriora rei medicæ studia, sua methodo, cui iam ab ovo adsueta sunt, contenti, minime terrentur ancipiti experimento, etsi quotidie morbum purgantibus adaugeri, universi corporis organismi incitationem minui, morbosque, levi medicamine profligandos, in pertinacissimos ac gravissimos ruere videant.

"Sunt tamen prudentes Medici complures, qui doctrinam illam in varijs Germaniæ scholis deprædicatam, omnes fere morbos e fordibus primarum viarum derivandos esse, ad vanas et inanes phantasias referant, omni veritate et recta observatione destitutas. Si quæ mala emeticum aut purgans exigunt, erunt forsitan ab indigestione orta, neque febres, quas dicunt gastricas, ita adpellandas censeo, quarum quippe causa ac fons inter præcordia non latet, sed alibi potius quaerendus est, ut magis edocet verum organismi animalis studium, iudicium et experientia. Minime enim morbi illi antigastricis, neque solventibus, neque emeticis, neque purgantibus organismi animalis incitationem ac incitabilitatem devastantibus tolluntur.

Alius,

“ Alius, de quo fermonem faciam, morbus erat renum peculiaris adfectio a fabulosis et calculosis concrementis suscitata. Multifariis iam lithontripticis sic dictis, uva ursi ab HAENIO maxime, aqua calcis cum saponone a STEPHENS, lixivio saponario a JURIN et CHITTIKS, alcali vegetabili ac minerali, aere fixo a PERCIVAL, SAUNDERS, HULME magnopere laudatis aliisque remediis institui experimenta: nullum vero votis magis respondit, quam aqua mephitica alcalina a COLBORN et FALCONER commendata. Absit tamen, ut huic aliive remedio vires lithontripticas tribuam, i. e. virtutem, calculos in rene solvendi, aut deterrandi, abraddendi. Videtur potius grato suo stimulo urinae secretionem adaugere, qua postmodum fabulosa concrementa ac minores calculi una cum mucositate glutinosa excernuntur. Aut forsan haec aqua alia et singulari gaudet, calculos depellendi, virtute sub sensu non cadente, qualem multis adhuc medicaminibus tribuimus, quorum effectum, minime tamen effectus causam novimus. Quamquam ad expellendos calculos maiores ac perfecte formatos illud remedium nihil omnino conferre experti sumus, plures tamen nobis innotescunt homines, calculosis et fabulosis concrementis ac multis exinde ortis molestiis adfecti, aquae huius usum restituti. Incommoda enim mox cessabant, atque per urinas multa alba glutinosa materiae sedimento fabuloso per longum temporis intervallum cum quodam urethrae ardore eiiciebatur. Alba illa materiae pauculo tempore sibi relicta friabiles formavit rubros vel albidos lapillos, urinaque blandam sensum amplexa est indolem, neque in urinis amplius cernebatur arena: quibus perstantibus ardor urethrae utique evanuit, et aegri postmodum eam recuperarunt sanitatem, ut et post multos annos calculosis adfectionibus immunes vixerint, et hodieum vivant. Neque in morbo hoc calculoso solum, sed et in aliis renum, vesicae ac uretherum morbis, medicamen illud iuvare, immo mucum atque gluten vasa renum excretoria obdurans illo reserari, atque e corpore eliminari, vesicae ulcera, uretherum ac pelvis renum exulcerationes depurari ac sanari observatum est. Quod si interea contingit, ut aut nimia mali intensitate, aut partium destructione, aut labe quacunque alia corpus tenente ac depascente homo non liberaretur, immo periret, nihil id derogaret remedii praestantiae, quippe quum omnium vel optimorum remediorum ea sit natura, ut intra certos tantum mali limites agant, et extra eosdem agere nequeant. Sufficit etiam in eiusmodi casibus eam remedii deprehendere efficaciam, ut, quum spes nulla adfulgere videatur, saltem inexpectatum adferat levamen.

Aquae huius alcalinae iuxta formam FALCONERI paratae aegrotans mane per tres vices uncias sedecim ad viginti quatuor sumit. Quantitatem vero semper aegrotantis viribus ac ventriculi praesertim robore metiebar. Ad quae diiudicanda nisi vitae ante actae ratio corporisque constitutio ducerent, effectus aquae propinatae iuvabat, quam caute semper porrexi, ne digestio unquam laederetur, ventriculus gravaretur, anxietas, pectoris oppressio, cardialgia, colica, ventris inflatio, diarrhoea aliaeque orirentur molestiae, quas non raro ab immodico aquae usu, nunquam a modico provenisse vidi. Eas tamen, si adparebant, usus roborantium amarorum dissipavit; nonnunquam statim in initio ad praecavenda haecce incommoda cum aqua mephitica alcalina simul et roborantia exhibui.” pp. 67—70.

Among the most instructive cases are those which the judicious author has illustrated with plates: viz. the history of an ossification in the heart.

heart, found after dissection; and a case of dropfy of the ovarium. Of these, we purpose to give a detailed account to our readers, in a future Number.—At present, we shall only take notice of a case of *emphysema*, which is sufficiently important, both on account of the complicated variety of symptoms, and the rational practice adopted by the physicians of that hospital. The particulars of this case are as follow :

