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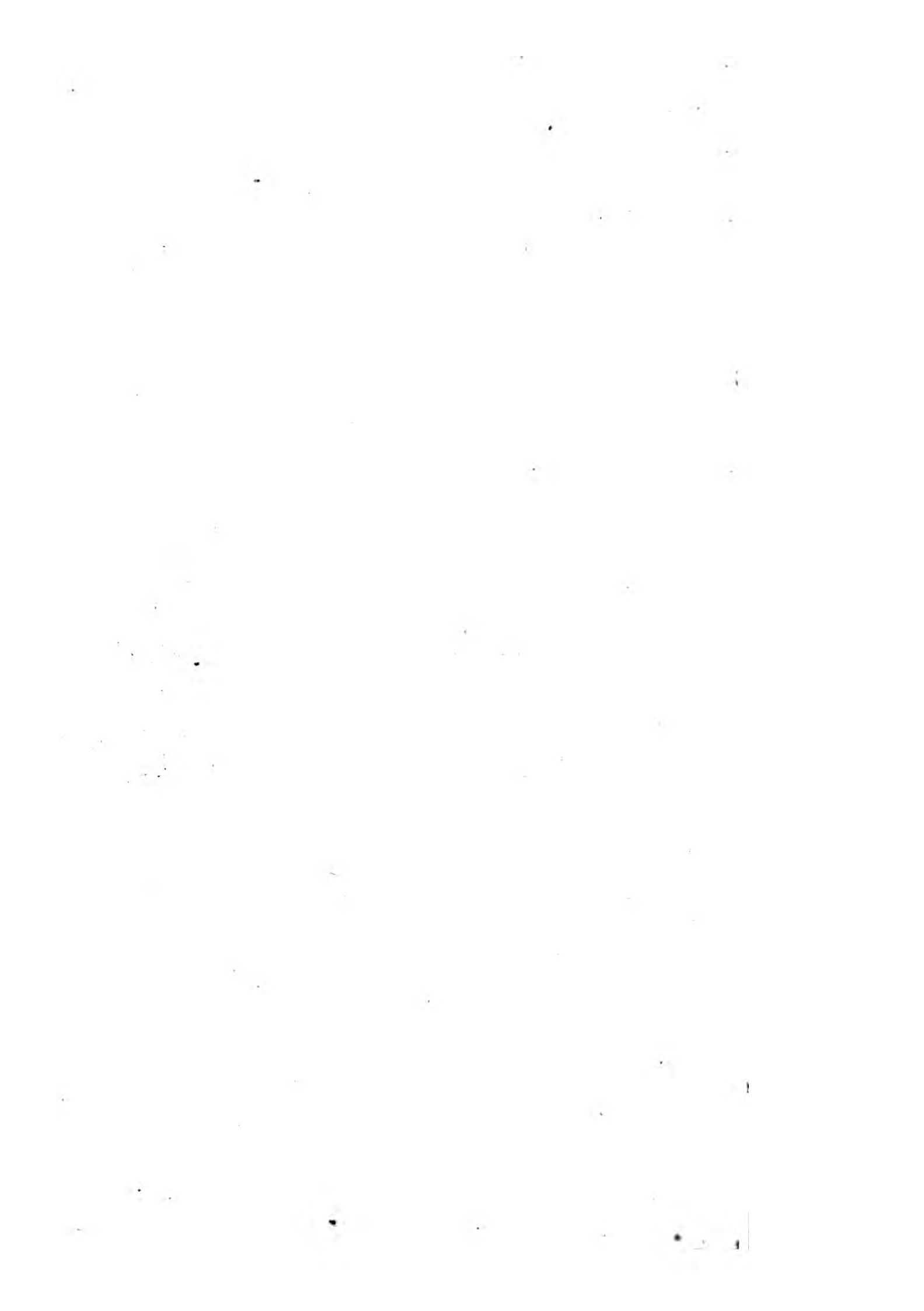
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THE
MEDICAL
AND
PHYSICAL
JOURNAL.

CONDUCTED BY
SAMUEL FOTHERGILL, M.D.
AND
WILLIAM ROYSTON, ESQ.

VOL. XXV.

FROM JANUARY TO JUNE, 1811.

Et quoniam variant morbi, variabimus artes;
Mille mali species, mille salutis erunt.

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Vol. XXV

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THE
Medical and Physical Journal.

VOL. XXV.] JANUARY, 1811. [NO. 143.

Printed for R. PHILLIPS, by E. Hemsted, Great New Street, Fetter Lane, London.

To the Editors of the Medical and Physical Journal.

A statistical Report of the WALCHEREN FEVER, as it appeared among the troops at Ipswich, on their return from Holland.

GENTLEMEN,

THE first of the sick arrived at Ipswich on the 10th of September, 1809, several of whom were found, when removed from the waggons, in a comatose stupid state, in which they continued till death. The greater number, however, were afflicted with intermittents and remittents of irregular and anomalous types, often united with pulmonic and bowel complaints. Almost every week, and sometimes daily, men were brought to the Hospitals and Barrack rooms, the latter of which were now converted into Wards, for the convenience of the sick. The number increased to between five and six hundred. Those who recovered were always discharged, as soon as possible, to provide for the worst cases among the fresh arrivals.

Of the intermittents, which were the chief and original complaints, very few died affected with this disease alone. When they terminated fatally the disorder, some days previous to death, first changed into a continued fever, and afterwards assumed the typhoid type, with great pain of the head, anorexia, tongue covered with a brown crust, low mutterings and delirium. When reduced to this state, few escaped. Those who recovered relapsed so frequently, that many were discharged and re-admitted in the course of the same week. This return appeared after the slightest change of weather or exposure to cold, many falling down while on parade, and others during the time they stood on guard. To avoid this as much as possible, all those who were discharged from the hospital were placed in convalescent barracks, and excused every kind of duty for several weeks, and

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when thus seasoned were discharged. The relapses, however, were found to be as numerous among these convalescents, as among those who were at duty; and it was remarked, that the men who had recovered in Walcheren were less liable to relapses than the others who recovered at home. Perhaps this may be accounted for, by the duration of the disease inducing greater debility. In fact, the men continued in such a weak, languid state till the beginning of June 1810, that few were able to bear the least excitement of whatever kind, without causing relapses. These returns of the disease were also frequently united with pulmonic complaints, which increasing soon terminated fatally. In these critical cases all the efforts of the medical practitioner were too often of no avail, for while he endeavoured to evade Scylla, he was sure to fall on Charybdis.

The time this disease lay latent in some habits, who were not affected with it while in Holland, appears a curious fact; several being attacked with different species of intermittents after they had been home seven or eight months. Many officers as well as privates were thus attacked at different subsequent periods.

As an example of the extent to which this malignant epidemic proceeded, I need only mention, that out of one battalion consisting of about seven hundred men, only 21 escaped its attack, and about an hundred of the others fell its victims.

About the middle of October a great many were attacked with hydropic complaints, so that one third almost of the patients who laboured under the different forms of intermittents became dropsical. At first hydrothorax and universal anasarca often suddenly appeared, which increased by the violence of the paroxysms of ague, frequently terminated fatally during the exacerbation. I was present at three of these afflicting scenes, even conversing with my patient a few minutes before his exit, which was so unexpected, that I saw one rise out of bed and place himself on the close stool, where he expired in a few seconds. Another robust, athletic man was seized with a violent paroxysm of ague, when his respiration became so difficult and hurried, that he was obliged to sit up in bed to assist his breathing. His thirst was insatiable. He spoke frequently, and said he should die; and with these words he leaned himself backwards and immediately expired. Being present I took hold of his hand, when I felt the pulse beat, which continued its pulsations for near two minutes after respiration and other vital appearances ceased. This man had no other external appearance of dropsy than that of a slight tumefaction about his ancles. On examining

aming the body a large quantity of water was found in the thorax, and near six ounces in the pericardium. The abdomen also contained some serous fluid.

The third case was a man who had just arrived, and who appeared so well that he was sent to the convalescent Wards where I saw him, at which time no hydropic complaint appeared. An universal anasarca attacked him so quickly that he died a few hours after. On viewing the body the skin seemed so distended on every part, that it was ready to burst, and a general exudation had commenced, especially on the scrotum and thighs.

These dropsical affections had now become so prevalent, that it was a general rule particularly to examine the patient concerning them.*

Some time afterwards Dysentery appeared, and the sick increasing, it very soon became a frequent and fatal malady. The disease was, in general, preceded by a diarrhæa. The sick labouring under the greatest debility from the length of time they had been afflicted, and from the immense quantities of bark and other medicines administered, among which purgatives held a principal station, it will not be difficult to conceive what must be the consequence. The bowels thus repeatedly harassed and irritated with these medicines, gradually lost their tone, when diarrhæa was produced; and as the intermittents often did not even then subside, it was kept up by the continued exhibition of the remedies for the original complaint.

When therefore the purging was not checked by proper remedies, it soon degenerated into a dysentery, which was peculiarly distinguished by that most harassing symptom tenesmus, accompanied with bloody mucous stools, and continued pain of the hypogastric region; for the support of which flannel rollers were constantly used, and found highly beneficial. This disease being often combined with others was seldom without fever. Many died soon after its appearance, so that some medical men concluded that no man who was attacked with it would recover. This conclusion, however, proved to be false. Several languished for many weeks, till they became so emaciated as to appear nothing more than skin and bones (to use the vulgar phrase) and at length recovered. When it appeared in this chronic state, the patient's appetite remained good till death, which generally snatched him off during his slumbers.

* Boerhaave mentions this disease as frequently occurring in Holland, particularly among robust people, to whom, after much muscular action, cold and inactivity soon succeed.

As there were many unexpected deaths from the hydropic complaints, so there were several very unexpected recoveries from this. Of this I could relate many examples. This recovery, however, appeared the more extraordinary, when we compared the dreadful ravages the disease had made on those who died of it. On inspecting their bodies, the larger intestines were almost always inflamed, thickened, covered with ulcers, and in many places sphacelating.

Icterus very frequently appeared as a symptom of this disease, but was scarcely ever observed as an original complaint. It even appeared in one instance, where the patient was undergoing a slight salivation, and what was most remarkable, there was no appearance of any bilious effusion until the mercury began to act. It also subsided in a ratio corresponding with the disappearance of the salivation. This case shews more fully the peculiar action of mercury on the liver.

Another very troublesome symptom of this disease was ardor urinæ. Many were so much afflicted with this complaint, as to discharge frequently a quantity of blood either immediately before or after micturition. Large round worms from six to twelve inches long were often voided by vomiting. These had often induced the most distressing symptoms.

These were the most common forms of this Proteus-malady, for a more particular account of which, I must refer to Dr. Davis's Treatise, and shall now beg leave to proceed with a cursory view of the means which were used to counteract its progress.

TREATMENT OF THE WALCHEREN FEVER.

As the disease appeared under so many different forms, the treatment was, of course, various, for which reason I shall follow the three forms mentioned above.

Intermittents and Remittents, &c.

In these complaints it was usual first to exhibit a cathartic, and afterwards to administer the bark in such quantities as the stomach would bear, either in substance, decoction, extract or tincture. This supposed specific frequently succeeded, but it also frequently failed when unassisted by other remedies. When, however, it was given at the same time with calomel and occasional cathartics it proved highly useful, especially in all those cases where visceral disease seemed to exist. When the patient underwent the slightest salivation, the paroxysms, during the mercurial action, were completely suspended, but as soon as the ptyalism began to subside,

subside, so soon did the paroxysms again recur, and often with greater violence than formerly. This fact became familiar to every medical officer present.

The sulphate of copper and zinc were both frequently tried, but without the desired effect; the former sometimes, however, changed the type of the disease from quotidian or tertian to continued fever, with sickness, vomiting, and not unfrequently delirium. The latter was used in combination with the extract of cinchona as a general tonic, and in this way was found often useful after the paroxysms had subsided, and great debility remained. It was not, however, found to check the regular paroxysm, although often given with that intention. When the disease became continued, and either threatened or assumed the typhoid appearance, antimony and aromatic confection were used with success. In this case, camphor and ammonia were also very efficacious remedies. Yeast was likewise used in many desperate cases with the best effect. By this alone I have often seen patients recover when their bodies were covered with petechiæ, and when syngultus had subsisted for two or three days, and the stomach rejected every thing, even wine. Nitric acid was found very useful in almost all those cases in which mercury had been exhibited, and after the action of which the paroxysms had again returned. In these cases it not unfrequently effected a cure either alone, or given in some bitter decoction. Opium, either with or without æther, given in large doses at the approach of the fit, always shortened the cold stage, and often completely subdued the paroxysm. Venesection was also often found useful when the disease was combined with pulmonic affections, which very frequently happened. I used this remedy very often, and must confess without ever observing the least injurious consequence, but on the contrary the most speedy relief.

The objections which were most frequently urged against this most *extensive* and *potent* remedy (as Haller calls it) were that, as debility was the most prominent feature of the disease, the abstraction of blood under such circumstances appeared paradoxical. This reasoning at first appeared satisfactory in theory, but not in practice, as I was sufficiently convinced. Its salutary effects, I think, may be thus explained. The men when apparently free from disease, but in a very weak and debilitated state, were often unavoidably exposed to the vicissitudes of weather, and were very liable to be affected with the slightest change of any kind, in their languid state. This immediately produced a relapse, which in general was attended with inflammation of some of the viscera. This conclusion is sufficiently warranted from the depredations

predations made on these organs, as the subsequent dissections will amply shew.

The symptoms were pyrexia, pain of the head, difficult respiration, troublesome cough, and pains of the sides or breast, but more frequently the latter. In this state I immediately used the lancet, which, in general, gave so much relief, as seldom to require a repetition. Diluents and laxatives were now continued for some days, till the inflammatory diathesis seemed subdued, then in the convalescent stage aromatics and bitters were found highly useful, and soon completely restored the enervated frame.

When lately perusing Sydenham, I found that the practice in some measure coincides with that laid down by that experienced physician in the treatment of chlorosis. In this disorder, though in general considered a disease of debility, he found that the most successful mode of treating it was, by commencing the cure with the loss of some blood, and afterwards administering tonics.

Haller, and Sir John Pringle, mention also a similar practice in intermittents—but to return. I have also tried the effects of ligatures on the extremities, with a view to check the fit, but never observed any beneficial result except in one case, where imagination and not the ligature appeared to produce the effect; the particulars of which were as follow. Going into a Ward where the experiment had not been made, and finding a man shivering horribly with gnashing teeth, I requested the Orderly to bring me a tourniquet. As soon as it entered the Ward, the patient's eyes were fixed on it, and he began, as he afterwards informed me, to wonder what I was about to do with him. I now proceeded to fix it on his arm, when the paroxysm immediately subsided, and the subsequent hot stage was very slight from the short duration of the cold. I afterwards tried it repeatedly, screwing one on opposite extremities, but without the least effect.

Epithems of nicotiana were also used with the same intention, but seldom produced any good effect, and if continued for any length of time, they did much mischief by the sickness and vomiting which they produced.

Treatment of the hydropic complaints.

These were only another form or stage, and consequence of the original disease. Debility, and consequent loss of tone of the absorbent and exhalent vessels, which is the proximate cause of this disease, were the effects of the former. In this, as well as the last, a variety of remedies were had recourse to, the chief of which were squills, digitalis, submuriate of mercury, acetate of potash, nitrate of potash, and the

the supertartrate of potash; elaterium, horseradish, mustard, and camboge were also frequently used with success. By the use of these separately, or in combination, the greater number were evacuated of the superabundant fluid, and the cure was completed by the administration of decoctions of quassia, serpentaria, senega, and other bitter and astringent tonics. None of these remedies operated with so much effect, or with such immediate relief to the patient, as those which possessed both a purgative and diuretic quality. Of these camboge and elaterium were the chief. They were often used with remarkable success, especially the former.

In all cases where the disease attacked suddenly, causing considerable distension of the abdomen with œdema of the legs, its exhibition was attended with the greatest success, one dose being, in general, sufficient for the evacuation of the water. It often produced vomiting, purging, and copious diuresis.

The patients thus suddenly relieved, were seldom observed to relapse into a similar state, as mentioned by authors, after the administration of these drastic hydragogues, but this might be, in part, owing to the tonics and bitters which were always exhibited after the evacuation of the water.

There were a few cases, in which the patients being nearly exhausted by the continuance of the disease, the use of these remedies was prohibited. Some of these were tapped as a dernier resource, but the fluid soon collecting again, eventually proved fatal. Others, of several months continuance, were speedily relieved by the spontaneous occurrence of a diarrhœa or dysentery, which, in general, however, proved fatal. Of this I could mention several examples, but one will suffice.—Johnes was first attacked with the fever, from which having recovered, he was discharged. Soon after he relapsed, and was now attacked with a violent pneumonia, which was, with some difficulty, subdued, by the loss of between forty and fifty ounces of blood, and other proper remedies. Being again convalescent, he was afflicted with a dropsical complaint; he swelled to an amazing size, and continued so for five or six months in despite of all our hydropic remedies. About this time he was first seized with a diarrhœa, which, by continuance, degenerated into a dysentery, and of which he died four or five days after its appearance, completely destitute of any dropsical complaint.

With respect to the dysenteric affections, which form the third most common termination of this malady; it did not appear to be contagious, but originated sporadically in different parts, and seldom or never infected those in the same Ward with the patient. It was, indeed, sometimes induced by

by the accumulation of putrid animal effluvia, of which the following are sufficient examples :—

Mr. B. surgeon, was in the habit of dissecting much, and making anatomical preparations. The room in which he dissected and kept his preparations, adjoined and opened into that in which he slept. Another medical colleague who attended some of these dissections, brought his child once or twice with him to this anatomical theatre. It was seized in a day or two after with dysentery and died; the body was inspected and left no doubt of the disease. Mr. B. continuing his investigations, was soon after attacked with the same complaint, which remained very violent for several days, notwithstanding every means were used to check its progress. Soon after, finding no abatement, he was removed from this room to other lodgings, where the disease abating, he soon recovered.

These cases show that it arises, in general, more from putrid animal effluvia, than from any peculiar matter generated during the progress of the disease.

The treatment pursued in this disease was varied according to symptoms; laxatives were often given in the commencement or inflammatory stage. When it resisted these, opium and compound powder of ipecacuanha were found very efficacious; infusions of rhubarb and small doses of ipecacuanha were also useful. When the pain of the abdomen was very great, a blister applied to the hypogastric region, often relieved very desperate symptoms. In one instance, in which the complaint had continued very violent for several days, resisting every means that could be devised, the patient was seized with vomiting, which returned on the introduction of any thing into the stomach, and thus prevented the exhibition of any medicine in this way. Injections of opium and starch were often given him without any beneficial effect. In this desperate state, a large blister was applied to the lower part of the abdomen, which drawing well, he was found next morning, free from both purging and vomiting. From this time he soon recovered without any other medicine, except a few occasional doses of Dover's powder. Flannel rollers were also found useful for the support of the abdomen against that distressing symptom tenesmus.

In some instances where the disease assumed a chronic form, mercury was used, but never having witnessed its effects in such cases, I am unable to speak decisively with regard to its success.

Having thus completed my remarks with regard to the cure, I now proceed to point out the ravages the disease entailed

tailed on the different organs, as demonstrated by dissection. This is an interesting part of my subject, and will, I doubt not, open a new field for the speculation of the pathologist. In this part as well as the former, I shall endeavour to point out the viscera most deranged by each form of the disease. It will be recollected that the intermittents and remittents, &c. degenerating or rather assuming the continued or typhoid type, most frequently terminated fatally. Of all the bodies which I dissected, I only find the particulars of 80 cases in my note book, 36 of which were of this form, and were, generally speaking, first in point of time, 26 hydropic and 18 dysenteric.

In these the chief organ affected was the spleen. This viscus was always enlarged, often weighing from three to five pounds. Its substance was extremely soft and easily deranged. Tubercles were often found on its surface. Inflammation and ulceration, not only of its peritoneal coat, but also of its substance, were frequently observed. These ulcers were found in all their various stages and forms, from the most minute to the almost complete exulceration of the whole lienteric mass. Of this last the following is a remarkable example.

Richard Mullan was readmitted with continued fever, which soon terminated fatally. On opening the abdomen, a large sac was found to occupy all the left hypochondriac region. It was firmly united to the stomach, diaphragm, and all the neighbouring viscera. It contained near two quarts of bloody purulent matter, in the midst of which floated the spleen quite detached, and so much ulcerated and wasted as to appear only a small mass of bloody matter without any capsule; for its proper peritoneal coat was found to have formed the basis of the sac. The lower surface of the diaphragm, which seemed to compose the superior part of this sac, was inflamed and deeply ulcerated. There were many other cases of this ulceration of the spleen, some of which being seated on its superior surface, where it comes in contact with the diaphragm, had corroded and destroyed that muscle, so as to form a communication between the thorax and abdomen, into the former of which they were found sometimes to have discharged their purulent contents.

Hard stony concretions were also frequently found on it, and in one or two instances its capsule had become cartilaginous. There was likewise an instance of accidental death from a rupture of this organ. Two of the convalescents disputing in their ward proceeded to blows, and one having fallen, his adversary was observed to have struck him while down with his foot. He rose, however, of his own accord,

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and ascended his birth, where he expired in a few minutes. Soon after the abdomen was found to have swelled considerably, and on inspecting the body there were found several pounds of fluid blood diffused in it. The rupture or rather laceration of the spleen was about an inch and half in length, and situated on that part of it which lies in contact with the stomach. It was also much enlarged and very soft.

The liver was the next grand organ on which this disease was found to have made rapid progress towards its destruction. Its most common appearance was preternatural enlargement, flaccidity, and induration or condensation. It was also frequently covered with coagulable lymph and adhered to the surrounding viscera. Inflammation and ulceration, not only of its coat, but also of its substance, were often detected. These were not, however, of so frequent occurrence in this organ as in the spleen. Its substance often exhibited a mottled friable appearance, with a deficiency of the secretion of bile in the biliary ducts, although the gall bladder was, in general, discovered to be quite full, and often distended with dark inspissated bile resembling tar.

Hydatids were also sometimes found in its substance. A bag of this kind was once discovered in the substance of the liver, which contained near a quart of limpid fluid. This was retained in a large sac, the structure of which appeared very white and cartilaginous. Tubercles were likewise sometimes observed in it.

The gall bladder was sometimes found in an inflamed state. In general it was distended with dark green viscid bile; sometimes, however, it was much contracted; gall-stones were often detected in it.

The stomach was for the most part found natural. It was often, however, much contracted from its middle to the pylorus. In many cases it was considerably distended with flatus. In a few instances inflammation and ulceration of its coats were discovered.

These ulcers of the stomach do not exactly resemble those of other parts of the body. In these cases there is little circumjacent inflammation. The ulcer appears of a circular form, with smooth edges, and little inflammation. At first view they appear as if cut out with an edged instrument.* In many cases the stomach was considerably corroded by the gastric juice, particularly towards its greater curvature. The peritoneum was in many cases much diseased. Its most frequent appearance was that of inflammation and adhesion. Its surface was often covered with purulent matter. Those duplicatures of the peritoneum which form the omenta, were

* Vide Baillie's Morbid Anatomy.

very frequently nearly absorbed. In many cases nothing of it remained but a plexus of vessels attached to the stomach and colon, of a dark or greenish colour.

The intestines were in general natural. The most common diseased appearance was that of inflammation and consequent adhesion. *Intus-susceptio* was also frequently observed.

The kidneys were for the most part healthy, except in those cases of dropsy which shall be hereafter mentioned. Stones were sometimes found in the pelvis of the kidney, as well as in the ureters.

The morbid appearance which the thoracic viscera often exhibited, was also very various and considerable.

Inflammation of the pleura and lungs, with all its consequences, was, however, the most common. In some instances the surface of the lungs was thickly encrusted with a cartilaginous substance. It was very common to find the substance of the lungs anasarous, and sometimes their structure was so far changed and condensed as to resemble the liver.

The pericardium was also sometimes found inflamed, and formed adhesions with the heart. It almost always contained a preternatural collection of serous fluid.

The heart itself did not escape the inroads of this destructive disease. Its adipose substance was often dropsical, and it was not unusual to find depositions of coaguable lymph on its surface. In one instance the surface of the right ventricle was found much inflamed and ulcerated, especially towards its superior part which approaches the auricle. On opening the ventricle the tricuspid valves were discovered to be in a complete state of ossification, by which the opening between the auricle and ventricle was nearly obliterated. The symptoms of this patient were so vicarious as to induce his medical attendants to suppose that he was affected with a cancer of the stomach.

Brain.—This intricate organ was not so frequently investigated as I could have wished, and principally for this obvious reason, that it required a greater length of time for this purpose than could be obtained. There were, however, sufficient demonstrations of the brain to show its general appearance in this disease. It was for the most part natural; there seemed, however, a great determination of blood to this organ, its vessels being in general found turgid. Adhesions of the dura mater to the surface of the brain, and depositions of lymph were often detected. A superabundant quantity of water was very often discovered in the ventricles.—In one or two cases death suddenly occurred while the patient laboured under salivation. In one of these that I inspected, a quantity of blood was effused between the brain and dura

matter, similar to the appearance observed in cases of apoplexy. The swelling of the neck and throat being so much increased as to impede the blood returning from the head, is generally supposed to be the cause of such unexpected occurrences.

I must not forget to mention that large collections of purulent matter in different parts of the body often proved fatal.

These critical abscesses were in general situated on the lumbar region, the thighs, legs, and shoulders, &c.

The matter detached the cellular substance and fascia from the muscles, insinuating itself between them, and thus formed sinuses and fistulous openings in distant and different parts. These openings were so numerous, and discharged such quantities daily, that the poor sufferers were rendered horrible spectacles. They often continued in this state for months before death terminated their wretched existence.

With respect to the morbid appearance of the hydropic form of the disease, I have little to add to the above-mentioned organic derangements. Here, however, the kidneys always seemed more flaccid and wasted than natural. The liver appeared always less or more diseased, and the whole of the peritoneum was often found to have formed various and extensive adhesions and indurations of its substance. In one case where the hydropic patient was affected with a cutaneous eruption, the whole of the peritoneum exhibited a similar appearance to that of the surface of the body.

The thorax was most frequently the seat of these complaints. Perhaps this may be explained by its being more liable to inflammatory attacks than any other cavity of the body. Adhesions of the lungs, pleura and pericardium were found in almost every instance. The substance of the lungs was very frequently anasarcaous, and on pressing them, the water was discharged as from a wet sponge. The pericardium was often much distended with fluid, when no other cavity was found to contain any preternatural quantity, measuring often from two to twelve ounces. This preternatural collection of water in some of the cavities was one of the most frequent occurrences met with, under almost every form of this malady. This was not only contained in the abdominal and thoracic cavities, but was frequently found to exist in the ventricles of the brain itself.

In the dysentery, which was the third and last most common form of this disease, the morbid appearance was mostly confined to the intestines; but as the patients all laboured, in some degree, under the influence of the original complaint, the

the other viscera in general, were also found to be much deranged.

The great intestines, especially from the sigmoid flexure to the anus, were always much contracted, thickened, inflamed, and ulcerated. The disease seemed to have commenced near the anus, as from thence it was observed gradually to decrease. The ulcers were so united, that the whole inner surface of the gut appeared in a state of granulation. This often extended to the cæcum, and sometimes to the smaller intestines; they commonly contained little faecal matter, and for the most part only bloody mucus. Scybala were very seldom detected.

Having now finished these remarks, I presume no one, who will attentively peruse them, can draw any other conclusion, than that this disease was originally of an inflammatory kind. This alone can explain the direful ravages of the viscera, than which humanity never, perhaps, laboured under a greater multiplicity inflicted in so short a period.

W. HAMILTON.

Ipswich, October 17th, 1810.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I WILLINGLY present to you the following simple narrative of facts, deeming them so unusual and eventually fortunate, considering the adverse circumstances under which they happened, as to deserve a more general publication than could be made, otherwise than by publishing them in your excellent Journal. Medical books are full of instances of extraordinary mortality prevailing in camps, prisons, and ships, whenever a contagious disease has broken out; these dreadful instances of visitation have often occurred in the West-Indies in our own times, and more recently were known to have taken place in the fleet of Sweden in the years 1808-9, as well as in the English ships that brought the army home from Spain after the battle of Corunna in 1809.

In the ensuing relation a disease manifestly and doubtlessly contagious, prevailed in a fifty-gun ship (armed en flute) in which, besides the ship's company, were embarked 343 soldiers, and upwards of 150 women and children.—Among this large and crowded collection of human beings, dysentery appeared, and gradually spread to an alarming extent, so that at different times, 178 persons came under the care of the surgeon for this complaint alone; and of this vast number

ber (I speak it with admiration), only two men could be said to die of the disorder itself, and two others of its effects, by which marasmus and death were at length induced.* If, therefore it should accord with your wishes to make known

Died on board.	Numbers.	Diseases.	The following is the Number of Sick, both Soldiers and Sailors, who came under the Treatment of the Naval Surgeon, between May the 22d, and December the 28th.
	78	Febrès.	
	22	Cynanche.	
	26	Pneumonia.	
	43	Ophthalmia.	
1	5	Phthisis.	
	1	Enteritis	
	3	Hepatitis.	
	2	Nephritis.	
	10	Rheumatismus.	
	1	Podagra.	
	13	Erythema.	
	2	Hæmoptysis.	
	3	Hæmorrhoids.	
	10	Catarrhus.	
2	178	Dysenteria.	
	1	Syncope.	
	7	Dyspepsia.	
	2	Epilepsia.	
1	2	Asthma.	
	26	Colica.	
	17	Cholera.	
	24	Diarrhæa.	
	5	Hydrops	
	3	Scrofula.	
	14	Syphilis.	
	14	Scorbutus.	
	17	Icterus.	
	4	Hernia.	
2	2	Tabes mesenterica.	
	106	Morbi irregulares.	
1	46	Vulnera.	
	16	Ulcera.	

the causes of this success, and the means employed to ensure it, an insertion of the following events which came to my knowledge will answer that purpose.

“ His Majesty’s ——— regiment embarked on board a ship of war (a two-decker) about the 9th of May 1809, to be conveyed to a very distant part of the world : they were composed for the most part of fine young men recruited from different parts of the kingdom, and remained on board the ship about a fortnight before the final orders came for sailing ; during which time some of the soldiers, who had been in an hospital, were so far recovered from fever and dysentery, as to be thought capable of proceeding on their voyage ; others, however, were found so ill as to require to be relanded, which however were few in number, and were taken to a military hospital by the medical attendant attached to that wing of the regiment which was embarked in the ship.

On the 22d of May the ship, with a consort containing the other part of the battalion, sailed from St. Helen’s, and proceeded down Channel with a fair wind.

It may be necessary to remark, that when troops are embarked on board ships of war, the military and naval surgeons perform their respective duties independently of each other, unless that the naval surgeon more particularly reports to the Captain of the ship such circumstances in the economy of the vessel as may have influence on the *general* health of the people on board ; but the individual treatment of the patients depends entirely on the respective surgeons of the two departments. Hence, although it is of delicate import for the naval surgeon to interfere with the soldiers without his advice being required by the military attendant, yet it behoves him especially to be attentive to the general state of the sick of *both* departments. For which reason, a complaint occurring, certainly, or even doubtfully contagious, being so alarming and of such great importance to every person in the ship, comes so far under the control of the naval surgeon as to render it necessary for him to interfere, in order as soon as possible to put a stop to the complaint, or to prevent its communication with the sailors.

The weather was moderate for the first week, but about the 30th of May a heavy gale was encountered, by which the ship was completely drenched with water, and the soldiers much exposed to wet and other severe suffering in the Bay of Biscay. The storm remitted on the following day, but another equal in violence took place three days after ; and again on the 4th of June another tremendous storm added to their sufferings, during which day, Cape Finisterre being on the lee, they were chased by a strange ship of a large size,

as much sail was set as possible, and the lower deck ports being ill closed, a great quantity of water was admitted, so that the carpenter was obliged to scuttle the lower deck to let into the hold a vast wave of water dashing from side to side of the ship among nearly four hundred men, women, and children. A remission was experienced on the fifth, and on the 12th the ship anchored in Funchal roads, many of the men being sick, and having in this short but severe passage become affected with the scorbutic diathesis.

When at anchor in this place the surgeon of the ship was surprised with the complaints of one of the soldier's wives, whom he found actually labouring under a severe attack of dysentery, with which she had been affected several days; and in a few days more two other women made complaint of the same symptoms. And to those who are acquainted with naval practice, it will not appear strange, that the disorder first appearing should continue to spread among the women, as they are all obliged to resort to the same necessary convenience, by means of which the complaint is more generally propagated.

The Surgeon of the ship deeming it of the greatest consequence *strenuously* to endeavour to put a stop to the further progress of the disease, by separation of the sick, advised that the women affected should be sent on shore at Madeira; but the individual hardship of separating the wives from their husbands, perhaps under such circumstances precluding them from ever meeting again, so far prevailed upon the humanity of the Commander, that they were ordered to remain on board, and the only then preventative consisted in keeping the women as little communicating with other persons as possible; but how ineffectual an entire separation was, must appear, when it is stated that there was not room for the inhabitants of the lower deck even to hang up their hammocks without absolute contact, many being compelled to place their bedding upon the wet deck.

The ship sailed from Madeira (the people having been refreshed with fruit, vegetables, and fresh beef) on the 19th of June, and on the 29th arrived at Porto Praya, on the island of St. Jago, from which they procured a stock of live cattle, and then proceeded on their voyage southward. On the 22d of June the armourer of the ship made complaint of severe dysenteric symptoms, and it is remarkable that this was almost the only sailor who had his birth on the lower deck among the soldiers, and he was placed very near the woman first affected with the disorder, for it is really impossible to prevent offensive matter being left about in a ship in boisterous weather, when all is darkness between decks, and scarcely

scarcely a healthy person is able to proceed from one part of the ship to the other, unless upon his hands and knees; and much less a poor sick woman from her hammock on the lower deck to the round-house, on the frequent occasions that take place in this complaint.

As might be expected, the malady having once appeared gradually increased both among soldiers and sailors; by the 6th of August, being then in South latitude 23°, West longitude 38°, twenty-six of the ship's company had been in various degrees attacked by the complaint, most of whose symptoms could be altogether removed or relieved by the remedies employed by the naval surgeon; there being only two of the sailors so ill as to take to their hammocks, and eight others under less severe symptoms.

At this time the most that the surgeon of the ship could do was, to permit little communication between the decks; the military having exclusively the lower, the sailors the gun-deck. The reports of the sick daily made by the respective medical attendants to their commanding officers being compared, there was found to be a great disparity, both in the numbers affected, and in the severity of their complaints; for while of the sailors there were but ten sick of dysentery, (the others previously having recovered from the disorder) there were forty-five of the soldiers; and of the former two only were confined to their beds, but there were twenty-seven of the latter: it was therefore determined by the respective commanding officers, to place the sick, both soldiers and sailors, under the care of the naval surgeon alone. This being enforced by a written order from the captain of the ship, aided by a regimental order from the colonel, entire authority was placed in his hands as far as related to the medical treatment of the persons then sick, or should at any future part of the voyage become so.

In obedience to these orders, the surgeon of the ship (being really placed in uncommon circumstances, having a very serious and arduous task to perform, and being endowed with double responsibility) immediately commenced his duty among the soldiers who he had never before individually visited, and with whose previous situation he was but little acquainted, unless from the written reports of their medical attendant, which he had sometimes an opportunity of seeing.

He found twenty-seven persons in their hammocks, men, women, and children, labouring under different stages of dysentery; some with the primary symptoms; others with the consequences of the disorder, emaciation, extreme debility,

lity, and severe abdominal pain. Besides those that were confined to bed, there were about as many others, less seriously, or more recently attacked, but labouring under the same disease.

Things being so situated, he prescribed such remedies as seemed to him necessary, and advised, that as the ship was within two days sail of Rio de Janeiro, she should proceed thither, where could be had every kind of refreshment, and where was an English fleet and a naval hospital.

As soon as the ship entered this harbour an admiral's order was procured to remove the more seriously sick to the naval hospital, and that every person, even the most slightly affected with the complaint, should be put on board a transport lying in the harbour, by which means the naval surgeon hoped to be enabled to give so effectual a check to the complaint as to be soon enabled to put a stop to it entirely.

When in Rio de Janeiro, provisions of every sort were sent to the ships, and after the sick were removed, a few slight cases of the disorder only appeared, which were no sooner seen than they were sent out of the ship, and in ten days no further case of the disease intervened.

On the 24th of August, having remained three weeks in this port, it was determined to proceed again to sea, having lost one old man only (who appeared to be moribund when sent there) at the hospital. The sick were then all returned on board from the transport in a state of convalescence; but those from the hospital very severely affected, for the most part with the consequences of the disease, rather than with the real complaint: and eight or ten men, with two women far advanced in pregnancy, were too ill to remain out of their hammocks. It was hoped, that, by departing somewhat south of the tropic of Capricorn, the heat hitherto experienced in the torrid zone, and which was thought to favour the complaint, would be obviated, and thus no further recurrence would take place; and this in a remarkable degree *was* observed, not more than ten or twelve cases appearing after that time; and those that returned from the hospital of St. Sebastian continued to recover.

The weather, during the passage from the Brazils to the Cape of Good Hope, being comparatively cold, (between the tropics it had been generally between 90 and 98 degrees of Fahrenheit, whereas here it was often under 60) few diseases, and these apparently arising solely from cold, were observed; some of these much resembled the former complaint. Many of the men also (having on their departure from England not been furnished with any warm cloathing) were attacked

lacked with very severe pneumonic symptoms ; no *fatal* cases, however, occurred, although frequent phlebotomy was in several found necessary.

On the 22d of September the ship anchored in Table Bay, in a very healthy state, there being no remains of the former alarming disorder.

After being refreshed at the Cape, the ship departed on the 15th of October, but about the 5th of November (south lat. 36 deg. 16 min. east long. 53 deg. 40 min.) the surgeon was extremely anxious, on observing that several men, to the number of eight or ten, made complaint of disordered bowels, accompanied with griping tenesmus, and frequent scanty mucous alvine evacuations. These complaints continued to be made for several succeeding days, but very easily giving way to medicine, and being for the most part unaccompanied with pyrexia, he was inclined to believe they proceeded from some other cause than contagion. The men, on leaving the Cape, had had a change in their diet ; having formerly had rum, but now wine, which is made at the Cape, and which is generally drank too new ; and it is a common observation there, that it is often productive of these disorders ; he therefore advised that half allowance of grog should be served out, and this seemed to have the intended good effect ; but few further instances of sickness appearing during the time the ship continued on her voyage, which terminated on the 28th of December.

Thus after a voyage of vast extent, approaching to near 20,000 miles, in most of the climates of the globe, in a crowded ship, during which time upwards of 600 persons applied to the surgeon for assistance, many of them with a disease manifestly contagious, often dangerous, and whose presence has often in camps and ships been synonymous with death and desolation ; so little was the mortality that only two persons could be said absolutely to die of the disease itself, and two others of its consequences, mesenteric obstruction and marasmus,

Having now therefore described the events as they occurred, and stated that only four persons died, whose deaths proceeded from the disease in question, I come to mention by what means this success was produced ; what were the attempts of the surgeon to stop its progress ; and what his treatment of the disease when it actually appeared.