“ Pistor quidam, annos 44 natus et sanis ortus parentibus, corpore sat robusto laetaque a teneris sanitate usus est, nisi quod 12mo aetatis suae anno per tres menses vexaretur scabie. Molestum hoc exanthema adhibito unguento ex sulphure, Mercurio et oleo olivarum ita evanuit, ut ullas inde remansisse molestias sibi haud meminerit. Ex coniugio fati infelici tres genuit proles cum uxore, quae ex cancroso ulcere faciem occupante periit. Qua defuncta opibus exhaustus cum infantibus ipsi relictis vitam vivebat miserrimam, plerumque vagabundam. Quum 24to aetatis suae anno in cella vinaria laborans atque multum refrigeratus magnam vini frigidi copiam avidis hausisset faucibus, subito molestiam in pectore sensit: horrorem sat vehementem insequiebantur calor, languor, tussicula sicca, sensatio quaedam tendens ac premens in pectore, respiratio difficilis et anxia. Incrementibus noctu hisce symptomatibus quaerit auxilium a Medico, et mox restitutus fuit. Ex eo tempore, expositus omnibus miserae ac vagae vivendi rationi adnexis calamitatibus, variis affligebatur morbis, in quibus tamen adfectiones pectoris maximi semper fuerant momenti. Quum praeterea pro vitae suae genere pondera levando pulmones adhuc magis exagitaret, accidit, ut in maiorem morbi traheretur opportunitatem. Quare omnio fere vernali et autumnali tempore a tussicula ab initio sicca, in posterum autem sputis soluta, adfectum se fuisse refert. Quibus pectoris adfectionibus se nonnunquam adsociavit cardialgia, quam usu spiritus vini vinive calidi profigare conabatur, quod remedium mox anavit tantopere, ut quotidie fere dimidiam vel etiam libram unam spiritus vini biberet. Infelicem hanc consuetudinem firmavit magis Medicus quidam, qui aegro elixirium quoddam spirituosum mane sumendum praescripsit. Levatus inde paululum aeger lubenter huic consuetudini indulgit, minusque sollicitus de sua valetudine aestatis calore excalesfactus aquam hausit frigidam, nec non data quavis occasione potibus spirituosis usus, hoc tempore tandem autumnali corripitur omnibus pectoris adfecti symptomatibus supra iam enarratis. Adpetitus praeterea fuit depravatus, atque sudoribus nocturnis fere diffuens aeger valde debilitabatur. Tussis cum sputis e viridi flavis ac tenacibus mane e lecto surgentem valde anxium reddebat. Mense Octobri ad suam fuorumque sustentandam vitam ruri circumvagus valdeque excalesfactus, larga subito pluvia per totum corpus madefactus, in proximum festinans hospitium calori fornacis proxime adsedit. Siccatus paululum aeris frigori se denuo exposuit, iter in urbem profecturus. Sed haud longe progressus subito collum quasi rigidum et tumens, totum caput graviter occupatum, instantem quasi apoplexiam, pectoris oppressionem et constrictionem, et in latere thoracis dextro sensum titillationis percepit. Viribus valde prostratis in urbem venit. Noctu subitaneo totumque corpus percutiente frigore excitatur e somno, quumque ob respirationis difficultatem e lecto sese ad tollere cogeretur, capitis, trunci et extremitatum superiorum tumorem sentit ac gravedinem ingentem; palpebrae oculi dextri tumentes bulbum obtegunt. Insequitur calor corporis urens, sitis inexplebilis, orthopnoea. Altera die, 5ta Octobris, miser

miser hic ad noscomium confugit. Capitis et trunci corporis monstruosa conspicitur tumescencia, facies rubedine fulgens erysipelatoza, palpebrae utriusque oculi tumens ita, ut bulbi obtegerentur. Mammae earum mulieris instar lactescentis turgent. In capite, trunco et extremitatibus superioribus strepitus sub adtactu crepitans, ut in emphysemate, sat bene distinguitur; frigus praeterea et calor alternans, respiratio difficilis, anxiosa, stertorosa, situm nonnisi erectum in lecto concedens aegro; tussis frequens et sicca; sputa interdum spumosa; pulsus parvus, debilis et frequens; cutis arida, fitis multa, alvus obstructa.

“ Morbi causam praeter tempestatis mutationes ac refrigeria aeger nullam accusat: quare prognosin discrimine plenam pronuntiantes praescripimus:

℞ Aq. flor. sambuc. Unc. septem.
Vini antimon. Huxh. Dr. duas.
Spir. Minder.
Syrup. diacod. aa Unc. unam et dimid.

MDS. Omni hora cochlear unum.

“ Adplicetur clyfma emolliens. Diaeta tenuis cum vino. Regimen calidum et ficcum.

“ Ne ullum de aeris sub cute praesentia superfit dubium, fonticulum ad brachium dextrum posuimus, quo levi pressione aer inter sanguinem eo loco adgregatum bullularum sub forma exiit.

“ A 6ta usque ad 9nam Octobris. Continuata hac medendi methodo erysipelas faciei ut et febris evanescit; subsequente largo sudore, tumor capitis et reliqui corporis collabitur; strepitus tamen tactui sensibilis atque pectoris adfectiones et tussicula cum sputis tenacibus e viridi flavis permanent: unde pulmonis dextri vomitam seu exulcerationes a neglectis praegressis pectoris morbis et vitae genere suspicati sumus. Ordinatur:

℞. Rad. polygal. feneg. Dr. duas.
coq. cum aq. font. libra una ad remanent.
Unc. septem. Col. adde
Mell. depur. Unc. unam.

MDS. Omni bihorio cochlearia duo.

“ Diaeta portio quadrans. Pro potu vinum aqua dilutum.

“ Die 9na et 10ma. Omnia eadem, nocte sudor largus. Praescribitur:

℞ Opii puri Gr. unum.
Rad. Ipecacuanh. Gr. dimidium.
Sacch. albi Dr. dimidiam.

M. f. pulv. div. in duas part. aequales.

DS. Mane et vespere dosis una.

“ Die 11ma et 12ma. Symptomata et ordinatio eadem.

“ Die 13tia. Symptomata pectoris valde imminuta; sputa puriformia facillime eiciuntur; lassitudo inter largos per noctem sudores; emphysema fere totum evanidum. Praescribitur:

℞. Pulv. cort. peruv. Unc. unam.
Rad. polygal. feneg. Dr. duas.
coq. c. aq. font. libra una ad remanent.
Unc. octo. Col. adde
Mell. depur. Unc. unam.

MDS. Omni bihorio cochlearia duo.

Pro potu decoctum Lich. Island. Portio dimidia cum vino.