When a disease of an infectious nature prevails in *any* situation and spreads much, there is great reason to suppose that there either is some neglect or mismanagement, or that the necessary preventatives are out of the reach of the medi-

cal attendant, which latter circumstance is much more frequent on board ships than on shore, seeing that a separation of the sick from the healthy is there but slightly practicable. If, however, an actual non-intercourse cannot be effected, it ought, as much as possible, to be approached to; hence, when the surgeon of the ship was ordered to attend the military, and found nearly thirty men confined to their beds with the disease, in different parts of the ship, he ordered them to be conveyed forward, and permitted no person but the medical attendants and servants to have intercourse with them; and aided by the commanding officers, a line of demarkation was strictly kept on both sides the deck by sentries. When the weather would permit the ports were kept open, and in the night windsails were well attended by sentries at the different hatchways, who were kept to their duty by the frequent visitations of the military officer having the watch; the deck under the hammocks was frequently sprinkled with vinegar, and a fumigating lamp suspended over the fore peak scuttle, and kept almost constantly burning.

And here it may be necessary to mention, that the naval surgeon discovered a source of evil, that evidently prevailed much in favouring the spreading of the disease among the persons in the lower deck. Many of the sick being too ill to reach the necessary on the upper deck, and having the frequent calls for evacuation so common in this complaint, had been furnished with small tubs for this purpose; and these most unwisely were unprovided with covers, from whence arose a continual source of danger; these conveniences, therefore, were immediately provided with such covers as could not be left open, and men were ordered very frequently to wash out these utensils with sea-water. Alterations also were made in the head of the ship, to which the healthy men resorted, to prevent any lodgement of stercoraceous matter; and one side of it was kept for the healthy, and the other for such of the sick as were able to come upon deck. Small conveniences for the same purpose were made in the fore-chains, so contrived, as easily to be removed as soon as no longer required; and to these salutary alterations more than to any thing else, the surgeon of the ship attributed the fortunate change, that took place soon after the ship left the Brazil coast.

With respect to the medical treatment little need be said, there being nothing unusual in it, nor did the surgeon follow any *particular* practice, or prescribe any thing more than is furnished to every ship of war; calomel, opium, neutral salts, magnesia, ipecacuanha, castor oil, jalap, senna, and quassia amara, form nearly all the *materia medica* employed
for

for the cure of this disease, and he has reason to believe, that a judicious exhibition of these alone will in most cases effect a cure, though he has seen, from a misapplication of them, the worst and most dangerous effects. All these medicines were employed according to circumstances, but it would be impossible to give such an account of their effects, as to form rules for future practice, this disease being so variable in its progress, and so often requiring sudden changes of treatment. Nor would he enter into a disquisition on the pathology of the complaint, or mention the different opinions held by medical men on the nature of the disease, or the different modes of treatment that have been proposed. No one can doubt from the symptoms, the causes, and the appearances on dissection, that it consisted in a specific inflammation of some part or other of the intestines, by which their functions are injured or destroyed, and the progressive impulse of their contents impeded; and being affected with a morbidly increased sensibility from their inner coats being abraded, the patients often, particularly if the included matter be hard or scybulous, are thrown into extreme torture. This complaint, he believes, like most, if not all of the exanthemata that depend upon specific inflammation, has its commencement, increase and decline at certain periods, at the end of which the specific action ceases: and though the painful symptoms often continue for a great length of time, nearly as acute as during the prevalence of the complaint itself, yet they are occasioned by the abrasion of the intestines, which are sometimes left inflamed, ulcerated, or scirrhus, and these protracted symptoms are often very difficultly removed and sometimes prove fatal, being attended with almost continual pain, emaciation, debility and hectic, which at length terminate the sufferings of the patient, unless he be previously cut off by an active and more general inflammation induced by the obstructions of the mesentery.

To mention the medicines above spoken of, *individually*, it may be stated, that *calomel* was often used as a purge, with jalap, senna, salts, or ipecacuanha, sometimes as an alterative with opium, or mercurial pill. In the more ordinary cases, a few doses of laxative medicines would effect a cure; in others the disease was more complicated. In a very few cases, the surgeon was obliged to resort to ptyalism, which had the desired effect; but he repaired to this as seldom as possible, and only in the most severe instances, as the patients were by it much reduced, and the recuperative means in his power very scanty. In some cases it was found advisable to induce a copious sweat, and this was generally done by
Dover's

Dover's powder and calomel ; when the perspiration was sufficiently profuse, it was very beneficial.

Opium was often found necessary, and however it may have been reprobated by some physicians, seemed not a little to have been required, to relieve the inordinate action and long continued distress, under which some of the patients suffered ; he had occasion, however, in a few instances, to observe its deleterious effects when improperly prescribed. *Neutral salts* were a common purgative employed at the beginning of the disease, sometimes with calomel and senna ; and a few drops of sulphuric acid, or two ounces of lime juice, were found an excellent addition.

Ipecacuanha has been a common remedy in this disease ; by some reprobated, by others extolled, but ought not to be withheld. It was found beneficial when combined with opium as a sudorific, and with rhubarb as a purge, and the most remarkable and unequivocal good effect, arose from a bi-hourial repetition of half a grain of ipecacuanha with two of rhubarb, the belly having been previously fully evacuated by more active cathartics.

From *magnesia* was often observed the greatest relief ; it sometimes occurred, that patients in the protracted stages of the disorder suffered with severe gastrodynia, and spasmodic affections of the abdominal viscera, which were often relieved by this medicine and oleum menthæ piperitæ alone, sometimes with opium. In two cases the most excruciating agony, accompanied with violent convulsions terrible to be looked upon, the patients mean while howling with intolerable suffering, were relieved and soon removed by these medicines.

Jalap was sometimes employed with calomel in the more trivial cases, or on the first onset, and had the best effects, but it was evidently too rough when the complaint was fully formed.

Of all the purgatives, *castor oil* was found in the advanced stage of the disorder to be the safest, most effectual, and the easiest of operation ; there was scarcely a doubt, but that the life of one man was actually preserved by repeated doses of it, every other purgative throwing him into the most dreadful convulsions.

These were the medicines principally employed during the disease itself ; when its symptoms went off, and the patient was left weak, emaciated, and often at death's door, the intention was to strengthen the stomach, and by sympathy with it the other functions of the body ; and this was very effectually done by a weak infusion of quassia amara, to which was added a small quantity of zingiber. By these means

means nearly all the patients who suffered with dysentery recovered, and its further progress was prevented."

Thus, Gentlemen, I have related, as they are reported to have occurred, a faithful history of the events that happened lately on board one of his Majesty's ships, and as they were of very unusual and fortunate event, seeing that during a very long voyage, performed in eight months, only seven persons died, one by an accident, and another of asthma, who was an old invalid; I would from a revision of the circumstances inculcate, that however adverse may be the circumstances, whatever opposition may be made to his attempts, or whatever obstructions should oppose the efforts of the medical man, when called upon to give his assistance in such cases, still he ought to embrace every, even the slightest means of ensuring success, and thus in many cases of almost hopeless good event, prosperity will ultimately crown his efforts.

I have the honour to be,

With the greatest respect,

Suffolk, Nov. 10,
1810.

Your obedient servant,
JOSEPH ARNOLD, M. D. &c.

To the Editors of the Medical and Physical Journal:

Tape-worm cured by Sp. Vin. Camph.

GENTLEMEN,

IF the following accidental cure of a tape-worm, and the singular occurrence of a fair lady turning as black as a negro, appear worthy of your Journal, they are at your service.

W. GOODWIN.

A poor woman of Leeds, in Yorkshire, of the name of Weird, undertook to walk to the vicinity of Stowmarket in Suffolk, to see her daughter, who had married a militia man. The great length of the journey crippled and swelled her ancles so much, as to occasion her sending to a neighbouring surgeon for some spirits to bathe them with, and she received some spt. vin. camph. for that purpose. The old lady admired its look and smell, and having for two years past been afflicted with pain in her stomach, observed to her daughter, "what was gude for the oote side might be gude for the in, and that she would e'en take a gulp of it." Accordingly

she drank about an ounce, and bathed her ancles with the remainder.

In about three hours after this, she felt something twisting itself about her thigh, and upon examination found a living tape-worm, upwards of three yards long; and from that time to this, now more than two years, has been entirely free from pain in her stomach. Her daughter has returned the visit, and found her mother in good health, with some of the "gude stuff" in the window, ready if the pain should return.

Since knowing of the above, a Mrs. Pipe applied to me on account of a bilious, nervous affection, with loss of appetite, &c. for which she had medicines and advice; but not getting quite well, observed she had forgot to mention a strange unpleasant sensation in her stomach, attended with slight pain at times, and a rising up to her throat, as of something alive; and saying also, that a long worm had lately crept into her mouth, I advised her to take a glass of gin, with two tea-spoonsful of spt. vin. camph. in a morning fasting, which she readily did, and from the time of doing so, lost all the distressing sensation in her stomach, has recovered her health and appetite, and been well ever since, now several months. She has no doubt but the worms in the stomach were the cause of her ill health, and firmly believes the spirits killed them; but as she visited the temple in the garden, no examination for the vermes was thought of.

Mrs. E——, a single woman, about 60 years of age, till about 20 years since, was of a natural fair complexion; when having an illness of some continuance, she perceived on her recovery that her complexion had changed to a dark hue, which has since gradually increased to that of the darkest native of Africa.

Mrs. E. is in general good health, but occasionally complains of rheumatism. I should be glad if some of your correspondents would favour us with their opinions of the cause of this singular phenomenon.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ON the 15th of March, 1809, a lady, 63 years of age, was attacked with pleuritis, but being from home when her friends sent for me, and detained by unavoidable circumstances until noon the day following, I consequently could not see her until the 16th about three o'clock in the afternoon. I found her

in

in a very distressed situation: the pain (which was on her left side) was violent; lancinating from the sternum to the scapula with great severity; inspiration remarkably difficult, increasing the pain so much as to induce her to scream out; pulse very hard and contracted, beating irregularly from 90 to 100 strokes in the minute; tongue covered with a thick white fur, except the sides of it, which were preternaturally red; bowels costive; urine scanty; thirst very distressing, but the pain occasioned by the effort of deglutition prevented her from alleviating it as she wished. I immediately took a pound of blood from her arm in as sudden a manner as possible, and induced syncope. The blood shewed no buff; the time of its flowing was about four minutes. I then directed the application of hot flannels to her side, until the arrival of a servant whom I had dispatched for a blister, and some powders composed of super tartras potassæ; nitratis potass. and gr. $\frac{1}{4}$. pulv. digitalis every third hour; immediately after the bleeding, she felt herself much relieved and breathed more freely; her pulse was much softer and fuller, and she now took copiously cooling acidulated drinks.

17. Symptoms varied very little since yesterday; urine high coloured; the blister rose well.

18. Pain much more violent; inspiration extremely difficult; pulse nearly in its original state, hard, tremulous, and contracted; cannot bear any other position than lying on her back with her head raised. Repeated the venæsection to a pound in the same sudden manner as before, and she was relieved; the blood was now covered with a thick opaque crust, and the surface was very concave; prescribed tart. antim. gr. $\frac{1}{8}$ and ætheris nitros. gutt. xv. in mist. camphorat. with each dose of the powders as before.

19. 9 A. M. Has had no sleep, pain still acute, yet something more like a weight or fullness (as she expressed herself); bowels gently open, urine high coloured and scanty; pulse 80, a gentle moisture upon the skin; thirst very troublesome. Ordered six leeches to the side. Evening very restless, pain as in the morning, pulse 75, beating more regular and soft; prescribed a draft as follows, and left her for the night. R. Ext. hyoscam gr. x. ætheris nitros. oxymel colechici aa 3j mist. camphorat. 3j. M. H. S. S.

Monday morning, 20th. Had no rest, pulse compressed, 70—feels a great weight and pain in her left side quite up to her shoulder; if raised so as to sit up, she immediately becomes faint, and is obliged to recline on her pillows again; countenance expressing great anxiety, pale and dejected, except that on each cheek there is a circumscribed redness inclining to a purple hue; has not voided more than three
(No. 143.)

ounces of urine since last night eight o'clock ; suspecting an effusion within the chest, I prescribed as follows.

R. gum. gambogæ. gr. iv. ætheris nitros. oxym : colchici, tinct. scillæ. āā ʒiij. tinct. digitalis ʒij. mist. camph. aquæ puræ, āā ʒiitiss. M sumat. cochl. dua 2a. qq. hora.

Repetatur H. anod. c. extra hyosciam. gr. xij. H. S. S.

21. Last night slept two or three hours, pain still severe, pulse 60 and compressed, intermitting at times one or two strokes; hands benumbed and cold, particularly on the left side; last night awoke from a dream much frightened, and was a long time before she could be composed; if she sits, faintness still immediately supervenes; has not voided more than six ounces of urine the preceding twenty-four hours.

Continue the mixture and draught at bed time as before.

22. Has had several fluid stools, and made about half a pint of water; fell asleep last night about twenty minutes after taking the draught, and remained so nearly two hours, when she awoke again in a fright and fancied she was suffocating; pulse 55, much compressed and intermitting frequently; hands and face œdematous; the symptoms now evidently and distinctly mark the case to be hydrothorax.

Continue the mixture and draught as before.

23d and 24th. Much as before, except that the flow of urine is more copious and she has two fluid evacuations e recto in the twenty-four hours. Continue as before.

25th and 26th. Has voided about fourteen ounces of urine and two stools in the twenty-four hours, these last two days, which is somewhat less in quantity than what she takes; pulse 53, frequently intermitting; cannot bear an erect posture.

27th. A considerable remission of pain, pulse 55, compressed and low; she has made about a pint and a half of water the last day, and there is a free action of the bowels, so that the fluid discharged is nearly equal to the quantity drank. Continue as before.

30th. Flow of urine as before, a pint and a half; hands and face still œdematous, breathing very difficult, and she still awakes at times greatly alarmed and terrified; I added to her mixture, ætheris nitros. oxymel. colchici. tinct. scillæ āā ʒj. tinct. melœ vesicat. ʒij. to be taken as before with the draught at bed time.

April 5th. Urine discharged copiously; pulse 60, fuller and more regular, swelling of the hands and face subsiding; her breathing is not so confined, and she has slept tolerably composed the last two nights. What is to me most remarkable in this case is, that since the time of her last parturition, twenty-one years ago, she has never menstruated from the vagina, but invariably and regularly from the rectum, with this

this difference, that sometimes it has been to the amazing quantity of four, five, or even six pounds; yet this enormous discharge has not reduced her so low as might be expected, but merely kept her in a state of common debility. Notwithstanding her advanced age, the discharge still appears at regular periods, and is preceded by the common symptoms; a sudden check which was incautiously given to it, may, I think, be deemed the proximate cause of the pleuritis, in which form the system was first attacked; and consequently the serous effusion in the chest was the effect of the increased inflammatory action of the minute secreting arteries on the surface of the pleura; and with respect to the vicarious hæmorrhage, I cannot see any other method of accounting for it, than by supposing the principal branches of the uterine arteries obliterated, and some anastomosing branch of the hypogastric assuming the action, perhaps the hæmorrhoidæ media.

April 11th. Hæmorrhage returned from the rectum; pulse 66, breathing much easier, can sit up four or five hours in the day; prescribed a mixture with extr. cinchon. solut. arsenic: and ætheris nitros. and to make free use of wine.

12th. Has had a restless night, hæmorrhage considerable, pulse 66; last night awoke from a dream frightened, swelling of the hands trifling, the quantity of urine voided is nearly double to the fluid drank, bowels freely open. Continue the cinchona, &c.

14th. A considerable pain in her head, pulse 70, natural, has a large flow of urine and one fluid evacuation e recto, per diem; nausea with an inclination to throw up; I consider it as the effect of the cinchona. She therefore omits it.

16th. Hæmorrhage stopped, pulse 70, natural, no thirst or pain, no sickness, appetite still poor; bowels regularly evacuated every day once, flow of urine copious; no swelling of the face or upper extremities. She appears convalescent.

She has had regular returns of the discharge until lately; it has varied both in quantity and regularity, and now seems as if it were about to cease; her health has been tolerable, except occasionally, when walking quickly, or otherwise exerting herself, she feels a little difficulty of breathing; she is under the necessity of taking some opening medicine occasionally, that the discharges from the system may be freely promoted.

I am, Gentlemen,
Your most obedient humble Servant,
JOHN KENWORTHY.

*Dobcross, Yorkshire,
Oct. 16, 1810.*

For the Medical and Physical Journal.

Case of strangulated Hernia reduced by the administration of Æther. Communicated by ARDUSSET, M. D. at Bazas, to the Editor of the Gazette de Sante, March 1809.

DELOUMES, a hatter, aged about sixty years, of very spare habit, and bilious sanguine temperament, had been afflicted during fifteen years with inguinal hernia of the right side, which he reduced by the *taxis*, and kept up by means of a truss. This, however, he had discontinued about eighteen months, without any signs of the rupture being apparent.

In June, 1808, he rode a considerable distance on horse-back in a very hot day; on his way he was seized with severe griping in the bowels, and a sharp pain in the right groin. He continued his journey, however, and returned home the next day without any further complaints than slight head-ach, and a painful sensation in the lower part of the abdomen.

The following day, June 17, whilst occupied in his shop, he was suddenly afflicted with a violent pain near the abdominal ring. Upon applying his hand to the part, he felt the tumour of the hernia, which he succeeded in returning within the abdomen. Two hours afterwards he ate a hearty dinner, and again entered his shop; but had scarcely commenced his usual employment, when the pain returned with a degree of intensity that scarcely permitted him to reach his chamber, and throw himself on his bed.

Whatever efforts he now made to reduce the hernia were unavailing. A common glyster was immediately thrown up, blood taken from the arm, and some hours afterwards he was placed in the warm bath, where he continued about an hour. The pain became easier, but the hardness and the volume of the tumour remained the same, and the following day the pain returned to an alarming degree. The patient was bled again, and put into the warm bath, which he could not bear beyond half an hour, although in the horizontal position. Upon being taken out of the bath, the swelling was covered with a large emollient poultice, which was renewed as often as it became cool. His drink was lemonade, and his nourishment chicken broth. He passed a restless night: the pain continued, and he was affected with hiccup and bilious vomiting. The pulse was small and frequent.

On the 19th, further assistance being deemed requisite, Dr. Ardusset was called in. His attempts at reduction proved ineffectual, and the symptoms became more threatening. He then

then proposed the administration of a mixture of infusion of mint with æther, and applied compresses, dipped in æther, to the tumour. Soon after this practice was tried, the pain in the abdomen, the hiccup, and the vomiting, subsided; the swelling sensibly diminished, and by the next day totally disappeared;—since which the patient has had no return of the complaint.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS nothing tends more towards the elucidation of medical science than the records of cases and facts, and as I do not immediately recollect having any where read of a case of twin births similar to the one I have here detailed, or met with during a period of thirty years, I send it for insertion in your useful Journal.

Ann Binder, a young woman about sixteen, being in her first pregnancy, was taken in labour on Sunday afternoon, the 24th of July, 1809. She was attended by a very experienced midwife, but not being able to accomplish the delivery, she sent for me about seven o'clock; when I arrived, she informed me it was a twin case, and the first had presented by the feet. On passing an examination, I discovered that the body of the child had protruded through the external orifice, with the arms down on each side; the funis umbilicalis, extremities, and part of the parietes of the abdomen, were in a state of putrefaction; therefore I concluded this child, for some considerable time, had lost its existence; the abdomen was towards the pubis of the patient, and was so completely pinioned or impacted in this way, in the external orifice, which was very contracted and rigid, that it was not without some considerable time and trouble I could extract the shoulders; and with much difficulty, with all the care, attention, and circumspection possible, prevented a laceration of the perinæum. I naturally concluded that when the shoulders were cleared through the os externum, the head would have immediately followed; but still finding a very great obstacle in its descent, and fearing if too much force were applied, I might have separated the head from the body; and well knowing what must follow in such a case, that it must have been left in the cavity of the uterus, had it been so separated, and must have been extracted after the birth

birth of the second, as in embryotomy, with the long scissars and crotchet; and as it occurred, from the child being some time in a putrefactive state, the neck was in part dislocated with the little exertion I had used on this occasion, I desisted from any further attempts, till I was fully convinced of the cause that impeded the delivery. On passing another examination, I found the head of the second child had passed that of the first, into the inferior aperture of the pelvis, with the vertex towards the pubis, and the face towards the sacrum, the head of the first still resting on the symphysis of the ossa pubis; in such a situation, as there was no deficiency of uterine action, or want of labour pains throughout the whole process, I suffered the labour to proceed as in cases where there are only one, and about nine o'clock in the evening she was delivered of the second. After the labour had been so far concluded, the head of the first passed downwards with only a single pain, and was protruded through the external orifice so rapidly, and with so much violence against my left hand, that I could scarcely maintain it to support the perinaeum again from laceration.

The united placentæ were afterwards extracted in the usual way about twenty minutes or half an hour afterwards, although the funis umbilicalis of the first had been worn through nearly towards its insertion in the parenchymatous substance of the placenta, in the head of the second passing through the external orifice. They were twin girls, and both born dead; the patient recovered from the parturient state in less than three weeks.

From the concurring circumstances in the above recited case, it would naturally appear that the length of time which had elapsed in endeavouring to extract the body and shoulder of the first child, gave the second the opportunity of descending down and passing that of the first into the lower aperture of the pelvis, and from there being no laxity of uterine action pressing on its contents, quaque versa, there was no possibility of returning the head of the second above the superior aperture of the pelvis, could it have been wished for, but was obliged to submit to the evil then existing, rather than incur the risk of doing far greater mischief to the patient by injuring the soft parts, or what would have been still worse, possibly of rupturing the uterus, or of leaving the head behind, either of which every prudent and cautious accoucheur would rather endeavour to avoid.

Another remarkable circumstance attending this case was, that, in addition to the head of the second child pressing upon the perinaeum, expecting on the return of every pain its momentary exit, the neck of the first being so completely wedged

Fatal Effects of eating Cherries, and copious Bleeding. 31

wedged in the os externum, there should be no laceration of the perinæum.

I am, Gentlemen, your's, &c.

H. G. CLOUGH, M. D.

18th Nov. 1810.

68, Berner's-street.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MY son, who studied physic at Philadelphia in America, relates the following case, which occurred whilst he was attending the hospital in that city.

"The porter belonging to the Hospital (Philadelphia) having eaten excessively of cherries, which abound there, was seized with violent vomiting and convulsions. It was Dr. Rush's month of attending. The House Surgeon bled the man freely without relief; in the evening he was bled again, copiously, in both feet: the next day the arteries in both wrists were opened ad deliquium, without relief, the convulsions continuing. The day after, both arteries in the ancles were opened ad deliquium. The following morning, being the fourth day from the attack, he expired in convulsions."

My son makes the following observations.—If the patient, as he vomited up the cherries, had taken plentifully of warm water or camomile tea, to have emptied his stomach, as nature dictated an emetic, and then a purging mixture, or enema, it is my opinion that his life might have been saved.

A gentleman in very extensive practice, in a hurry, opened an abscess in the throat with a lancet which he had used for inoculation. The child a few days afterwards was seized with a putrid fever. I saw the child; it was about two years old. The part that was opened had hundreds of the confluent small-pox; no other part of the body, excepting the place where the abscess was opened, was affected. The child expired covered with purple petechiæ in a very few days. The gentleman affirms, that the lancet had been well scalded in boiling hot water before he used it.

I am yours, &c.

Thornbury, Gloucestershire,
Nov, 26, 1810.

J. E. HARRISON, M. D.

Note. Dr. Harrison requests us to correct an omission in his Case of Cancer, in the Journal for October 1810, p. 276, line 6, where instead of advising the patient to trust, it should have been written "advising her to trust in God." And in the case of Fluor Albus, p. 279, for discharge remaining, read No discharge remaining.

To the Editors of the Medical and Physical Journal.

Mr. Earl's Invention of an Aneurismal Needle.

GENTLEMEN,

IN some Surgical observations which have been lately published by Mr. Ramsden, under the head of "Cases of Aneurism with practical Remarks," will be found a description of two needles; the first is said to be the invention of Mr. I. I. Watt, the second of Mr. Henry Earle. In referring to the plates, the reader will no doubt be much surprised and disappointed to find, nearly the same instrument described as the invention of two different people. It must naturally strike him that the second has been borrowed from the first without any acknowledgment on the part of its pretended author. It is to remove any such impression, which cannot fail of being injurious to my reputation, that I beg the admission of these lines into your widely circulating Journal. The real fact will be found to be, that they were both invented at the same time, and both by me, as I trust I shall prove in a most satisfactory manner.

The circumstances which gave rise to their invention were as follow. A case of axillary aneurism occurred in St. Bartholomew's Hospital, in which Mr. Ramsden took up the subclavian artery just after it emerges from behind the anterior scalenus muscle; the aneurismal tumour was very large, and had elevated the clavicle considerably higher than natural. The artery was found without any difficulty, but the operation was nearly foiled at a point which was little expected. In consequence of the clavicle being pushed up, and the depth of the wound, it was found impossible to pass a ligature round the artery, notwithstanding Mr. Ramsden had prepared himself with a great variety of needles. Though these were different in shape, they were similar in principle, and that unfortunately was imperfect. I cannot forbear here remarking, that it is to be lamented that Surgeons do not pay more attention to this mechanical part of their profession; the fabrication and invention of instruments is left almost entirely to artists, who must be ignorant of the object to be attained; their instruments appear very eligible in theory, but when submitted to the test of experiment they will too often be found insufficient and useless.

For above an hour and half, all attempts to pass a ligature were ineffectual, though needles were several times passed under the artery so as to appear on the opposite side; further they could not pass, it being impossible to depress the handle in order to raise the point. Another fault which these needles had,

had, was the length of the eye, whereby the ligature remained on one side of the artery when the point was on the other. At length I handed to Mr. Ramsden part of the stilet of a flexible metallic catheter, which I had flattened for the purpose. This rude instrument, from its great pliability, passed readily under the artery and was drawn up on the opposite side, a ligature was then fastened to it, and the operation happily concluded.

During all this time I was close to the patient, and had an opportunity of observing the cause of embarrassment and the means whereby it might be removed. That night I sketched the instruments which have been described by Mr. R. and the following morning directed them to be made by Mr. M'Lellan, an ingenious instrument maker at St. Bartholomew's. The first that was completed consisted of a flat silver cannula slightly curved at its lower extremity, with two small wings at its upper, at the back there was a groove for the ligature to lie in. In this cannula was fitted a spring about an inch and half longer than it, at the upper extremity of which there was a small handle, at the lower an eye for the ligature. When this instrument is to be used, it must be armed with a ligature which is to be placed in the groove and attached to the wings at the top, the spring being drawn within the cannula. It is then to be passed under the edge of the artery, the ligature loosed and the handle depressed, when the spring, from its elasticity, will rise on the opposite side, carrying with it the ligature, which must be detached and the spring drawn within the cannula, or the needle may be threaded after it has passed under the artery.

This instrument I shewed to Mr. Ramsden, and at his request gave him the preceding account. I also showed it to Mr. Astley Cooper, who received it with the liberality and zeal with which he never fails to embrace any thing that is likely to improve the Profession. On trying this needle on the dead subject I found that the spring in its passage formed too large a circle, whereby the neighbouring nerves were endangered. I recurred, therefore, to my original plan, and ordered a needle of soft metal about an inch and half long to be made to fit the cannula, into the upper part of which was fitted a flat steel spring of the same length as the cannula, having a handle at the top, which when depressed would push out the needle with its ligature. In short, I ordered the precise needle which has been described as Mr. Watt's contrivance. This instrument I showed to Mr. Ramsden and several other gentlemen, and it was publicly sold at M'Lellan's as my invention. In the mean time Mr. Watt invented a needle which was made at the same shop, the object of which was the same as mine, though the means were materially

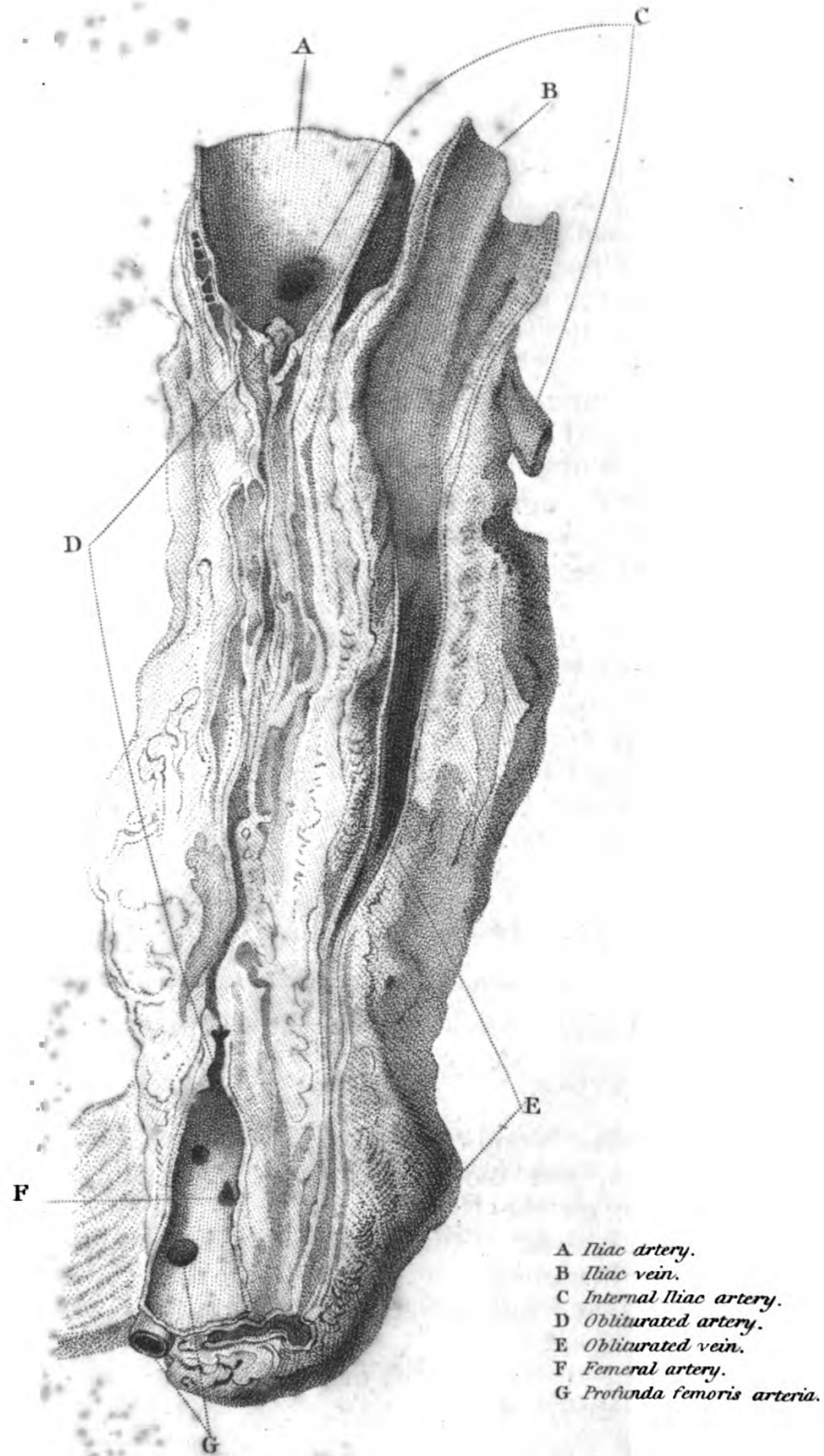
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terially different. This he afterwards abandoned, for reasons best known to himself, and he did me the honour of adopting mine. The only alteration he made was substituting a steel needle for the flexible one, and not continuing the slit up the whole length of the cannula. I need no other proof of the truth of this statement than the joint testimony of the instrument maker and his man. The reason of my intruding myself in this manner is to clear my character from the stigma which might be cast on it of being an unmeaning copyist. If my name had not been mentioned at all, Mr. Watt should have been most welcome to what little credit may attach to the inventor of such an instrument; but as it has appeared before the public, I certainly wish that things should be represented in their true light. I am also desirous of making this statement to avoid the imputation of having borrowed from the French, without making due acknowledgment. I feel myself placed in a particularly unpleasant situation, for at the very time that I am attempting to prove that the instrument has been taken from me, I am aware, that I may be accused of having copied from Desault. Since I invented this, to me, unfortunate needle, I have read a description of one nearly similar in Desault's works edited by Bichat. I have stated the circumstances which gave rise to *my* instrument; which was the genuine offspring of necessity, fostered by a little turn for mechanics which I have always endeavoured to use for the advantage of my Profession. Similiar causes might have produced the one described by Bichat. But with Mr. Watt and myself circumstances are widely different. He daily saw and examined the instrument which I had invented, whilst he was superintending the making of his own. It cannot, I think, for a minute, be supposed that I should attempt so gross an imposition, as to endeavour to pass for my own, an instrument which I knew to be the invention of another; particularly when I should be liable to be detected by every person who perused the works of that excellent practitioner Desault. As I have now discovered a prior author, I shall cede all claim to originality, and deem myself fortunate in introducing into this country an instrument which is likely to be of practical utility. I cannot conclude without thanking Mr. Ramsden for the very unmerited encomium he has been pleased to pass on me, and stating that I am perfectly convinced that had he been aware of the facts which I have mentioned, he would have rendered all this egotism unnecessary. To avoid any further altercation or paper war on a subject which can only be interesting to individuals, I can produce the evidence of Mr. M'Lellan to the veracity of the above account.

Hanover Square, December 10, 1810.

HENRY EARLE.

M. Tauntins, Case of Obliterated Iliac Artery.



To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN a Number of your very useful Journal published three or four years since, I took the liberty of suggesting a mode of treatment in Scarlatina Anginosa Maligna, which was happily attended with the most complete success.

I cannot at this distant period charge my recollection with the circumstances, either local or general, under which the disease made its appearance, or by which its fatality might have been influenced, not having that Number of the Medical and Physical Journal immediately within my reach, but that the disease in a very great and alarming number of instances ran its fatal course in a very short period, notwithstanding both the most rigorous antiphlogistic and antiseptic treatment had been had recourse to, in succession, without the least apparent benefit whatever. By a reference to the paper alluded to, it will be seen that, as soon as the carbonic acid gas was liberated in the pharynx, œsophagus, and stomach, from the supercarbonated kali, its antiseptic powers were immediately apparent in almost every instance. In the hope that, should Mr. Goodwin be induced to make trial of the above treatment, he will be equally successful with myself in this truly alarming disease, I remain, Gentlemen,

Your most obedient humble servant,

JOHN WALDON, M.D.

Bodmin, Cornwall, Dec. 9th, 1810.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the last Number of the Medical and Physical Journal, page 524, you have inserted a case entitled, "Effect of a Ligature on the Iliac Artery." By the conclusion of this paper it is difficult to conceive how the author could venture to give it such a title. Indeed the whole is so inaccurately stated, that I am induced to offer you the following abstract of my notes.*

I am, &c.

Your obedient Servant,

JOHN TAUNTON.

Mr. S——, æt. 33, of a spare habit of body, has been subject to cough, pain in the chest, and difficult respiration,

* The case alluded to by Mr. Taunton, was copied *verbatim* from the last Number of the London Medical Review.

for several winters, which symptoms generally disappeared during the summer months.

There had been an enlargement of the left testicle for upwards of four years. In May last the operation of castration was thought necessary by the professional gentlemen under whose care he had been. I was permitted to be present at the operation.

In passing the knife through the integuments from the abdominal ring towards the depending part of the tumor, some cysts were cut into at the upper part of the testicle. From these a limpid fluid escaped, (probably about two or three ounces.) The integuments being separated from the sides of the tumor, and spermatic process, the latter was then divided. Several attempts were made to take up the spermatic arteries with the tenaculum, but the ligatures had no effect in suppressing the hæmorrhage, probably on account of the retraction of the spermatic arteries within the cellular substance of the cord. The spermatic process (which was very short from the great enlargement of the testicle) receded within the abdominal ring, the incision was then enlarged upwards with a view of exposing the arteries above the external ring. These attempts failing, the bleeding, which was very profuse, could only be restrained by passing a large needle, armed with a very strong ligature, high up under the spermatic process, and enclosing within the ligature the whole surface from whence the hæmorrhage issued.

This succeeded completely with regard to the spermatic arteries; some smaller vessels from the cellular substance were secured, and the patient put to bed in a very weak state from great loss of blood during an operation of nearly two hours.

In the night there was a considerable hæmorrhage from the vessels of the cellular substance; this was stopped by powdered ice laid on the part with tow.

From the 25th of May to the 14th of June, I did not visit the patient, but was informed by the gentleman who attended him, that febrifuge medicines were given for some days after the operation. Afterwards a more nutritious diet was allowed and bark given; that the ligatures had all come away, that the wound looked healthy, and was healing fast on the scrotum.

On the 14th of June a small swelling appeared at the upper part of the wound, which was painful; a poultice was applied. About eleven P. M. the swelling burst, from the opening of which a large stream of arterial blood issued.—Lint and cloths moistened with cold water were constantly applied.

applied to the wound with pressure, and succeeded partially in stopping the hæmorrhage.

Between eleven and twelve P.M. I saw him for the first time after the operation, and found him very low from the loss of arterial blood, which had been considerable; but at this time there remained only an oozing from the coagula, lying at the upper part of the wound.—R. lig. plumbi acetat. ʒij . aquæ ʒvj . M. Lint and cloths moistened in the above lotion were applied to the wound, with directions to make pressure with the hand if the bleeding should return; the room was kept cool, and the patient ordered to be perfectly quiet.

June 15, 16, 17, and 18. Bandages were applied round the body to produce different degrees of pressure on the part, but without any apparent advantage, as the bleeding returned at short intervals.

19th. A steel truss was applied with a screw to the pad, by which the pressure could be greatly increased; the pad of the truss was large, and applied immediately over the course of the external iliac artery, the lower part reaching to the edge of Poupart's ligament.—This produced great pain, from the pad imbedding itself in the wound, without completely restraining the hæmorrhage, which returned several times during the 20th, 21st, and 22d; rather profusely on the latter day.

The pad of the truss had, by the 22d, completely embedded itself in the soft parts, producing great constitutional irritation.

23d. At eight A.M. the hæmorrhage had been profuse, the stream of blood very large, and evidently arterial: it could not be stopped by pressure.

Five A.M. It was now agreed in consultation to remove the truss, and if possible to expose and secure the bleeding artery.

Pressure was made upon the primitive iliac artery, and the truss removed. The pad had destroyed the integuments, muscles, and tendons, and completely embedded itself in a large cavity extending nearly to the iliacus internus muscle. The surface of the cavity was a confused mass in a sloughing state.*

The epigastric artery appeared ulcerated near its origin, having been destroyed by the pressure of the truss.—An in-

* The author of the paper in your last Journal is so little acquainted with the real history of the case, that he speaks of the hæmorrhage as occurring "at the expiration of some weeks from the application of the truss." He ought to have informed himself that the truss only remained on between four and five days.

cision of about two inches in length was made through the integuments and muscles, from the upper surface of the wound towards the superior margin of the ilium in the direction of the fibres of the external oblique muscle.—Little hæmorrhage followed the complete exposure of the wound. A ligature was now made on the iliac artery, but still some bleeding was observed to come from a small vessel in the direction of the spermatic artery. This was taken up with the tenaculum. The ligature which had been passed on the iliac artery was removed, at which time a tingling sensation was experienced down the thigh in the course of the crural nerve: one suture was passed in that part of the wound where the incision had been made. The wound was dressed with lint moistened in a lotion of some water, acid, and camphor.

The wound suppurated kindly; the discharge was very considerable; the contused parts separated; the ligature came away in a few days; the granulations appeared healthy, excepting in one part immediately over the iliac artery, where a kind of downy appearance was seen on the granulations, which were of a pale colour. This disappeared gradually; the wound filled up with healthy granulations, and at the end of three weeks required to be dressed only every second day, the lower part being now completely healed.

During this period a nourishing diet was allowed, some bark had been taken in Port wine, and occasionally an aperient medicine, the general health and strength were much improved, so that on the 15th of July, the patient could be raised in the bed, and held up in nearly a sitting posture for some time. This change of position was repeated several times on the 16th, and seemed to give additional strength, the wounds on the back and lips had become very painful, from lying so long in one position. On the 17th he was lifted out of bed and placed in a chair, the body inclined forwards on a pillow laid on a table.

This change of position agreed well, and was repeated two or three times each day; the general health was much improved, but some swelling of the legs took place, particularly about the ancles; pain was felt down the inside of the thigh in the course of the Sartorius muscle; there was also an irregular, hard, knotty line, extending in the same direction, very painful to the touch; this line was longest and most painful near the groin.

The wound continued to heal and look healthy, the hardness and pain on the inside of the thigh gradually subsided. A nutritious regimen, bark infused in wine, and aperients were continued; when his cough (to which he was very liable)

ble) was troublesome, he took *misturæ ammoniaci cum tinct. digitalis*.

On the 5th of August he appeared as well or rather better than usual, but I observed that the granulations looked pale, and that the edges of the wound had an irregular appearance, which had not been seen before; he sat up near ten hours during this day, went to bed as well as usual, and had a tolerable night.

On the 6th, soon after he had been lifted out of bed, the wound began to bleed, but not profusely; he was immediately put to bed again, lint and cloths moistened in cold water were applied to the wound; this succeeded in stopping the hæmorrhage, and the quantity of blood lost (which was arterial) was not more than from 4 to 8 ounces. On removing the cloths and lint there was a small coagulum at the bottom of the wound immediately over the iliac artery, at least two inches from the part where the ligature had been applied on the small artery on the 23d June. Pledgets of lint moistened in a similar lotion to that ordered on the 14th of June were applied to the wound, he was laid on his back, the knees raised. No bleeding during the remainder of this day.

In the evening, on removing the lint the coagulum was separated and a small sinus observed at the bottom of the wound over the iliac artery. A probe introduced about an inch deep in a direct line to the artery had a distinct pulsating motion communicated to it.

The pulsation in the femoral artery through its *whole course* had continued the same as in the other thigh during the *whole* confinement.

August 7. He had slept a little during the night, but suffered much this morning from the position of the body, which had not been changed, he had also great pain in his left side with difficult respiration.

Bottles of warm water were ordered to be applied to his side, and a mixture of the *liquor ammoniæ acetat. cum syrup. papav. alb.* to be taken frequently.

August 8. From this time to the 26th September the original wound often granulated in a healthy manner, and even seemed disposed to cicatrize, yet his general health gradually declined, he became hectic and even anasarcaous, with those deceitful intermissions which so often occur in these cases. The wounds in his back assumed an unfavourable aspect, and his cough and expectoration increased. From the 26th to the 30th he became much worse, respiration was short and painful, the granulations looked flabby and pale, and the edges a little irregular, the hands were somewhat swelled.

October 1st. Much worse, respiration very short and painful, the countenance indicated a speedy dissolution.

October

October 2d.—2 A. M. After a restless night he is a little revived, but in the whole much worse than he was yesterday.
—Died at 1 P. M.

Examination after Death.

October 3d. The abdominal viscera were healthy, excepting some adhesions between the intestines and the peritoneum: in the left inguinal and iliac regions, the peritoneum, iliac artery and vein were united by a dense substance, evidently the effects of extensive and active inflammation.—The iliac artery was obliterated from within half an inch of the internal iliac to the under part of Poupart's ligament about $5\frac{1}{4}$ inches in extent.—The arteria profunda was given off, high up, near Poupart's ligament, and neither that nor the femoral artery appeared to have undergone any change at that part.

What appears to me to deserve particular attention is, that the pulsation of the femoral artery at the under edge of Poupart's ligament, and below, never suffered any change in strength or frequency from that which was observed in the artery of the right thigh.

The iliac vein was obliterated from a little above Poupart's ligament for one inch and half downwards, which was the part where the vessel was divided; hence it could not be ascertained how low the obliteration was continued.

Is it not probable that the obliteration extended along the femoral vein, and that the pain, and the irregular knotty line, which was observed on the 17th of July, and following days, in the direction of the Sartorius muscle, were occasioned by the obliteration of this, and the Saphenæ major veins?

The experiments of Dr. Jones tend to prove, that the obliteration of an artery must be preceded by inflammation. Whether this inflammation is produced by injury done immediately to the artery itself, or to the surrounding parts, and from them communicated to the artery, cannot be of importance, if, as Dr. Jones supposes, the whole effect is produced by inflammation. In this instance there cannot be any reasonable grounds for attributing the obliteration to the ligature, especially as the iliac and femoral veins were obliterated without any ligature, and also as the inflammation, ulceration, and destruction of parts produced by the pressure of the truss in the neighbourhood, and upon the obliterated vessels, were much more than sufficient to explain the event. It is very far from my wish to undervalue Dr. Jones's labours, or the conclusions he draws from them, they are supported by experiments, and, in my opinion, would not receive aid from any inference drawn from the preceding case.

Memoir

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Request you will insert, in your widely circulated Journal, the following statement. It is meant merely to put in my claim to a *discovery*, without the least offence intended to Mr. Ramsden.

Yours, &c.

JESSE FOOT.

Dean-street, Soho, Dec. 15,
1810.

ON perusing the Table of Contents in Mr. Ramsden's late Publication, my attention was particularly arrested by the following article. "Description of a Membranous Fence at the Aperture of the Urethra *hitherto UNNOTICED*; a common cause of derangement of the Urethra." And on coming to page 36 of the work, which is referred to by the Table of Contents, the explanation of the discovery, so important in Mr. Ramsden's opinion, commences with the following paragraph:—

"There is, however, another cause which is very commonly productive of that derangement of the urinary passage now under consideration, and which I believe has not been noticed, viz. an unnatural diminution of the external opening of the urethra.

"In the majority of persons who apply for assistance under complaints of the testicle or of the urethra, which are not to be traced to gonorrhœal inflammation, the urethra will be found to be more contracted at its orifice than at any other part of the canal. This state of its extremity is very different from the stricture which is sometimes situated immediately within the aperture, as well as from that appearance of this part, which is called the blind urethra.

"The diminution of the orifice of the urethra is occasioned by a membranous fence, which partially closes up the lips of the extremity of the canal; it may sometimes be an original mal-formation: yet I apprehend it is for the most part produced by cohesion during infancy, and is analogous to the union we sometimes see between the prepuce and glans penis of the male child, and between the nymphæ in the female.

"Unimportant as this diminution of the extremity of the urethra may at first appear, many valuable facts may be deduced from it. It is the only instance, I believe, in which an immediate cause of spasmodic stricture in that canal can

(No. 143.)

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be

be demonstrated, by occasioning too strong and too frequent action of the adjacent muscles upon its diameter : at the same time it affords an excellent illustration of the manner in which other causes, although more remote, may either predispose the urethra to stricture, or establish in its membrane a state of latent irritation."

Mr. Ramsden proceeds to state the consequences of this hitherto unnoticed cause of derangement of the urethra, along a page or two further ; but as my object is merely to establish a prior claim to this hitherto unnoticed cause of derangement of the urethra, I shall content myself with proving my priority of right.

In the year 1803, a new edition of a work entitled, *CASES OF A SUCCESSFUL PRACTICE OF VESICÆ LOTURA FOR THE CURE OF DISEASED BLADDER*, was published, with a second Part, containing more CASES ; and also Cases of diseased Affections from Phymosis, and on too small a Perforation of the Glans Penis.

In the second part of this Edition, page 10, are the following remarks.

" Amongst the causes, as the cases offer, I shall demonstrate to a physical certainty, that natural phymosis, and too small a perforation of the glans penis, are causes of dangerous affections of urethra, bladder, and kidneys, and that nothing but the operation fitting for either will be the foundation of a cure. This has not been generally attended to, or what has been generally done has been so done as to be disgraceful to surgery. Still I must be so candid as to allow that I know there are some, and these among my friends, who are apprised of the importance of this subject, and who treat it as I have done."

And in page 84 of the same work, is the following Case and Observations thereon.

" CASE XVIII.

" *Of too small a Perforation of the Glans Penis.*

" A gentleman of the law, aged twenty-two, who had resided in Jamaica two years, was forced to return from thence, for a complaint in the kidneys and bladder, accompanied with a difficulty in evacuating his urine.

" He told me, that he had enjoyed perfect health till within these two years ; but that ever since he was in a warm climate, these affections were rapidly advancing, till they had arrived to that excess in which they were now experienced. To all appearance, no one could be, with any chance of recovery, in a worse state. Upon attempting to
pass,

pass a bougie, I found there was, in limine, a great difficulty in passing it, I could scarcely get the smallest bougie to enter the perforation or orifice of the glans. There also appeared a scar, left from a former ulcer, not directly upon the orifice of the glans, but on one side of it. Upon attempting again and again to pass up a bougie of that size, which any natural orifice would have readily admitted, I still found it impracticable.

"I suggested to him, that the smallness of the orifice might be the cause of all his symptoms; that it was my firm opinion it was the cause; and that dilating, or enlarging the orifice, was the sine qua non of his ever getting well. The orifice was dilated after the following manner.

"I passed the largest bougie I could into the urethra, and made my incision, upon the orifice enlarging it on its lower end. I considered that enough was done, when I could pass a large bougie. The point of a bougie was passed up twice a day till it healed. After this, I left his situation, for some time, to its natural action, without attempting any thing more, to see how far the relief thus given would be productive. The whole of the symptoms gradually abated. He discharged at length his urine in a fair stream, at proper distances, and in proper quantities. But notwithstanding this effect of the operation, it is very singular to relate, that I was never able to get a bougie into the bladder, though nothing was omitted for at least six months, that I thought would conduce to it. The orifice was dilated two years ago, and he has ever since continued free from any return of symptoms.

" OBSERVATION.

"I have relieved two more cases of this sort. They were taken in time, so that the symptoms produced in consequence of them, had not gone such a length as they had in the above case. But it was the symptoms they had in consequence of the smallness of the perforation, and not the smallness of the perforation, that induced these two patients to apply to me."

Since the above Publication in 1803, I have witnessed some of the most distressing Cases which ever fell under my care, produced from natural Phymosis, and from the *Smallness of the Perforation of the Glans Penis*.

For the present I thus most humbly put in my claim of priority. But I mean at my leisure to make observations upon Mr. Ramsden's performance, when I shall give the Cases above alluded to at some length, and supported by the most positive evidence.

I trust Mr. Ramsden will have the fairness voluntarily to restore to me this feather, as in critical justice, every bird should have his proper one.

44 *Dr. Magendie on the Organs of Absorption.*

I will no further prosecute the subject, for the present, but give Mr. Ramsden time for recollection, and conclude with the following observation from Dr. Johnson.

“ Even a man whose genius qualifies him for great undertakings, must be content to learn, at least, from books, the present state of human knowledge, that he may not ascribe to himself the invention of arts generally known ; weary his attention with experiments of which the event has been long registered ; and waste, in attempts which have already succeeded or miscarried, that time which might have been spent with usefulness and honor upon new undertakings.”

J. F.

For the Medical and Physical Journal.

Memoir upon the Organs of Absorption in Mammiferous Animals, read at the Institute, the seventh of August, 1809. By M. MAGENDIE, Doctor in Medicine of the Faculty of Paris.

AMONGST the facts which I have had the honour of relating to the class, in a memoir upon the Upas, nux vomica, and St. Ignatius's bean,* one in particular seems worthy of attention ; I allude to the facility with which these poisonous substances are absorbed and introduced into the sanguineous system. Scarcely twenty seconds being necessary for them to pass from the peritoneal cavity to the spinal marrow.

The ideas generally received respecting the organs of absorption, leave no doubt that the lymphatic vessels are the agents which convey these poisons into the circulating system. Thus, in the experiment, where poison is inserted in the thigh of an animal, there are not two modes of explaining the mode of its absorption. We must admit, that it is taken up from the wound by the lymphatic vessels of the

* Faba Sanct. Ignat. is a species of the Genus Ignatia, and is the I. Amara. Pentandria Monogynia.

Jussieu confounds the Genus Ignatia with the genus Strychnos, and probably this author may have done the same. In that case the Strychnos potatorum, the seed of which has the remarkable property of purifying water, and is used for that purpose throughout the East, will be, perhaps, the Faba S. I. The synom. of the S. potatorum, are

S. Tentankotta.

S. Titou-cote.

parts with which it was in contact; that after being absorbed, it is conveyed by these vessels to the inguinal glands, and thence, still by lymphatic vessels, to the thoracic duct; and is ultimately introduced into the sanguineous system, by the communication between that canal and the subclavian veins.

The experiments which I am about to detail, were instituted with the design of adding a degree of certainty to the explanation of these facts, at present, generally admitted, and our labour only took a particular direction when a great number of facts obliged us to modify our views of the subject. An absorption so rapid, by vessels characterized by weakness and slowness of action; a poisonous matter readily passing along the tortuous and difficult course of the lymphatic glands without being subjected to any alteration, were facts calculated to throw some doubt on the correctness of the received opinion. But this explanation is given by so many respectable men, and is supported by experiments so decisive, that, even now, when we have several facts to oppose to it, we dare not assert that it is incorrect, only, that it is not admissible in all circumstances.

Before we give an exposition of our own experiments, it may not be useless to recall to notice an hypothesis, which for some time rendered the received opinion on the organs of absorption doubtful.

This hypothesis, professed by Boerhaave, Haller, Meckel, Riusch, Swammerdam, and others, consisted in supposing that the veins divide the absorbing faculty with the lymphatic vessels. It is supported by various circumstances of structure, and some physiological and pathological facts. A series of interesting experiments, enterprized and executed a few years since at the veterinary school of Alfort, has given a yet further degree of probability to the absorbing power of the veins, without, however, being of a nature to produce complete conviction. An opinion founded on the physical disposition of the organs, upon experiments sufficiently numerous and conclusive, and supported by the names of Boerhaave, of Ruisch, and of Haller, ought not to be readily abandoned. Nothing short of the anatomical discoveries of the last century, on lymphatic vessels; the admirable experiments of the two Hunters, of Cruickshanks, of Mascagni, of Degenettes, could have established the position, that the lymphatic vessels alone possessed the faculty of absorbing.

In support of the general opinion, may also be cited the very curious experiments recently made by M. Dupuytren. This physiologist tied the thoracic duct in several horses; some of them died in five and six days, others preserved all the

the appearances of health. It was already known by an experiment of Duverney, by some observations on an obstructed thoracic duct, and especially, by the experiments of Flandrin, that the thoracic duct might cease to pour chyle into the subclavian vein, without the death of the animal being occasioned. It was known, indeed, that certain animals had died in consequence of a ligature round the duct, but the cause of this diversity of result was not understood. By his experiments, M. Dupuytren has ascertained it in a very satisfactory manner. In those animals that died in five or six days after the thoracic duct was tied, it was always impossible to make an injection pass from the inferior portion of the canal into the subclavian vein; consequently it is probable that as soon as the ligature was tied, the chyle ceased to flow into the venous system. On the contrary, in those animals which survived the ligature, it was always easy to make any fluid pass from the lower part of the duct into the subclavian veins, by means of very numerous communications established between them, by lymphatic vessels situated in the posterior as well as in the anterior mediastinum. I was present at the opening of a horse, in which M. Dupuytren had tied the thoracic duct upwards of six weeks before, and I was readily convinced, that evident communications existed between the inferior portion of the canal, and the subclavian veins, although the canal was entirely obliterated where the ligature was tied.

I shall now state the experiments which I have made, chiefly in concert with M. Delille, to determine whether the lymphatic vessels really afford the only passage by which foreign bodies enter the venous system.

Experiments upon absorption have always been attended with a degree of obscurity, from the difficulty of demonstrating the passage and the presence of the absorbed substances, either in the lymphatic vessels, or in the blood vessels. In employing the *upas*, or *nux vomica*, we have not to fear these inconveniences; it is well known that two *centigrammes**, of these substances produce effects too remarkable to be disputed.

The first question we proposed to resolve, was—Will a ligature round the thoracic duct prevent poison from passing into the sanguineous system, and in course, its effects on the spinal marrow?

I passed a ligature round the thoracic duct of a dog, a little before the opening into the left subclavian vein; and im-

* Centigramme. E. grain .1544.

mediately introduced a solution of upas into the cavity of the peritoneum. The effects of the poison were as speedy and as marked, as if the duct had not been tied. I tied a ligature upon other animals in the same manner; but instead of introducing the poison into the cavity of the peritoneum, I inserted it in the pleura, in the stomach, in the intestines, in the femoral muscles, &c. The effects, in every instance, were as rapid and as fatal as if the duct had been free.

We cannot draw very certain conclusions from these first essays; for we know that the thoracic duct is not the only point of communication between the lymphatic system and the venous system. There is usually a second thoracic duct on the right side, almost as considerable as that on the left side; large lymphatic trunks frequently open separately into the subclavian veins; and the lacteal canal, still more frequently, has several openings into the vein, in which it terminates. One of these circumstances was probably the case with the animals subjected to our experiments; it was therefore necessary to make further attempts from which less doubtful results might be obtained.

We made an incision through the abdominal parietes of a dog, which had eaten a large quantity of food seven hours before, that the lymphatic vessels of the abdomen might be easy to distinguish, and we drew out a fold of small intestine, round which we applied two ligatures, at four decimetres * from each other. The lymphatics on this fold of intestine were very white, and very apparent from the chyle which they contained. Two ligatures were tied on each of these lymphatics at the distance of a centimetre; we then cut the vessels between the ligatures. This part of the experiment was conducted with great care, and we assured ourselves, by all possible means, that the convolution of intestine out of the abdomen had no communication by the lymphatics with the rest of the body. Five arteries and five mesenteric veins were included in the fold of intestine between the two ligatures; four of these arteries and veins were tied and cut in the same manner as the lymphatics; the two extremities of our fold of intestine were cut and entirely separated from the rest of the small intestine. Thus we had a portion of intestine four decimetres long, communicating with the rest of the body only by one artery and one mesenteric vein; these two vessels were isolated in length about the space of three inches; we even stripped off the cellular tunic, lest any lymphatics should remain concealed in it.

* Decimetre E. inches.
 3.93702

To obtain a positive result, nothing more was requisite than to inject a small quantity of upas into the cavity of the fold of intestine. This was executed with proper precaution, to prevent the injected liquid escaping. The fold of intestine, enveloped in a piece of fine linen, was replaced in the abdomen; it was then exactly one o'clock. To our great astonishment, at six minutes past one, the general effects of the poison appeared with their ordinary intensity, in as great a degree, indeed, as if the fold of intestine had been in its natural state.

The animal being dead, we examined the state of the parts; none of the ligatures were displaced; nothing excited any suspicion that the poison had passed into the cavity of the abdomen.

This experiment, repeated several times without the least variation in the result, appeared to us very positive; it proves at least as much as can be proved by physiology, that the lacteal vessels are not exclusively the organs of intestinal absorption.

This species of absorption, different from lymphatic absorption, might be peculiar to the intestine; it was therefore important to ascertain whether it obtained in other parts of the body.

We separated from the body the thigh of a dog, previously stupified by opium (to spare him the pain of a difficult experiment); the division of the thigh was effected in a manner, that it still communicated with the trunk by the crural artery and vein. We took the same precautions with respect to these two vessels, as for the mesenteric vein and artery in the preceding experiment; *i. e.* we isolated them for an extent of four decimetres, and stripped off the cellular coat. We then inserted two grains of poison in the paw of the animal, and watched the event.—The poison produced its effects as rapidly and as powerfully as if the thigh had not been separated from the body; so much so that the first signs of the upas operating, were manifested before the fourth minute, and before the tenth, the animal was dead.

It might be objected that, notwithstanding all our precautions, the coats of the veins and arteries might still contain lymphatics, and that these vessels were sufficient to afford a passage for the poison. It was easy to remove this objection.

I repeated the preceding experiment on another dog, with this modification: I introduced into the crural artery a small quill, upon which I fastened the vessel by two ligatures: the artery was then divided between the two strings. The crural vein was treated in the same manner; so that there

there was no communication between the thigh and the rest of the body, except by the arterial blood which was brought to the thigh, and the venous blood which returned to the trunk. The poison being inserted in the paw, produced its general effects in the usual time, that is, in about four minutes.—From these different experiments, I think we may conclude, that the lymphatic system is not, at least in certain cases, the exclusive way by which foreign substances pass into the venous system.

This new mode of absorption, much more direct than lymphatic absorption, enables us to conceive the rapidity with which various deleterious, or other matters, are absorbed, as well as the promptitude with which their effects are produced on the system.

But what are the organs which take up the poison in the parts where it has been introduced? Are they venous extremities, or are they lymphatic capillaries, which having immediate anastomoses with the sanguineous capillaries, might thence convey the poison into the venous system?

The experiments which I have just stated, added to all those which have been attempted on the same subject, appear to me wholly insufficient to determine either of these questions; only, it ought to be remarked, that our experiments strongly support the opinion that there is a direct absorption by the veins.

But there is a fact rendered evident by the preceding experiments, upon which it is necessary to dwell for a moment; it is, that the venous blood is charged with the poison, and that through the medium of this blood, the poison is enabled to produce its deleterious action upon the organs. In effect, if in the experiments in which I had separated the thigh from the trunk, we were to suspend the course of the venous blood by pressing the crural vein between two fingers, we should diminish, and even totally prevent the production of bad consequences. The blood of an animal, then, in which signs of the action of the upas are manifested, contains a portion of poisonous matter; we may say, that such blood is really poisoned. It was curious and interesting to know if this blood, conveyed into the circulating system of a sound animal, would produce effects similar to those which it occasions in the animal in which it was originally inserted. At first, we are disposed to think this is very probable, even that it is certain. The following experiments will shew how careful we ought to be in physiological inquiries to distinguish that which is probable, from that which is proved by experience.

We caused the arterial blood of an animal, in which the
(No. 143.) H tetanos,

tetanos, occasioned by the upas, was evident, to pass into the jugular vein of a sound animal. The transfusion lasted nearly twenty minutes, so that the sound animal received a considerable quantity of poisoned blood, blood which in the first moment of the experiment was red and vermillion, and which at length became violet, and black, when the upas had produced asphyxy. Yet no appearance of irritation in the spinal marrow was evinced, and the animal suffered nothing more than what happens in ordinary transfusions conducted with every precaution. He had during some hours, a marked acceleration of the inspiratory and expiratory actions, and an abundant pulmonary exhalation.—The experiment was repeated several times, and always gave the same results.

After this we were certain that the arterial blood of animals poisoned by the upas, nux vomica, or St. Ignatius's bean, was not capable of producing ill consequences in other animals: perhaps it might be different in venous blood. It might be presumed that the act of respiration changed the nature of the poisonous substance; and that this change might give, to a certain extent, the reason why the transfusion of the blood of animals poisoned by the strychnos, is not followed by any bad consequences.

This circumstance did not hold with regard to the venous blood, which returns from the part where the poison has been introduced. After the experiment which we have related upon the upas, it is impossible to doubt that the poison is conveyed to the lungs by the venous blood. It was very probable that this blood introduced into the system of another animal, would produce accidents similar to those which it occasioned in the animal which was inoculated with the poison.

A small piece of wood covered with two grains of upas was inserted in the left side of the snout of a dog.—Three minutes afterwards, we caused the blood to pass from the jugular vein of the side in which the poison had been introduced, into the venous system of another dog. The transfusion was began about a minute before the first signs of the upas having taken effect were apparent, and ended only with the death of the animal which experienced them. No appearance of irritation in the spinal marrow was perceived in the dog which had received so much poisoned blood.

The experiment was repeated several times with variations in the mode of introducing the poison; but we never could perceive any thing which resembled the effects of the action of the strychnos in the sound animals which had suffered the transfusion of the poisoned blood.

These

These decisive results seem sufficient to permit us to conclude, that the venous blood of animals poisoned by the upas, nux vomica, and St. Ignatius's bean, is as incapable as the arterial blood of producing in another animal the ill consequences which they would occasion in the animal to which they had been immediately applied.

If doubts still remained, the following experiment, several times repeated, would set the question at rest.

We separated the thigh from the body of an animal, as in the preceding experiment, isolating the crural artery and vein; we introduced the poison into the paw of the divided limb, and transfused the blood from the crural vein into the jugular vein of a sound animal. The passing of the blood from one animal to the other lasted above six minutes, being much more than sufficient time for the upas to produce its effects; yet this poison gave no indication of having acted.— We must not, however, believe that in this experiment the transfused blood, from some particular cause, had no deleterious properties: the experiment which we are about to detail proves the contrary.

As in the last experiments, I separated the thigh from the body; three minutes after having introduced poison into the paw, I made the blood pass from the crural vein into the jugular vein of another animal; the transfusion was continued five minutes without occasioning bad consequences; I then stopped it, and caused the blood of the crural vein to return to the animal to which it belonged. This animal almost immediately presented evident signs of the action of the strychnos on the spinal marrow.

From the several experiments related in this memoir, I think we may conclude,

1. That the lymphatic vessels are not always the channel through which foreign substances pass to the sanguineous system.

2. That the blood of animals upon which the bitter strychnos produce their deleterious effects, cannot produce fatal accidents in other animals.

I think it would be premature at present, to offer any explanation of this singular phenomenon. In physiological science we ought to be sparing in conjectures, and prodigal in facts.

On the Barometer. By RICHARD WALKER, Esq.
(Phil. Magazine.)

WATER exists in the atmosphere in two different states, viz. 1st, in a state of *chemical combination*; that is, so completely incorporated with the air, as to form with it one homogeneous transparent fluid;—and, 2dly, in a state of *mechanical combination*; which is, when the minute particles of water are merely suspended in the air, forming that state of the atmosphere, which is denominated cloudy or misty.

The dense state of the air being fittest for the *chemical combination* above mentioned; clear, dry weather, generally speaking, accompanies the higher degrees of the mercury in the barometer, whilst, a rare state of the air being less capable of receiving the water into chemical combination, it is then merely suspended in a state of *mechanical combination*, forming clouds, mists, &c.

Hence it follows, that, when the mercury stands at or near FAIR, clear dry weather is indicated *generally*; and when at or near RAIN, cloudy or wet weather; and when fluctuating mid-way, changeable weather.

It occasionally happens, however, that the atmosphere is cloudy, and even wet, whilst the barometer is as high as FAIR; and clear and dry, whilst the barometer stands as low as RAIN. The reason of this, in the first instance, is, that the air, having become replete or over-loaded with water, is incapable (by an alteration of temperature, viz. the air and its contents having become colder) of retaining or suspending it in a state of *chemical combination*; and in the latter case, which happens after rain, succeeding a continued dry state of the atmosphere, which having swept down the vapour with it in its descent; the air, though then in a rarer state, is yet sufficient to retain the proportion of water, now much reduced in quantity, in a state of chemical combination.

The particular or more immediate indication of the weather which is coming, arises from the alteration which is *taking place* in the density of the atmosphere, and which the barometer exhibits by the *rising or sinking state* of the mercury; the weather becoming comparatively *clearer* as the atmosphere is becoming denser, and *duller* as the atmosphere is becoming rarer*.

* The difference that might be supposed to arise in the height of the barometer from the effects of different degrees of heat on the atmosphere, may in observations of this nature be entirely disregarded, these effects being very nearly equalized by the expansion and contraction of the mercury in the barometer, from the same cause.

Hence,

Hence, if the barometer were as portable and as convenient for reference as a watch, we should seldom be at a loss to know, at least for short intervals, what kind of weather was coming*.

The ordinary range of the barometer in this climate is from RAIN to FAIR; rising however, occasionally, as high as SETTLED FAIR; and sometimes, though very rarely, as high as VERY DRY: and sinking, occasionally, as low as MUCH RAIN; and sometimes, though very rarely, as low as STORMY.

It is scarcely necessary to observe that north and east winds, in consequence of passing to us from a colder climate, and over land, bring a denser, colder, and dryer atmosphere; and south and west winds, coming to us from a warmer climate, and over the sea, bringing a rarer, warmer, and damper atmosphere; and moreover, that the capacity of air for retaining water in a state of chemical combination, is *increased* by coming from a colder to a warmer temperature; and *diminished*, by coming from a warmer to a colder temperature.

It must be equally apparent, that the greater or less elevation of the clouds depends upon their own degree of density, and that of the atmosphere which supports them.

With regard to the immediate causes of the direction and changes of the wind in this climate, I consider them as involved in too much obscurity and uncertainty to say any thing satisfactorily about them; and with respect to electricity, which though doubtless a powerful agent in meteorological effects, I consider it rather as a matter of curious speculation than of practical utility.

I have therefore only to add, that by a due consideration of the causes enumerated above, connected with the more obvious effects of the sun's varying influence in raising and dissipating vapours, we may, I think, account pretty satisfactorily for the various vicissitudes of weather, which mark the different seasons throughout the year; and by the relation of the barometer to those causes, be enabled to foresee, with a considerably greater degree of certainty than is commonly supposed, the different changes of weather which are, at all times, about to take place.

* As the atmosphere is almost constantly varying in its degree of density; so is the barometer, which is an accurate measure of its density, as constantly varying in its altitude, and should therefore be frequently referred to.

*New Mode of improving Grass Lands. By Mr. SALTER
of Norfolk.*

(Communications to the Board of Agriculture.)

AS Mr. Coke, President to the Norfolk Agricultural Society, has expressed himself in terms of approbation so highly gratifying to me upon my method of improving poor pastures and boggy meadows, and particularly when he honoured me with a visit this summer for the purpose of examining a meadow, which was then in its highest state of improvement with a crop growing upon it; I readily comply with your request, and have sent you the best information I can of the method, which I have pursued now ten years in that line of farming; a method, which originated in accident, but which has ever since been carried on systematically.

At Michaelmas 1795, I entered upon this farm, consisting of upwards of six hundred acres, of which the greatest part is wet, springy, cold land. There were at that time, about one hundred acres of bad meadow, so over-run with rushes, sedges, and all sorts of aquatic plants, that no sheep had ever been known to be pastured upon them; whereas, for the last eight years, I have not had a single instance of a rotten sheep. I first cut the rivulet, which runs through the meadows, three hundred and fifty-two rods in length, (reckoning seven yards to a rod,) and eight feet wide. I also cut one thousand one hundred and sixteen rods of open drains; and the turf or sods, which came out of them, I laid to dry in the months of February and March; and as soon as dried I gathered them on large heaps of sixty and a hundred loads, and burnt them to ashes. On the 2d of April, 1796, I dibbled about two acres of that part of the meadow which was most dry, and immediately I carried on, in half-load tumbrils with broad wheels, about fifteen loads *per* acre of the turf ashes: then I sowed sixteen or eighteen pounds of Dutch clover, and four bushels of ray grass; *i. e.* eight or nine pounds of Dutch clover, and two bushels of ray grass *per* acre. These I brushed with a pair of harrows brushed, and rolled three or four times with a very heavy roll, in order to make them as firm as possible. Upon that part of the meadow which was boggy and rushy, I laid from eighty to an hundred tumbril loads *per* acre of sand, fine gravel, and mould, as I could most conveniently come at them, cutting and carrying away every hillock of waste earth which I could find. Having harrowed and rolled this, I dibbled upon every acre two bushels of summer vetches, one bushel of early grey peas,

peas, and two bushels of Poland oats, all mixed together ; and then sowed Dutch clover and ray grass as I did upon the dry part of the meadow, in which I omitted the oats, knowing they would not have succeeded.

In dibbling thus, the holes ought to be four inches square from each other, and from two to four seeds should be put into a hole. Peas and vetches thus growing upon grass land, whether on low meadows or dry uplands, have never failed with me of having excellent effect. They entirely destroy moss, and ameliorate the soil. It is to be observed, that upon dry uplands I omit the ray grass. When the crop is forward in the pod, I mow it for hay ; and as soon as it is dry, I put it upon small cocks, and then on to large ones, so as to prevent the leaves from falling off. If I do not want this hay for my sheep, I cut it for my horses ; and it is so nutritious, that it serves both as hay and corn.

In the year 1803 I grew thirty acres of vetches, peas, and oats, managed as above : the crop was not less than from two and a half to three loads *per* acre : by a load, you know, I mean as much as a waggon drawn by four horses can carry. In the same year I sowed one hundred acres of turnips three times over, and at last lost my whole crop, except a single turnip. I had 532 breeding ewes to maintain in the following winter. Having provided thirty troughs twelve feet long, and a straw-cutting machine, (which with a horse will cut ten coombs an hour), I cut the hay made of the vetches, peas, and oats, and thus fed my sheep, which produced me a greater number of lambs, and a greater quantity of milk for the lambs, than I ever had from turnips. They were kept in the straw-yard from the 10th of October to the middle of April ; and thus I kept them last year, and shall always keep them whilst I remain upon a heavy-land farm. They eat the straw well, and make a far better yard of muck, than that from bullocks. It was by much the best muck I ever had, except a yard of muck, where I fatted 220 pigs, by scattering peas about the yard.—As a proof of my success in lambs in the year 1804, my shepherd, Thomas Nunn, gained one of the premiums (five guineas) from the Society.

In February, 1805, a seventeen-acre meadow was become solid ; I filled up the open drains, and cut nine hundred and ninety-five rods of under-drains, which I filled up part with bushes and part with stones. Upon April 4th, I began to dibble vetches and peas ; then carried on about 15 loads *per* acre of out-hollowing, muck, and mould together ; sowed Dutch clover and ray grass, and brushed them as usual : the crop was abundant—I got 63 loads of hay from the 17 acres. This was the meadow which Mr. Coke, Mr. Gurdon, you and
other

other gentlemen admired so much, and deemed an improvement in the management of grass land deserving of high commendation.

I will not omit to tell you from what accident this method of managing grass lands originated:—In the year 1784 I had a piece of grass land eaten up by grubs: I sowed vetches upon it, and harrowed them. They produced so good a crop, that I have continued the practice to the present time. Indeed I carry it on in every instance where I can; for whenever my lays of clover fail, instead of breaking them up, I dibble or drill vetches early in the spring. It is worthy of remark, that the ray grass and Dutch clover upon my meadows come much earlier, and grow faster, than the lays upon my arable land. Be assured, that I shall have pleasure in attending you to Reepham to examine your pasture there, in order to *salter* them, as you are pleased to call my method of improving grass land.

P. S. I as often use the drill roll for the vetches and peas, as I do the dibbles: please to observe also that I never plough, pare, or scarify my grass lands.

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS

IN THE

DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY,

Transactions of the Medical Society of London. Vol. I.
Part 1. 8vo. pp. 247. 1810. Maxwell.

THE Society has changed the title of its volume, as well as the mode of publishing it. *Transactions* is certainly a more appropriate term for such a work than *Memoirs*, and by being favoured with it in parts, at shorter intervals, our curiosity is gratified without our patience being exhausted.

The volume commences auspiciously, with a paper from Mr. Mason Good, on Medical Technology. After eloquently descanting on the imperfection of our language, and the consequent confusion of our ideas, Mr. Good refers the sources of the corruption to the following heads: "First, the intermixture of different tongues that have no family
or

or dialectic union. Secondly, the want of a common principle in the origin or appropriation of terms. Thirdly, the introduction of a variety of useless synonyms, or the adoption of different words by different writers to express the same idea. Fourthly, imprecision in the use of the same terms. Fifthly, an unnecessary coinage of new terms upon a coinage of new systems." P. 4.—He then makes some remarks upon each of these sources, and concludes "with a few hints for such a general correction and improvement of medical language as may yet be introduced into it without violence or ostentation."—Mr. Good has been very successful in detecting errors and imperfections; he has handled his flail dexterously, and the chaff has flown in all directions. If he has not been equally fortunate in suggesting remedies for all the evils which he has detected, it is, we apprehend, rather from the difficulty of the subject, than from any lack of ingenuity on his part.

We quote the following specimen of his powers in the exposition of erroneous terms, almost at random.

"What is the meaning of tone? In therapeutics, in physiology, and in the common language of mankind, *sound and healthful elasticity*: that voluntary reaction or state of extension between antagonist muscles, as Galen has admirably observed after Hippocrates, by which they are removed from a modification of rest; and in which the one yields to the other, not from utter debility, but in a precise ratio to the superiority of power exercised over it * Whence that class of medicines which contribute to this elasticity or healthful reaction in irritable or weakened organs is denominated *tonics*; while organs which are destitute of it are said to be in a state of *atony*. But if *tone* be used to imply health, and *tonics* restoratives of health, what are we to understand by the phrase *tonic spasm*? a phrase founded upon an erroneous physiology, perpetually, as I fear, leading us astray in our practice, and applied to a state of muscle in which there is no more *tone*, elasticity, or healthful reaction, than in the frozen strings of a violin. To shew the full force of the absurdity of this phrase, it is only necessary to translate it; and to tell the English reader that it means neither more nor less than *extensible contraction*.

Phrenitis is a common and very proper term for phrensy or inflammation of the brain; but *paraphrenitis* is employed to express inflammation of the diaphragm. How is this last sense to be explained? The medical lexicographers tell us that the preposition *παρά* is here used as a diminutive to denote a kind of sympathetic phrensy. Yet nothing can be more superficial; and here, as in the former case, the term is derived from an erroneous physiology. *Phren* (*φρην*) in *paraphrenitis*, has a reference to the very vulgar but very early opinion of the residence of the soul in the præcordia; while *para*, instead of diminution or defect, implies proximity—*inflammation around the seat of the soul*. Yet the meaning of *παρά* is about equally divided between the ideas of proximity and defect in the medical use of the term, and hence the student

* De Mot Muscul. lib. ii.

can derive no precise information from its employment. Thus the *parame* of a fever means its decline; *paracusis* depraved hearing; *paranea* defective judgment; in all which $\pi\alpha\rho\alpha$ is used diminutively; while in *parotis*, *parathenar*, *paronychia*, it implies proximity alone. In paralysis its intention is doubtful, for it may be taken either way. There are many other prepositions and particles which, in composition, are used in the same indeterminate manner, and considerably augment the confusion of our vocabulary." P. 30.