488 *Dr. Beddoes's Notice of the Medical Pneumatic Institution.*

“ A die 14ta ad 18vam. Adfectiones pectoris valde imminutae; restat autem tussis cum sputis puriformibus. Hinc sublato emphysemate et faciei erysipelate aegrum declaravimus phthisicum, et post aliquod tempus viribus magis restauratis e nosocomio dimissimus.”

Notice of some Observations made at the Medical Pneumatic Institution: By T. BEDDOES, M. D. 8vo. p. p. 47, price 1s. 6d. Bristol and London. Longman and Rees, 1799.

Dr. Beddoes commences this pamphlet with an explanation of the causes of delay, which have retarded the long expected reports from the Pneumatic Institution.

“ At length, after some disgusts and much delay, we have it in our power to announce the first proceedings at the establishment, for applying chemistry to the elucidation of animal nature, principally by pursuing the connection between the properties of elastic fluids, and the conditions of life. By such an investigation, the public has been already too often told how much I consider it as practicable to advance *physiology*, the most interesting of the sciences, and *medicine*, the most useful of the arts. Intimately persuaded that immense improvements must, sooner or later, result from the inquiry, provided Nature be consistent with herself, and nothing doubting the truth of this, the fundamental postulate of all philosophy, I felt little discouraged by failures, which the presumption of sciolists has often busied itself in representing as decisive. For, who would suffer himself to be turned prematurely aside from an useful pursuit, by reptiles that plant themselves on the high road of improvement, and try to hiss back all who would advance? — Nor has the intelligent part of the public, I believe, been induced to regard as finished that which could not properly be said to be begun. For myself, among a multitude of reports, that prove nothing beyond the safety of the research, observing some far more favourable than could be expected from the excessive disproportion between the means hitherto employed, and the end in view, I incessantly persevered in urging the execution of the design.

“ How widely this proceeding departed from that wary professional conduct, which, above all things, avoids committing itself by any measure of striking singularity, and is content with the eternal repetition of processes, from which nothing of advantage is expected, and nothing gained, I could not but be conscious. The present was, perhaps, the first example, since the origin of civil society, of an extensive scheme of pure scientific medical investigation.

“ To have engaged in it, however, either without a sufficient fund, or the most able assistance, would have been to do a good cause the most lasting of injuries, supposing (what I have long sincerely believed) that extensive benefit may result from the undertaking. The qualifications of a superintendent, were, indeed, of still greater importance than the amount of the subscription. In some hands, the largest sum would have been utterly unproductive. And the acquisition of a properly qualified associate, might be considered as more than virtually doubling the fund; since it is the prerogative of superior talents, to accomplish great purposes by small means.”

Dr. BEDDOES gives an account of the effects produced by breathing a certain modification of the *dephlogisticated nitrous gas* of Dr. PRIEST-

LEY, which are astonishing enough, and will, doubtless, produce no common sensation in the minds of physiologists.

The present publication, however, is only a notice of a regular quarterly account of the Institution, and its future prospects. This periodical work the author here announces, under the title of *Researches concerning Nature and Man*.

NATURAL HISTORY.

The British Flora, or a Linnæan Arrangement of British Plants; with their generic and specific characters, select synonyms, English names, places of growth, duration, times of flowering, and references to figures. By JOHN HULL, M. D. &c. in two parts, 8vo. 449 pp. (price nine shillings) Manchester, CLARKE; London, BICKERSTAFF; and Edinburgh, MUDIE.

This compendious and useful work has hitherto escaped our attention, though it was published in the beginning of the present year. The author appears to have taken uncommon pains, in rendering this publication of superior utility to others that have hitherto appeared on the native plants of this island; as he has not only availed himself of the best authorities, but likewise added many original remarks and observations made in his botanical excursions.

In order to enable the reader to judge, in some degree, of the merits claimed by this "*Flora*," we shall quote the author's own words from his preface: "The numerous corrections and additions, which the catalogue of British plants has lately received, in consequence of the prevailing taste for botanical pursuits, having rendered the *Enchiridion Botanicum* of Broughton, and all similar publications, very insufficient for the purposes of the practical botanist, the author was induced, in the beginning of last year, to prepare the volume, now offered to the public, for the press.

"Had he then been apprised, that a pocket *Flora* would so soon appear by another hand, he would have relinquished his undertaking; but, having nearly completed the work, before the Synopsis of Mr. SYMONS was announced for publication; and finding that work written in the Latin language, less comprehensive in its plan, and not continued through the three last orders of the Class Cryptogamia, he could not consider it as superseding the necessity of this volume; which, he flatters himself, will prove an useful companion in botanical excursions.

"In the *Catalogue* here given, will be found all the *species* contained in the third edition of Dr. WITHERING's very valuable work on the botany of these kingdoms, together with such additional ones, as have been since discovered and ascertained. All the varieties also are given, except those depending merely upon size or colour.

"In the *Arrangement*, the author has adhered strictly to the method established by the justly celebrated Linnæus, in preference to the reformed system of Professor THUNBERG; although this has been adopted on the Continent by HAENKE, in his edition of the *Genera Plantarum*, and by WILDENOW in his *Floræ Berolinensis Prodrômus*; and in this kingdom, by SIETHORPE, WITHERING, and SYMONS. That he may not unnecessarily add to the size of this volume, he will assign his reasons for this, and give some observations on the botanical language, here employed, in

the preface to a work, containing an Introduction to Botany, and the Natural Characters of the Genera of British Plants, which is now in the press; and will content himself with giving here the following short statement of the plan of the British Flora.

“ The *Genera* are numbered in the same manner, as in RICHARDSON'S edition of the *Genera Plantarum*, and the fourteenth edition of the *Systema Vegetabilium*, published by MURRAY, at Goettingen, in 1784. The *Characters* are, in general, translated from the works of LINNÆUS, and chiefly from the *Systema Vegetabilium*. Where Linnæan characters are wanting, the deficiency has been supplied from the works of HUDSON, LIGHTFOOT, WITHERING, DIXON, SMITH, the Linnæan Transactions, &c. &c. With these, are occasionally given some additional distinctive marks, either included in a parenthesis, or subjoined as an observation.