Having happily pointed out the "*extraordinary intertexture, the discordia concors*" of the medical language of the day, Mr. Good proceeds to offer his assistance in correcting it. He advises us "to discard all equivocal terms as much as possible; and in cases where this cannot be done, to assign a fixt (fixed) and individual sense to every term, and never to employ it in any other sense." He recommends us to create as few new words as possible; and among those already in use, to confine ourselves to the same term to express the same idea, even where we have a choice of numerous synonyms. He wishes us "to limit our nomenclature as much as possible to one language alone;" and prefers the Greek, because "by far the greater part of our technology is already derived from it, and that it possesses a facility of combination to which the Latin has no pretensions." We are then, "to banish every Latin, as well as every Arabic, Spanish, Italian, and German word in favour of its Greek synonym." But as many diseases, such as *syphilis*, *small-pox*, &c. were unknown to the Greeks, we must condescend to explore the writings of more modern authors to enrich our vocabulary.—Mr. Good concludes with submitting the following regulations:

"1. Let the particle α (α) express alone the idea of total privation; as in *amentia*, *agalactia*, *amenorrhœa*.

"2. Let *dys* ($\delta\upsilon\varsigma$) express alone the idea of deficiency, as its origin $\delta\upsilon\nu\omega$ or $\delta\upsilon\mu\iota$ most naturally imports, and as we find it employed to express in *dys-pnœa*, *dys-cinesia*, and *dysphagia*.

"3. As an opposite to *dys*, let *en* ($\epsilon\nu$) be employed as an augmentative particle, as we have it in *en-harmonic*, *en-telechia*, and *en-ergetic*. *En* is not often, indeed, a medical compound, nor do I recollect its being employed in more than two instances; *encephalon*, in which it has the sense of *interior* (a word, indeed, that has been long falling into disuse), and *enuresis*, in which it imports excess, and is consequently used as now recommended. Thus restricted, $\epsilon\nu$ and $\delta\upsilon\varsigma$ will have the force of $\upsilon\pi\epsilon\rho$ and $\kappa\alpha\tau\omega$, but will be far more manageable in the formation of compounds.

"4. Let *agra* ($\alpha\gamma\rho\alpha$) be restrained to express the idea of simple morbid affection in an organ, synonymously with the Latin *passio*, or the *berh* of the Arabians.

"5. Let *itis* ($\acute{\iota}\tau\iota\varsigma$) express alone the idea of inflammatory action, as in *cephalitis*, *gastritis*, *nephritis*.

"6. Let

"6. Let *algia* ($\alpha\lambda\gamma\iota\alpha$) express alone the idea of pain or ache, to the banishment of such useless synonyms as *odyne* and *copos* or *copus*.

"7. Let *rhagia* (from $\rho\nu\sigma\sigma\omega$ *rumfio*) be confined to express a præternatural flux of blood.

"8. Let *rhæa* (from $\rho\epsilon\omega$ *fluo*) express a præternatural flux of any other kind."

A table of radical compounds is subjoined.

We give the author credit for the learning and the ingenuity which he has displayed in this essay, but we have no apprehension of being obliged by his verbal speculations, to disburthen our memory of the "gibberish" acquired from ancient writers, and charge it with new terms, which have not always the merit of being more appropriate, and in many instances, are more barbarous and cacophonous. Thus we have *enenteria* for diarrhæa; *gastrorrhagia* for hæmatemesis; *pneumonorrhagia* for hæmoptoe; *urorrhagia* for hæmaturia; *urirrhæa* for pyuria; *ophthalmalgia* for ache of the eye-ball. We know that Mr. Good is very conversant with dictionaries, and were therefore surprised at his remarks on the particle *en*, which is used as a compound much more frequently than he seems to be aware of, as in *enæorema*, *enarthrosis*, *encanthis*, *encœlia*, *encauma*, *endemic*, *encope*, &c. &c. Without any pretensions to the art of prophesying, we may venture to predict, that whilst the works of Hippocrates, of Sauvages, of Cullen, and of numerous other accurate describers of diseases, continue to be read and admired, the terminology which they have used will be adopted. The reform of language is slow and gradual; and till we have better books, and more complete systems of medicine, we must endure the jargon which prevailed in the times when our best treatises were composed; let us bear in mind the opinion of Vaugelas, "Lorsqu'une façon de parler est usitée des bons auteurs, il ne faut pas s'amuser à en faire l'anatomie, ni à pointiller dessus, comme font une infinité de gens; mais il faut se laisser emporter au torrent, et parler comme les autres, sans daigner éconter ces eplucheurs de phrases."

In the second article, the President, Dr. Lettsom, has drawn up a neat account of the late William Hewson, F. R. & M. S. and Teacher of Anatomy in London. He was born in 1739; and in 1760, took charge of the dissecting room, in the absence of John Hunter, with whom, in 1762, he acted as joint lecturer. In 1768, he was engaged in investigating the anatomy of fishes, and in the following year, presented to the Royal Society, of which he soon afterwards became a member, an account of the lymphatic system in birds and fishes, and particularly in the turtle. In 1771, he published his "Experimental Inquiry into the Properties of the Blood." In the

autumn of the following year, the lecturing connection between him and Mr. Hunter being dissolved, he commenced on his own account, and opened his course with a lecture on the uses of the spleen and thymus. In 1774, he published his work on the lymphatic system, and in the spring of the same year, whilst blessed with domestic felicity, and favoured by extensive practice, and well earned celebrity, "he was attacked with a fever, occasioned by a wound which he received in dissecting a morbid body;" and died on the 1st of May, at the age of 35.

Mr. Hewson's celebrity chiefly hinged on his discovery of the lymphatic system in birds and amphibious animals, and his experiments on the blood. Dr. Monro has disputed (we believe unjustly) his claim to the first, and modern chemistry has, in a great degree, destroyed the value of the latter. We must admire his ingenuity and his industry, and lament that the fame of man rests on frail materials.

The third article in the Transactions, contains a "History of fatal effects from the accidental use of white lead;" by John Deering, Surgeon, with additional remarks, by William Shearman, M. D. We shall state the substance of the case as related by Mr. D.

Mrs. R. October 21, 1808, "complained of violent pain in the scrobiculus cordis, with great soreness of the epigastric region when pressed upon. She had vomited a considerable quantity of bilious matter, and at the same time her bowels were constipated: the pulse was calm and regular, the tongue clean and moist, and there was no symptom of fever present. She immediately took a cathartic, which operated, and an opiate in the evening." In the morning she was relieved; but in the evening the pains and vomiting returned, and continued for some days very distressing.

Nov. 4. A physician was called in; he considered the affection as rheumatic and spasmodic, and discontinued his visits in a few days, in consequence of the amendment of the patient. "In about a week after this period, a boy in the same family, nearly sixteen years of age, was seized with symptoms exactly similar to those of the preceding case, and similar remedies afforded only partial relief, till at length he was removed into the country, and thereby recovered his health." Another child, soon afterwards, was seized with similar symptoms, the mother relapsed into her former state, and three other persons in the family laboured under analogous affections. Poison was now suspected, but no indication of it, after minute investigation, appeared. The child, in about a fortnight, was pronounced by his physicians in a convalescent state; but was soon after seized with convulsions, and expired within a few hours. Mrs. R. in whom the sickness and pain had continued unabated, now gradually grew a little better. "She had hitherto continued to suckle her child, which, it being fifteen months old, she was advised to wean: to this she reluctantly consented. In about ten days afterwards the child became somewhat costive, without any other apparent indis-

indisposition; but at this period it was seized with vomiting and convulsions, and suddenly expired." The unfortunate mother, after experiencing some relief, without being entirely free from complaint, on the 21st of January, 1809, was seized in the morning with convulsions, which continued till 5 o'clock, P. M. when she expired. On the subsequent day, Mr. Chevalier examined the body by dissection; he could not, however, discover the least trace of morbid affection.

Of the three other persons who were indisposed, two recovered, and one died after lingering under disease till March.

A Committee of the Medical Society proceeded to inquire into this extraordinary case; but no probable cause for the calamity was ascertained, till Dr. Laird detected a white powder adhering to the inner surface of a cask which had contained sugar used by the family. Upon subjecting this powder to heat by means of the blow-pipe, globules of lead in the metallic state were produced. The mystery was now developed. The sugar had been put into a cask which had previously contained white lead, and becoming impregnated with the metal, was, doubtless the source of the fatal events described.

"Of nine persons in this family, who were more or less indisposed, four died, and the effects of the poison appear to have been nearly in the ratio of their respective ages."

Dr. Shearman describes an affection of the bowels very similar to the above, which prevailed in a provincial town. The cause of the complaint was traced by Dr. S. to some Holland's geneva, which he found contained a metallic poison. The spirit had been bought at the Excise office, and the chief officer, on being examined before a magistrate, "confessed that the whole of the quantity of Holland's sold at the last sale had been impregnated with sugar of lead, for the purpose of depriving the spirit of the colour which it always contained by being kept some time in the tubs in which it was brought over sea by the smugglers."

Dr. Dixon, of Whitehaven, in the fourth article, relates the history of a case resembling hydrophobia, from the bite of a cat. The animal was not supposed to be mad, but the symptoms of the patient were unquestionably those of a person affected with rabies canina, and terminated in the usual fatal manner. Our limits will not admit of the whole of this interesting case being inserted, and its value would suffer from being abridged or partially detailed.

The fifth article, by Dr. Falconer, of Bath, treats of the "indiscriminate use of mercurial preparations." The author commences with some well expressed animadversions on quackery, a subject indeed, on which little can now be said which has not been advanced by a hundred writers before; of this part of his essay we quote the following with approbation:

"The absurdity of implicit faith in the decision of beings of our own nature and rank in the line of creation, is not confined to religion. Medicine

dicine affords numerous instances equally striking, and both perhaps produced by nearly the same cause. The miracles of the Romish church, and the instances of cure produced by empirics, bear a strong resemblance to each other; and the practitioners of medicine in this branch have not much fallen short of their religious associates in the extraordinary instances of success which they exhibit." Pag. 99.

After stating the usual effects of mercury on the system, the learned author proceeds with his inquiry into the operation of calomel in some of the disorders in which it is prescribed. He thinks it is prejudicial in scrofula, and in glandular swellings, being more likely from its "*stimulant and inflammatory qualities*" to lay the foundation of obstruction than to remove it.

"A state of indisposition, marked by a pale leaden-coloured countenance, defect of appetite, paucity of urine, and sense of weight rather than of pain in the abdomen, accompanied with low spirits; a pulse sometimes rather slower than ordinary, but generally irregular in this respect; and often a dry but harsh or corrugated skin, and a degree of animal heat, rather below than above the natural standard; frequently occurs among those who resort to the Bath waters for relief.

"This disease is generally ascribed, how truly I cannot say, to mesenteric obstruction; and the hardness of the abdomen, which sometimes accompanies the other symptoms, seems to countenance this opinion. But this hardness is often very variable, particularly in women, and though at times evident, is at others scarcely perceivable. Such cases are sometimes relieved by the use of the Bath waters, especially in female subjects, but I fear the failures are pretty numerous. These instances however, afford an ample field for the trial of mercurial preparations, especially calomel, which in these, as in most other obscure chronic complaints, where no specific indication is suggested, is usually plentifully administered; in a good measure, it must be owned, on an empirical footing. The symptoms above described, afford but too much reason to suspect scirrhus of some of the viscera, and the ill effects of mercurials in all cases that partake of a cancerous nature are but too well known. If scirrhi of this kind are but of small extent, and indolent, they may often by a cool regimen, a milk diet, some assistance afforded to the general health, and a quiet manner of life, by avoiding extremes of temperature and other causes of irritation, be kept from spreading, and contributing much either to embitter or to shorten life. But the administration of mercurials, of all which, calomel may in the present age be regarded as the representative, is too apt to rouse the slumbering malady into an active inflammatory state, from the consequences of which few escape, and those few, only by such efforts of nature as we have no right to expect, and know not how to promote or to imitate."

In cases of decided hepatitis, Dr. Falconer affirms, the bad effects of calomel are still more evident; in confirmation of which, he relates the case of a gentleman affected with that complaint, in which calomel seemed to aggravate the severity, and to accelerate the fatal termination. He sees no
reason

reason to prefer mercurial purgatives in simple obstruction of the gall ducts, which often occur without any disease whatsoever of the liver itself. "Calomel has no specific power in dislodging a biliary calculus." He deprecates the use of calomel in complaints which are often very improperly termed bilious.

"Complaints (he observes) of an obscure nature are denominated bilious, on a strange and even contradictory supposition that they proceed from either a deficiency or redundancy of bile, or from its depraved or corrupted state; though no marks of any of these faults appear, either in the colour of the skin, or the colour, quantity, or rather qualities of the evacuations. It would have been fortunate for mankind, if the practitioners of medicine had done in the present age as Dr. Swift satirically describes them to have done in his time, and, for the cure of these imaginary diseases, to have invented imaginary remedies. But, unfortunately, giants have been brought on the stage to combat pigmies, or rather shadows. Every dabbler in medicine prescribes calomel as freely, and on the most trifling occasions, as he would the most insignificant article in his shop; and this active, and in many instances dangerous, article is employed oftener, I believe, to the destruction than to the preservation of mankind."

We might quote two pages more on the deleterious effects of this powerful mineral, but we believe they would be familiar to most of our readers. Dr. Falconer has unburdened his conscience in relating them, and we have pleasure in assuring him, that we read of many more shocking cases, than we have ever experienced in a very free and extensive use of the remedy, or have observed in the practice of two of the largest hospitals in Britain: Dr. Falconer has himself witnessed some of the evils which he describes, and we cannot doubt his testimony; but it seems to us almost inconceivable, that any intelligent practitioner in the present day can push a remedy beyond due bounds, or persevere in its use, when the direful consequences are manifest. We commend his concluding caution, though we think the practitioner who stands in need of it must be very young.

"I cannot quit this subject without remonstrating in the strongest manner against the too frequent practice of administering on common occasions calomel to young children. It has been found, when largely given, to weaken, and even to disorder, the mental as well as corporeal faculties of grown persons, and the use of it at an early age, when the faculties of either body or mind have not acquired strength and firmness, may both impair the bodily health and debilitate the mental energy of persons, who might, but for such imprudent interference, have distinguished themselves when further advanced in life."

[*To be continued.*]

Observations on the Climate, Manners, and Amusements of Malta; principally intended for the Information of Invalids repairing to that Island for the Recovery of Health. By William Domeier, M.D. of the Royal College of Physicians of London, &c. 8vo. pp. 116. Callow. 1810.

THE author has divided this little work into four, or rather into five chapters, for there are two chapters IV. The first treats "of the climate and voyage." Malta lies in 35° of north latitude; the climate is mild and dry, and the atmosphere clear. The thermometer throughout the year is very regular and not subject to sudden changes. In summer it ranges from 70° to 88°; and in winter from 57° to 60°. Dr. Domeier thinks that "this equality must be a great advantage for the recovery and the prevention of those numerous diseases, which are brought on, and maintained by suppression of the cutaneous perspiration, viz. chronic dysentery, diarrhoea, rheumatism, gout, coughs, catarrhs, ophthalmia, cholic, dropsy, cutaneous eruptions, &c." "During three or four months in the summer, it does not rain at all, and rarely even in the winter." "Showers of hail fall once or twice in the winter, but snow never." The dews and fogs are inconsiderable. In September the sirocco (south-east wind) prevails, and renders the air dense and damp. "Persons with flat narrow chests, or those who have diseases in their lungs, such as schirri, vomicae, ulcers, water in the breast, &c. feel uneasy on the days when the wind blows." The island is free from endemic diseases, and the only epidemic which Dr. Domeier observed during three years residence, was the small-pox, which, however, was much checked by a general inoculation of the cow-pox.

We are informed that a packet leaves Falmouth every three weeks, and arrives at Malta in about a month. The best time for sailing is the middle of August. Consumptive, dropsical, and rheumatic patients, often experience much benefit from the voyage.—The next chapter contains an account "Of Medical Assistance and Diet," from which we learn, that the latter is much superior to the former. Provisions of all kinds are excellent, cheap and plentiful, whereas the physicians, except three, are stated to be "without knowledge and judgment," and of the three the best is merely said to understand "a little of both the English and French languages, to be "acquainted with literature, and a friend of natural history." The second in rank, "cares little for practice, and speaks no English, and only very broken French." The third is a venerable, good man, and one of the
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the physicians to the hospital. Pharmacy is in a low state, and surgery still worse. The author "wished once to have a cancerous breast of a female patient taken out, but could find no Maltese surgeon who was able to undertake the operation." "I have been present (says Dr. D. speaking of the hospital at Valetta) at the surgical visit after two o'clock in the afternoon in summer, when the surgeon was obliged to dress the patients by candle light. He saw the only window of the end of the ward open, and ordered it to be immediately shut, adding, *that he was not a friend to fresh air for surgical patients.*"

From the two preceding Chapters we learn, that amusement and social pleasures are enjoyed in as great perfection in Malta as at any of our fashionable watering-places in this country, but great temperance and moderation are preserved by all ranks of people in the island. The botanical garden instituted by the late governor Sir A. Ball, affords the inhabitants of "all ages, sexes, and classes," a convenient and pleasant promenade, where "devout monks walk near dashing officers; young, blooming girls wishing to attract notice near decrepid men, who feel no attachment for their neighbour, or for this life altogether; nurses paying more attention to the society than to the infants trusted to their arms; English ladies, tastefully dressed, next Maltese ones, covered with the *saklarra**; and to fashionables it is Bond-street." Of course, among this motley groupe we hear of no students.

In the last Chapter we are informed that there are some tolerably good schools in Malta, and a university at Valetta. Of this we are sorry to remark, the medical faculty is extremely defective; perhaps on this account, the inhabitants are prohibited from resorting to the universities of Italy for obtaining instruction, which they cannot receive at home. Amongst the defects in the medical department may be enumerated the appointment of only one lecturer, who is expected to teach all the branches of the healing art in two hours each day. Natural history and experimental philosophy are not taught there; no anatomical theatre, and no clinical lectures are delivered.

The Maltese hospital is attended by four physicians, and four surgeons. These "change every month in performing their duty, so that a patient, who comes in the last day of the month, falls the first of the next immediately under the hands of another practitioner." And "in most cases the whole plan of cure is altered." The medical officers "en-

*. A black silken cloak.

deavour to acquire practice by contradicting and blaming one another, and acting otherwise than their colleagues, though not better"—“ Besides these mentioned four physicians and surgeons, there is an equal number of under-physicians and under-surgeons employed; also four governors, sub-governors, apothecaries, four chaplains, dressers, persons who only bleed and cup, even one person, who carries smelling bottles at the medical visit, for fear that any body might faint away, (and really the atmosphere is, in some wards, in such a state, that the fear is not ill founded) a person who keeps the linen under his care, even disciples, &c. &c. every one of them is paid, though many are of no use.” P. 112. We have now stated the most interesting particulars of this publication; if from the extracts which we have given, our readers should conclude that the author does not consider perspicuity and accuracy essential in composition, we may perhaps avert their censure, by stating that he is a Foreigner.

A familiar Treatise on Asthma, Difficulty of Breathing, Wheezing, and Winter Cough, containing explicit Directions for the Use of the Stramonium Herb. By JAMES T. FISHER, Surgeon. 8vo. Lond. 1810.

It is certain that facts have arisen fully proving the efficacy of the *Datura Stramonium* in quieting the paroxysm of asthma. In some cases, however, of this disease, it has been inert; in others, it has been injurious. It remains to be pointed out in which it is serviceable, in which inert, and in which injurious. We mean at some future period to collect the evidence for and against this narcotic; and in expectation of gaining information on the subject, we looked into Mr. Fisher's Pamphlet. Though we do not perceive that, in any degree, it elucidates the properties and effects of this species of *Datura*, we fully understand its object in directing where to find a nostrum, a very odd thing, a *Tobacco* made of *Stramonium*. The only way in which it differs from other *empirical ephemera*, is in its abuse of two gentlemen of most respectable characters, and whose talents are an honor to the profession of medicine.

On the Morbid Sensibility of the Eye, commonly called Weakness of Sight. By JOHN STEVENSON, Member of the Royal College of Surgeons, &c. 8vo. London, 1810. p. 108. Highley.

EVERY practitioner has heard more than he has seen of a disease of the eye, under the vague appellation "*weakness of sight*." This complaint being often esteemed, in certain stages of its progress, rather an inconvenience than an actual disease, has, too generally, been treated with some domestic remedy, or with advertised nostrums. It is no question, but the profession, and society at large, are greatly indebted to those authors who elucidate what have been called minor complaints, with that degree of scientific clearness which makes them rationally understood. The dextrous operator, the describer of unusual occurrences, and the investigator of irremediable calamities, have had, in great abundance, their historians and their eulogists. Mr. Stevenson has sought, and we doubt not, will find reputation in a less brilliant career. In proportion to the frequency of the disease on which he treats, in proportion to the obscurity in which it has hitherto remained, and in ratio agreeing with the precision with which he describes its phenomena, and points out the mode of treatment, will be his claims on public gratitude.

THE complaint which makes the subject of this pamphlet, Mr. Stevenson considers as a "*Morbid sensibility of the Eye*," and that it has not hitherto been described by writers as a distinct disease, and only incidentally noticed: that its remote and proximate causes have been misunderstood, and its cure unfounded on a rational pathology. In endeavouring to give our readers a distinct view of this disease, its causes, and its treatment as stated in this pamphlet, we shall, in a degree, deviate from the arrangement of Mr. Stevenson. According to our idea of perspicuity it will be proper to give a description of the disease, with its usual symptoms; explain its predisponent, exciting, and proximate causes; and conclude with stating the method of cure.

1st. Description of the Disease.

"By simply inspecting the eye, it is scarcely possible to recognize the existence of this complaint, as there is not the slightest external ophthalmia; or unusual fullness in the vessels of the conjunctiva, any apparent affection of the biliary glands, nor the least visible organic derangement. The characteristic symptoms are, a morbid sensibility of the eye to light, and different kinds of external stimuli. According to the accurate observations of the late venerable Dr. Heberden, "*Oculi*

si vel levissime sint imbecilles, quamvis nullam morbi notam præ se ferant, agere patiuntur ventum, ignem, pulverem, aut lectionem. *Comment. de morbis oculorum.*) A strong glare of light is always painfully distressing to the patient; and hence, in aggravated cases of this disease, the effulgence of the Sun's rays when admitted to the Eye, excites in it a very acute sensation, which is accurately referred to the bottom of the orbit; around which there is at the same time, a sense of tension and oppressive uneasiness. For the same reason, the patient is miserably uncomfortable in a brilliantly illuminated apartment. In order therefore to exclude the strong and direct rays of light, he instinctively depresses his eyebrows, or applies his hand to his forehead, viewing objects with the palpebræ half closed, by which he is apt to acquire the habit of *blinking. If he attempt to read, or look at small or bright objects, he is soon dazzled, and his vision becomes confused, which added to the pain the effort occasions, speedily compels him to desist. The iris acts with great energy on the admission of the rays of light to the retina, and in consequence, the pupil becomes contracted to a very small aperture; a striking feature of this disease. When the stimulus of light affects the Eye, there is sometimes, though very rarely, a manifestly deficient action of the lachrymal glands, but much oftener the secretion of tears is abundantly copious,† which is indeed the principal cause of the confused vision occasionally attending this malady.

2d. Remote or predisposing Cause.

"General debility, however, induced, though not essential, seems greatly to predispose to this complaint. Hence, its most frequent occurrence to persons recovering from previous illness, and to those of a relaxed habit. Females are most obnoxious to its attacks, as the predisponent causes are most liable to arise in the low tone of their system.

"Most of the instances of weakness of sight, occur under great constitutional delicacy.

3d. Exciting Cause.

"Long or frequent exposure of the eye to a very vivid or reflected light, or its excessive exertion in reading, or viewing minute and dazzling objects.

4th. Proximate Cause.

"The proximate cause of weakness of sight, instead of being a local debility, consists in an exquisite irritability and sensibility of the

* I am assured by an intelligent and learned traveller, that the inhabitants who reside at the foot of the Glacier in Switzerland, acquire this habit in a remarkable degree, in consequence probably of the vivid light that is reflected from the accumulated fields of ice and snow, to which they are perpetually exposed.

† Many people amongst the Ethiopians, Africans, &c. who have an extreme degree of tenderness of sight, owing to the great brilliancy of the Sun's rays, suffer exceedingly, according to Haller, (Tom. v. p. 490.) from violent epiphora, or watery eye, which in fact renders them nearly blind during the day.

retina, the effect of great turgescency of the vessels, or a chronic inflammation of that membrane, or the choroid."

5th, *The Cure.*

The remote causes of this disease, or what have been understood to be its remote causes; as well as an obvious reasoning upon its exciting causes, led to an erroneous conclusion, and to a fundamental mistake in the treatment.

A morbid sensibility of the retina, the effect of exhausted nervous energy, was deemed to constitute the very essence of this complaint. On this hypothesis, the symptoms were combated by the external application of sedative and tonic, and by the internal exhibition of corroborant and nervous remedies.

The compleat failure of this method led Mr. Stevenson to adopt an antiphlogistic and evacuating plan. His observations brought him to conclude,

"That the exquisite sensibility of the Eye might with more probability result from a chronic inflammation, or at least a highly turgid condition of the blood-vessels of the retina or choroid."

"Agreeably to this supposition, the indications of cure must consist, not in giving additional tone by the use of cold astringent applications, and internal strengthening medicines, but in lessening the plethoric state of the vessels of the posterior membranes of the eye, and in obviating, at the same time, the exquisite sensibility of the retina."

On this principle, leeches were applied* to, generally, the

* "The application of leeches so immediately in the vicinity of the eye, has been pointedly reprobated by a celebrated author on ocular complaints, because, says he, they have sometimes been found to occasion a considerable swelling of the lids, and have also, for a time, increased, instead of lessened the irritation of the eye. In order to prevent which mischief, he adds, it will be proper to apply the leeches to the hollow of the temple. In a very large number of cases in which I have known them applied to the lower eye-lid, under the direction of the late Mr. Saunders, as well as under my own, I have indeed very rarely witnessed the effects above alluded to; and where any inconvenience of the kind has occurred, it has been in highly irritable habits greatly disposed to erysipelas, in which cases the same consequences are apt to supervene even from the application of a blister. But I am convinced, from the fullest observation and experience, that the benefit they afford the patient when placed as near as possible to the inflamed eye, infinitely exceeds what the same number are capable of yielding, by being laid on the temples, and more than compensates for the greater degree of ecchymosis, which I admit is more prone to take place by the extravasation of blood into their loose reticular texture, than into the denser cellular membrane of the temples, and which temporary inconvenience constitutes the

under eye-lid; cathartics were employed, and managed in a way which Mr. Stevenson explicitly describes;† Fomenta-

the principal, if not the only real objection against their application to the lower eye-lid."

Having ourselves observed the inconvenience here stated, and also a troublesome ulceration when leeches have fixed on the upper eye-lid, we are gratified in stating the opinion of a gentleman of much practical knowledge, on a point often important in private practice, in more than one view. When an ecchymosis does take place, Mr. Stevenson recommends aq. ammon. reduced with water, or the juice of *Solomon's seal*, for removing it. We have often had an opportunity of observing the advantages that arise from attending to *euphoristic* medicines. The Solomon's seal (*Convallaria multiflora* Linn.) affords an instance of an indigenous plant that deserves investigation. It is so common as to be found in the woods of many, if not all the English counties; is perennial, flowers in May and June; and has been long known, as a popular remedy for removing ecchymosis very speedily. The professors and pupils of the pugilistic schools are well acquainted with this fact. It may be worthy of enquiry whether the reputed effect of *Convallaria multiflora* in hernia, has any actual foundation. Applied to the protruded part, and given internally in powder and infusion, it was once thought to be useful. If mixed with its congeners the *Convallaria majalis*, *C. verticillata*, and *C. polygonatum*, would its properties be improved?

† "Purgative medicines as exhibited by practitioners in general, for the acute inflammation of the eye, whether external or internal, have been given much *too sparingly*, both in regard to their dose, and to the times of their repetition. If they be meant to produce any decidedly good effect, they must at first be administered in a full dose, so as to excite an immediately copious evacuation, and repeated afterward in such a way as to keep up a constant determination to the bowels. Should the patient be of a robust habit of body, nothing is so effectual for that purpose as a full dose of calomel with antimonial powder, and in two hours afterward, a sufficient proportion of powdered jalap, and double the quantity of cream of tartar in mint water, or gruel; by the operation of which, a large discharge of serous fluids is solicited, and the vigor and activity of the general circulation sensibly diminished. In more delicate constitutions the calomel must be given sparingly, and in lieu of the jalap, an adequate quantity of *magnesia vitriolata* in infusion of senna."

"I have repeatedly observed, Mr. Stevenson adds, that gentle aperients in these cases make no impression upon the disease; but, if the operation of the remedy be powerful, the most manifest advantage is certainly obtained. In the management of this class of remedies, it is customary to allow two or three days to intervene before they are again repeated, by which time the effects of the first dose have wholly subsided, and little comparative advantage is gained. On this account the cathartic should be employed in a full dose, and as frequently as the patient can bear.

used warm, and composed of narcotic substances, in an aqueous decoction*. These were applied morning and even-

bear. The object is not only to lessen the actual quantity of circulating fluids, but also to prevent their immediate accumulation, and the consequent distention of the vessels upon which the inflammation depends. This purpose should be effected by the observance, at the same time, of a strictly antiphlogistic regimen, allowing only a small quantity of diluting liquids, and by interposing between the active purgation, small quantities of emetic tartar, combined with some mild saline aperient, repeated so as to keep up a constantly moderate diarrhoea." In every species of acute ophthalmia, and in every kind of inflammation, or fullness of the vessels of the eye, Mr. Stevenson found this method effectual; and often superseding the necessity of repeated topical bleedings. This practical fact, so fully confirmed by Mr. Stevenson's experience, was undoubtedly known to HIPPOCRATES, who asserts, Aphorism 17, section 6. *Lippitudine laborantem alvi profluvio corrumpi, bonum*; and succeeding practitioners have availed themselves of it. Celsus says, *omnium dejectio lippitudini prodest*. (Lib. 4, cap. 8, page 77, Svo Edit. Biponte, 1786,) and the annotators on Hippocrates subjoin, "*Ratio est, quia fit revulsio a supernis deorsum materie siue humoris ophthalmiam facientis*. Debet ergo Medicus naturam imitari, cum illa morbum sanat. Cardan. p. 622, Conf. Duret. in Coac. p. 120. Enim vero optime caput ab humorum affluxu liberant laxantia, vel etiam pro circumstantiarum ratione purgantia. Et Galenus gravis testis est, nonnullos, quibus oculi inflammati, sola purgatione per alvum una die sanatos. Hoffm. Med. Rat. T. 4, S. 1, p. 525. We believe, however, that the fact has never been so strongly put as by Mr. Stevenson.

* For the focus Mr. Stevenson employed the capsule of the poppy, chamomile flowers, rosemary, and eyebright infused in hot water, but confesses he is unable to determine if any of these substances augmented the efficacy of the water. Are we to suppose the *Euphrasia officinalis* was employed because it was formerly in repute as a remedy for impaired vision, and even had the power to make old eyes again young. *Tantum esse, ait, Euphrasie in imbellicata visus vim atque efficaciam, ut ejus usu septuagenari or quosdam, propter vigilias et studia plurima amisso visu, in decrepita ista etate, cum recuperasse observaverit*. These are the tales of other times. We have more satisfaction in resting on the strong evidence of the efficacy of the long neglected digitalis. I cannot omit to state, says Mr. Stevenson, (p. 77) that I have used a warm decoction of digitalis (*pupurea*), with the effect of diminishing, materially, the exquisite sensibility of the eye; nor does its application produce any uneasiness, like the different preparations of opium. In violent inflammations of the eye, the decoction of this plant has been used with marked success by Dr. Haworth;—in the most severe attacks of the Egyptian ophthalmia it has alleviated the suffering—and it has been extensively employed, in strong infusion, to the inflamed eyes of horses, with similar results. Saffron in the form of a warm infusion tends also. Mr. Stevenson assures us, most powerfully to take off the morbid sensibility of the eye.

ing, as hot as could be comfortably borne; and after the eye was dried from the fomentation, a quantity of a *tinctura opii mitis* * was dropped into it.

But sometimes, in very confirmed cases, it became requisite to apply a permanent blister to the head, below the ears, or between the shoulders.

Under this management modified to the peculiarities of individual cases, the disease usually subsided in a very short period; and due perseverance, with the addition of tonics, when the congestion was removed, effected permanent cures.

There are diseases of the eye so nearly resembling this as to be mistaken by very able men. It is essential to clearly ascertain these, because the remedies proper for them will be useless in "*weakness of sight*," and *vice versa*.

"By the disease termed by Hippocrates, amblyosmos; by Aretæus, amblytes; by Ætius, visus debilis; by Boerhaave, visus hebetudo; and by some French writers, vuë confuse, faiblesse de la vuë, and mauvaise vuë is not to be understood the same complaint which is described in this Dissertation, under the name of *weakness of sight*, but rather an indistinctness of vision, or absolute and complete ambliopy.†

This ocular complaint, properly called *Dulness of sight*, I must briefly

* The following formula is given for this tincture. R. *opii purificati, croci anglica. aa ʒij. spir. gallic. alb. ʒj. aquæ distillatæ ʒvij. macera in vase clauso per sex dies, deinde tincturam cola.*

The patient being placed in a supine posture, with the head somewhat elevated, and the eyelids gently closed, a little of this tincture should be poured into the inner canthus of the eye, from whence it should be suffered gradually to insinuate itself between the palpebræ, by inclining the head to that side, and, at the same time twinkling the eye-lids; avoiding, in the interim, most carefully, every rude effort forcibly to separate them. It may be applied by means of a camel hair pencil, in the following manner. The operator, with the fingers of one hand, must cautiously depress the lower eye-lid, by which it will be somewhat averted (inverted), when the pencil, fully charged with the tincture and held in the other hand, is to be rapidly and dextrously swept across its inside, permitting the eye-lid instantly to resume its proper situation; p. 82. It seems an object to accurately diffuse the tincture over the whole anterior surface of the globe of the eye, and in particular to bring it in contact with the whole of the cornea. A rude application of this tincture, by forcibly pulling open the eye-lids, and dropping it upon the centre of the cornea, increases the pain, and adds to the irritation.

† Ambliopia est visus debilitas sine admodum visibili oculi vitio. Myopes et presbytes in certâ objecti distantiâ solummodò confusè vident: nyctalopes et hemeralopes certo diei tempore tantùm malè vident, at ambliopes in quâvis distantiâ et quôvis diei tempore objecta debilitèr discernunt. Plenck *Doctrina de Morbis Oculorum*, p. 186.

notice, because I have known it confounded with *weakness* of sight, although it is in fact the very reverse; and depends not upon an excess, but a positive want, of sensibility of the retina.

The principal symptoms are, not only frequent alterations in regard to the precise limits, but also a great indistinctness and confusion of vision; under all circumstances of time and place. If the eyes be much exerted, they soon become fatigued, which renders it necessary, every now and then, to close and gently rub them, when the patient can again see somewhat better for a short time. The eyes appear dull and inanimate. The iris, which is more or less dilated, is susceptible of very feeble, oftentimes scarcely any motion, even on the sudden impulse of a strong light, which occasions *very little* uneasiness. This malady is most apt to attack persons who are past their meridian; and is generally brought on by the too free use, or rather abuse, of the organ of vision, co-operating with other causes which have a tendency to debilitate the general and nervous system. The disease not unfrequently remains almost stationary for a great length of time. In other instances its progress is much more rapid, when it generally terminates in complete gutta serena, or total blindness.

Various and extremely contradictory remedies have been recommended by oculists for the cure of this very formidable complaint; which, however, I shall forbear at this time enumerating. The first thing to be attended to is, to allow the eye as much rest as possible, and to avoid particularly what may be considered the exciting causes of the disease. It is, I believe, in many cases absolutely incurable: and the only remedies which I have ever known to prove beneficial, are topical stimulants, as * electricity, galvanism, æther, infusion of capsicum, rubefacients applied to the palpebræ, &c. whereas, in *genuine weakness* of sight, these means are certainly useless, some of them highly hazardous. Internally, too, mercurials given so as slightly to affect the mouth, together with the *arnica montana*, and deobstruent medicines, have sometimes been productive of benefit. Double convex glasses, by concentrating the rays of light, never fail to afford, in this case, considerable assistance to the sight.

It is this particular species of disease to which I presume Mr. Ware alludes in the following passage. "I cannot omit to mention," says he, (Vol. I. p. 122) "that in some instances where the eye has been particularly weak," (a term he employs in a vague and indefinite manner), "without any perceptible cause to produce it, the application of spirituous remedies that have been highly rectified, such as the medicine sold at Riga, under the name of the Riga balsam, or the æther of the Lon-

* I think it consonant with the present discussion to remark, that some cases which were deemed instances of gutta serena, I have ascertained to be examples of actual dulness of sight, and that they derived the most essential assistance from the application of the electric and galvanic influence. And I cannot forbear to add, that a few cases of blindness, which have fallen under my observation, and which were likewise ascribed to a paralytic state of the optic nerve, were altogether sympathetic affections, depending upon visceral irritation; by the removal of which the patient has obtained a complete cure. Of the latter description are the successful instances of amaurosis, related by Richter, Schmucker, and Scarpa.

don pharmacopœia, either alone or mixed with an *equal proportion of sugar and water*, has sometimes been greatly useful. In a few instances also, the excitement of a violent inflammation, by the application of other stimuli, has been found of use to overcome the enfeebled action of different parts of the eye."

Dulness of sight again differs from the Glaucoma, as there is not that deep-seated grey appearance, or shining pearl colour, observable in the latter complaint.

I am well aware, and have met with many examples of a slight species of Psorophthalmia, which, if only cursorily regarded, seems, in some respects nearly to resemble weakness of sight. Mr. Ware, indeed, appears, from the cases he has published, to have actually identified it with this complaint. I think it necessary, therefore, to dwell a little upon this topic; and I doubt not to be able to prove, by contrasting their respective symptoms, and the different modes of cure they individually require, that they are in reality perfectly distinct ailments. The description of this affection of the ciliary glands is so accurately given by that respectable author, that I shall take the liberty of transcribing the particulars, and of subjoining a few remarks in support of my opinion.

"The psorophthalmia," says Mr. Ware, (*Chirurgical Observations relative to the Eye*, Vol I. p. 116), "not unfrequently occurs, without producing the slightest appearance of inflammation, either in the eye or eye-lid. I have attended a very considerable number of such cases; and in many, the only intimation of the nature of the complaint has been derived from the description given by the patients themselves. Whenever I am informed that the edges of the eye-lids have a disposition, be it ever so slight, to adhere to each other after they have been long in contact, as during the time of sleep, and when this is accompanied with an uncomfortable sense of weight in the lids on the approach of night, in consequence whereof the patient involuntarily shuts them without being drowsy, and without any particular stimulus being applied to the eye to give it pain, I always suspect that the secretion of the ciliary glands is in a diseased state; and in many such cases, I have found the success attending the use of the unguentum hydrargyri nitrati, recommended for the cure of this disorder, quite as effectual as in those other instances, where the excoriation and redness of the eye-lids have been visible on the slightest inspection."

There are, however, several symptoms above mentioned, which decidedly characterize that species of diseased ciliary glands, and which serve at all times to distinguish it from the subject of this Dissertation. I allude to the uncomfortable sense of weight in the lids on the approach of night, the tendency of the tarsi to adhere together during sleep, and the involuntary disposition to shut them without being drowsy, and without any particular stimulus being applied to give them pain.

In the complaint in question, on the contrary, the meibomian glands perform their functions in the most perfect manner, consequently there is not any sense of weight of the palpebræ towards the close of day, inducing a propensity to shut them independently of drowsiness or uneasiness, nor is there any adhesion of their edges during the night. Hence, the application of mercurials to the tarsi, which are almost specific in the psorophthalmia

psorophthalmy are absolutely useless, often prejudicial in genuine weakness of sight. Besides which, the acute pain excited by the admission of a vivid light to the eyes in cases of the latter disease, furnishes a striking discriminating feature, sufficient to point out a decided difference between weakness of sight, and the above described slight species of psorophthalmy.

The injuries done to the delicate structure of the organ of vision by the improper treatment of many of its complaints, especially those of the minor class, by their falling to the care of empirics, and nostrum-mongers, or even under gentlemen regularly instructed, and sufficiently qualified in the general duties of the profession, are very numerous. These often arising from topical applications, we cannot doubt the propriety of giving a general currency to Mr. Stevenson's observations on the subject.

"To a person conversant with ocular complaints, it is really a matter of astonishment to witness the gross mistakes that are perpetually made in the selection, and proper management of external applications for the eye. For, nothing is more common, than to see astringent lotions resorted to in the very *early* stages of Ophthalmia, by which the inflammation and pain become speedily and excessively exasperated.—Whereas, if they had been withheld till the secondary symptoms had commenced, their utility would then have been as strikingly displayed, as in the former instance was the mischief they occasioned. Indeed it has been doubtless owing to the *casual* employment of the tonic class of medicines, during the *chronic* state of inflammation, that many boasted nostrums of this description are indebted for their reputation, in the cure of morbid affections of the eye. I should not, probably, be incorrect in asserting that, more injury has resulted from injudicious officiousness in this particular, than from all other measures which have been adopted for complaints of that organ. Innocent as a common poultice is generally esteemed, I have, in several instances of Ophthalmia, seen it applied with the lamentable effect of causing, in some instances, the formation of abscesses between the lamellæ of the cornea, which not unfrequently end in incurable blindness, by the opacity they leave behind them; and in other cases, it has occasioned a speedy ulceration, and consequent rupture of the cornea, and staphyloma. In fact, a good remedy *untimely* applied to the eye, has often rendered its diseases, which were at the time scarcely uneasy, absolutely incurable. And I am persuaded that, less mischief would in general arise, were every kind of application for the eye withheld, than from employing improper ones. And thus it has scarcely ever happened, that an appropriate collyrium has been used for the disease under consideration. Amongst the different formulæ prescribed for it, the Zincum vitriolatum has almost invariably been the efficient ingredient, on the supposition doubtless, that astringents alone were required with a view to brace the fancied relaxation of the organ. From the amplest experience of the effects of that plan I dare maintain, that till the plenitude of the vessels is diminished by proper evacuations, it uniformly does harm. Indeed, I have really my doubts, whether eye waters are at all desirable, during the existence of the great tenderness

of sight. If any are advisable, I would recommend such only as are calculated to allay action, and appease pain, as the different preparations of lead; of which probably the best is composed of the cerussa acetata gr. j. dissolved in ℥j. elder flower water, and rendered perfectly limpid by the addition of a few drops of distilled vinegar. When used, it should be made a little warm, by immersing a cup, containing some of it, in a bason of boiling water. For I must repeat, that *cold* applications manifestly do harm in the *early* stage of this complaint, probably by constringing the exhalent pores of the cornea, and by propelling the blood from the superficial, to the deep-seated vessels of the eye, already in a preternaturally turgid condition. And, if any good effects are to be derived from the lotion, it must be repeated frequently during the day.

I trust I shall be pardoned for the digression, if I cursorily make a few practical remarks on the composition of eye waters. According to the manner in which they are occasionally prescribed, I am convinced that they are mischievous, when employed in cases of ophthalmia, or of great irritability of the eye. I allude to the custom of making them with the oxyds of metals, or other rough and insoluble powders, or with liquids, which though pellucid individually, yet when mixed together, suffer an immediate decomposition, and in consequence, the eye water is rendered more or less turbid and inert. Indeed, nothing is more common than to see the cerussa acetata dissolved in common water, by which the lotion becomes instantly opaque, and the greater part of the lead is soon precipitated in form of a whitish calx. Must not the rough ingredients above alluded to, stimulate the exquisitely irritable cornea in some degree like so many heterogeneous particles of sand? Sometimes the tinctura, or the vinum opii, is added to an aqueous vehicle, the resinous particles of which separating from the watery menstruum, they are introduced into the eye, and adhering to some part of the globe, excite in it no small degree of irritation. However refined this may appear to the inaccurate observer, I must declare that, I have personally witnessed very acute pain having been brought on by this apparently trivial cause, which has not ceased, until the removal of these little filaments of opium.*

In a word, I hold it to be an invariable maxim, that eye waters should be rendered *perfectly transparent* before using, either by the addition of an appropriate solvent, (if the active ingredient be derived from the mineral kingdom, taking care that it coincides with the intention of the remedy), or else by filtration through paper.

But although I am not strongly prepossessed in favour of any kind of collyria, from a satisfactory experience of their utility in weakness of sight, *before* the exquisite sensibility of the retina is relieved by the plan of depletion above recommended, yet *after* this object is once fully attained, the vessels of the eye will *then* require astringents to impart increased tone and energy. Otherwise, a relapse would be very apt to occur, from the blood again accumulating in vessels, relaxed by long continued over-distension.

Of the applications best adapted to accomplish that purpose, I may name a weakish solution of Zincum vitriolatum, dissolved in camphorated mixture, or in rose water, and filtered. But I think a still more

* I have met with similar effects from neglecting to pass an infusion of digitalis, prepared with fine powder of the plant, through linen cloth before using it.

effectual collyrium is formed of one drop of the sulphuric acid, and an ounce of distilled water, to which may be added a few grains of Zincum vitriolatum, and a small quantity of brandy. Nor, is a solution of the argentum nitratum, in the proportion of from half to a whole grain to one ounce of distilled water, and half, or a whole drop of the nitrous acid, a contemptible tonic collyrium in this case. Even cold spring water is a remedy, by no means destitute of efficacy in this stage of the complaint.

The above eye waters, being intended to act as corroborants, should of course, be applied *cold*, three or four times a day.

As Mr. Stevenson's treatise is more of a practical than a speculative nature, and contains some novel methods of managing a disease which seems to have been much misunderstood, we do not hesitate to recommend it to our readers.

When our Analysis was going to press, we received the following Letter :—

GENTLEMEN,

I take the liberty of requesting a place in your very respectable Journal, for the following observations upon a publication of Mr. Stevenson's, upon the disease called weak sight. My sole wish, in communicating these remarks, is to do justice to a most respectable member of the profession, whom I have long known, and also to set some other matters upon their proper footing. In attempting to effect these objects I should be sorry to shew any disrespect towards Mr. Stevenson.—The first observation which I shall make upon the dissertation, is, that from the language used in page 5 of the preface, the reader might conclude that the knowledge of the *proximate cause* of the disease in question, as well as the *plan of cure*, originated with Mr. S.—“I was,” says he, “repeatedly disappointed in any attempts to relieve it, before a different view of the proximate cause, and a corresponding variation in the mode of cure suggested themselves.” This view of the proximate cause is described by Mr. S. in the following words: “And with regard to the proximate cause of weakness of sight, *instead of local debility, I will hazard the opinion*, that it consists in an exquisite irritability and sensibility of the retina, the effect of a great turgescency of the vessels, or a chronic inflammation of that membrane, or the *choroid*.” Mr. S. however, in the next sentence, quotes this opinion from Sauvages: “Intolerantia lucis retinæ sensibilitatem adauctam esse probat, sive detur ejus infarctus phlogisticus, sive tensa sit nimium choroidea, ejusque expansio uvea.” This quotation from Sauvages, appears to me to convey nearly the same opinion as that suggested by Mr. S. But leaving the reader to judge for himself, I shall proceed to say a few words upon the corresponding variation in the mode of treatment, which suggested itself to Mr. S. at the same time. In this point, also, or at least, in the chief part of it, Mr. S. it would appear, had been long anticipated by Mr. Ware. To make this clear I need only refer the reader to the cases quoted at length from Mr. Ware's observations. From these cases (which extend from page 51 to 58, inclusive, of Mr. S.'s work) it is evident, that *evacuation by means of leeches* was used by Mr. Ware, when the plan which he usually adopted, proved ineffectual.—Independent, however, of these considerations, the general plan recommended by Mr. S.

is by no means new. I am acquainted with many eminent practitioners in different quarters of the kingdom, who occasionally resort to leeches, but uniformly employ the other parts of the evacuant plan, such as purging with calomel, blisters, setons, &c. They have also used remedies to promote a determination to and discharge of blood from the nose, of which Mr. S. makes no mention. To those surgeons, however, who were ignorant of the evacuant plan, Mr. S.'s statement of the fact will be acceptable. Valeat quantum valere potest.—Having now done justice to the celebrated Sauvages and Mr. Ware, I shall next say a few words respecting the validity of the proximate cause. Mr. S. has, however, stated it in terms so different in different pages of his work, that it will be necessary to collect the whole into one point of view. After describing this cause in the words already mentioned, (page 11) Mr. S. next remarks, (page 12) “that this highly nervous and vascular tunic (the retina) is *either* in an actually inflamed, *or, at least*, in a morbidly *distended*, and, consequently, irritable condition.” He next observes, (page 12) “that *genuine weakness of sight* is actually a disease in the retina arising from the great turgescency, or chronic inflammation of that membrane,” &c. Next (page 33) “the exquisite sensibility of the eye might with more probability be the result of a chronic inflammation, *or, at least*, highly turgid condition of the blood-vessels of the *retina* or *choroid*.” Next (at page 60) “The proximate cause of weakness of sight is a turgescency or *more or less* inflammatory affection of the *posterior vascular membranes* of the eye.” Soon afterwards (page 62) is this expression, “Do not the history of the above case and its dissection *demonstrably* prove, that *weakness of sight* does not, *always at least*, proceed from a nervous affection of the retina, but that it is the *actual* result of a greater or less degree of inflammation of the choroid?” Lastly, our author observes, (page 29) “In these cases (of psorophthalmia) the inflammation seems continuous, extending itself from the margin of the tarsi along the PALPEBRAL to the CORNEAL conjunctiva. Even in this instance, however, I conceive that the intolerance of light *does not arise, at least* only sympathetically, from an affection of the retina, but rather from the cornea itself, which” &c. &c.—From the quotations it appears, that Mr. S.'s opinion respecting the proximate cause is somewhat fluctuating. For my own part, I think it questionable and inconsistent with facts, but to attack it under all its protean forms would be a fruitless task, or almost impossible; for I confess myself ignorant of Mr. S.'s meaning when he talks of the *distended condition* of the *turgescency*, or of the *nervous affection of the retina*, or of the *posterior vascular membranes of the eye*. Still less can I comprehend how “light really acts in expanding the vessels of the retina:” (page 16.) That blood may expand, or distend these vessels, is obvious: but we have yet to learn what expansive powers are exerted upon blood-vessels by light, even from the meridian sun, which as our author informs us (page 15) destroyed the Roman general Regulus. I shall therefore confine myself to Mr. S.'s first opinion.

The first observation, which I shall make, is, that Mr. S. in defining his proximate cause, supposes that exquisite irritability and sensibility of the retina, is the effect either of chronic inflammation of the *retina*, or of the *choroid* indifferently. Why chronic inflammation of the *choroid* should produce

produce the same symptoms, as a similar affection of the *retina*, since the two membranes are totally different in their structure and uses, requires elucidation. My next observation is, that the chronic inflammation of any membrane or organ, with which I am acquainted, is with difficulty and only gradually removed. This does not well accord with the *astonishing* and *immediate efficacy* of leeches and evacuations. Nor does chronic inflammation ever exist long without leaving lasting marks behind it. How few anatomists, however, have detected any obvious morbid change in the *retina* or *choroid*.

But admitting that chronic inflammation, or a great turgescency of the vessels of the retina or choroid coat exists, it is somewhat remarkable that these affections do never spread to the iris. The blood-vessels of the iris are most intimately connected with those of the choroid, yet the latter may labour under great turgescency, without producing any perceptible change in the former. The same observation may be made with respect to one part of the vessels of the sclerotic coat. These are derived from the same source as the vessels of the choroid coat, nay some of the vessels of the choroid itself pass directly through the sclerotic coat, and ramify upon it externally, yet, in the disease in question, no symptoms of turgescency appear in these vessels, however close their connection. For these reasons I consider Mr. S's opinion highly questionable: and if I may be allowed to advance another, I would say, that weakness of sight is, probably, produced in this manner. In the first place, the exciting causes, such as excessive light, intense reading, &c. being frequently applied, the sensibility of the retina is increased, which induces some degree of increased action in its blood-vessels, and those of the choroid also, by sympathy. This state would, in most cases gradually subside, were the exciting causes withdrawn. From the repeated application, however, of these causes, a morbid action at length arises in the *secretory vessels* of the choroid. This so far alters the quality or quantity of the secretion of pigmentum nigrum, as to render it unfit for its purpose of absorbing erratic or reflected light within the eye. In short, I conceive, that the state of the eyeball in this disease, bears a striking analogy to that defective state, which obtains in albinos.—Such a state, I apprehend, perfectly coincides with the effect of the evacuant mode of treatment, and is liable to no material objection.—The effect of the first application of leeches is probably that of allaying the irritability of the retina: this topical evacuation, with the use of sedative applications, and the removal of all exciting causes is principally instrumental in suspending this most distressing symptom of the disease, and at the same time lays the foundation of that healthy change in the action of the secretory vessels of the choroid, which is finally completed by the use of purgatives. The morbid action in the secretory vessels of the choroid, in this instance, is, probably, not inflammatory, but rather bears an analogy to that change, which occasionally occurs in the action of the vessels of other secretory organs, producing an alteration in the nature of their secretions, without being accompanied by any symptom of turgescency or inflammatory disposition. The effects of purging and other evacuations, in re-establishing their healthy functions, is well known. This view of the proximate cause explains also, why tonics, conjoined with sedative applications, and freedom from all
exciting

exciting causes, are, in particular habits, effectual in removing this disease; particularly if conjoined with alterative doses of calomel.

I shall not dwell longer upon this subject, as I am, by no means, very solicitous about the adoption of this or that opinion respecting the proximate cause of weak sight. What is of much greater importance, is, that Mr. S. setting aside all selfish motives of concealment, has candidly made known to the profession at large his experience in means, which few practitioners have employed more extensively or successfully, than himself; and that he has, moreover, announced some important improvements in the treatment of *Blar-eye*, which, after repeated trials, he at length discovered (See note, page 28). That the public may lose no part of the advantage to result from this discovery, I dare say, that the Editors of the Medical and Physical Journal will be happy to place it without loss of time amongst their excellent pages.

I am confident that Mr. S. will pardon any liberty I may have taken, in making these remarks upon his publication. To do justice to all parties has been my sole aim, and I know that no member of the profession would with more pleasure "reuder unto Cæsar the things which are Cæsar's."

I remain, Gentlemen,

Shrewsbury,
December 6, 1810.

Your obliged servant,
CHARLES HUMPHRIES.

A Treatise on the Venereal Disease. By JOHN HUNTER. With an Introduction and Commentary; by JOSEPH ADAMS, M.D. Author of Observations on Morbid Poisons, &c. 8vo. London, 1810. pp. xvi.—600. six plates.

WE should not have thought it necessary to notice a **third** edition of this valuable work, had it not been for the illustrations of one who has so long been considered the interpreter of his favourite master. To pursue the plan we have hitherto adopted, we shall content ourselves with offering a few extracts as a specimen of the work, instead of the often unthankful task of minutely criticising individual passages.

The following is Dr. Adams's commentary on that part of Mr. Hunter's introduction which relates to hectic fever.

"The hectic fever, till Mr. Hunter's time, was usually considered as the effect of matter absorbed. Phthisis pulmonalis and psoas abscess seemed to furnish proofs of such a cause. The late Dr. Heberden has, however, a very ingenious paper on hectic fever, making the first article of the second volume of Medical Transactions. This accurate writer seems rather to consider the disease as the effect of repeated formations of matter, than of its absorption. He calls it the symptomatic, the irregular intermittent, and the fever of suppurations. The disease itself is most admirably described by him, but some parts of the pape

paper are confused, from the difficulty the author found in tracing the cause constantly to suppuration. Hence he describes the various symptomatic fevers as making different forms of the hectic. Thus the shivering from the first formation of matter, and the high feverish irritation sometimes consequent on a wounded tendon, are all included in the hectic, which would be reasonable enough, if the *symptomatic* fever always became *hectic*, which we shall presently see is not the case. Mr. Hunter, though he considers both as the effect of sympathy, yet distinguishes them as arising from different causes, and exhibiting different phenomena. The *symptomatic* fever is usually acute, and arises from, or is only a *symptom* of some acute local injury, which, throughout all its stages, whether in its commencement or its progress to suppuration, is attended with shivering and consequent fever. Sydenham has well marked these stages in small-pox. They occur in every common abscess, if the progress is rapid.

Hectic, or (if we translate the word) *habitual** fever, is less acute than the symptomatic, but more permanent in its returns. As it almost always attends phthisis pulmonalis, and large incurable abscesses, it was supposed to arise from the absorption of matter. But this error might easily have been removed by reflecting, that in large abscesses matter is sometimes absorbed without injury to the constitution. Suppuration is one of the curative processes of nature, in parts which cannot return to their original actions, and like other new actions is usually ushered in by shivering, and consequent fever. But where suppuration is unattended with inflammation, the constitution is little affected, so that no shivering or consequent fever arises. Thus in the psoas abscess, whilst it is continually enlarging by an increase of matter, or by fresh suppurations, the constitution is very little affected, and in the lungs large tubercles are formed, which suppurate, and whilst the matter remains in the capsules, the constitution only suffers from the loss of so much lung. But as soon as the abscess is opened by nature or art, or the matter of tubercles finds its way to the bronchia, inflammation takes place over the whole surfaces, as the first means by which the part is to be restored; and this inflammation is attended with shivering and heat, constituting a paroxysm of fever. If this attempt made by nature to restore the part is ineffectual, she renews it; but this and every future attempt are often insufficient to relieve so much mischief as the parts have sustained. Still, however, the attempt continues as long as the constitution retains power to excite inflammation, and each attempt is attended with a similar paroxysm. Hence the fever becomes *habitual* or *hectic*, not from the absorption of matter, but from the repeated attempts at restoring parts which cannot be restored. This will be further illustrated when we arrive at Mr Hunter's doctrines concerning *lues venerea*.

Thus the symptomatic and hectic fever are both of them similar, in-

* The Greek word *ἐξνός* can scarcely be translated by any other word than *habitual*. In both languages it is derived from the same root, from *ἐξω* *habeo*, *ēxi*; *habitus*, and *ἐξνός* *habitu positus*, or as we say in English, *habitual*. *Habitual*, though there is no such classical word as *habitualis*, must be derived from the Latin *habitus*, from which we vernacularize *habit*.

asmuch as they arise from the *sympathy* of the whole constitution with a local disease, and the only difference is, that the former is for the most part more acute, and rarely returns more than once or twice, after which, if matter is formed, it is either absorbed, or if it comes forward to the surface, granulation succeeds, to restore the lost part. The hectic, on the contrary, is less violent, in proportion as the constitution is previously debilitated, but returns as long as strength enough remains to attempt the curative process. To bring these more immediately to the present purpose—symptomatic fever, in swelled testicle, is the sympathy of the constitution with the violent inflammation excited. Hectic fever, in *lues venerea*, is the perpetual attempt of the constitution to cure a disease, or to excite such a new action as will supersede the disease: but we find, by experience, that the constitution is unequal to such an attempt. The attempt, therefore, not having succeeded, is renewed till it becomes *habitual*; or, in other words, “*hectic fever* is an habitual universal sympathy of the constitution, struggling with a disease which it is unable to overcome.”

The following passage we insert, not only on account of the credit it does our commentator, but inasmuch as it contradicts an accusation too often retorted from one nation to another, without sufficient enquiries by either. Among the arguments to prove that “the poison is the same in gonorrhæa and chancre,” Mr. Hunter has introduced one taken from the supposed introduction of the disease into the South Sea Islands. At the close of the commentaries on this section we have the following remarks.

“Having thus, says Dr. Adams, I hope sufficiently illustrated Mr. Hunter’s explanation, how the same matter applied to different surfaces may produce different effects, the reader must indulge me with a few words on the South Sea disease.

“About the year 1800, a lady of fashion who was recommended to my care in Madeira, brought with her the French account of De la Peyrouse’s voyage. Though I had leisure enough to peruse the whole, yet the letters of his surgeon attracted my particular notice. After examining them with the greatest attention, I could not help remarking that he wrote of *mal venerienne* without the precision of a Hunter. In the end, I was convinced there was reason to doubt whether De la Peyrouse’s surgeon had met with the venereal disease in any of the places in which he spoke of it with so much freedom. This induced me to examine the accounts of Captain Cook’s voyages; and the result was, a thorough conviction, that, if the venereal disease existed at all in the South Sea islands, there was at least no satisfactory proof of it. Under this impression, I wrote to three physicians in London, explaining my doubts, and, perhaps with more Quixotism than prudence, was willing, if encouraged, to make a voyage in order to ascertain a point involving not only an important medical question, but in some measure the national reputation.

Fortunately, this question has been much better decided, by one who candidly admits his arrival at those islands with a most perfect conviction that the disease existed there in all its forms. His inquiry was not,

not, therefore, whether he should find it, but how general, and with what severity, it would appear, and also how he might preserve the health of his crew. From these circumstances, and still more from the character of the gentleman, no doubt can be entertained of the faithfulness of his conclusion, which is, that "*the venereal disease is unknown in Otaheite.*"* At first sight, it may seem strange that this opinion of mine has never been published before the fact was confirmed by Mr. Wilson. To this I can only answer, that to offer an opinion on a subject without the means of ascertaining it, must, at least, be premature. There are, however, fortunately, witnesses that such was my opinion. Dr. Garthshore is one of the gentlemen to whom I wrote from Madeira on the subject. The late Dr. Pitcairn was another, which is confirmed by his note now in my possession, and also by a communication he made to a most distinguished philosophical character now living.

But perhaps it may be asked, "Admitting the whole as I have stated it, why should the reader be troubled with the account?" In order, I answer, that he may learn there are certain characters by which the venereal disease may be distinguished with certainty; that these are so well marked as to be understood by description; and that even the absence of them may be ascertained by those who take the trouble of examining with sufficient diligence. It may then be asked, how could the accurate Hunter have fallen so easily into the belief, that the venereal disease was known in all its forms in the South-Sea islands. Mr. Hunter, it may be answered, had not the prolixity of a French surgeon's account to make him doubtful on the subject. When I speak of prolixity in this case, it is not from disrespect. Though De la Peyrouse's surgeon was not mistaken, still his descriptions are so minute as to enable the reader to comprehend what symptoms were present. It was from the description, not from the name, of the disease, that I suspected De la Peyrouse's cases were not venereal, and it was natural to transfer this scepticism to the South Sea disease. On examination, it was found, that the account, defective as it is, would authorize the same conclusion.

These extracts are enough to shew the nature of the performance, which is all we profess to do in a work, of which so large a portion is occupied by original communications.

* "From the foregoing statement," says Mr. Wilson, "it may be concluded, without, I hope, presuming too much, that notwithstanding the melancholy accounts we read of the ravages of lues venerea at Otaheite, and even disputations about its first importers, this disease was not introduced there antecedent to the Porpoise's voyages."—See *Edin. Med. Journal*, vol. II. p. 283. The Porpoise is His Majesty's ship, of which Mr. Wilson was surgeon, and arrived at Port Jackson in June 1801.

*An Account of Diseases in an Eastern District of London,
from Nov. 20 to Dec. 20, 1810.*

ACUTE DISEASES.					
Perepneumonia Notha	2		Diarrhæa	-	5
Cynanche Tonsillaris	2		Hæmorrhoids	-	3
Rubeola	5		Dysuria	-	4
Variola	4		Vertigo	-	4
Rheumatismus Acutus	1		Rheumatismus Chronicus	16	
CHRONIC DISEASES.			PUERPERAL DISEASES.		
Tussis	10		Ephamera	-	6
Dyspnœa	7		Menorrhagia Lochialis	5	
Tussis cum Dyspnœa	8		Mastodynia	-	4
Catarrhus	5		Rhagas Papillæ	-	2
Raucedo	2		Stranguria	-	2
Hæmoptysis	4		INFANTILE DISEASES.		
Phthisis Pulmonalis	3		Erysipelas Infantile	-	4
Ophthalmia	2		Aphthæ	-	5
Dyspepsia	3		Convulsio	-	3
Gastrodynia	2		Herpes	-	6

Having now made some advances in the winter quarter of the year, we may expect that those diseases which are peculiar to this season, will make their appearance. The weather has hitherto, indeed, been very mild, so that the diseases referred to have not appeared in their most alarming form.

The immense quantity of rain which has lately fallen has been productive of an uncommon humidity of the atmosphere, which has rendered coughs and catarrhs very frequent; but these have not been attended with those symptoms of inflammation which usually prevail under the influence of the north and north-easterly winds. Rheumatism, of the chronic species, has very frequently occurred. In some constitutions this disease is particularly troublesome during a warm and moist state of the atmosphere. The heat has afforded relief to some patients, and cold has generally increased their pain; in other cases just the reverse of this has been the consequence. This very common complaint is, in some cases, relieved by an addition of warm clothing, and by the increased temperature of a warm bed, but in others it is very much aggravated by these very circumstances. Instances are not unfrequent where persons subject to rheumatic affections, after sitting near a fire for some time, or even occupying any part of a heated room, feel a pain in their joints, particularly in the knees, accompanied with a restlessness which is more distressing than the pain itself, and which is most speedily relieved by a removal into a cool room.

MEDICAL AND PHILOSOPHICAL INTELLIGENCE,

ROYAL SOCIETY.

ON the 22d of November, Dr. Wollaston read a paper "On some of the Combinations of oxymuriatic Gas and Oxygen, and on the Chemical Relations of these Principles to inflammable Bodies." By H. Davy, Esq. Sec. R. S.

In this paper Mr. Davy details a great number of experiments which he has made on the combinations of oxymuriatic gas and oxygen with the metals of the fixed alkalies, the metals of the earths, and the common metals; with a view to illustrate the nature, properties, and combinations of oxymuriatic gas, and its relations to inflammable bodies, as compared with those of oxygen. He also offers some general views and conclusions concerning the chemical powers of different species of matter, and the proportions in which they combine. And lastly, he concludes his paper by some observations on the impropriety of the present nomenclature, in reference to the oxymuriatic gas and its combinations; and proposes some concise modes of distinguishing these novel bodies.

Mr. Davy made some previous experiments on the combinations of potassium and sodium with oxygen; and of potash and soda with water, from which he concludes that those metals when burnt with oxygen gas are at their highest state of oxygenation—and at their lowest, when in the state of potash and soda. He also found that ignited potash contains about 16 per cent. of water, and ignited soda 22.9 per cent.

The spontaneous inflammation of the metals of the fixed alkalies in oxymuriatic gas, affords a proof of the intensity of their attractions. In these operations, no water is separated, but mere binary combinations formed; the same as those produced by igniting muriate of potash and soda. Similar compounds are formed when dry potash and soda are heated in oxymuriatic gas, and oxygen is evolved.

Mr. Davy mentions a simple mode by which pure sodium may be obtained. It is by mixing common salt which has been ignited to redness, with potassinm, and exposing the whole to a red heat in a glass tube or retort: for every two parts of potassium employed, one part of sodium is obtained.

As the muriates of lime, barytes and strontites remain unaltered by any simple attractions, even at a white heat, Mr. Davy conceived that these compounds consist merely of the metallic bases of the earths in union with oxymuriatic gas, and the experiments he has made confirm this conclusion. Thus when lime, barytes, &c. were heated in oxymuriatic gas, oxygen was expelled, and substances exactly similar to the dry muriates were formed.

In operating on metals, Mr. Davy employed green glass retorts holding from three to six cubical inches of gas, they were furnished with stop-cocks. The metal was first introduced into the retort, it was then exhausted and filled with oxymuriatic gas, the heat of a spirit lamp was employed in the processes. The products from arsenic, antimony, and bismuth; and on the addition of water, the white oxides and muriatic acid. Tin produced Libavius's liquor, mercury, corrosive sublimate, silver

silver and lead, horn silver, and horn lead. Iron, a beautiful, volatile, crystallized substance which gave the red muriate of iron on the addition of water.

Mr. Davy also found that oxymuriatic gas decomposes the metallic oxides at a heat below redness: those of the volatile metals more easily than those of the fixed metals, and protoxides more readily than peroxides. Mr. Davy notices two beautiful experiments on the agency of oxymuriatic gas on white oxide of arsenic, and black oxide of iron. In these cases, no oxygen was evolved, the portion separated from one part of the oxides combined with the other part, and the products were butter of arsenic and arsenic acid, and ferruginous sublimate and red oxide of iron.

Mr. Davy notices an experiment in which he decomposed the gray oxide of tin by muriatic acid gas. In this case, water rapidly separated and Libavius's liquor was formed.

Mr. Davy conceives that these new inquiries confirm all the conclusions he has drawn in his recent paper on "Oxymuriatic Acid, &c."

With a liberality consonant to the high station in which they are placed, the President and Fellows of the College of Physicians of London, have determined on printing their *Statutes*; and by that means, making distinctly known to the public the extent and nature of their powers.

A case of the ancient *Elephantiasis, or Lepra Arabum*, has occurred at Bartholomew's Hospital, exactly answering Dr. Adams's description of that dreadful disease. The countenance has a near resemblance to one of his plates. The subject is a Portuguese Brazilian, about thirty years old, has little hair on the chin, none on the pubes, and in all other respects, answers the history of the disease as given in the "Observations on Morbid Poison"

Medical Spring in Lancashire.

About two miles from Flookborough, a small village in the parish of Cartmell, in Lancashire, near to a very ancient building, *Wrorysholme Tower*, there is a medicinal spring, called, according to common usage, Holywell. From the bottom of a rock adjoining to the *Tower*, the water appears to issue, and is sold at a very cheap rate, by a person residing in a hut, who is little acquainted with the qualities it possesses, to those afflicted with scurvy, or any cutaneous disease. As this spring is stated to be little known, we shall be indebted to any gentleman of Cartmell, or the neighbourhood, who will give a more particular account. Is it of the nature of the Borrodale, and Rougham, or New Cartmel Springs? Scurvy is used incorrectly, we apprehend, for some of the species of Herpes, or other individual of the numerous tribe of cutaneous maladies.

The scarcity of oil at Venice, in 1807, occasioned by the destruction of the olive trees, during the war, led to the introduction into that state of

of the Chinese radish, which has, of late, been cultivated there with great success. The oil of this plant is represented to be superior to any yet known, not merely for the table, but for burning, and many medical purposes.

Mr. Stevenson has made some important improvements in the treatment of *blear-eye*, by which he is enabled to effect a very speedy and radical cure, with scarcely any pain to the patient. We hope soon to have an opportunity of stating the particulars of this improvement in the treatment of this obstinate and distressing disease.

Test for the Discovery of Sulphuric Acid in Vinegar.

The Acetite of Barytes is a most delicate test for the detection of this sophistication. Upon the application of a small quantity of this acetite to vinegar thus adulterated, a copious insoluble sediment is immediately precipitated.

Mr. James Ward, an eminent artist, residing in Newman-street, is engaged in etching the portraits of Mary Thomas, the fasting woman of North Wales; and of Ann Moor, of Tutbury, who has likewise lived a long time without taking nutriment. These portraits will be published early in the spring, and are now in sufficient forwardness, to manifest all that spirit and freedom which renders the etching of painters so peculiarly valuable. Notices of these two women, so remarkable by the circumstance of their continuing to exist for so long a time, literally without food, will be found in the preceding volumes of this Journal. Mr. Ward proposes to publish with these portraits, the fac simile of a letter written during sleep. Connected with this letter, which was written by a person named Bush, will be given some surprising facts respecting the operation of the intellectual principle during the period of sleep; and which add considerably to the stock of materials that at present constitute the history of somnambulism.

Charles Wilkinson, Esq. after a series of observations, made during several years, on the Influence which the Moon has upon the Atmosphere of this Earth, gives the result of those observations in the following TABLE, the calculations in which, we are assured by him, are sufficiently near to the truth, to ascertain, generally, what weather will follow the times of the changes in that Planet, as there specified. The effect resulting from every individual change in the Moon, occupies the space of time up to the next change, so that each prognostication continues in force for eight days. If a more extended observation, and the experience of successive years should support these conclusions, great benefit will arise to Agriculture, various rural employments, and maritime affairs.

TABLE.

TABLE.

MOON.	SUMMER.	WINTER.
If it be New or Full Moon, or the Moon enters into the First or Last Quarter at the hour of 12 at Noon;—or between the Hours of		
—2— and —4—	— Very Rainy —	— Snow or Rain —
—4— —6—	— Changeable —	— Fair & Mild —
—6— —8—	— Fair —	— Fair —
—8— —10—	{ Fair if W. at N. W. Rainy if S. or S. W.	{ Fair and Frosty if N. or N. E.—Rain or Snow, if S. or S. E.
—10— Midnight	— Same —	— Same —
Midnight —2—	— Fair —	— Fair & Frosty —
—2— —4—	— Cold with freq. showers —	{ Hard Frost, unless W. at S. or W.
—4— —6—	— Rain —	— Snow & Stormy —
—6— —8—	— Wind & Rain —	— Cold Rain or Snow —
—8— —10—	— Changeable —	— Stormy —
—10— —12—	— Frequent Showers —	{ Cold Rain if W. at W.—Snow, if E.
		— Cold with high wind —

Migration of Swallows.

THE disappearance of the Swallow Tribe in the Autumn has always excited the attention of naturalists. Various hypotheses have been formed to account for this fact. That they either migrate from, or hibernate in this country, is certain: but which of the two still divides opinion.

Mr. Foster has lately printed (*Phil. Mag. October 1810*) some observations on the hirundines of this country, in favour of migration.

The Swift (*Hirundo apus* Lin. *Martinet noir*, Buff.) which abounds, he says, in the neighbourhood of Hackney, and annually builds in great numbers in the old steeple, was not seen after the 13th of August: several days after this (on the 17th) Mr. Foster being at Ely, saw great numbers of this kind flying round the tower of the cathedral; after which not a single bird was seen.

In consequence of the controversy so long carried on among naturalists, whether the swallow was a bird of passage, or whether it remained dormant, during the winter, Mr. Foster opened several holes of the sand martin (*Hirundo riparia*, Lin.—*L'Hirondelle de rivage*, Buff.) but found nothing in them but toads, which had there taken up their winter lodging. There are many circumstances which tend greatly to establish the opinion, that these birds migrate: for instance, they do not appear in spring and depart in autumn sooner or later according to the

the forwardness or backwardness of the season, but generally according to the direction of the prevailing current of air. The prevalence of N.E. winds occasioned a very great diminution of the numbers of swallows and martins, this year, before their usual time; whence it may be inferred that they had taken their flight in a south-western direction. The winged insects (the food of this tribe) were very abundant, when this migration took place. Many proofs that swallows hibernate in the countries where they have been seen in the summer, are to be gathered from the ancients. Olaus Magnus and Scheffer, in a letter to Hevelius, affirm, that, in some northerly countries, it is very common for fishermen to find in the water large clusters of swallows, which in the beginning of the Autumn had thus piled themselves up. Kircher, in *Mund. Subterr. lib. 8. Sect. 4.* observes, that some Swallows migrate, whilst those in cold countries conceal themselves in caves, lakes, hollow trees, &c. Fortunus Licetus affirms, that the Swallows which in Summer build their nests on the tops of houses towards the end of September plunge into ditches and rivers, and remain till the middle of May. Huet, archbishop of Avranches, informs us, that between Caen and the sea, along the shore of the river Orne, large clusters of swallows are found in the Winter suspended in the caves like bunches of grapes. Pede Albinovanus, in his elegy on the death of Mæcenas, speaks of the retreat of the Swallows to the rocks, as an infallible sign of the approach of winter.

“ Congelantur aquæ, scopulis se condit hirundo

Verberat e gelidas garrula vere lacus.”

Various other writers might be quoted in support of these facts.

The following intelligence from Dublin, from unquestionable authority, proves that the state of medical education in the sister kingdom is rapidly advancing.

The College of Surgeons is now completed, and will, when some proposed additions are made to the anatomical department, excell any thing of the kind in the Empire. The present dissecting room is inadequate to accommodate a class which, last season, amounted to more than three hundred students, and which has been rapidly increasing for four years past. The facility with which dead bodies are procured here, and the indifference with which all classes of the people look upon the business of dissection, give us advantages which, as far as I can learn, are not enjoyed to the same extent in the schools of either London, or Edinburgh, so that we have every reason to believe that Dublin, in a few years, will have established a character of respectability for Anatomical Instruction.

The School of Physic too in this city, is likely to become conspicuous. A very magnificent Clinical Hospital is now almost finished, which will be a great acquisition to the Students, and will enable our own countrymen to graduate here, without going to the expence and inconvenience of a journey to Edinburgh.”

Mr. George Graves, nephew of the late ingenious and accurate Botanist William Curtis, is engaged in a work on British Ornithology. It is intended to publish this work in numbers, each of which is to contain six coloured Engravings. Copious descriptions will be given of the
(No. 143.) N peculiar

peculiar manners of each species of British Birds, the modes of nidification, generic and specific character, with other particulars, illustrative of their habits. Such birds as have been domesticated, though originally foreign, will be placed in an Appendix, making a part of the fourth or last volume. The work is in such forwardness as to insure an immediate publication of the first number.

When we are informed that the plan of the work was projected by the scientific Author of the *FLORA LONDINENSIS*, and that many of the Drawings were executed under his care, and that Mr. Graves is actuated by the same ardent desire to improve Natural History, that his late relation possessed, we cannot doubt, but this work will be highly acceptable to the Ornithologist.