“ To each *Species* are added,

1. The English Names; except in the three last orders of the class Cryptogamia, where they have been almost universally omitted, because they are mere translations, and not properly established:

2. The general *Habitation*, or *Situation*, in which it is found, and, in some instances, where the plant is very rare, the particular place is indicated:

3. The *Duration*; which is expressed by the initials of the words annual, biennial, perennial, shrub, tree:

4. The *Seasons*, or *months of flowering*; the months being expressed by numbers, e. g. January by 1, February by 2, &c. &c.

5. A *Reference* to some figure, or figures. In general, one figure only is referred to, and, in some instances, an inferior English figure has been preferred to a superior foreign one, as being more accessible to the generality of readers. When two or more are given, the first place has not always been assigned to the best.

“ The *Synonyms* of HUDSON, LIGHTFOOT, and WITHERING, are also constantly added, when they differ from the Linnæan name, or from each other. And the synonyms of other authors are frequently given, especially in the class Cryptogamia.

To such species as are *doubtful natives*, a note of interrogation is affixed.”

Botanisches Taschenbuch für die Anfänger dieser Wissenschaft, und der Apotheker-kunst, auf das Jahr, 1799.—A Botanical Pocket-Book, for the use of the student of this science, as well as of Pharmacy, for the year 1799. By D. H. HOPPE, 8vo. 225 pp. (price 21 grösch. or about 3s. 6d.) Regensburg, Montag and Weifs.

Germany cannot boast of a more popular and useful botanical almanack than the present, which has now been continued for a whole *decennium*, with undiminished reputation. Its contents are well adapted to promote the study of botany; a science which is more than any other entitled to universal attention, and in which we may reasonably expect a beneficial reform in the present revolutionary age. By such a reform, however, we do not mean to insinuate, that the systematic arrangement or classification of plants, can be much altered and improved; nor is it from new discoveries of rare and curious plants, that the world will be benefitted in a degree adequate to these pursuits.

but we submit to the consideration of the reader, whether the *useful and æconomical purposes of plants* are sufficiently investigated, understood, or applied? * Our answer cannot be given in the affirmative.

The first article of this 'Pocket-Book' is a Journal kept in Spring 1798, to record the time of flowering of several vernal plants; by L. N. GEBHARD. The observations were made at Süttschlag, situated in a narrow valley extending from north to south, to the chain of mountains called Tauern, in the Bishoprick of Salzburg, in Germany, and exposed to a rough climate, where the winter begins early in autumn, and the snow melts only after the spring season has considerably advanced. On these German Alps, the author found the *Gentiana verna* in blossom, on the 1st of March; the *Saxifraga oppositifolia*, which consisted here uniformly of five, and sometimes of six petals, on the 10th of March; the *Ranunculus nivalis*, on the 17th; the *Viola biflora*, generally with one flower, on the 24th; the *Arnica Bellidifolia*, and *Cardamine bellidifolia*, on the 27th; the *Soldanella alpina*, on the 30th; the *Valeriana tripteris*, on the 4th of May; the *Ribes alpinum*, and *Gentiana acaulis*, on the 7th; the *Anemone alpina* and *vernalis*, *Pinguicula alpina*, and *Salix arbuscula*, on the 9th; the *Arabis bellidifolia*, *Antirrhinum alpinum*, on the 10th; the *Bartsia alpina*, *Rhododendron ferrugineum*, *Saxifraga stellaris*, *Potentilla aurea*, and *Azalea procumbens*, on the 14th; the *Saxifraga Cotyledon*, *Myagrum saxatile*, *Hieraceum aurcum*, *Campanula barbata*, *Gypsophila repens*, and *Thymus Alpinus*, on the 19th; the *Erysimum sulphureum*, on the 22d; the *Lonicera alpigena*, and *Senecio alpinus*, on the 28th; the *Tussilago alpina*, *Carduus defloratus*, *Atragene alpina*, *Veronica apbylla* and *integrifolia*, *Uvularia amplexifolia*, *Ranunculus aconitifolius*, *Saxifraga rotundifolia*, *Silene acaulis*, *Sedum rubens*, *Pedicularis comosa* and *recutita*, *Cistus celanditicus*, *Primula minima*, and *Empetrum nigrum*, on the 30th and 31st of May.

The next article is a paper written by the same author, and containing reflections on the arrangement of our botanical text-books: the third is a list of some of the Cryptogamia, growing in the mountains of Salzburg, near *Hüttschlag*; both by the same author.—Some accounts of the Austrian Alps and their plants, by L. TRATTNIK, of Vienna.—A botanical excursion to some of the Alps of Salzburg, Carinthia, and Tyrol, by the editor. The author calculates the height of Mount Glockner, at 6400 feet above the horizon of Klagenfurt: the number of plants collected on this journey, he reckons at 6000, among which are many new and rare alpine plants, e. g. of the former, the *Soldanella alpina*, *Atragene alpina*, &c. *Ranunculus nivalis*, *Gentiana nivalis*, *Arnica glacialis* *Artemisia glacialis*, and *Ranunculus glacialis*: of the latter description are the new species of the *Hieracium piliferum* and *angustifolium*, and quite a new species, *Cynofurus ovatus*.

The other papers of this annual work are to us less interesting, as they are of a local nature; but we cannot, in this place, omit to mention a work of Mr. HOPPE, the present editor, entitled, *Herbarium vicium plantarum rariorum, præsertim alpinarum*. It is published in numbers, each containing one hundred plants preserved in such perfection,

as

* See an account of a new work on this subject, in our present Number, under the head of *Domestic Intelligence*, p. 482.

as is unrivalled by any similar attempt: to each plant is affixed a printed paper, with its systematic name and technical definition; the general and particular habitation of the plant; the day on which it was found; and the name of the botanist who collected and communicated the plant to the editor.