Anatomical Theatre, Bristol. Mr. Shute will commence his Spring course of Lectures on Anatomy, Physiology, and the principles of, and operations in Surgery, on Saturday the 12th of January, at eight o'clock in the morning. Park-street, December 21st, 1810.

Dr. Buxton will commence his Spring Course of Lectures on the Practice of Medicine, about the 20th of January, 1811, at the London Hospital.

Lectures on Anatomy, Physiology, Pathology, and Surgery, by Mr. John Taunton, Member of the Royal College of Surgeons of London, Surgeon to the City and Finsbury Dispensaries, City Truss Society, &c.

In this Course of Lectures it is proposed to take a comprehensive view of the structure and œconomy of the living body, and to consider the causes, symptoms, nature, and treatment of surgical diseases, with the mode of performing the different surgical operations; forming a complete course of anatomical and physiological instruction for the medical or surgical student, the artist, the professional or private gentleman.

An ample field for professional edification will be afforded by the opportunity which pupils may have of attending the clinical and other practice of both the City and Finsbury Dispensaries.

The Spring course will commence on Saturday, January the 12th, 1811, at eight o'clock in the evening, *precisely*, and to be continued every Tuesday, Thursday, and Saturday, at the same hour.

Particulars may be had on applying to Mr. Taunton, Greville-street, Hatton Garden.

Theatre of Anatomy, Blenheim-street, Great Marlborough-street. The Spring Course of Lectures on Anatomy, Physiology, and Surgery, will be commenced on Monday, the 21st of January, at two o'clock, by Mr. Brookes.

Spacious Apartments, thoroughly ventilated, and replete with every convenience, are open all the Morning for the purposes of
Dissecting

Dissecting and Injecting, where Mr. Brookes attends to direct the Students, and demonstrate the various parts as they appear on Dissection.

In the beginning of January Dr. Adams will commence his Course of Lectures on the Institutes and Practice of Medicine at his house, No. 17, Hatton Garden; to be continued every Tuesday, Thursday, and Saturday, at ten o'clock in the morning.

Mr. Joseph Murphy, surgeon, in a few days will publish a Natural History of the human Teeth, with a treatise on their Diseases from infancy to old age, adapted for general information: to which are added Observations on the Physiognomy of the Teeth and projecting Chin.

The following Letter was received too late to be inserted in its proper place.

GENTLEMEN,

IN the life of Dr. Beddoes, lately published by me, an accidental error has been detected, which I should be happy to avail myself of the medium of your journal to correct.

From the account given at page 389, it would appear as if Dr. Craufurd had expressed a wish that further advice should be called in, when the alarming change had already taken place, which so shortly preceded Dr. Beddoes's dissolution. The fact, however, is, as I have since been informed, that this wish was expressed, not by Dr. Craufurd, but by some members of the family, and though complied with on his part, was accompanied by a remark that it must necessarily be useless.

I remain, Gentlemen,

Bristol, Dec. 1810.

Your very humble Servant,
J. E. STOCK.

MONTHLY CATALOGUE OF NEW MEDICAL PUBLICATIONS.

On Diseases of the Generative System; with twelve plates. By John Robertson. 8vo. Highley.

The Anatomy of the Human Bones and Nerves. By Alexander Monro, M. D. Highley.

Observations on the Natural History, Climate, and Diseases of Madeira, during a period of eighteen years. By William Gourlay, M. D. Callow.

Practical Observations on the Sclerocele, and other Morbid Enlargements of the Testicle, also on the cause and cure of the Acute, the Spurious, and the Chronic Hydrocele. The whole illustrated by cases, to which are added four cases of operations for aneurism, subclavian, femoral, popliteal, and femoral-popliteal, with Practical Remarks, and Plates. By Thomas Ramsden. 8vo. Wilkie and Robinson.

Memoirs of the Life of Thomas Beddoes, M. D. with an Analytical account of his Writings. By John Edmonds Stock, M. D. Murray.

A System of Chemical Philosophy. Part 2d. By John Dalton, 8vo. Bickerstaff.

Dissertation on Insanity; Illustrated with tables, and extracted from between two and three thousand cases in Bedlam. By William Black, M. D. 8vo.

MONTHLY BOTANICAL REPORT.

HAVING for some Months past made no mention of English Botany, we shall now resume our usual account of such phænogamic plants as occur from the 1st of July to the end of the year; of the cryptogamic plants, except those of the order of filices, we shall not take any notice.

Galium verrucosum, the *Valantia Aparine* of Linnæus. Dr. Smith has very properly swerved from his great masters in this instance: indeed the small importance of some of the flowers being defective in part of the sexual organs, is now much better understood than formerly. The true *Valantias* are distinguished by much more important characters in the seed. The figure of this plant as given by Mr. Sowerby is strikingly different from that of *Vaillant*, in the greater length and straightness of the peduncles; found by Mr. G. Don in corn-fields in the carse of Gowrie.

Juncus gracilis, supposed to be a non-descript species, also found by Mr. Don, among the mountains of Angus-shire, but very rarely. It approaches to *J. bufonius*.

Caltha radicans; first described by T. F. Forster, esq. in the eighth volume of the Transactions of the Linnæan Society.

Pinguicula grandiflora, of Decandolle and Lamareck; sent from Ireland by the Rev. Mr. Hincks, Secretary to the Cork Institution; found plentifully in the western parts of the county of Cork, by Mr. Drummond.

Carex pallescens; common in most groves and pastures.

Salix tenuifolia; native of Westmoreland and Scotland, drawn from a specimen in the garden of Mr. T. F. Forster, at Clapton. The name is derived from the thinness of the substance of the leaf.

Brassica rapa, the common turnip. A valuable observation of Mr. J. A. Knight's, the celebrated vegetable physiologist, is inserted, proving that the Swedish turnip is a variety of this, and not of the cabbage, as has been supposed.

Sagina maritima; a minute plant, much resembling *Sagina apetala*, found on the sea-coast of Scotland and Ireland, and on the summit of Ben Nevis.

Rosa hibernica. Some patrons of Botany at Dublin offered a premium of fifty pounds for the discovery of a new Irish plant, which reward was claimed by J. Templeton, esq. in consequence of his discovery of this supposed non-descript species. Its character is "fruit nearly globose, (red) smooth as well as the flower-stalks. Prickles of the stem slightly hooked. Leaflets elliptical, smooth, with hairy ribs."

Fragaria

Fragaria elatior; the hautboy strawberry; found in a wood on the west side of Tring in Hertfordshire, and in Charlton Forest, Sussex. This species bearing male and female flowers on different roots is very apt to be unproductive even in a cultivated state. It should be the business of gardeners to take care that some barren of male plants are intermixed with the fruit-bearing ones, which would probably insure a plentiful crop.

Betula alba; the birch. Every admirer of picturesque beauty is acquainted with the elegance, as every schoolboy is with the disciplinary virtues of this beautiful and useful tree.

Aspidium irriguum; supposed to be a new species of fern, discovered by Mr. J. F. Foster, about the margins of clear springs, near Tunbridge Wells. The drawing was taken from a garden specimen.

Galium witheringii; mistaken by Withering for the *G. montanum* of Linnæus.

Cistus surrejanus. This species is become a very dubious one, no wild specimen having been found since the time of Dillenius; the drawing was of course necessarily taken from a garden specimen.

Cistus tomentosus; of Scopoli. Dr. Smith has received this from different botanists; gathered in Scotland, and discovers it to be the same as Scopoli's plant from a comparison of it with a specimen from that excellent botanist himself. Judging from the figures of the above two plants, they appear to us to differ only in the form of the petals and the nature of the pubescence on the under surface of the leaves; the difference of the former apparently arise from their being defective in *surrejanus*, and the latter, perhaps, solely from cultivation.

Scrophularia Scoradonia, a rare native of Jersey, and found also by Mr. E. Llwyd, about St. Ives, in Cornwall; not yet observed in any other part of Great Britain; drawn from a garden specimen.

Hieracium molle, found by Mr. Dickson in woods in the south of Scotland. It agrees with authentic specimens from Jacquin in the Linnean Herbarium.

Senecio saracenicus; one of the rarest of British plants, found in Yorkshire, Lancashire, and Westmorland.

Amaranthus Blitum; found in Battersea field and elsewhere in the neighbourhood of London, on dunghills. Dr. Smith remarks, that it resembles *Atriplex* in habit more nearly than such of its more specious congeners as decorate our gardens.

Avena fatua; a pernicious weed, especially infesting barley.

Frankenia pulverulenta; a very doubtful British species, drawn from a garden specimen, said to have been found on the coast of Sussex in the time of Dillenius; and Hudson professed to have gathered it himself between Bognor and Brighton.

Atriplex erecta; this species, at first rightly defined by Hudson, but afterwards improperly joined by him with *patula*, has not been of late found by any botanist, and hence has necessarily been figured from a dried specimen in Mr. Rose's herbarium, named under the inspection of Mr. Hudson.

Polypodium

Polypodium Phegopteris; a beautiful, delicate fern, growing in rather moist places, on mountains in the south of Scotland and north of England.

Of the Botanist's Repository we have received only one number since our last account of this work. The contents are,

Ipomœa pendula; native of New Holland, about Port Jackson as well as the tropical parts. It appears to be a very beautiful species, corollas large, flesh-coloured. The drawing was taken at the Comtesse de Vandes collection at Bayswater.

Fumaria nobilis; communicated by Mr. Donn, from the Botanic garden at Cambridge, at present one of the first collections in Europe.

Globba purpurea. The mantisia *saltatoria* of the Botanical Magazine; drawn at Sir Abraham Hume's, from whence Mr. Leo's collection was supplied with it.

Euphorbia ephythmoides; communicated by Mr. Donn, from the Cambridge garden. Native of Austria. The herbaceous euphorbiae look so differently at different periods of their growth, that it is often difficult to determine the species, but from the very entire edges of involucre and the roundness of the leaves, we are inclined to doubt if this be the same as has been described and figured by Jacquin in the Flora Austriaea.

Euphorbia meloformis. A much better figure of this plant, though uncoloured, is to be seen in the Annales du Museum d'Histoire Naturelle, and copied from thence in the first volume of Annals of Botany, pl. 2. It is a diœcious plant, and we believe the male only has been as yet seen in this country.

The Botanical Magazine for last month contains

Alœe rigida of Decandolle, the *expansa* of Haworth.

Alœe pentagona of Haworth.

Anthericum longiscapum of Jacquin; from Mr. Haworth's collection. This, according to Mr. Ker, is the *asphadcloides* of the late edition of the Hortus Kewensis, as is proved by the specimen preserved in the Banksian Herbarium. It is not, however, the *asphadcloides* of Linnæus, Miller, &c.

Tradescantia cretta, an annual plant; native of Mexico.

Fothergilla alnifolia, var. *obtusata*, and var. *major*. Dr. Sims describes another variety under the name of *serotina*. This genus was named in honor of Dr. John Fothergill, by the late Dr. Garden of Charlestown, South Carolina. For an interesting life of the last mentioned author, by Dr. Smith, See Dr. Rees's Cyclopædia, article, Garden.

Arctolis glutinosa, a new species, as appears, though Dr. Sims is not certain with respect to the genus to which it ought to be referred; drawn at Lee and Kennedy's Museum, Hammersmith.

Phlox Carolina; an old inhabitant of our gardens, but probably for some time lost, and now recovered by Mr. Fraser, of Sloane-square. The smooth leaves and rough stem united seem to be sufficient to distinguish this from every other known species.

METEOROLOGICAL TABLE,

From Oct. 29, to Nov. 27.

D	Therm.			Barom.		Hygrom.			Weather.
						dry	damp.		
28	43	46	45	29	—	28 ⁹	10	42 31 40	clear . . . — . . rain . .
29	41	47	40	29 ¹	— ¹	—	—	34 36 38	cloudy . . rain . . . clear . .
30	37	42	38	29 ²	— ³	— ⁴	—	38 35 —	cloudy . . clear . . . — . .
1	36	42	38	29 ⁴	— ⁵	— ⁶	—	85 — —	clear . . . — . rain .
2	35	37	34	29 ³	— ⁹	—	—	30 27 30	clear —
3	34	46	—	29 ⁹	— ³	—	—	30 42 50	clear . . . rain . . . —
4	43	46	48	29 ⁹	—	—	—	57 52 57	fog . . . cloudy . . rain . .
5	48	—	—	29 ⁹	— ³	—	—	58 — 48	clear . . cloudy . . —
6	49	50	47	29 ⁵	— ⁴	—	—	50 — 48	rain . . cloudy . . rain . . clear .
7	45	46	40	29 ³	— ⁴	—	—	48 40 —	clear . . . —
8	40	41	38	29 ⁵	— ⁶	— ⁷	—	40 36 35	clear . . . —
9	34	38	36	29 ³	— ⁹	— ³	—	35 38 35	clear —
10	38	40	39	29 ⁶	— ²	— ⁴	—	40 50 49	rain . . . snow . cloudy . . rain .
11	38	47	34	29 ⁵	— ⁷	— ⁸	—	47 35 38	cloudy . . . clear
12	36	46	48	29 ⁷	— ⁴	— ⁵	—	38 55 49	rain clear
13	48	52	—	29 ⁷	— ⁸	— ⁹	—	43 — 55	cloudy . clear . . rain . in n . . . *
14	57	48	45	29 ⁶	—	— ⁷	—	51 22 25	cloudy . . . clear *
15	44	45	45	29 ³	—	30	—	30 27 28	clear —
16	42	43	41	30 ¹	— ³	—	—	30 28 27	clear . . . dry fog . . . clear . . . *
17	42	49	48	30 ²	30	29 ⁹	—	32 48 49	fog . . clear . . rain . . cloud . .
18	49	46	41	29 ⁶	— ³	— ⁴	—	54 52 40	cloudy . . . rain . . . clear . .
19	42	43	40	29 ⁵	—	—	—	35 34 32	clear —
20	39	43	45	29 ³	— ⁶	— ⁵	—	35 — 48	clear rain . cloudy . .
21	43	—	—	29 ⁹	—	—	—	40 21 4	cloudy rain . clear . . . *
22	43	47	51	29 ⁵	—	— ⁴	—	10 30 55	clear rain
23	51	49	47	29 ⁴	— ⁵	—	—	52 32 —	rain . cloudy . . clear
24	45	44	—	29 ³	— ⁵	—	—	39 — 35	rain . . . clear — . .
25	49	47	45	29 ¹	—	—	—	55 29 26	rain . . . clear . . hail . . cloud . .
26	41	45	46	29 ⁵	— ⁸	—	—	21 17 28	clear —
27	51	45	42	29 ⁴	— ⁶	—	—	52 18 21	rain . . . clear — .
28	41	43	36	30	— ²	— ³	—	24 10 3	cloudy . . . snow . clear . . .

13. Heavy fall of rain in the night of the 13th and morning of the 14th, with a gale of wind from N.W.

14. Stormy wind N.W. and quick evaporation.

16. Dry fog passing in large masses, with intervals of sun.

21. Stormy wind from N. W. the whole day. Hygrometer rises rapidly to the dry point: quick evaporation in the night.

25. Serene lightning from eleven to twelve at night.

Prinsep Street, Cavendish Square, Nov. 29, 1810.

NOTICES TO CORRESPONDENTS.

From the account of the Society for the Relief of the Widows and Orphans of Medical men, in the last number of our Journal, Mr. Chamberlain will find that the plan of that philanthropic institution, with which he has favoured us, need not now be inserted.

We have been obliged to defer till our next number, the conclusion of the interesting paper of Medicus upon Tobacco; also amongst other articles, communications from H. R. from Dr. Hamilton of Ipswich, Dr. Cookson, Dr. Merriman, and Mr. Bailey, &c. &c.

The following notices came to hand too late to be inserted in their proper places.

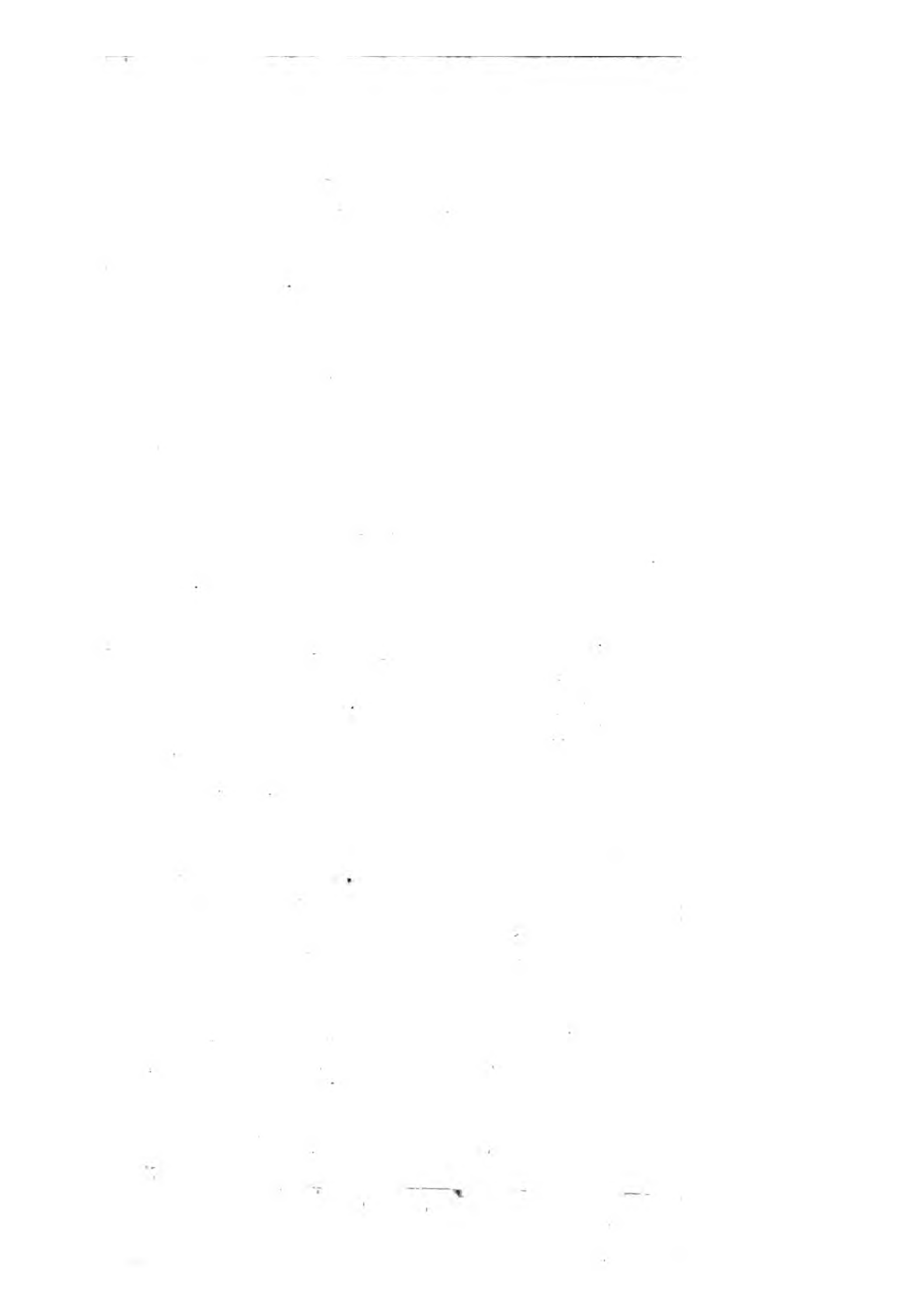
Mr. Stevenson, Great Russell-street, Bloomsbury, (author of "a Practical Treatise on the *Morbid Sensibility of the Eye*, commonly called *Weakness of Sight*,") purposes delivering a Course of Lectures on the Anatomy, Physiology, and Diseases of the *Eye and Ear*, early in the ensuing spring.

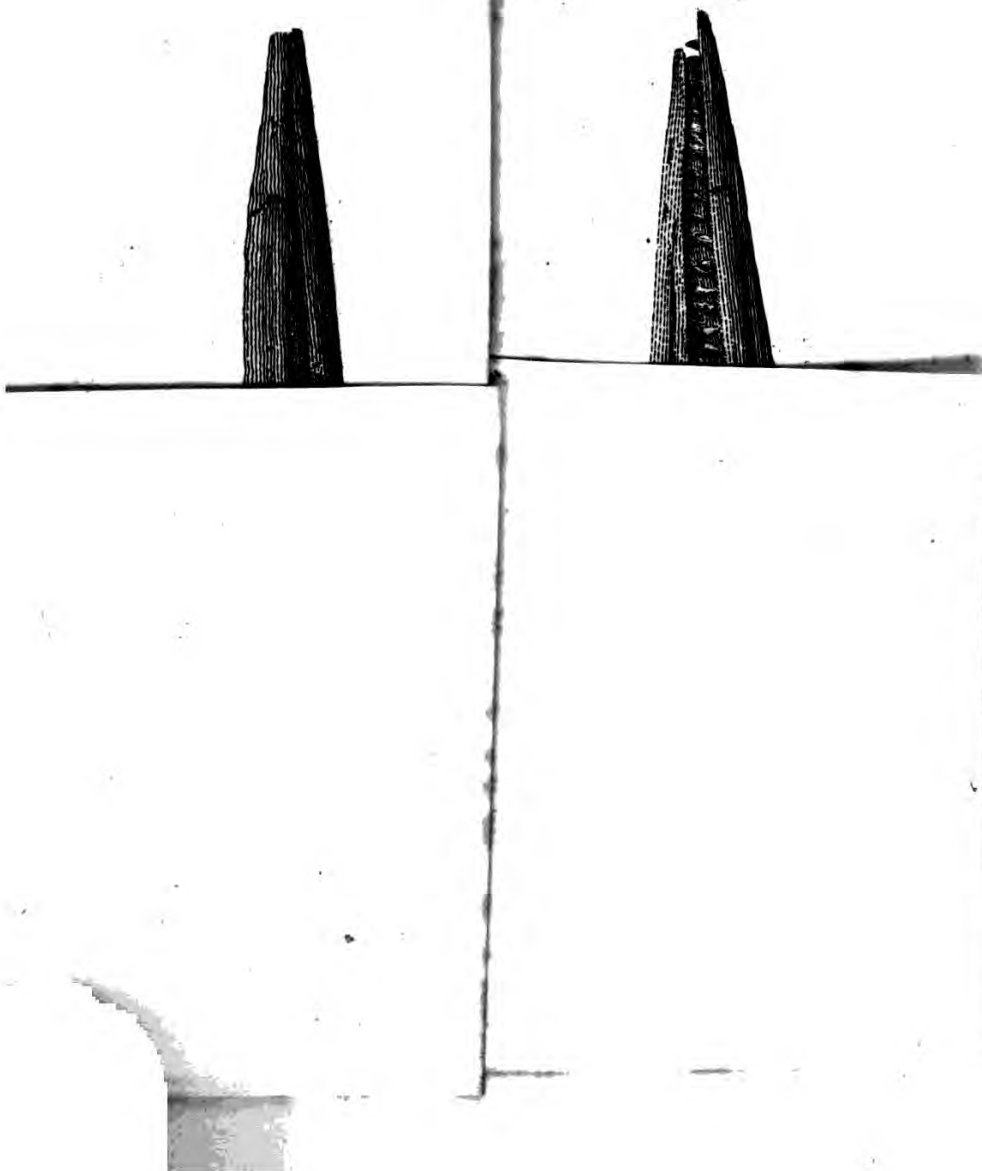
Dr. Beid will commence his Spring course of Lectures on the Theory and Practice of Medicine, on Wednesday the 24th of January.

Joseph Reade, M. D. of Cork, has in the press, a treatise entitled, *Critical and Practical Observations on the Diseases of the inner corner of the Human Eyes*, comprising the epiphora, the tumor sacculi lachrymalis, and the fistula lachrymalis, with a new arrangement and method of Cure.

Mr. Parkinson is about to publish *Observations on the Act for Regulating Mad-houses*, with remarks addressed to the friends of the Insane; and a correction of the mistatements of the case of Benjamin Elliot, sentenced to six Months imprisonment for illegally depriving Mary Daintree of her liberty.

Surgical Observations on Injuries of the Head, and on Miscellaneous Subjects. By John Abernethy. F. R. S. 8vo. boards 7s. Longman and Co.





THE
Medical and Physical Journal.

VOL. XXV.] FEBRUARY, 1811. [NO. 144.]

Printed for R. PHILLIPS, by E. Hemsted, Great New Street, Fetter Lane, London.

To the Editors of the Medical and Physical Journal.

(With an Engraving.)

GENTLEMEN,

PERCEIVING that your very useful work is rendered not only valuable to the medical profession, but likewise to the naturalist; I beg to transmit to you for publication, a drawing of a curious extraneous fossil, should you think it of sufficient importance. To me this drawing is very interesting, inasmuch as it is the production of a young gentleman who studied anatomy at my Theatre.* It represents, with great spirit and correctness, the fossil remains of a young crocodile or alligator, an animal which perhaps was never indigenous in this island;† at least in any of the species at present existing,

That parts of apparently exotic animals are frequently found in this country, is well known to every naturalist: but there is a doubt whether these did actually belong to animals now only living near to the equator, or are remains, pre-

* This gentleman, Mr. Alfred Jukes, of Birmingham, has also favoured me with some fine representations of uncommon anatomical subjects, that have occurred in the dissections which have taken place within these last twelve months.

† That the climate of the British islands was, at some remote period, congenial to crocodiles, elephants, and other quadrupeds of the torrid zone, I cannot believe. An hypothesis founded on a wild conjecture of the position of this globe being changed, and with this change of position its temperature reduced, seems to be refuted by the beaver (*Castor fiber*) having formerly been an inhabitant here, and also from the fossil bones of the Elk (*Cervus elephas*) being frequently found in Ireland. Both these animals are now inhabitants of the frigid zone. A fair deduction from these premises would be, that in some early period, the climate of Britain was much colder than at present.

(No. 144.)

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served by a process in natural chemistry, as evidence of the former existence of genera of animals, possibly, now extinct.

If the fossil remains discovered in this country did belong to races of animals now existing only within the tropics, two conjectures may be offered to account for their being found at this distance from their native soil, without having recourse to some violent change of climate to prove that they might be indigenous here.

The waters of the general deluge may have carried them from one quarter of the world to another, especially the amphibia, and being left in regions far from their natural climate, and subsiding in situations favourable to fossilization, their remains have been preserved to this time.

It is no improbable conjecture, that many of the bones of exotic animals dug up in various parts of this island, belonged to animals brought hither by the Romans. The passion this people had for collecting extraordinary creatures from every part of the world to which they had access, gives force to this opinion. That rare animal the *Camelopardalis Giraffa*, which we are now permitted to see in Europe only in dead specimens, was exhibited alive at Rome. The Roman Consul, Lucullus, brought hither the cherry, which being first planted in Kent, has taken the name of that county. The *Helix pomatia*, now so numerous in Surry and other parts, was imported by Sir Kenelm Digby. My friend, Mr. Winston, of Newman Street, presented me with the hoofs of a very large exotic deer, which were dragged from the bottom of the Thames,* along with the head of a lion; and I can point out the spot, where about thirty years ago the largest white bear (*Ursus maritimus*) ever seen in this country, is buried: but as it is under a public highway†, which has since been made, and as the ground is very much raised, it is almost impossible now to obtain the bones. Some centuries hence, perhaps the skeleton of this animal may be found in a mass of sulphate of lime, carbonate of lime, or other mineral;

* It is a curious fact that bones are so valuable an article of commerce, that men are employed incessantly in dragging the bottom of the river to obtain them. The animal oil being extracted from the bones thus obtained, the parts remaining, particularly of the shank bones, are rasped into hartshorn shavings, and are under this metamorphosis converted into jellies, &c. &c. for our splendid entertainments. The less delicate of these bones, or rather those which have an inconvenient shape for the action of the rasp, are, with a similar trading dexterity, made into ivory-black.

† At the entrance of Brook-street, a few yards from the middle of the New Road, and at a short distance from Tottenham Court, from which it bears west.

and may then excite conjectures similar to those which now occupy our minds. If from any accident, in future times these bones should be discovered in a fossil state, the naturalist of that period will have his doubts and conjectures removed by this record, placed in a work which cannot fail to be consulted, in succeeding ages, by the physician and the man of science.

There is reason to believe, however, that many, possibly the greater portion of the fossil remains of large animals in these islands, and in many other parts of the globe, do not owe their deposition to either of the foregoing causes, having now no existing prototypes;* and that the bones of enormous size, frequently found very far beneath the surface, are the remains of extinct genera, once indigenous in the countries where these remains are discovered. Many facts are on record which give force and authority to this opinion. Some years since, the skeleton of an enormous sloth was found in Spain, of which I have a drawing. This skeleton measured twelve feet in length, and certainly was the remains of an animal incognitum; as the largest of the *Bradypus* genus (*Bradypus ursinus*) is about the ordinary size of the *Ursus arcticus*, or black bear. I have seen several fossil molar teeth of an animal incognitum (*carnivorous*), found on the coast of Essex; and nearly the size of those of the adult elephant. Similar productions may be seen in the British Museum; and in the private collections of many naturalists are preserved parts of unknown animals. The horns of an animal of the Beeve tribe have been found of an enormous magnitude, belonging to a creature of whose present existence we have no knowledge. The most extraordinary among these remains of former times is the claw of a quadruped (probably rapacious) of a size exceeding all belief, were it not now to be seen in Mr. Bullock's Museum.† Even human bones

* We must not positively decide that an extinction of these races of animals has happened. Perhaps a farther exploration of this earth may bring us acquainted with some of them in a living state. Many creatures have been brought into Europe, and particularly into England, within a few years, of whose existence we had not the most distant idea. The *Elephas americanus* may yet live; and the *rara avis* of Juvenal* is no longer a wonder, now we have found the *Anas atrata*. The discovery of the *Macropterus gigantea*, the *Ornithoryncus paradoxus*, and the *Syren lacertina*, ought not to make us credulous, but they may make us doubt what forms of being range in unexplored forests, or swim in unknown seas.

† The Museum of Mr. Bullock, in Piccadilly, has in it many rare and curious specimens of nature, collected at a great expence, and with an

* "*Rara avis in terris, nigroque similima cygno.*" Sat. vi.

have been found of a length and dimensions, which almost countenance the opinion that a race of giants once existed on this earth. Crania have likewise been discovered, sunk deep in the earth, where they must have lain many centuries, varying so materially from the form of the head in the present race of men, as to baffle conjecture and bewilder investigation. In the valuable collection of Mr. Heavyside, is a human skull, which was found 200 feet below the surface of the soil, (the workmen who were sinking a well in which this skull was found, supposed at this depth they were digging maiden earth,) remarkable for its length, and the form of the *ossa nasalia*.* Another cranium, which was presented to me by Mr. Nicholls of Margaret Street, is as singular for its shortness, and for peculiarities in its general conformation.†

The most extraordinary perhaps, certainly the most noticed of these antient remains, are the fragments, and even the whole of the boney structure of an animal which has had given to it the appellation of *mammoth*. The bones of this creature have generally been found in Russia, Siberia, and North America; and some in England. It is but a few years since Mr. Peele exhibited the skeleton of one of three which were discovered in a swamp in the province of Pennsylvania; and the evidence for its having been indigenous in the northern climates of the old world, is very satisfactory. Not many years ago an unusually hot summer dissolved the snow so much in one of the northern provinces of Russia, as to lay open an immense cavern, in which were several mammoths entire.‡ But unfortunately, as soon as the bodies of these animals were thawed, bears, wolves, &c. regaling upon the novel repast, left little more than the bones. Some portion, however, of muscle and integument were brought away; and in the splendid Museum of the Royal College of Sur-

ardour in the study of natural history, which reflects great credit on the ingenious proprietor. EDITOR.

* If these facts are not stated with precision, Mr. Heavyside will, possibly, have the goodness to correct them.

† This skull was found on removing the rubbish from beneath the foundation of a building in the parish of Marylebone, known to have stood 400 years.

‡ A complete mammoth was found in a state of perfect preservation, on the coast of the frozen ocean, by Schoumachoff, a Tongoose chief, in the autumn of 1799, in the midst of a rock of ice. A detailed history of this fact may be seen in the *Phil. Mag.* 29. 141. The largest os femoris of the mammoth ever seen, was found in Cheshire in a fossil state, now at Mr. Bullock's museum.

geons of London, by the favour of Sir James Earl, I examined a portion of cutis clothed with fine soft fur, obtained from one of these tremendous creatures.

The extraneous fossil, represented in the annexed engraving, and discovered in a stone quarry, thirty feet below the surface, at Wilmcote, near Stratford upon Avon, in the spring of 1810, undoubtedly belongs to the *Lacerta* genus; but whether it is an individual of any of the known existing species is not to be fully determined. The disagreement both in the disposition and form of the teeth in this fossil specimen with its congeners, lead rather to a conjecture that it may be an individual of an extinct species,* which was found to exist in the climate of the British islands.

None of the known species of crocodile will live many years in this country, and indeed, like other species of the amphibia, will often not feed at all. The longest period a crocodile has been kept alive here was fourteen years. This animal was in the possession of my father, and when it died was presented to Mr. John Hunter, and may probably have been the individual in which he noticed the singular fact of chyle in the lacteals.

I am, Gentlemen,
Your's, &c. &c.

JOSHUA BROOKS.

Theatre of Anatomy, Blenheim-street,
January 7, 1811.

To the Editors of the Medical and Physical Journal.

*Cases of Scarlatina Anginosa, treated by Mr. R. HAMILTON
and his NEPHEW.*

GENTLEMEN,

FINDING some remarks and cases of this formidable and fatal disease, in your last Number, by Mr. Goodwin, who

* The obscurity which necessarily accompanies fossilized substances must prevent positive decision. Characteristic marks of species may be so altered, obliterated, or blended with carbonate of lime, &c. as no longer to deserve that denomination. The disagreement in our specimen with the existing species, is of a kind not likely to be produced by the process of fossilization. As far as can be determined from the drawing, the correctness of which is not to be doubted, the teeth do not agree, either in form or arrangement, with the corresponding animals of the genus *Lacerta*. This fossil is five feet nine inches long.

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as well as you, solicit farther particulars on this head, I take the liberty to transmit, for your consideration, some cases and remarks on this interesting subject.

Before proceeding further, I beg leave to observe, that the disease has raged here since September 1809, during which it has assumed many anomalous appearances both in its duration and symptoms, from the slightest affection to the most destructive malady. Most authors since the time of Sydenham, Pringle, Sims, Fothergill, have considered this disease as highly putrid almost under every form, and prepossessed with this idea, they have had recourse immediately and indiscriminately to tonics and antiseptics.

This treatment seems, however, to be fast losing ground since the publication of Currie's Medical Reports, and Hamilton's Observations on Purgative Medicines. Without entering at present further into a history of the disease, I shall proceed briefly to mention the remedies which we chiefly employ. These are bleeding, blistering, vomiting, purging, cold affusion, sponging, &c. with the strictest antiphlogistic regimen.

These powerful means, it must be understood, are not to be used indiscriminately, for in many instances, that early stage, in which their use would be attended with the greatest success, has elapsed before the medical practitioners can arrive. In the last stage only, are tonics and antiseptics admissible, and even here, when the throat is much affected, I have seen much more beneficial results from fomentations and repeated poultices, applied externally after blistering the neck, with the addition of inhalations of volatile and aromatic vapours. I may just mention that venesection was adopted chiefly from observing epistaxis to be a frequent symptom, and favourable in every case in which it occurred.

Cases shewing the success resulting from Venesection.

Case I. Miss Shepherd, aged 14, had been attending her uncle, who died of the disease on the fourth day. She was seized the day after his decease, with cold and hot fits, great pain of the head, throat much affected, pulse quick and strong, eruption appearing. She was directed to lose six ounces of blood, which immediately relieved her head; had a purge, was repeatedly sponged with vinegar and water, drank saline mixture frequently; pursuing this plan for three or four days, she recovered rapidly, and no hydropic symptoms followed.

Case II. Miss Right, aged 8.—This girl had the disease in a violent degree, being delirious. She was bled, sponged, purged;

purged; and the throat being very sore, it was blistered, and afterwards repeatedly poulticed. The eruption continued out six days, and appeared in several places in groups of small pustules, which contained matter, &c. She soon recovered, and slight hydropic symptoms followed.

Case III. Miss Denny, aged 14, was taken in the night with vomiting, purging, great pain of the head, much fever, and no appetite, throat sore. Was bled next morning about six ounces, and was sponged. Next morning she had so far recovered as to allow her to sit up, and on the following day returned to her usual occupations. In this case the disease, which attacked violently, was evidently cut short by the active remedies.

Case IV. C. Turner, aged 10. This girl was so bad when first visited, as to render her recovery extremely doubtful. She had much fever, had been delirious, throat so much affected, that she could with the greatest difficulty articulate: tongue covered with a brown crust, eruption very full. This was the second day of the disease. I extracted about six ounces of blood from the arm, gave a purge, applied a blister to the throat, and ordered frequent ablution. In the evening she was much better, took saline mixture frequently, and had the throat repeatedly fomented and poulticed. She recovered so rapidly, that in a few days she became well. She experienced slight rheumatic pains of the joints, but had no swellings.*

Case V. Sarah Cork, aged 8, was attacked with the fever in the usual manner. When visited, the throat was much affected, the eruption very full, considerable pain of the head, no appetite, pulse rapid and full. She was immediately bled about six ounces, took a purging powder, and was ordered to be sponged frequently in the usual manner. The ensuing morning she appeared nearly well, her purge operated, and she slept well during the night. After which she recovered very fast, and was no longer confined to her bed.

Case VI. Mr. Tydiman took the disease from his own children, five of whom laboured under it at the same time. Throat sore, deglutition difficult, tonsils inflamed, pains of back and loins with cold chills, and much pain of the head, with sickness. His tonsils were scarified and bled freely; he took an emetic, and afterwards a purge. Next day he was

* N. B. Three children out of five died next door, all of whom, the mother informed me, had been well plied with bark and wine from the commencement of the disease.

somewhat better, but the pain of the head had little abated, and the fever was considerable. He was now bled to the quantity of sixteen ounces, took saline mixture frequently, and occasionally gargled his throat. Next morning he was much better, and the pain of the head had quite subsided. After this he recovered very fast, returning to his work on the third day after.

Case VII. Miss Tydiman, aged 12, was attacked in the usual way; took a purge which operated well; after which she became very sick and vomited repeatedly. Fever considerable, great prostration of strength, eruption out. She was now bled about eight ounces; immediately after which she again vomited. The stomach remained so irritable, that nothing could be retained; an opium plaister was therefore applied to her breast, which gave her a good night's rest, and she awoke next morning nearly free from fever, and became quite well in a few days.

Case VIII. Godbold, aged 7, was seized with the disease on the recovery of her sister. She complained of much pain of the head and great difficulty in swallowing, eruption full, had been delirious the two last nights. She lost between five and six ounces of blood, which gave immediate relief to the head, and no more delirium occurred. In a day or two after she was quite well. The cuticle was thrown off in very large portions, but no anasarca succeeded.