Ericorum Icones et Descriptiones, auctore JOHANNO CHRISTOPHORO WENDLAND. Fascicul. III. Abbildung und Beschreibung der Heiden. The three first Numbers, 4to. 1798 and 1799, (price seven rix-doll. or about 1l. 8s.) Hanover, HAHN.

This work was begun by the editor in conjunction with Dr. RÖMER, in 1794, who has since relinquished the undertaking, on account of adventitious circumstances. Mr. WENDLAND being the director of the Royal Garden at Herrnhäusen, near Hanover, is happily situated, and eminently qualified to communicate to his countrymen the different species of heaths, partly cultivated in that magnificent botanic garden, and partly represented and described in splendid, but expensive English works. Each number contains six plates, on each a different species, not numbered, in order to arrange them at pleasure, when the whole is concluded. The drawings are indeed remarkably correct, but the colouring is inferior to most botanical plates we have lately seen imported from Germany.

The usual description of the character of every species is added with punctual fidelity, and the following are given in these three numbers: *lutea, ramentacea, Pattersoniana, pinea Thunbergii, perspicua, pinea Plukenetii, taxifolia, strigosa, spicata, interrupta Plukenetii, Bergiana, laniflora, coccinea, venricosa, nutans, incarnata, capitata, and curviflora.*

Beschreibung merkwürdiger Höhlen.—A Description of remarkable Caverns; a Contribution to the Physical History of the Earth. By Dr. ROSEMÜLLER and Dr. TILLESIIUS, 8vo. XVI. and 224 pp. with ten plates, (price three rix-doll. or 12s.) Leipzig, Breitkopf and Hartel.

Our room does not permit us to mention even the names of that multitude of original works from which this interesting description has been collected: but, to gratify the curiosity of the reader, we shall give an account of the different caverns here described: viz. the Devil's Arse, and Elden Cave, near Castleton; Pool's Cave, near Buxton, in Derbyshire; the Cavern near Kiemel's House, in Wales; Mortimer's Cave, in Nottingham; the caverns near Slains and Dunbar, in Scotland; the Caves of Sutherland, Caithness, Cantyre, and near Flamborough-Head; the Caves of the Isle of Arran in Scotland; the Cavern in the Hebride Isle of Bay; the Cave of Fingal, on Staffa; the Caves of Angus-shire; the Baar's Cave in Suther-Island; the Caves of Sniosell and Snurth, on the Wester-Island; the Cavern in New Spain; the Cave at Dondon, on the Island of Hispaniola; the Cavern on the Copper Island; the Cole's Cave at Barbadoes; the Cave of Pusgeskoi, on the mountains of Alta; the Caverns near Murom in Russia; the Cave near Kungur, and those near the banks of the rivers Yenisei and Onon, in Siberia; the Caves near the Ulu Syr and Syokul in Siberia; the Bone-Caves in Egypt; the Cave of Sybilla on Lake Avern; the Grotta di Posilippo and Dog's Cave,

Cave, near Naples; the Grotto of Serpents, near Civita Vecchia; the Cave at Castro Pales; the great Caverns at Alcantara, near Lisbon; the small yellow Cave in the valley of Alcantara, together with an account of their productions, never before described; the Caves near Sassenage; the Witches Grotto, near Ganges, in the Sevens; the Cave of Pilate, in the Swiss Alps; the Caves of Bruder Bahn and Glaris, in Switzerland; the Cavern in the Landgraviate of Saufenberg; the Caves of the Wester-Forest; the Dragon's Hole, in the Landgraviate of Hesse Darmstadt; the Cave near Bredewinde, in the Upper Palatinate; the Cave near Ribar, in the county of Zoll; the Ice-cave, near Scelicze, and the Lungs-Cave, near the Carpathic Mountains; the Horse-hole, near Eisenach; and the Mouse-Cave, in the Dutchy of Coburg.

The description of the two Caves in the Valley of Alcantara, is masterly and original; but the plates, though engraved by the editors themselves, are, except one or two, very indifferent performances. In short, it appears doubtful to us, whether works of this nature afford to the mineralogist, or rather geologist, that degree of instruction which he expects from their perusal; or whether they are not better calculated to amuse the superficial inquirer, as well as to inspire the admirer of Nature with dignified conceptions, than to answer the practical purposes of science, and its useful application.

POPULAR MEDICINE.

Lectures on Diet and Regimen, &c. by Dr. WILlich.

[Concluded from our last Number, pp. 393—396.]

“ Nature resents every outrage committed on her treasures, and seldom fails to punish the transgressors with lingering disease, or early dissolution. This observation may be applied to the moral as well as the physical faculties of man. It is commonly said, and not without some degree of truth, that very forward children seldom live to any age; and that too early an exertion of mental powers is in most cases destructive. The same remark holds good in what relates to the body. The inhabitants of hot climates, who frequently marry at the age of ten and twelve, or twelve and fourteen, begin to be old at thirty, and rarely survive the sixtieth year. Every thing which hastens the evolution of the natural powers, every exertion of strength disproportionate to the ability of the individual, should be carefully avoided, as of a dangerous tendency. Hence the great art of education, the great art of living, consists in following the path of Nature.

Fifthly, We should constantly inure ourselves to the habits of supporting and resisting the various impressions of external agency. Some persons who have paid a very rigid attention to diet, have, notwithstanding, been unable to reach even a middling age; while others, who have been addicted to the most irregular and extravagant courses, have been observed to live to one very advanced. Hence arise contradictory maxims in dietetics, which can only be reconciled by deciding chemically between the two extremes, and ascertaining pretty nearly the absolute and relative salubrity of things. All deviations from the rules of diet are in a certain degree hurtful; although these may, in most cases, have only a limited value. Many epicures have been known to reach
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their seventieth and eightieth year, if they have once survived a certain critical period of their lives. As soon as the body becomes accustomed to the use of certain things, at first disagreeable and perhaps hurtful, the noxious tendency will not only be removed, but we shall find our frame hardened and strengthened by the habit of using them. Nature must stand many a shock, if she would familiarize herself to the vicissitudes of climate and opposite modes of life, but every victory she gains in these encounters, will be a means of rendering her more vigorous and unconquerable. How could the sublime mind of **FREDERIC the GREAT** have remained so long in its earthly vehicle, if he had not improved, by constant culture and discipline, his original disposition to a long life. A thousand other men, who have endured as much exercise of body and exertion of mind in their younger years, have yet not attained to any remarkable age. Severe and obstinate diseases have also been thought, in many instances, to contribute to the prolongation of life: this is at best, however, but a doubtful point; although it cannot be denied, that many sick persons have, to all appearance, acquired additional strength and spirits, after having recovered from a distressing quartan ague, or some threatening pulmonary disorder.

“ *Sixthly*, We may take notice of a certain *steady and equal progress through life*, as highly conducive to the great object in view, whether it flows in the manner of a gentle stream, or resembles the more active course of a rapid river. The mind, when accustomed to certain situations and pursuits, which almost constantly affect it in an uniform manner, is most likely to preserve its reasoning powers unimpaired and strong. He whom neither violent joy convulses, nor deep melancholy corrodes, whose drama of life is not chequered by too sudden vicissitudes, may, with some probability, expect a long enjoyment of that life to which he has become so habituated. There are many whose days quietly glide away, like those of a simple rustic, in continual sameness: such persons, it is observed, generally live to a great age.

“ *Seventhly*, A very necessary cause of the attainment of an advanced age is a sound state of digestion. In very old persons, we generally find the digestive organs in excellent condition; nor is there a surer symptom of approaching dissolution, than complaints in the stomach, or frequent returns of indigestion. The Swiss are indebted, it is thought, to the vigorous tone of their digestive organs, for the long preservation of their lives, in general, and for the great number of aged persons among them. Milk and vegetable food seem remarkably well adapted to invigorate the stomach. To effect the same purpose, **LORD BACON** advises old people to have recourse to strengthening baths, fomentations, and similar *external* remedies, which operate upon the absorbent system; at the same time, a thin but nourishing and moderate diet should be observed, in order to spare the organs of digestion.

“ *Eighthly*, and lastly: We may recommend equanimity, or that state of the mind, when, from the happy nature of its pursuits, it is not disquieted by too violent exertions. In the literary professions, and particularly among such individuals as are placed in easy circumstances, we discover as many instances of longevity, as in the more laborious occupations. It was remarked by the ancients, that grammarians and rhetoricians commonly attained a great age. The mind being engaged in scientific pursuits, and other objects in which it finds pleasure, such as
 conversation

conversation on literary and mixed topics, collecting the productions of Nature, a continual series of mental research, diversifying the pursuits or amusements, yet gradually and constantly persevering in exertions toward the attainment of some principal object,—all supply the vital power, as it were, with materials, like the cruse of oil, which proved a never-failing support to the widow of *Sarepta*. On the other hand, it is a general remark, that deep thinkers, speculative philosophers, and those whose powers are continually absorbed in abstruse inquiry, soon feel the effects of age from the great exertions of their mental powers. This must be understood, however, with exceptions, as in the cases of Sir ISAAC NEWTON, HALLER, EULER, and, the pride of his nation and age, the profound and venerable KANT, still living at Koenigsburg.

It would, perhaps, be considered presumptuous, if we were to give farther extracts from the subsequent chapters of this work, in which the author treats, at large, of Air and Weather; Cleanliness; Dress; Food, Drink, and Spices; Exercise and Rest; Sleeping and Waking; Evacuations; Sexual Intercourse; the Passions and Affections of the Mind; the Organs of Sense; and, the Treatment and Preservation of the Eyes.—To the 'CONCLUSION,' he has subjoined the following *Corollary*:

“ A luxurious life, and dissolute manners, not only impoverish a people, but ultimately depopulate the country. Such mischievous consequences can be averted only by laws wisely enacted, duly administered, and experimentally adapted to the natural capacity and disposition of a people: for, if their artificial propensities and desires be not controlled in time, and directed to useful ends, the citizen must degenerate into a feeble and irresolute slave, and his progeny will gradually wither away, like a plant in a foreign soil. Thus Rome was subdued, when she departed from her ancient simplicity of manners, when she adopted foreign and effeminating refinements, and when her feasts and public amusements became too frequent.”

In a 'Postscript' the author informs the public, that he purposes, next year, to publish another volume, intended as a counterpart to these Lectures. “ Having treated in the present volume, (says he) of almost every subject that relates to the management of the human body in its *healthy* state, my next work shall be entirely appropriated to its treatment in a *diseased* state. It shall comprehend an accurate and clear description of diseases, together with a plan founded on the rules of experience, how to treat and eventually to cure them, especially those of a chronic nature. The administration of medicine ought, in such a work, to be only a *secondary* mean of removing disease; as it will be admitted by the most enlightened and candid of the profession, that, by strictly medical remedies, we can cure *symptoms*, and afford occasional alleviation of pain; but that we cannot affect a favourable change in the nature and progress of a disease, without due attention to food, drink, air, sleep, exercise, or rest, &c.

A few practical Remarks on the Medicinal Effects of Wine and Spirits; with Observations on the Oeconomy of Health: intended principally for the Use of Guardians and others intrusted with the care of Youth: By W. SANDFORD, Surgeon to the Worcester Infirmary. Small 8vo. 152 pp. London. Cadell and Davies.

We think this benevolent work well worthy the most serious attention of those for whose use it is written; and even the medical practitioner will have no cause to regret the time he bestows on its perusal.