Case IX. Mrs. Southerfield caught the disease from her infant child, who died of it soon after her attack. Her throat was much affected, great pain in the head, much apparent debility. She was bled about twelve ounces, purged, and had a blister applied to the throat, and frequently used Mudge's inhaler. The common saline mixture was frequently exhibited. Notwithstanding the most serious apprehensions were entertained concerning her recovery, her mind being much affected in consequence of her child's death, as well as her bodily disease, yet she soon recovered her pristine vigour.

Cases indicative of the beneficial Results of this Treatment at an advanced Period of the Disease.

Case I. William Brown, ætat. 10, was attacked on the 20th July. The eruption appeared on the following day, and gradually became worse till the 24th, when first visited. At this time the throat was much affected, tongue and lips brown, great pain of the head; had been delirious during the night, seemed stupid and comatose, no appetite, great thirst, body costive, pulse quick, talking often incoherently. In this

this desperate state I immediately bled him about six ounces, gave him a purge, and ordered saline mixture. He was also repeatedly sponged, and warm fomentations were frequently applied to the throat. Next morning he was rather better; pain of the head had subsided, and he had not been delirious during the night; had had no stool; the purge was therefore repeated; and as he now refused every kind of medicine, he was allowed toast and water only, the sponging and poulticing being continued. He had a motion towards evening. His neck, breast, and arms began now to vesiculate, and on the following day these parts seemed as if they had been covered with cantharides. These vesicles began to disappear about the 8th day of the eruption, when the cuticle fell off in large pieces; after which he soon became convalescent, and no dropsical symptoms appeared.

Case II. — Downs, ætat. 11. This boy had been ill for several days before I saw him. He now complained of great pain of the head, and sore throat, (the scarlet eruption had appeared and disappeared several times during the last three days) anorexia, and considerable fever. I bled him about seven ounces, which gave the head great relief. He also took cooling medicine. On calling the next day, he was free from all complaint, and had gone out of doors.

Case III. F. Web, ætat. 14, was attacked with the disease some days before I visited her. Her fever was very high, body covered with the eruption, throat much affected, bowels open. Bleeding was now proposed, but not acceded to; she was therefore sponged as usual, took saline mixture plentifully, and had the throat poulticed. On the fifth day of the disease she became much worse, being quite delirious and rather comatose, the eruption still out, very full, and great pain of the head, &c. In this state she was bled about seven ounces, after which she became much better, and the delirium did not again recur. The ablution and medicine were continued for a few days, when she became convalescent. Slight œdema succeeded.*

Case IV. Maria Peak, ætat. 15, was seized on the 6th of September. The following day she took an emetic and purge which operated well. She gradually became worse till the ninth, when she was bled, sponged, &c. At this time the eruption was very full, the throat considerably swelled, scarcely admitting any drink, great pain of the head. Next morning she was very little better, and towards evening ap-

* N. B. This girl remained for several days in the utmost danger.

peared to be sinking fast. She was now ordered a cordial and stimulating draught. This evidently increased every symptom, and was not, therefore, repeated. She was now kept to the strictest antiphlogistic remedies. The neck was blistered and afterwards repeatedly poulticed, and the inhaler frequently used. Epistaxis occurred towards night. This and the copious discharge of saliva seemed the only favourable symptoms. The putrid smell was now almost insupportable. Nothing could be swallowed for the two last days. Our remedies were all therefore external, viz. fomentations, blisters, inhalations, and ablutions, &c. By these means only was she, at length, rescued from the arms of death. Her convalescence was, however, much retarded by a large abscess formed on the neck. This was one of the most desperate cases conceivable, she being for ten days almost in articulo mortis, during which time the putrid odour could scarcely be kept under by continued fumigations, &c.

Case V. Sarah Barrel, ætat. 15. The only material difference in this case from the last, was, that she remained quite delirious for seven days, being often with great difficulty retained in bed. The head had been thrice blistered, and sinapisms were applied to the feet. Neither food nor medicine were swallowed for the greater part of the time. She was allowed weak wine and water when convalescent. Epistaxis occurred after the bleeding, and the salivary secretion was copious. No hydropic symptoms succeeded.

Cases in which Phlebotomy appeared to check the Progress of the Disease when early adopted.

Charlotte Peak, ætat. 13, sister to the subject of Case IV. was attacked on the 14th of September, and the disease fast advancing, the greatest danger was to be feared. She lost about seven ounces of blood, and took an active purge when the eruption began first to appear. She was delirious on the second night of the attack, but every symptom speedily disappeared after the venesection and operation of the purge, when she was no longer indisposed.

Case II. — Manning, ætat. 14, was on a visit, and the fever being in the neighbourhood, she caught the disease. I saw her next morning, when she complained of much pain of the head, sore throat, no appetite, pulse rapid, very thirsty, face flushed. She was now bled about eight ounces, took a purge, was sponged as usual, and ordered saline mixture and barley water. Next day she was nearly well, appetite good, and no particular complaint. In the evening she was so well as to return home.

Case

Case III. Mrs. Collier was attacked with the disease in the usual manner; had great pain of the head, sore throat, and cold shiverings, &c. She was immediately bled between eight and ten ounces, and afterwards purged and sponged, &c. Next morning the body was covered with spots as large as a crown-piece. Towards evening she left her bed, and was quite recovered on the succeeding day.

Case IV. Eliz. Right, ætat. 15, returned from a visit on the 2d of November, when her sister lay bad under the complaint. She was attacked on the 12th with sickness and vomiting, pains of the joints, sore throat, much pain of the head, and great thirst, &c. She was now bled about six ounces, sponged, and took saline medicine. In the evening I was agreeably surprised to find her sitting at the fire, being nearly well. No eruption appeared, the throat better, and the appetite good. Next day she became quite well.

Cases shewing the comparative Success of each Method of Treatment.

A family of the name of Porter, residing at Westerfield Green, was attacked with the disease. It consisted of five children, the eldest of whom was about thirteen, and the youngest near two years.

James was seized on Wednesday. I saw him on Thursday evening, when I learned he had taken an emetic, which both purged and vomited him. He was allowed toast and water, and had a blister for the neck. Some days after he began to recover, but did not leave his bed for seven or eight days.

The eldest was taken on Friday night. Saturday morning she took a purge of rhubarb, which also vomited her; she drank freely of toast and water, &c. and in the night became delirious. Sunday morning the fever was very high, and about twelve o'clock she became stupid and comatose. Camphor, aromat. conf.* and wine were ordered, and she continued till towards morning in a similar state, when she expired.

The second boy was seized some days after. He was also purged, and had vomited likewise. The eruption was full, and the throat slightly affected; on the fourth day he became delirious and comatose. He was now ordered camphorated julep, with aromatic confection, and wine. This plan he continued for several days without any apparent benefit. The delirium and stupor continuing, he died on the eleventh

* Local circumstances, not design, prevented the adoption of means here, which might have saved her.

day of the disease. His smell was so bad for some days previous to his decease, as to be almost insupportable.

The two younger children took the disease at the same time, but had it slightly, and were therefore chiefly left to nature. Their convalescence was, however, very tedious.

A family of the name of Barrel, in the parish of Bramford, caught the disease. This family consisted of six children, the eldest aged seventeen, the youngest about one.

Charlotte, aged five, had it first, and was treated with the strictest antiphlogistic regimen, and, notwithstanding she had been delirious, she soon recovered.

At this time the three eldest were taken, viz. Betty, aged seventeen, Sarah, fifteen, and Jane, eleven years. They all lay in a small lower room, very little larger than what the bed occupied. Two, and for the most part three were in the bed, and one on a sofa. They were all seized with sickness, vomiting, and purging. Sarah became delirious, face flushed, eyes vacant, and the adnata covered with blood-vessels, great pain of the head, &c. This was on the second day of the disease. She was now bled about six ounces, had a blister applied to the nape of the neck, was repeatedly sponged, and drank saline mixture and aq. ammon. acetat. The throat being much affected, was continually poulticed. The delirium and stupor continuing, both temples were blistered, and sinapisms applied to the feet. Persisting in this plan for some days, she became convalescent, and was now allowed some wine. No hydropic symptoms succeeded, and she recovered remarkably fast. Betty and Jane continued to vomit and purge for two days, when it was judged prudent to check this by a small dose of opium. They drank saline mixture plentifully, and were repeatedly sponged. Jane began first to recover. Betty became delirious; a large blister was now applied to the nape of the neck and temples. The throat was often fomented, and the inhaler frequently used. By these means the delirium soon subsided, and the eruption beginning to desquamate, she became convalescent. At this period Mary, aged nine years, was seized in the same violent manner, soon becoming delirious. She was actively purged, vomited, sponged, &c. and allowed the saline mixture as usual. Soon after this she recovered. The young child escaped the disease.

N. B. These five were all confined in the above small apartment, not only three, but often four lying in the same bed. The disease attacked with the greatest violence, inducing delirium, a wild countenance, and almost complete loss of strength in the course of the second and third day. A respectable medical gentleman in the neighbourhood, having visited

visited them, pronounced the approaching dissolution of three. They were attended with the greatest care, and the plan pushed to its utmost extreme.

To each of these heads might be added, a numerous list of examples, but considering these sufficiently indicative of the success of this treatment, I refrain from occupying more of your useful miscellany.

I remain, Sir, Yours, &c.
W. H.*

Ipswich, December 5, 1810.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING read a criticism of Dr. Harrison's "Address to the Lincolnshire Benevolent Medical Society" in your last Number, I beg leave, through the same channel, to offer a few remarks upon a subject vitally interesting to the Faculty, and their patients. I do it the more readily, because you have liberally offered to make your valuable Journal the medium of any temperate observations, whether they be favourable to reform or otherwise. There is every reason to expect, as I have repeatedly heard in conversation, that the bill, of which a copious abstract is printed, with Dr. H.'s address, will under certain modifications be presented to the legislature *early in the ensuing Session of Parliament*, and therefore, it behoves every practitioner, anxious for the honour of his art, and the public weal in what relates to it, to examine the bill and address, which includes a comment upon the bill, dispassionately and without pre-conceived notions. Let him in so doing weigh rather what is practicable in reform, than what he himself conceives to be most desirable or agreeable to his private interests.

The reviewer of Dr. Harrison's work observes, "it appears to us, that he (the Dr.) has attempted to lop some misshapen branches of an old tree, whilst he feared to apply the axe to the decayed trunk." A commentator on the same work, in another Medical Journal, cries out, "that the rusty musty corporations must be destroyed." Without offering any opinion of my own on this delicate affair, I think

* We are requested to state that this communication, as well as, the case of puerperal Fever in No. 138, the case of diseased Bladder in No. 140, and the Report of the Walcheren Fever, in the last number of our Journal, were written by W. Hamilton, Surgeon, Ipswich, and not by Dr. W. Hamilton. EDITOR.

enough is stated by your reviewer, to shew the impossibility of overturning these antient fabrics. "The College of Physicians," he observes, "was instituted by royal authority, and from the nature of its constitution is intimately connected with our two English Universities, and consequently may be regarded as forming part of the aristocratic establishment of the country. Any attempt at reform, therefore, not sanctioned by the College itself, must be hopeless, whilst these institutions continue to be upheld by Government." If then it be deemed so difficult to subvert a single college, can it be conceived possible by one effort to pull down nine Medical Corporations, founded on Acts of Parliament, and protected, as many of them are, by royal charters? The very experiment in these unsettled times would savour of insanity. Dr. Harrison, convinced of its futility, has contrived a bill, which bears no reference to the constitution of the public bodies. The question between the Fellows and Licentiates of the College of Physicians, and the examiners and private members of the College of Surgeons, is therefore left wholly untouched.

Loud and reiterated lamentations are likewise made about quack medicines. Every person tolerably acquainted with human nature, and the state of medical affairs, must feelingly deplore the encouragements afforded to these pernicious articles of finance. Much as I disapprove the policy of Government in this respect, and sincerely as I join the malcontents, I must nevertheless be allowed to think it an act of justifiable caution, on the present occasion, to disregard the patent warehouse. Whenever quack medicines are brought under parliamentary review, let them be introduced in a separate bill and undergo a specific investigation, or no good will be done by the attempt. Look at the popular torrent as it now runs in favour of the Eau Medicinale. Do we not discover Peers and Commoners of distinguished talents and political influence, among its decided partizans? Such is the unaccountable rage for this newly imported secret, that no less an individual than the President of that learned and scientific institution, the Royal Society of London, a severe and crippled Podagric, has repeatedly tried its powers and declaims openly in its favor. What is perhaps still more to our purpose, the most fashionable physicians do not hesitate to recommend it, and the King's Sergeant Surgeon has, it is said, condescended to swallow the remedy and to give testimony to its sanative virtues, on his own person. During the continuance of such prejudices with respect to one reputed panacea, can it be reasonably expected that a general clause to restrain the sale of all quack medicines would be favourably received in the British senate? Surely not. Although

though corporate societies and empirical nostrums are unassailable, may we not be permitted to try a remedy for the other evils and grievances, under which we have long and confessedly suffered? Dr. Harrison seems to have been actuated by these considerations, when he observes, that "influenced therefore by prudential motives, it was determined to exclude the mention of some less important or objectionable abuses, rather than hazard the whole scheme by making it too difficult and complex, leaving it to the wisdom of after times to correct them, by such provisions as may be suggested by sound policy and subsequent reflection.

It is matter of notoriety, that the provinces and even the capital itself are infested with physicians, surgeons, apothecaries, and venders of drugs, who are acting as *regular persons*, without having passed through a prescribed course of study, or giving any test of professional skill. And are these irregularities to be patiently endured in a civilized country? Shall such an outrage upon society, such a scandal to well informed practitioners be allowed to continue, and no effort made by us to remove the disgrace. Let a becoming regard for the best interests of the people, and for the honour of an useful profession, rouse to immediate exertion. The first process should, I think, be limited to the *regular establishment*. When that has been purified, and made fully competent to its important duties, ulterior regulations will follow in course; because their necessity will become apparent. With this intention, as I conceive, the bill has been limited chiefly to the education and admission of future candidates, leaving a great variety of other matters wholly unnoticed. From the agitated and suspicious temper of the faculty, it appears that Dr. Harrison judged well, in confining his first efforts to a few points. The different orders of the profession are so extremely jealous of each other, that it is next to impossible to devise any measure likely to meet with general approbation. In different conversations with Dr. Harrison, while in London, last summer, I found his chief expectations are from parliament. He was admitted to an official interview with the Chancellor of the Exchequer, and had communications with many leading persons in both Houses. A privy counsellor, one of the most active members of the government, would have introduced the bill into the House of Commons had he received it early enough in the late sessions. A peer, who is of the *cabinet*, has also voluntarily offered his best services. This nobleman, like many others, thought the present measure insufficient for an effectual arrangement of the profession. Being told what subsequent matters are in contemplation, he declared his

his entire approbation, and his determination to support the bill.

Provision is made in the bill not only for the passing generation to continue their functions unmolested, but to confirm them *in the legal enjoyment of their several practices*, consequently the plan will be highly beneficial to the present establishment. Unadmitted persons are required to submit to certain preliminary conditions, which in fact were meant to have been included in the several acts of Henry VIII. In his reign the colleges of physicians and surgeons were constructed to examine and admit all physicians and surgeons. The company of apothecaries was afterwards founded to superintend the practice of pharmacy. The present bill professes to supply these defects, and to provide for the introduction of midwives, and all venders of drugs. It is nowhere declared that the scheme offered to the medical public is yet complete, or divested of formidable objections. The friends readily admit its imperfections, and are solicitous to receive the candid remarks of well informed individuals, that its defects may be supplied, before the sitting of parliament. In stating difficulties or offering corrections, gentlemen are particularly requested to confine their remarks to what is contained in the bill itself, since they cannot be acquainted with the nature or extent of all that is intended. I may safely assert from what I have heard, that the matters brought forward by your several correspondents, and other irregularities not noticed by them, are well known and under consideration. I may further add, that some verbal alterations have been suggested to the solicitors: *e. g.* In the clause for physicians "to receive" is wholly omitted. In that for surgeons "to claim" is substituted for "to receive." By these trifling alterations, it is believed, that the utmost degree of latitude possible will be given to surgeons in the practice of physic, and to apothecaries in both physic and surgery.

The bill seems in one material instance to have been generally misunderstood, and in consequence to have been unjustly abused. An opinion seems to prevail, that the bill will forcibly restrain physicians, surgeons, and apothecaries to their respective lines. No such thing was ever in contemplation. Dr. Harrison, to tranquillize the apprehensions of the profession, declares in his pamphlet, "in order to remove the fears, and correct the mistakes of some people, it may be proper to observe, that the bill does not attempt to limit the sphere of medical duty by coercive statutes.* Practitioners will be

* See Dr. Harrison's "Address," &c. p. 87.

left under it at full liberty to use their talents according to their own discretion. It will however oblige all future medical men to pass through a suitable course of study, and undergo examinations for the particular branch, or branches of the profession, into which they are admitted. If any of these persons be desirous afterwards to act beyond the authority of his Diploma, as is now the case with many in the profession, and can succeed with the public by his address or merit, he will not be prevented by the bill from following the bent of his inclination." From Dr. Harrison's frequent consultations with the Solicitor, and the Barrister, who drew out the bill, we may fairly conclude, that he is fully authorized in making the above statement. The action lately brought by Messrs. Price and Thompson in the Common Pleas, to recover for medicines and attendance, affords sufficient proof that surgeons and apothecaries are not legally empowered to charge for medical attendance. From the declaration of the Chief Justice, and the reasonableness of the thing, I trust, if we can ever lay the foundation of reform, that something will be done to increase the receipts of apothecaries, whose incessant labours are so ill requited, and who, in order to obtain a miserable pittance, are obliged to drench their employers with supernumerary medicines. It must have struck every observer, that in small towns and sequestered spots, the rich as well as the poor must continue to place their reliance, as heretofore, in apothecaries, because the emoluments will neither admit of division, nor offer sufficient encouragement to induce physicians, or surgeons, to settle there. Had the scheme prevented apothecaries from exercising physic or surgery, it would have increased the distresses of invalids instead of alleviating them. I am the more desirous to correct this misconception, that the faculty of every denomination may fully understand the extent and tendency of the proposed act. Should any person remain sceptical after this explanation, he will I think do well to state his difficulties, and have the sanction of some legal practitioner, before he ventures hastily and inconsiderately to oppose and condemn clauses, which have been framed by a Barrister of the first eminence in this department of law, and have been unequivocally approved by some of the most respectable physicians, surgeons, apothecaries, and accoucheurs of the present age.

I am, Gentlemen,

Your very obedient humble Servant,

H. R.

London, Dec. 14, 1810.

(No. 144.)

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To the Editors of the Medical and Physical Journal.

Bailey on the Eau Medicinale.

GENTLEMEN,

FROM the commencement of your Repository, its pages have been open to the animadversions of candid criticism: hence has arisen its widely diffused and well established fame. A work continued upon principles like this, will not be likely to lose any of its credit.

Although I am no more concerned for the character of the remedy, the effects of which I propose to lay before you, than you are yourselves, yet as the subject has been noticed in your Journal, and as the eyes of the public are turned towards the conduct and opinion of the medical world, it is no more than just, that an *impartial* and *dipassionate* inquiry should take place.

The old maxim, *audi alteram partem*, holds good in medicine as well as in law.

From much that I had heard and from more that I had read, I considered that the high sounding fame of the new gout remedy would, like many of its precursors, soon “vanish in thin air;” until very lately a small volume being put into my hands, edited by a regular physician of eminence, containing a short history and a list of cases cured by the Eau medicinale. The character of the gentleman who recommended it, and the rank of patients on whom it was tried, banished my scepticism. I determined to make trial of it in the first clear and unmixed case that came in my way. An opportunity soon occurred in the person of a man about fifty years of age, who had had several attacks of regular gout in his feet and hands. Thursday, the 29th ult. was the first day that I saw the patient in his paroxysm; it had come upon him the day before, and was as severe in its attack, and as menacing in its consequences as any one that he before had suffered; it was in his wrist, and from his sensations and former experience promised soon to attack his feet and knees; in this respect he was not deceived, for on the following day he was confined in bed with both his feet wrapped up in flannel, inflamed, swollen, and exquisitely painful; the prospect of passing a dreary winter in pain and distress, lay before him. In this unfortunate condition he begged that I would procure him a bottle of the Eau medicinale; having a good deal of curiosity and more desire to alleviate my patient's distress, I lost no time in complying with his wishes. On Sunday evening, at eight o'clock, he took a tea spoonful, which is about half the bottle, mixed in some water;

water; he felt no effect from it until half past two in the morning; at that time a glow of heat broke out and he went into a refreshing sleep, which continued till eight o'clock, when he awoke and expressed himself easy, and slept again till ten; at this time he was well enough to sit up, and whilst drinking coffee he suddenly became sick and vomited; the sickness soon abated: during that and the following day (Tuesday) he was purged smartly, but he had no other ailment; the pain had quitted both his feet and hand. On my visit to him in the evening of Monday, I found him sitting up, cheerful, and free from uneasiness of every description; he said, if it were necessary he could walk out; his feet and hand were a little stiff, but in other respects he was, in his own opinion, as well as ever he was in his life.

This, Gentlemen, is the history of *one* case, and as far as it goes, is certainly in favour of the nostrum. I am not an advocate for quackery, but I feel every disposition to render praise where it is due.

Your correspondent under the pseudonymous title of Reprehensor shews a laudable feeling, in wishing to collate the opinion of medical men, as far as it regards the character and effect of Eau medicinale; there is no doubt, I conceive, that the wishes of this gentleman will be fully satisfied, as the medicine is undergoing a very extensive probation, in the hands of some of the first medical and chemical characters in the metropolis.

I remain, Gentlemen,
Very respectfully, Yours,
JOHN BAILEY.

Harwich, Dec. 6, 1810.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN looking over the three volumes of "*Medical Histories and Reflections*," by Dr. Ferriar, *second edition*, lately published, I found in the third volume under the head of "*Hooping Cough*," page 221, the following observations.—

"I believe that the only remedy, which promises to shorten the disease effectually, is the solution of white arsenic. I have employed this medicine in several cases of infirmity patients, with tolerable success; and I have occasionally given it in private practice, with so much advantage, that I think it deserving of farther trial. The dose with which I

Q 2

generally

generally begin is *one drop*, daily, for an infant ; and for children under seven, *two drops*, repeated according to the state of the symptoms. It requires some caution, to avoid the accumulated action of this medicine. The exhibition of the solution should be suspended occasionally, for a day or more, and the bowels should be gently opened by means of a little calomel."

As there are no marks by which one can judge, whether the above extract is given as the result of Dr. Ferriar's experience, *since* the publication of the former edition of these volumes, or whether it now remains as it was in the first edition, I shall be much obliged to any of your correspondents who may be in possession of that edition for information on the subject. If the above observation be now for the first time published, the reputation of the author will undoubtedly induce other practitioners to make a trial of the remedy proposed ; but if, as I suspect, this passage is to be found in the former edition, there cannot be reasonably entertained much expectation of advantage from the use of arsenic in the hooping-cough ;—for it amounts to this : Dr. Ferriar's third volume was originally published ten years ago, during which time he must have had repeated opportunities of exhibiting this medicine in the hooping-cough ; of course, if after ten years additional experience, in so common a complaint, he still speaks *doubtfully*, we may fairly infer, that the solution of arsenic is not to be depended upon, and consequently, as Dr. Ferriar admits that it is a hazardous medicine, it would be wise to discard it.

I observe likewise in Dr. Ferriar's second volume, a recommendation of an infusion of digitalis to be used as a lotion, in cancerous cases : Has this been tried for cancer ? It does not appear that Dr. F. used it as a remedy for cancer, but he says, that the simple infusion of digitalis gave relief "in a very painful and ulcerated herpetic affection of the face, which was irritated by the most simple applications, and which would not bear the mildest preparations of lead ;" and hence he is led to suppose that it might relieve cancerous ulcers.

Information from any of your Correspondents on these points, will much oblige

Your constant Reader,
M.

December 12, 1810.

To the Editors of the Medical and Physical Journal.

Queries on Cancer.

GENTLEMEN,

PERMIT me, by means of your Journal, to request from such of your Readers as have paid attention to the Diseases of Animals, Replies to some or all of the following Queries, which, I doubt not, will be acceptable to others of your Readers, as well as to

Your's, &c.

S. M.

Is Cancer a disease to which animals are liable?

What animals are most liable to Cancer?

What parts of the animal are mostly attacked by Cancer?

What are the diagnostics of Cancer in animals?

Is the Cancer of animals characterized by the *firm white lines* of Dr. Baillie; the *firm whitish bands* of Mr. Abernethy; the *ligamentous bands of a whitish colour* of Mr. Home?

Do any medicines relieve the Cancer of animals?

Is the Cancer of animals curable; and by what means?

Does Cancer ever attack the uterus of animals?

The uterus of women is liable to *very different diseases*, which pass under the common name of Cancer: Is the uterus of animals equally liable to diseases of these different kinds?

To the Editors of the Medical and Physical Journal:

Case of Premature Puberty.

GENTLEMEN,

A FEW days after I had perused the very singular instances of premature puberty detailed in a former Number, the following most extraordinary instance occurred, of which I have had ocular demonstration.

Charlotte Mavor, of this city, born in the month of March, 1806, had an appearance of the catamenia at the age of three years and a half, which recurred at uncertain and unequal periods till within six months; since which period she has had them regularly every four or five weeks. Of late they have flowed in considerable quantity, being of
a rich

a rich florid colour. She experiences no pains or other symptoms indicating their approach, save a little stretching and yawning. She is a strong-built womanly kind of child, her nates and shoulders being as large and as broad as those of a grown-up woman. The mammæ are uncommonly large and protuberant, and the pudenda as prominent as those of a girl of sixteen; the mons veneris and labia being furnished with a downy kind of hair. Until within these few weeks the child has enjoyed a good state of health, but since that time she seems to have drooped and languished, owing, no doubt, to the great periodical loss she experiences, and which her young and tender frame is unequal to sustain. I do not find that this girl has exhibited any particular marks of attachment to the other sex; but have thought it right to caution the mother on this head; though I am apprehensive she will not survive many years.

It may be a matter of curious speculation, whether this child could be impregnated, conceive, and produce her kind—I am inclined to think in the affirmative.

I remain, Gentlemen, &c.

A. COOKSON, M. D.

Lincoln, December 10, 1810.

To the Editors of the Medical and Physical Journal.

Mr. Ramsden on the membranous Fence at the Extremity of the Urethra.

[In answer to Mr. Foot.]

GENTLEMEN,

MR. FOOT having in the Medical Journal of the last month complained of a passage in my publication on the Sclerocele, &c. as an *invasion of his claim to the discovery of a particular state of the Urethra*, I hasten through the same channel of professional information, to disavow such construction, by observing that the "*too small perforation in the glans penis*," described by Mr. Foot, and "*THE MEMBRANOUS FENCE*" lately adverted to by me, although somewhat alike in principle, are very different from each other in appearance and in practical application.

The "*too small perforation in the glans penis*,"* men-

* This state of the orifice, if I have a just conception of Mr. Foot's meaning, has no membranous appearance. Although it is not very frequent, yet most surgeons of experience must have met with it. Mr. Foot,

tioned by Mr. Foot in his book on *Vesicæ lotura*, has always seemed to me to mean a small aperture, the edges of which are of equal thickness, and consequently without any *membranous* appearance. This is treated of by Mr. Foot as a cause of disease to the **BLADDER and KIDNEYS**; whereas the "*membranous fence*" or fold, described in my book on the *Sclerocele*, is there treated of, as a cause of derangement to the **TESTICLE**.

To shew that Mr. Foot and I mean two states of the extremity of the urethra which are different from each other, I have to remark, that in the year 1803, Mr. Foot's extensive practice, as appears from his own statement, had only supplied him with *three instances** of the "*too small perforation in the glans penis*," which could not have been the case had Mr. F. intended to speak of the same state of the extremity of the urethra as that which I have noticed under the description of a *membranous fence*—the latter being so very common that it will be found to exist "*IN THE MAJORITY OF PERSONS who apply for assistance under complaints of the testicle or urethra, which cannot be traced to gonorrhæal inflammation.*"

As a farther distinction I might add, that the "*too small perforation in the glans penis*," on account of the **POWERFUL** resistance it occasions to the passage of the urine or semen, becomes the cause of **PAINFUL** and "**DANGEROUS diseases**" of the **URETHRA**, the **BLADDER**, and the **KIDNEYS**, while the "*membranous fence*," on account of its occasioning a more *modified and gentle check* to the passage of those fluids, seldom induces any farther morbid affection **IN THE URETHRA**, than **SPASMODIC STRICTURE**, or THAT **PECULIAR, SUBTLE, AND SECRET DERANGEMENT** of its *membrane*, which I have ascertained to be a *common cause of morbid alteration* in the **TESTICLE**.

Having thus shewn that I have no wish to invade Mr. Foot's claim to the "*feather*" so fairly due to him for his practical remarks on the "*too small perforation in the glans penis*" as a cause of *dangerous diseases to the urethra, the bladder, and the kidneys*, he must pardon me if I retain

Foot, indeed, has candidly acknowledged, that in the year 1803, "*there were some among his friends who were apprised of the importance of the subject, and who treated it as he had done.*"—This fact, however, in no way takes from Mr. F.'s merit in having so *publicly demonstrated* such "*too small perforation of the glans penis*" to be the *cause of dangerous diseases of the Urethra, the Bladder, and the Kidnies*. Vide Mr. Foot on *Vesicæ lotura*, second part, page 84, 85, and 86, cases.

* Vide the same.

120 *Remarks on the History and Use of Tobacco.*

to myself, at least until I can surrender it to a more rightful claimant. the humble credit of having directed the attention of the Profession to *another more frequent state* of the extremity of the urethra, which, although doubtless familiar to every practitioner, has to the best of my belief "HITHERTO REMAINED UNNOTICED" as a remote cause of derangement TO THE TESTICLE.

This, Gentlemen, is the whole and only construction I supposed could be given to the words "HITHERTO UNNOTICED", page 59 of my late *Publication* PROFESSEDLY ON THE TESTICLE, but since Mr. Foot imagines them to allow of a reading injurious to his professional fame, and it is my wish (notwithstanding Mr. F. has concluded his appeal somewhat uncourteously) to do what is proper and respectful, care shall certainly be taken when I reprint the work to free the passage from all ambiguity.

I am, Gentlemen, with respect,

Your obedient Servant,

THOMAS RAMSDEN.

Jan. 15, 1811. Coll. M. D.

Remarks on the History and Use of Tobacco.

(Continued from vol. xxiv. p. 460.)

THE plant which we have seen (*Med. and Phys. Journal*, xxiv. p. 445) disturbing, for a century or more, the repose of the statesman, the priest, and the moralist; and awakening the poet's lyre, to censure or to praise; is an individual of a genus containing seven species.* In the Linnæan sys-

* The six individuals of this family, which differ from the *Nicotiana tabacum* in external appearance, (and probably in physical properties), of sufficient permanence to constitute species, are,

1st. *NICOTIANA fruticosa*. Shrubby tobacco. (Lin. S. 258. Reich. I. 502. Lour. Cochinchina, 111. Burm. Ind. 54. Rumphius Amboi. 7. L. 8. C. 40.) This is, perhaps, indigenous in China, Cochinchina, and India; and, possibly, like the Ginseng, may be found growing spontaneously in some particular spots both in the old and new world. Sir George Staunton informs us (*Embassy* 2, 174,) that it is planted in great quantities in the low grounds of China. On the continent of Hindoostan, and in the islands of the Indian ocean, it is also cultivated with much attention. In Java, particularly about Batavia, it grows to the height of eight feet, with leaves eighteen inches long and eight broad (Nieuhoff.) In Ceylon (*Phil. Trans.*) two varieties were cultivated. It grows naturally in the woods of the island of Tobago.

tem this genus is placed in the class *pentandria*, order *monogynia*; and belongs, in the natural arrangement, to the

Tobago, from whence the seeds were sent to Phillip Miller. (Martyn.)

Var. *N. alba*. Mill. Dict. No. 5.

— *N. major latifolia*, floribus albis, vasculo brevi. Martyn, Hist. Plant. rarior. cent. 5.

(2) *NICOTIANA rustica*, common or English Tobacco. (Lin. spec. 258. Reich. 1. 503. Hort. Cliff. 56-2. Ups. 45. Blackw. t. 437. Kniph. cent. 3. n. 65. Sabb. hort. 1. t. 90. Berg. phyt. 2. 57. Plenck, icon. 100.)

The *N. rustica* was the species first imported, and being more hardy than its congenors, is become a weed in many parts of England. It came originally from America by the name of *Petume*, a Brazilian word. This species is also rendered interesting from being that which Sir W. Raleigh smoked during his confinement in the Tower; and which he cured himself, says Parkinson his contemporary, with great nicety. Sir W. Raleigh, on his return from America, is said to have introduced the smoking of Tobacco into England. In the house wherein he lived at Islington, now the Pied Bull public-house, his arms remain, with a Tobacco plant on the top of the shield. In this house perhaps it was, when soothing his care-worn mind by indulging in his favourite relaxation, and

Faucibus ingentem fumum, mirabile dictu,
Evomit; involvitque domum caligine cæca,
Prospectum eripiens oculis; glomeratque sub antro
Fumiferam noctem, commistis igne tenebris.

VIRGIL.

that his honest English servant, supposing Sir Walter to be on fire, deluged him with water. It may be a question how far the fate of this valuable man was influenced by the notion of his having taught the English to smoke. James had strong prejudices, and his irritations on the subject of Tobacco might have been transferred from the plant to the man. He believed the morals, and even the natural powers of his people to be depraved and diminished by the use of Tobacco. To destroy the man who imported the infernal practice might appear to his mind an act of justice.

Symon. *N. minor*. Morison, hist. 493. 4. f. 4. *Tabaccum anglicum*. Park. theat. 711. t. 712. *Hyoscyamus luteus*. Dod. pempt. 450. Ger. 284. emac. 356. *Priapeia quibusdam Nicotiana minor*. Bauh. hi. t. 3. 630. f. 3. Raii hist. 715. *Pachyphylla*. Renealm. spec. 40.

Var. *N. rugosa*. Mill. dict. n. 7.

— *N. minor*, fol. rugosioribus amplioribus. Vaillant.

(3) *NICOTIANA paniculata*. Panicked Tobacco. Linn. spec. 259. Reich. 1. 503. Kniph. cent. 2. n. 48. Feuill. Peruv. 1, 717. t. 10.

The *N. paniculata* is a native of Peru, was cultivated by Miller in 1739, who says it was found in the valley of Lima by Pere Feuillée in 1710, since which, the seeds were sent from Peru by the younger Jussieu to Paris. The stalk of the panicked Tobacco rises more than three feet, dividing upwards into many panicked branches, which are

(No. 144.)

R

round

LURIDÆ.* The denomination *Nicotiana* has been given to it, from the M. Nicot, before noticed.

round and somewhat hairy. Leaves about four inches long, and three broad, upon longish footstalks. Flowers in loose panicles at the ends of the branches: tube about an inch long and club shaped; brim slightly cut into nine obtuse reflex segments: corolla of a yellowish green, and succeeded by a roundish capsule.

(4) *NICOTIANA urens*. Stinging Tobacco.

Lin. spec. 259. Reich. 1. 503.

A native of South America. The fructification of this species is in racemes directed one way and revolute, with bell shaped corollas, and cordate leaves like those of *N. rustica*, but crenate, the stem hispid, stinging; and the whole tree prickly.

Synon. *N. arborescens spinosissima*, flore ex albido. Plum. spec. 3. icon. 211.

(5) *NICOTIANA glutinosa*. Clammy-leaved Tobacco. Lin. spec. 259. Reich. 1. 503. Kniph. cent. 10. n. 65.

The seeds of this were sent from Peru with the *N. urens* by the younger Jussieu, and cultivated by Millar in 1759. Stalk round near four feet high, sending out two or three branches from the lower part. Leaves large, heart shaped and a little waved, very clammy, standing upon long footstalks. Flowers in loose spikes (*racemes*) at the top of the stalk, of a dull purple colour; calyx unequally cut, one of the segments being twice the size of the others. The corolla almost ringent, gaping at the throat.

Synon. *N. militaris*, Act. holm. 1753. p. 41. t. 2.

(6) *NICOTIANA pusilla*.

Lin. spec. 258. Reich. 1. 504.

This species was discovered in La Vera Cruz, by Dr. Houston, who sent the seeds to England. It has a thick taper root, which strikes deep in the ground; at the top of it come out six or seven radical, oblong, oval leaves, about the size of those of the common primrose, but of a deeper green. The stalk rises about a foot high, branching into three or four divisions, at each of which is placed one small leaf. The branches are terminated by a loose spike of flowers, in acute racemes, which are small, and of a yellowish green colour.

The dealers in Tobacco have many varieties, which probably differ but little in their properties. In the time of *Jean Neander*, who published the first edit. of his *Tabacologia* in 1622, there were known among the merchants the following: *Varinium*, *Tecaporinum*, *Brasilianum*, *Ornochesium*, *Marcapanum*, *Craxium*, *Commenarinum*, *Gotegonasium*, *Burneodes*, *Amazonium*, *Manochesium*, *Comenagoticum*, *Virginianse*, ex Insul. S. Margaritæ, ex Insul. Phillipinis, ex Insul. S. Lucæ, ex Insul. S. Trinitatis, ex Insul. S. Dominice. These seem to be arranged according to the order in which they were esteemed: the *Varinium* was considered

as

* In the former part of these Remarks, *Cynoglossum*, *Conium*, and some species of *Agarics* are apparently referred to the natural order

The species, which is the subject of these Remarks, is the *Nicotiana Tabacum*. *Virginian Tobacco*.*

It is described as having a large, long, fibrous, annual root:—an erect, strong, round, hairy stalk, branched to-

as the best. At present (1811) the London Tobacconists have K'naster two sorts, Virginia three sorts, Oroonoco (Maryland), Ellsham, Persian, Turkey, and Segars. The varieties of snuff are very numerous. They differ but little perhaps in their real properties; but when mixed with odoriferous substances, or changed in their appearance, they have the names of Princes, Dukes, and Generals given to them, and also of noted manufacturers.

Luridæ.† They are not, however, to be placed in that order. The *Cynoglossum* belongs to the *Asperipoliæ*; and the *Conium* to the *Umbellatæ*. Among that class of cryptogamic plants known under the denomination *Agaricus*, will be found some individuals having properties extremely deleterious to animal life. Many instances of their poisonous effects are on record; the pages of the Medical Journal will afford several: but there is not yet, to my recollection, a single notice of their having been employed medicinally. They have a strong action on the brain and nerves, exciting in these parts of the animal system extraordinary commotion; producing temporary insanity, and sometimes death. Three species, *Agaricus muscarius*, *Agaricus glutinosus*, and *A. piperitidis* are known, or suspected to possess the property of thus disturbing the functions: and one of them, the *Agaricus muscarius*, under the vernacular term *moucha-moura*, (so called by the Russians. Pennant Art. Zoo. 1. cxviii.) is employed in the northern parts of Europe and Asia for the same purpose that *Bangue* is used in India. Possessing these narcotic or stimulating powers in an uncommon degree, it is a question if they might not be employed medically under some circumstances. The extensive circulation of the Medical Journal may possibly occasion this hint to be improved into an experimental inquiry, that may elucidate this obscure and neglected subject.