Baco Von Verulam über die Lebensverlängerung:—Bacon of Verulam, on the Prolongation of Life. Translated and illustrated with Remarks, by C. A. STRUVE, M. D. 1799. 8vo. 264 pp. (16 gr. or 2s. 8d.) Glogau. Günther.

The illustrious Bacon, who opened new paths of inquiry in various branches of science, also taught his cotemporaries how to promote the beneficial application of physical and historical science, and extend their influence on the happiness of mankind. He not only wrote a profound and valuable work on this subject, entitled, "*Historia vitæ et mortis*," but he also evinced, by his own example, under what circumstances and conditions, man may attain the greatest possible age, and how he may secure his health, together with that of his numerous posterity, against the inroads of disease. He demonstrated, that speculations unsupported by facts, must necessarily mislead us in our investigations of physical objects. We cannot but admire the truly philosophic spirit that prevails throughout his numerous works, as well as in that which has given birth to the present publication; for it is not strictly a translation, but a learned commentary of Bacon's "*Historia vitæ et mortis*," which Dr. Struve has occasionally abridged, enlarged, and illustrated with remarks conformable to the spirit of the age, and consistent with the present state of Medical Science. The German Commentator was of opinion, that his work would serve as a proper counterpart to Professor Hufeland's valuable '*Macrobótica, or the Art of Prolonging Life*,' a work that has lately been translated into English, while another much improved and enlarged edition of it appeared in Germany.

Every reader who is acquainted with Bacon's acute and correct method of reasoning; his sagacity of discriminating between fact and opinion, truth and fallacy, sophistry and valid argument; his uncommon perspicuity in arranging facts, and deducing from them the most striking and important conclusions; will, doubtless, agree with us, that Dr. Struve deserves the thanks of his cotemporaries, for having undertaken the arduous task of translating and adapting this judicious treatise to the prevailing taste and opinions; and thus contributing to revive the study of his invaluable works, which, in the present age of hypothetical frivolity, are but too much neglected. It is, however, our duty to remark, that Dr. S. has not bestowed that degree of diligence and industry in translating and illustrating this Latin treatise, which characterises most of his other works on medicine, addressed to unprofessional readers. We mentioned in our first Number, p. 84, that the Royal Humane Society of London had presented this popular writer with a copy of their works, for his excellent treatises on re-animation and

and other subjects connected with the philanthropic views of the Society: grateful for this mark of attention shewn to him by so respectable a body of generous and enlightened individuals, Dr. Struve has lately dedicated the following classical work to that illustrious Society:

Verfuch über die Kunst Scheintodte zu beleben, &c.—An Essay on the Art of re-animating persons apparently dead; and on the means of relief in sudden danger of death. A pocket-book in the form of tables. By CHRISTIAN AUGUST STRUVE, M. D. 8vo. 150 pp. exclusive of the dedication, preface, and contents. *Hanover.* Hahn.

The modest author informs us in the preface, that he was induced to publish this work, in consequence of the approbation bestowed by the German public on his former writings, relative to this subject. He justly claims the indulgence of the scientific reader, if this attempt should be found deficient in the execution; as he is unfavourably situated with respect to literary resources, his place of residence being at a considerable distance from public libraries. His wishes would be much gratified, if the present Essay should excite his countrymen to establish Institutions similar to that of the Royal Humane Society of London, and the Society for the encouragement of useful arts and trades at Hamburgh. He bitterly complains of the want of such Institutions in Germany, while he makes honourable mention of the only Society in imitation of that in London, lately established at Leipzig, by the magistrates of that learned city. Yet he admits that there exist, in Germany, different philanthropic Institutions, such as those for saving persons from fire, in every town of Saxony; the Lying-in Charity at Lübben, in Lower Lausatia, and others.

This compendious work is next addressed to the professional reader, in order to afford him a rational and simple method of treating persons under asphyxia, whether natural or accidental. For this purpose, the tabular form has been adopted by the author as the most proper, especially as it enables the reader, without loss of time, to survey all the rules and cautions, on a sudden emergency.

Those remedies, the application of which is still contested, or which can be resorted to only in particular cases, such as the inspiration of air, venæsection, and tobacco-clysters, Dr. Struve has judiciously classed under a distinct section; as they require the greatest precaution to administer them with success. In this work, he has endeavoured to illustrate chiefly the practical methods of treating persons apparently dead, while it is supposed that medical readers are sufficiently acquainted with the *rationale*, on which this treatment is founded. And in this point of view the author hopes, that his attempt will be received with candour and liberality by the profession. Indeed, there will be little occasion to evince that species of indulgence claimed by the author, *pro captanda benevolentia*; as it would be difficult to find a work which, in the small compass of ten sheets, contains information equally interesting and valuable to the medical practitioner, as well as to the philanthropic assistant.

To enable the reader to survey the multifarious objects treated of in this little volume, we shall here give an outline of its contents.

INTRODUCTION: *Section First.* I. Historical account of the Institutions established in various parts of Europe, for recovering the lives of persons apparently dead. II. General ideas on the means of resuscitation.

III. Asphyxia. IV. On some species of apparent death, occasioned by sudden accidents. V. General principles relative to the subject of re-animation. VI. Further analysis of the means of resuscitation. VII. General points to be attended to, in the treatment of accidents, or apparent death. VIII. Circumstances deserving attention in particular cases of asphyxia.

Section Second, Introductory remarks. I. The apparatus for resuscitation. II. Practical principles by which the treatment of the apparently dead, or otherwise unfortunate, is to be regulated. III. General treatment of such persons. IV. Particular directions and rules. V. Tables exhibiting the means employed in the different kinds of asphyxia. VII. A systematic view of these means, according to their effects on the human body. VIII. Remarks on resuscitation, illustrated with successful cases.

Section Third, On the means to be employed in sudden and dangerous accidents. I. General and particular symptoms and circumstances to be inquired into, respecting the nature of such cases; as, hydrophobia, the different species of poison and apoplexy. II. Tables exhibiting the means to be resorted to, according to the nature of the case. III. Remarks on the prevention of hydrophobia.—An alphabetical list of the most remarkable poisonous plants.—A case of a person poisoned by arsenic, &c. Lastly, Retrospect of the different remedies suggested in this work, and how far they may be employed with safety, viz. 1. Venæsection. 2. Opening of the trachea. 3. Clysters. 4. Fluids introduced into the stomach by a syringe. 5. Baths. 6. Shower-bath. 7. Bed of ashes or sand. 8. Earth bath. 9. Friction. 10. Electricity. 11. Inspiration of air. 12. The Tincture of the *Scarabæus majalis*, or *Melœ proscarabæus et Melœ majalis of Linnaeus*. 13. The root of the belladonna. 14. Mercurial ointment, in hydrophobia. 15. Soap-ley. 16. Water saturated with hepatic air. 17. Hahnemann's *liquor vini probatorius*. 18. Precautionary rules for recovering persons suffocated in pits. 19. Purification of the air in damp apartments.

MISCELLANEOUS.

Schwedische Annalen, &c.—The Swedish Annals of Medicine and Natural History. By Dr. RUDOLPHI, &c.

[Concluded from p. 399 of our 1. st Number.]

Art. VI.—X. A review of SVEN HEDIN'S Scientific Essays, addressed to physicians and surgeons. XI. and XII. Of SVEN A. HEDIN'S Manual of the practice of Medicine;—a very just and profound specimen of criticism. XIII. A. I. SEGERSTEDT'S Elements of Medicine. XIV. B. BJORN LUND *materia medica selecta*. XVII. ADOLPHI MURRAY & NICOL. A. BERGSTEN *usus modioli in fractura et depressione cranii, casu singulari illustratus*.—Among the XLI. articles which this work contains, we shall take notice only of the XVII. entitled, CAR. P. THUNEERG *et* CAR. JO. KJELLMANN, *Diss. de usu menyanthidis trifoliatae (Trifolii fibrini)*; the leaves of which are frequently used by brewers as a substitute for the hop. It is asserted, that the beer in which this plant has been boiled much resembles London Porter.

Magazin

Magazin für gemeinnützige Arzneykunde, &c.—The Magazine devoted to medical subjects of general utility, and medical police. Edited by J. H. RAHN, Member of the Helvetic Republican Senate, No. I. 11½ sheets 8vo. 1799 (12 gr. or 2s.) Zürich. Orell, Fufli and Co.

With this work the venerable Editor recommences his periodical labours, which had been interrupted by the late calamitous events in his native country. As our praise can add but little to his established reputation, we shall extract merely some of the subjects treated of in this popular Magazine: I. Proposals and a Plan of Medical Police-laws for the Helvetic Republic one and indivisible. III. Instructions for Midwives, Fathers, and Mothers; with useful practical advice and cautions against the prejudices and hurtful customs prevailing in midwifery; being a review of a popular book, published at Erlang, in 1798. VII. TISSOT'S Directions for treating persons bitten by a mad dog. IX. An Account of some epidemic diseases, particularly the malignant small-pox, which prevailed in several Cantons of the Republic, during the year 1798.

NEW PUBLICATIONS IN GERMANY.

Vorschläge zur Verbesserung der Hospitäler, &c. Suggestions for the Improvement of Hospitals and other charitable Institutions. By WILLIAM BLIZARD, F. R. S. and F. A. S. Translated with additions, respecting the Hospitals and Medical Schools of London, Edinburgh, Bath, and Vienna. By Dr. I. A. ALBERS, physician at Bremen, 8vo. 128 pp. 1799, Iena. In the Academical Shop.

N. B. *We propose to give ample extracts from this highly interesting little work, in our future Numbers; as the German Editor is a gentleman of unquestionable veracity, and personally known in this country, where he resided the greatest part of the years 1796 and 1797.*

Chemische Briefe an Frauenzimmer, &c.—Chemical Letters addressed to ladies; in which the principal subjects of Chemistry are explained in a popular manner; their application to economy, the arts, and amusing experiments are pointed out, and instructions given for arranging and establishing a laboratory. Two volumes, 8vo. with plates (Price 4 rixd. 20 grosch. or about 18s. Brit. curr.) Leipzig. 1779. Meyer.

Kurze Darstellung, &c.—A Concise View of the Chemical Inquiries into the different Gases: by Dr. A. N. SCHERER, &c. 8vo. (6 grosch. or 1s.) *Ibid.*

Kleine Mineralogische Schriften.—Concise Essays on subjects of Mineralogy: by J. C. W. VOIGT, Counsellor of Mines, 8vo. Part I. with a plate. (20 grosch. or about 3s. 2d.) *Ibid.*

Unterricht für Aeltern, &c.—Instructions for Parents, respecting the Dietetic Treatment of Infants at the Breast: by J. F. ZUCKERT, fourth Edition, enlarged and edited by Dr. L. FORMEY. 8vo. (8 grosch. or 1s. 4d. Berlin.) Mylius.

Umriss des Zustandes, &c.—A Sketch of the State of Surgery among the Ancient Romans, especially in the time of Celsus; compared with, and applied to, Modern Surgery: by J. C. JÆGER; with a preface by the Aulic Counsellor and Prof. GRÜNER, 8vo. (20 grosch. or about 3s. 4d.) Frankfurt. Jæger.

TO CORRESPONDENTS.

We acknowledge the receipt of communications from Dr. Sicks, Dr. Scrimshire, Messrs. Ladaill, Brown, Grose, O. W. B. Brande, Pulley, Whyte, Latham, J. M. W. L. F. A. Viator, R. B. M. Henrique Xavier Baeta.

We are concerned to receive so many communications signed only with initials, particularly as several of our friends have suggested the propriety of very narrow limits to such articles.

The hint given us by an obliging Correspondent, respecting the arrangement of the Index, could not be attended to in the present Volume, as it arrived too late; but we shall certainly pay due regard to his suggestion in our next.

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