* Lin. Spec. 258. Reich. 1. 502. Mat. Med. 64. Woodville Med. Bot. 162. t. 60. Hort. Cliff. 56. 1. Ups. 45. Blackw. t. 146. Kniphof Botanica in originali cent. 4. t. 55. Ludw. est. t. 167. Know. del. 1. t. 11. Sabb. Hort. 1. t. 89. Plenck icon. 99. Abbott georg. t. 33. Gært. fruct. 1. 264.

† Vid. *Fragmenta methodi naturalis* of Linnæus, which with the *canones*, or institutes, occupies 30 pp. of the *Classes Plantarum*. Edit. 8vo. Lugd. Batav. 1738. Linnæus, in his lectures, continued to add very considerably to the *Fragmenta methodi naturalis*; and as much as could be collected from these lectures, was afterwards published by Dr. Gieseke at Hamburg, under the title of *Caroli Linnæi Prælectiones in ordines naturales plantarum è proprio et fa. (hr. Fabricii, Prof. Kilon. M Sto. Hamb. 1792. 8vo. pp. 652. eum tabb. n. 8. The nat. ord. Luridæ, the 33d in the Fragmenta, contains the following genera—Capsicum, Solanum, Physalis, Atropa, Hyoscyamus, Mandragora, Datura, Verbascum, Celis, Digitalis, and Nicotiana.*

wards the top, and rising five or six feet in height:—leaves numerous, large, oblong, pointed, entire, veined, viscid, pale green, without footstalks:—bractæ long, linear, pointed:—flowers in loose clusters, terminating the stem and branches:—calyx hairy, about half the length of the corolla, cut into five narrow segments:—corolla monopetalous, funnel shaped, tube hairy, gradually swelling toward the border, where it divides into five folding acute segments of a reddish colour:—filaments bent inward, tapering, and crowned with oblong anthera:—germen oval, supporting a long slender style, terminated by a round cleft stigma:—capsule ovate-conical, cloathed with the calyx, smooth, with four depressed streaks, two-celled, opening four ways at top:—partition simple, contrary to the valves:—receptacle very large, fungous, ovate acuminate, convex on one side, and flat on the other; or reniform concave, fastened on both sides to the partition:—seeds very numerous, small, ovate, subreniform, with raised lines or nerves beautifully reticulated, of a yellowish bay colour.*

Of this plant, which has been admitted into the *Materia Medica* of the London Pharmacopein, there are several varieties,† all however of American growth, and possibly not

* Vide Gaertner, de Fructibus et Seminibus Plantarum, 2 vols. 4to. Stutgard, 1788, 1791. The exquisite plates of these volumes beautifully express the form and texture of fruits and seeds.

† VAR. (1.) *N. latissima*. Mill. dict. n. 1. Oroonoco Tobacco. This is the sort commonly brought to market in pots: its leaves are more than a foot and a half long, and a foot broad, their surfaces very rough and glutinous, and their bases half embrace the stalk. In a rich moist soil the stalks are more than ten feet high, and the upper part divides into smaller branches, which are terminated by loose bunches of flowers, standing erect: they have pretty long tubes, and are of a pale purplish colour. Flowers in July and August, and its seed ripens in the autumn.

VAR. (2.) *N. tabacum*. Mill. dict. n. 2. Broad-leaved Virginian, or sweet-scented Tobacco. *Synon.* (1) *N. major latifolia*. Bauh. pin. 169.—Mor. hist. 2. 492. f. 5. t. 11. f. 1. (2) *N. major*. Tabern. s. *Tabacum majus*. Bauh. hist. 3. 629. (3) *Tabacum latifolium*. Camer. and Besl. cyst. (4) *Tabacco latifolium*. Park. parad. 363. t. 361. f. 8. Raii hist. 713. (5) *Petum latifolium*. Class exot. 309. (6) *Sana sancta*. nob. adv. 251. icon. 252. (7) *Hyoscyamus peruvianus*. Ger. 235. 1. emac. 357. 1. (8) *Tornobis*. Cæsalp. (9) *Blennochoes*. Renealm. spec. 37. t. 38. This variety flowers and perfects its seeds at the same time, and is sometimes called sweet-scented Tobacco. It is the broad-leaved Tobacco of C. Bauhin, seldom rises more than five or six feet, and divides into more branches than *Var. 1.* The leaves are about ten inches long, and three and a half broad, smooth,

differing much in their properties. The *Nicotiana Tabacum* properly so called from being the most active and powerful of the genus, and distinguished in the preceding description from its congeners and its varieties, has been examined with minute precision as regards its operation on the mind and on the body—in its botanical, commercial, political, chemical, and medical history. In the former part of these remarks a detail was given of its discovery and first importation into the old world; its sudden and extensive spread among the European states; its influence upon the mind by its soothing and insidious qualities: and its agency in the delusive arts of the Pagan priesthood.* Having now also passed

smooth, acute, sessile: the flowers are rather larger than in *Var. 1*, and of a brighter purple colour.

VAR. (3.) *N. angustifolia*. Mill. dict. n. 3. fig. t. 185, f. 1. Narrow-leaved Virginian Tobacco.

Syn. (1.) *N. major angustifolium*. Bauh. pin. 169. Besl. eyst. Mor. hist. 429. 2. f. 2. (2.) *N. s. Tabacum fol. angustiora*. Bauh. hist. 3. 629. (3) *Tabacum angustifolium*. Camerar. (4) *Tabacum alterum minus*. Dalech. (5) *Tabacum s. herba sancta minor*. Lobel. adv. 251. (6) *Tobacco angustifolium*. Park. parad. 363. Raii. hist. 714. (7) *Petum angustifolium*. Class. exot. 309. (8) *Sanasanta Indorum*. Ger. 285. 2. emac. 357. 2. This rises with an upright branching stalk, four or five feet high. The lower leaves are a foot long, and three or four inches broad: those on the stalks are much narrower, lessening on the top, and end in very acute points, sitting close to the stalks; and are very glutinous. The flowers grow in loose bunches at the top of the stalks; they have long tubes, and are of a bright purple or red colour. They appear at the same time with *var. 2*, and ripen their seeds in the autumn. I am indebted for much information to the elaborate edition of Millar by Professor Martyn, who has so much improved the original work, that in justice it now should be called Martyn's rather than Miller's Dictionary.

* The natural simplicity, and the air of unaffected truth, with which the modes of incantation employed by the priests of the *aborigines* of America are described in an old translation of *Monardes*, B. L. 1580, may afford some apology for inserting the account here. "One of the marvelles of this hearbe (Tobacco) and that which bringeth most admiration, is, the maner howe the Priestes of the Indians did use it, which was in this manner: when there was amongst the Indians any manner of businesse, of great importance, in which the chief Gentlemen called *Casiques*, or any of the principall people of the countrie, had necessitie to consult with their Priestes, in any businesse of importance: then they went and propounded the matter to their chiefe Prieste, forthwith in their presence, he tooke certayne leaves of the Tobacco, and cast them into the fire, and did receive the smoke of them into his mouth, and at his nose with a cane, and in taking of it, hee fell downe upon the ground,

through the scientific part of its botanical history, it remains to notice shortly its culture, and commercial importance; the discovery of its constituent materials by chemical analysis, and to point out its medical properties and its effects, whether curative or deleterious, on animal bodies.

In two points the cultivation of Tobacco has been an object of great solicitude to mankind. On its first introduction into Europe, the morning of science had scarcely broke on that long night of barbarian ignorance, which involved in intellectual darkness the greater portion of this division of the earth. The wonders told by travellers who had just returned from America, and especially of the properties of this plant, aided by its apparent effects, operated strongly on the feelings and expectations of the uninformed population of Europe. Tobacco was sought every where; and as soon as its seed could be procured, it was grown in every place.* When this inducement to its cultivation subsided, as it must when experience made it better known, another sprang up. Its promise to produce great wealth † both

ground, as a dead man, and remayning so, according to the quantitie of the smoke he had taken. When the hearbe had done his woorke, he did revive and awake, and gave them their answeares, according to his visions, and illusions which he saw, whiles hee was rapte in the same manner, and he did interpret them, as to him seemed best, or as the Divell had counselled him, giving them continually doubtfull answeares, in such sorte that howsoever it fell out, they might saye that it was the same, which was declared, and the answeare that he made."

"In like sort the reste of the Indians for their pastime doe take the smoke of the Tobaco, too make themselves drunke withall, and to see the visions, and things that represent unto them that wherein they doe delight: and other times they take it to know their businesse, and successe, because conformable to that, which they have seen beyng drunke therewith, even so they judge of their businesse. And as the Devill is a deceaver, and hathe the knowledge of the vertue of hearbes, so he did shew the vertue of this hearbe, that by the means thereof, they might see their imaginations and visions." Fol. 39.

* As all the species of *Nicotiana*, the *Rustica*, and *Paniculata* excepted, are too tender to be raised from seeds, without the assistance of artificial heat, it is probable the *N. Tabacum* was not generally grown in the fields and gardens of Europe. The *N. rustica* (common or English Tobacco) the favorite of Sir Walter Raleigh, most likely was the plant that invaded Europe, and threatened to dislodge the natural and useful possessors of the soil.

† The first commerce in Tobacco seems to have commenced about 1585, and as it proceeded, the demand for it in Europe became so urgent, that at the beginning of 1600, it was essential for the existence of the American colonies to restrain the cultivation, which by the hope

to individuals and to states, gave it a second triumph : and the financier now became as anxious to promote its increase as the physician, who hailed it as an universal *panacea* had formerly been.

The culture of this plant as adopted in Europe, in a commercial view has now no importance. To science, however, it still affords no small portion of interest ; and the philosophical botanist who desires to compare the species with each other, and fully to comprehend the generic characters, will not be displeased with the note* below, which describes from

hope of gain had extended so as to threaten the exclusion of grain of all kinds. For a detail of the progress of the culture and commerce of Tobacco from 1584 to 1748, Anderson's elaborate History of Commerce may be consulted ; and to that excellent work I refer with confidence in its correctness.

* The seeds of the tender species of the Tobacco plant, viz. *N. tabacum*, *N. fruticosa*, *N. urens*, *N. glutinosa*, and *N. pusilla*, must be sown on a moderate hot-bed in March, and when the plants come up fit to remove, they should be transplanted into a new hot-bed of moderate warmth, about four inches asunder each way, observing to water and shade them until they have taken root ; after which let them have air in proportion to the warmth of the season, otherwise they will draw up very weak, and be thereby less capable of enduring the open air : water them frequently, but while they are very young it should not be given to them in great quantities ; though when they are pretty strong, they will require to have it often, and in plenty.

In this bed the plants should remain until the middle of May, by which time, if they have succeeded well, they will touch each other : therefore they should be inured to bear the air gradually ; after which they must be taken up carefully, preserving a large ball of earth to each root, and planted into a rich light soil, in rows four feet asunder, and the plants three feet distant in the rows, observing to water them until they have taken root ; after which they will require no further care (but only to keep them clean from weeds) until the plants begin to shew their flower-stems ; at which time cut off the tops of them, that their leaves may be the better nourished, whereby they will be rendered larger, and of a thicker substance. In August they will be full grown, when they should be cut for use ; for if they are permitted to stand longer, their under leaves will begin to decay. This is to be understood of such plants as are propagated for use, but those which are designed for ornament should be planted in the borders of the pleasure-garden, and permitted to grow their full height, when they will continue flowering from July till the frost puts a stop to them.

The *N. urens*, *glutinosa*, and *pusilla*, being somewhat more tender than the *N. tabacum*, when removed from the hot-bed in which they were sown, and when they have obtained a good share of strength, should be transplanted into separate pots, and plunged into a moderate hot-bed to bring them forward. About the middle of June some of the plants

the best source, the judicious methods that the most rational gardeners of the present time employ. The growing of Tobacco in America* has the same interest which the cultiva-

plants may be shaken out of the pots, and planted in beds of rich earth; but it will be proper to keep one or two plants in pots, to be placed in the stove, in the case the season should prove bad, that they may ripen their seeds.

The *N. rustica*, and *paniculata* being very hardy, may be propagated by sowing their seeds in March upon a bed of light earth, whence they may be transplanted into any part of the garden, and will thrive without farther care. MARTYN'S MILLER.

* In America Tobacco is cultivated with great care and attention; but the mode of management varies, as we see in England a different kind of agriculture pursued in the different counties. In 1724 the Rev. Hugh Jones, of James-town in Virginia, thus describes the culture of Tobacco. "When a tract of land is seated," says he, "they clear it by felling the trees about a yard from the ground, lest they should shoot again. What wood they have occasion for they carry off, and burn the rest, or let it lie and rot upon the ground.

"The land between the logs and stumps they hoe up, planting tobacco there in the spring, enclosing it with a slight fence of cleft rails. This will last for tobacco some years if the land be good, as it is where fine timber or grape vines grow.

"Land, when hired, is forced to bear tobacco by penning their cattle upon it; but cow-penned tobacco tastes strong, and that planted in wet marshy land is called *not-burning tobacco*, which smokes in the pipe like leather, unless it be of a good age.

"When land is tired of tobacco it will bear Indian corn or English wheat, or any other European grain or seed, with wonderful increase.

"Tobacco and India corn are planted in hills, as hops, and secured by *worm fences*, which are made of rails supporting one another very firmly in a particular manner.

"Tobacco requires a great deal of skill and trouble in the right management of it. They raise the plants in beds as we do cabbage plants, which they *transplant* and *replant* upon occasion after a shower of rain, which they call a *season*. When it is grown up they top it, or nip off the head, succour it, or cut off the ground leaves, weed it, hill it, and, when ripe, they cut it down about six or eight leaves on a stalk, which they carry into airy tobacco houses; after it is withered a little in the sun, there it is hung to dry on sticks, as paper at the paper mills; when it is in proper case (as they call it) and the air neither too moist, nor too dry, they *strike it*, or take it down, then cover it up in *bulk*, or a great heap, where it lies till they have leisure or occasion to *stem* it (that is, to pull the leaves from the stalk), or *strip* it (that is, to take out the great fibres), and tie it up in *hands*, or *straight lay it*, and so by degrees prize or press it with proper engines into great hogsheads, containing from about six to eleven hundred pounds; four of which hogs-

heads

tion of wheat has in this country. It affords subsistence to multitudes. A failure in the crop of Tobacco is a national evil: because its produce gives revenue to the state, and wealth to the merchant; to the farmer competency, and to the labourer employment.

A circumstance which accompanies the cultivation of Tobacco in America, if the principle of it were not seen in Europe through the medium of similar facts, would be thought so wonderful as almost to forbid belief. This powerful soporific plant, which in a few grains only enervates the strongest man, and pushed a little further extinguishes the vital principle, is eaten with avidity, and is indeed the principal food of the *larva* of a delicate fly.*

heads make a tun, by dimensions, not by weight; then it is ready for sale or shipping.

"There are two sorts of tobacco, viz. *Oroonoco*, the stronger, and *sweet-scented*, the milder; the first with a sharper leaf like a fox's ear, and the other rounder and with finer fibres: but each of these are varied into several sorts, much as apples and pears are; and I have been informed by the Indian traders, that the inland Indians have sorts of tobacco much different from any planted or used by the Europeans." A German author describes, about 1794, the Virginian mode of culture and cure, which seems exercised with a ridiculous precision. In the voyages of *Perele Bat* there are many particulars of the first methods of managing the tobacco plant; and in the American Museum for 1787 and 1789, an account will be found of the raising and curing of tobacco in Maryland, and of the method of cultivating that plant in Virginia where it borders on that country, as practised by Judge Parker. The great obstacles to the successful culture of tobacco in America, are the fly and the worm.

* It will be gratifying to me, and probably acceptable to most of the Readers of the Medical Journal, to have described by some of its numerous correspondents, the species of insects which feed upon the Tobacco plant—pointing out their station and name in the *Syst. Nat. Lin.* the peculiarities of their natural history; the effects they produce upon other animals when eaten or applied to the skin, if any such are known; the common or popular appellations by which they are distinguished; whether they are considered as poisonous; if their fluids manifest the properties of the plant upon which they feed, or whether the acrid principle of that plant is so changed by digestion and assimilation, as to lose its original properties. If the insects which feed upon Tobacco should be found to acquire the properties of that plant, whether these properties may not have undergone a change in some particular which may render their acrid and soporific principles more valuable medicines, cannot be determined without an experimental inquiry. There are analogies in insect life, and in the other orders of the animal kingdom, which make it probable that the flies or larvæ which feed on

In the general attention which Tobacco has excited, it was not possible that it could escape the investigation of the chemist. At different periods, and under many varied circumstances, attempts have been made to detect and separate the principle that gives energy and activity to this vegetable : to ascertain whether in the same substance was combined its emetic, cathartic, diuretic, and narcotic qualities ; whether those qualities might be separated and singly employed ; and what proportion they held with the inert earthy or herbaceous bodies, which possibly give form and stability to the plant. The facts respecting these particulars, as ascertained by chemical analysis, have been so governed or distorted by prevailing theories, that some plain and tangible truth which might convey conviction to the mind, is sought for in vain. With one the active principle has been an undefined volatile spirit, escaping on the application of heat, and leaving behind an inert mass. With another an acid phlegm*, a gross sulphur, or a specific salt, in some way afforded the medicinal or deleterious material. Or the active constituent is again believed to be an essential oil obtained by distillation, and which is so virulent, that small animals are almost instantly destroyed when wounded by a needle dipped into it.† The French Chemists, who have laboured exceedingly on the analysis of every substance, have not overlooked Tobacco. The last of them who have attempted to separate the component parts of this plant, and to seize on the substance in which its virtues are believed more especially to be confined, is M. Vauquelin, who has given in the *Annales de Chimie*, an analysis of the *Nicotiana Tabacum latifolia et angustifolia*. (Tabac a larges feuilles.) The result of M. Vauquelin's experiments shewed that the juice of the *Nicotiana latifolium* contained :—

the genus *Nicotiana*, may retain the properties of the species of that genus, or have their juices changed by the process of animalization into some other active substance.

* “ Such as are more vexed with rheumatic, or erratic pains, by moderate drinking, should smook Tobacco, for its acid or sulphur embarrasses those acrid particles, whose points are so ready to pierce into, and fix in the small vessels of the periosteum, and excite intolerable pains.” Discourses on Tea, Tobacco, &c. by Dr. Thomas Short. 8vo. Lond. 1750.—In another place, this writer (who was, notwithstanding these wanderings into hypothesis, a man of observation and laborious inquiry,) says, smoking is serviceable, on account of the salts of Tobacco breaking and dividing the sily cohesions of the blood.

† In a *Memoire sur le Tabac*, &c. the active material is said to be a gum, perfectly soluble in water, but not in alkohol ; and that with this
gum

1. Une grande quantité de matière animale de nature albumineuse.
2. Du malate de chaux avec excès d'acide.
3. De l'acide acétique.
4. Du nitrate et du muriate de potasse en quantité notable.
5. Une matière rouge soluble dans l'alcool et dans l'eau, qui se boursoufle considérablement au feu, et dont je ne connois pas bien la nature.
6. Du muriate d'ammoniaque.
7. Enfin un principe âcre,* volatil, sans couleur, soluble dans l'eau et dans l'alcool, et qui paroît être différent de tous ceux qu'on connoit dans le regne végétal. C'est ce principe qui donne au tabac préparé, le caractère particulier qui le fait facilement distinguer de toute autre préparation végétale.†

gum a considerable portion of muriated kali is intimately mixed. Vid. *Journal de Physique*, 1791.

* Le principe âcre dont il s'agit, a peu d'odeur quand il est dissous dans l'eau, ce qui annonce qu'il n'est pas très-volatil : il paroît très-difficile à détruire, car, mêlé avec une assez grande quantité d'acide muriatique oxigéné, il conserve encore toute son âcreté après que celui-ci s'est évaporé spontanément.

La saveur âcre et la volatilité tout-à-fait particulières de ce corps, semblent indiquer que c'est un principe qui appartient exclusivement au genre nicotiane, et qui par cela même est nouveau, puisque les chimistes qui ont donné l'analyse de cette plante, n'en ont point parlé, au moins à notre connoissance.

† M. Vauquelin conjectured that there existed in the species of the genus *Nicotiana*, a principle very different from any found in other plants ; or if it were not so, Tobacco (that is the prepared Tobacco of Commerce) might be made from a variety of plants ; but by the want of this all endeavours of that sort have been frustrated. Under this impression, assisted by M. Roubiquet, jun. and M. Warden, M. Vauquelin undertook this Analysis. It may not be unacceptable to those who wish to repeat or to pursue the Analysis of M. Vauquelin, to have, in detail, the process of that ingenious chemist, as inserted in the *Annales de Chimie*, July 1809.

Procédé.

“ Après avoir broyé les feuilles du *nicotiana latifolia*, dans un mortier de marbre, on les a enveloppées dans un linge serré, et soumises à l'action de la presse. Pour séparer tout ce que ces feuilles pouvoient contenir de soluble, on a répété trois fois l'opération ci-dessus, en ajoutant une petite quantité d'eau.

Quoique le linge dans lequel on avoit pressé se végétal fût assez serré, le suc contenoit une grande quantité de matière verte en suspension,

THE medical history of Tobacco may be divided into two distinct branches. One will comprehend its employment as

qu'on a séparée par la filtration à travers un papier joseph : cette matière verte, restée sur le filtre, a été lavée et mise à part ; nous en reparlerons dans la suite.

Examen du suc filtré.

1°. Ce suc rougit fortement le papier de tournesol, preuve qu'il contient un acide libre ;

2°. L'oxalate d'ammoniaque, par le précipité abondant qu'il y forme, démontre la présence de la chaux ; et conséquemment d'un sel calcaire quelconque ;

3°. Le nitrate d'argent détermine dans le suc de tabac, un précipité abondant qui n'est pas entièrement dissous par l'acide nitrique, d'où l'on peut conclure qu'il est en partie formé par un muriate ;

4°. L'infusion de noix de galle, les acides minéraux annoncent, par les précipités bruns assez volumineux qu'ils y occasionnent, l'existence d'une matière animale et particulièrement de l'albumine ;

5°. La chaleur élevée à quatre-vingts degrés de l'échelle de Réaumur, en y déterminant une coagulation abondante, confirme ce que les acides et la noix de galle ont annoncé ;

6°. L'acétate de plomb y forme un dépôt grisâtre extrêmement abondant, qui se dissout en grande partie dans le vinaigre distillé.

L'effet de l'acétate de plomb dans ce suc, nous ayant fait soupçonner la présence de l'acide malique, nous avons précipité, au moyen de l'acétate de plomb, une assez grande quantité de cette liqueur coagulée par la chaleur ; nous avons fait passer ensuite sur ce précipité lavé et délayé dans l'eau, un courant de gaz hydrogène sulfuré jusqu'à ce qu'il y en ait eu un léger excès.

L'objet de cette opération a été de réduire le plomb en sulfure, et par ce moyen de le séparer de la matière à laquelle il étoit uni. Pour faciliter la précipitation du plomb-sulfuré, nous avons chauffé et filtré la liqueur.

Cette liqueur, ainsi filtrée, a été évaporée avec ménagement jusqu'en consistance de sirop ; en cet état elle avoit une saveur très-acide, rougissoit fortement l'infusion de tournesol, formoit avec l'alcool et l'ammoniaque, des dépôts abondans qui, en annonçant la présence d'une matière animale, prouvoient qu'une portion de cette substance avoit été entraînée par le plomb dans sa précipitation.

Espérant que l'acide contenu dans cette liqueur épaissie, seroit soluble dans l'esprit-de-vin, et qu'on pourroit par ce moyen le séparer de la matière qu'il tenoit en dissolution, nous l'avons traité à chaud par cet agent à quarante degrés. En effet, aussitôt que le mélange de ces matières a eu lieu, il s'est produit une coagulation abondante, l'alcool s'est coloré, d'abord en jaunâtre, puis en rouge-brun, et est devenu.

La portion de matière non dissoute par l'esprit-de-vin, étoit blanchâtre, se dissolvoit en partie dans l'eau, et sa dissolution précipitoit par l'acétate de plomb comme l'acide lui-même.

L'oxalate d'ammoniaque y occasionnoit un précipité, et cette substance

mise

a luxury, and its use as a prophylactic; the other will apply to its direct exhibition as a remedy for existing disease.

mise sur les charbons ardents, laissoit un residu de carbonate de chaux; enfin nous avons reconnu que cette substance étoit formée en grande partie de malate de chaux qui retenoit quelques portions de matière végétale-animale.

La majeure partie de cette substance végétale-animale que nous avons cherché à séparer au moyen de l'alcool, s'y étant dissoute à la faveur de l'acide, nous avons saturé ce dernier par l'ammoniaque qui y a formé un dépôt floconneux considérable, dont les propriétés étoient entièrement semblables à celles des matières animales. Malgré cette saturation, la noix de galle produisoit encore dans la liqueur un précipité très-sensible; de là l'on voit qu'il existe entre l'acide et ce principe animalisé, une très-grande affinité.

Cet acide purifié le mieux possible, nous a présenté tous les caractères de l'acide malique, c'est-à-dire, qu'il donnoit beaucoup de consistance à l'eau par l'évaporation, ne cristallisoit point, précipitoit l'acétate de plomb en une substance soluble dans le vinaigre distillé, se boursouffloit au feu en répandant une odeur de caramel, et se convertissoit en acide oxalique par le moyen de l'acide nitrique.

Ainsi, l'acétate de plomb avoit tout à-la-fois précipité l'acide malique, beaucoup de matière végétale-animale colorée, et un peu de malate de chaux. Ce dernier paroît avoir été entraîné en combinaison avec le malate de plomb, et avoir été redissous par l'acide malique, à mesure qu'il a été mis à nu par l'hydrogène sulfuré.

Dans plusieurs expériences où nous avons aussi précipité du suc de tabac avec de l'acétate de plomb en excès, nous avons de même retrouvé du malate de chaux dans l'acide malique.

Il existe donc dans la nicotiane une grande quantité de malate de chaux que l'on peut obtenir directement en faisant évaporer aux deux tiers le suc de cette plante.

Une fois la nature de l'acide bien constatée, nous avons repris le suc de nicotiana, dans lequel nous avons versé de l'acétate de plomb en excès, pour le traiter aussi par l'hydrogène sulfuré; nous avons obtenu un liquide bien transparent, de couleur citrine, qui conservoit la même odeur et toute l'âcreté du suc entier. Soupçonnant que cette saveur dépendoit de la présence d'une huile volatile, nous avons distillé la liqueur, et nous avons obtenu un produit qui avoit une légère odeur herbacée et peu de saveur.

La portion concentrée qui restoit dans la cornue, mêlée avec un peu de potasse ou d'ammoniaque, exhaloit une odeur vive et tellement pénétrante, qu'en la respirant un peu fortement, elle faisoit éternuer et couler les larmes; nous répétâmes cette expérience en employant la potasse sur une quantité plus considérable de matière, et nous distillâmes après avoir étendu d'un peu d'eau. Le nouveau produit que nous obtînmes dans cette deuxième opération, avoit la même odeur que la fumée de tabac, étoit extrêmement âcre, et produisoit une sensation semblable à celle qu'on éprouve lorsque la poudre de tabac, respirée trop fortement tombe dans la gorge.

Comme

Of its general employment as a luxury, and of the evils it produced, or was supposed to have produced, on the morals and in the affairs of mankind, enough has been said in the former part of these Remarks.

Its power to preserve from disease, and to prolong life, has been the fond theme of many writers, who persuaded themselves that by its constant use the extreme period of longevity might be attained, and that the interval would be filled with jollity, uninterrupted health, and perfect happiness. A Dutch Physician,* in a work published in 1690, was so convinced of its power to effect those desirable objects, that he concludes, in the last chapter (the 20th) of his elaborate volume, that every man and woman should be encouraged or compelled to smoke, that they may pass a life of gaiety and unvarying health.† His work begins with assert-

Comme ce produit étoit alcalin, nous avons soupçonné que ce principe, quel qu'il fut, ne se volatilisoit qu'à la faveur de l'ammoniaque, provenant de la décomposition d'un sel ammoniacal contenu dans le tabac, puisque quand la liqueur étoit avec excès d'acide, nous n'obtenions point le même résultat. Cependant dans une opération semblable, fait à la vérité sur un tabac sec, nous avons obtenu un produit dont l'odeur et la saveur étoient pour le moins aussi prononcées, quoique la liqueur d'où il provenoit contint un acide libre. Au reste, par la distillation, nous ne sommes jamais parvenus à isoler parfaitement cette substance acre, et même la plus grande partie restoit dans la cornue : il paroît d'après cela que l'acide malique diminue la volatilité de ce principe acre.

Pour tâcher d'obtenir séparément ce principe, nous avons évaporé à une très-douce chaleur, la liqueur qui le contenoit, et nous l'avons traité par l'alcool à quarante degrés qui, en effet, l'a séparé des autres matières : en faisant ensuite évaporer l'alcool, nous avons remarqué à la surface du liquide, quelques traces d'huile brune, et la portion qui passoit à la distillation, acquéroit d'autant plus d'âcreté, que l'opération arrivoit plus près de sa fin. Cette huile presque solide répandoit, lorsqu'on la mettoit sur un charbon allumé, une fumée épaisse, et une si forte odeur de tabac, qu'elle en étoit insupportable.

Cette dissolution alcoolique a fourni, en refroidissant, du nitrate de potassé en quantité notable.

* Joannes Ignatius Worp Beintema Van Peima, M. D. *Tabacologia, ofte Korte Verhan delenge over de Tabak, Detselvsdeugd, gebruyk ende kennisse: Waar door aangerweesen word't een wegh om lang, vroolyk, ende gezond te leeven.* 12mo. Gravenhage. 1690. pp. 175. With a frontispiece of men and women smoking, worthy of Hogarth.

† Met aanmoedigeng van Tabak te rooken aan alle mans, ende vrouwen, met een bewijs, dat se verplicht zyn te rooken, so se blyde, vrolyk, ende wel leevende wille zyn.

So highly was Tobacco esteemed at this period, that *Johannes Kiersinga*, who presented complimentary verses to *Beintema* on his publication, contends that the discovery of this plant alone has placed the science and knowledge of the moderns above that of the ancients.

ing, “*Het rooken is een van de voornaamste middelen, om gezondheid, ende leeven lang te behouden.*” That smoking is one of the principal means to preserve health and to prolong life.

The prophylactic properties of Tobacco were once, however, believed to be more specifically determined.* Diemer-

Indien de gryse Eeuw uyt haar gefronste kuilen
 Ons leev tijds wijsheid, en dien drom van letter—zuilen,
 Aansag; gewisselyk sy zeyd geheel versuft:
 Nu is't de vyfde Eeuw van 't Goddelyk vernuft.
 Neerland alleene geeft meer licht, als in myn dagen
 En Greik-en Romerland met al haar Wijsen saagen.
 Swijg vry Aaloude tijd! en trek 't gerimpold hoofd
 In't swarte grav, dees Eeuw heeft u van konst beroofd.
 Ganz bar sou dit geluyt ter schorre keel uytstygen,
 (Niet met maarteegen wil) indiense niet moest swygen.
 Alleen Genees-kunst die in onse daagen praald
 Toond, dat de wetensghap nu word voor't licht gehaald.
 In alles vind men kragt om swakke wear te styven,
 Uit hout, uit been, selvssteen daarkan men kragt uit dryven.
 Sghoon dat de oudheid hier in minst geen deugd in keurt,
 Word nogtans in ons tijd hier groote kragt bespeurt.
 Ons kruyd, wiens naam dat selvs de oudheid nimmer kende,
 Roemt sig een troost te zyn, een hulp voor veel elende.
 Prijswaardig is by dan, die ons dat kruyd verklaart,
 Besghermt, en al sijn kragt, en dengden openbaart,
 En toont met hoeveel heyl dit heerlyk kruid kan werken
 In 'smensghen lighaam, hoe't de geest selv kanversterken,
 Naadien het sinnelyk door rook met rook omswiert,
 Terwijl de geest haar selv tot hooger dingen stiert,
 En soekt naa 't vaste goed, 't welk niemand kan bevatten
 Met sinnelyk gewoel dat nooyt so hoogh kan spatten.
 Aaloude Eeuwen swijgt dan vry maar van u lof,
 Van welk de wereld waagt, gy sghreeft nooit van een stof
 Als deese is: de kunst godin woont nu op Aarde,
 Nu segt se 't geen se u nog nimmer openbaarde.
 Prat dan o Haaven-stad vry op u BEINTEMA,
 Eer hem, die evenschreets Heer *Bontekoe* gaat na;
 Juight vry om dat hy sig, en ook U met zyn schriften
 Met onverwelkbaar lof dees eerezuil gaat stifien.
 Apollos voesterkind; was *Dokkums* Voesterling.

* Though Diemerbrook, who was extremely conversant with the subject, had an high confidence in the prophylactic virtues of Tobacco in Pestis, and others also recommended it with some earnestness; yet there is much reason to conclude it has no property that renders it valuable in that view. Dr. Russel, who had the best means of making observations on this subject, says, that those who employed Tobacco as a preservative

brook asserted that it preserved from the contagion of the Plague; and that all the inhabitants of houses both in London and Nimeguen, where tobacco was sold, escaped infection, while those in the adjoining ones received the disease. But this property was denied by Rivinus and others, who affirm, that many great smokers died in the Plague of Leipsic. Dr. Thomas Short asserts its prophylactic property, with regard to contagious and epidemic distempers: and though his reasoning on its *modus operandi* cannot be admitted, yet the facts he mentions are, if fully ascertained, of great value.* A more exact acquaintance with the laws of

preservative (at Aleppo) were not less liable than others to be infected. The custom of smoking is universal among both men and women of all ranks at Aleppo, and Dr. Russel supposed that the habit might deduct from its prophylactic property, but corrects himself by remarking, that those who use it as a preservative must in some degree be accustomed to it, otherwise the violence of its operation might prove hurtful. But as the Tobacco commonly used in Syria is much milder than the American, this remark may lose some of its force. Dr. Mead hesitatingly recommends smoking as a prophylactic in Pestis. Further observations on this property in Tobacco may be seen in *Orræi descriptio Pestis*. Primrose, (*De vulgi erroribus in Medicina*, 16mo. Amstelod, 1639.) has some curious reasoning on the prophylactic property of Tobacco in the Plague. His opinions cannot be considered as vulgar errors; but the mistakes of the learned are of more importance than those of the unlearned. Adamus Hahn (*Tabacologia sive de Tabaco dissertatio*. 4to. Jenæ,) thought its prophylactic property of sufficient importance to make one of the queries in his 7th chapter; which especially inquires if smoking Tobacco is serviceable against the Plague? See De Merten's Obs. Med. de Febr. putr.—Chenot Tract. de Peste. Sir William Temple thought it not only cured diseases of the eyes, but preserved the sight. His words are, "For rheums in the eyes and the head, I take a leaf of Tobacco put into the nostrils for an hour each morning, to be a specific medicine. An old prince Maurice of Nassau told me, he had by this preserved his eyes to so great an age, after the danger of losing them at thirty years old: and I have ever since used it with the same success, after great reasons, near that age, to apprehend the loss or decay of mine." Essays, 8vo. vol. iii. 297. This is cited rather as a specimen of opinions which once prevailed, than as a practical precept.

* "In time of pestilence, or any other contagious or epidemic distemper, smoking is profitable, both as the pungency of the smoke accelerates the blood's motion, and prevents the alteration of our mass of blood, by the attraction of the contagious effluvia drawn in with our breath, and swallowed with our spittle, but especially as its much sulphur embarrasses and sheaths those effluvia; hence all the Tobacconists' houses and shops in London barred the entrance of the spreading contagion in 1665 and 66; even the fumes of the Tobacco, by stirring it up and handling

nature, profound chemical investigations, and an experimental knowledge of the operations of animal life, have taught modern physiologists to reject all preservatives from contagion, which do not chemically neutralize or destroy the contaminating material. Fumigations, and odoriferous substances, camphor, ruta, &c. are not only useless, but possibly increase the danger. The organ of smell has been given to animals, not only for the purpose of discriminating food, but as a sentinel to give warning of the approach of danger.* When enjoying the full exercise of its natural

handling it, had destroyed the venom of the malignant effluvia, before they were sucked in with the people's breath." Discourses on Tea, Tobacco, &c.

* The abuse of the organs of sense, in a highly artificial state of society, have frequently so injured their properties, that civilized man has hardly an idea of their acuteness in a state of nature. Savage tribes in the American forests know if a man has passed the preceding day, by smelling to the leaves or herbage on which he has trampled. A dog scents game at considerable distances; and, if the fact were not confirmed by daily experience, it would hardly gain credit, that he can trace the odour of his master's foot through all the winding streets of a populous city. A very ingenious collector of the facts in natural history, speaking of the *sense of smell*, says, "all bodies in nature, whether solid or fluid, whether animated or inanimated, continually send forth to the air certain effluvia or emanations. These effluvia float in the atmosphere, and act upon the olfactory nerves of different animals, and sometimes of different individuals of the same species, in such a manner as to produce very different sensations. Brute animals select their food chiefly by employing the sense of smelling, and it seldom deceives them. In the selection of food, men are greatly assisted, even in the most luxurious state of society, by the sense of smelling. Substances of a putrid smell, as equally offensive to the olfactory nerves and to the constitution, are avoided with abhorrence and rejected as noxious. The more acute discernment of brutes in the exercise of this sense, is entirely owing to their freedom, and to their using natural productions alone. But men in society, by the arts of cookery, by the unnatural assemblage of numerous ingredients in one dish, *blunt, corrupt, and deceive their sense of smell*. Were they in the same natural condition as the brute, they would be enabled by the olfactory organs to distinguish, with equal certainty, noxious from salutary food. Domestic animals are nearly in the same condition with luxurious men. A pampered dog snuffs and rejects many kinds of food, which, in a natural state, he would devour with eagerness. But assistance in the choice of food is not the only advantage that men and other animals derive from the sense of smelling. The subtilty of the emanations that are sent forth from animal, vegetable, and mineral substances, when exposed to the air, is so extreme, that no eye can perceive them. These effluvia, or volatile particles, are diffused through the air, and are recognized by the organ of smell. To
(No. 144.) T give

powers, the olfactory apparatus will sometimes, perhaps frequently, give intelligence of being within the sphere of the infecting atmosphere. How absurd, then, is it to confuse this sentinel by a variety of powerful odours, which certainly do not correct or destroy the infecting gas, or whatever it is, but merely render the nerves of the organ of smell insensible to it!

The confidence with which Tobacco was used as a prophylactic, was certainly equalled by the opinion that it produced singular changes in some of the organs. Many writers, and some of great credit, believed, that the brain of immoderate smokers became incrustated with a fuliginous matter similar to soot in a chimney.* It is more certain, or at least more con-

give some idea of the minuteness of these particles, and of the amazing sensibility of the nostrils of animals, it is only necessary to state, that the odour of musk has been known to fill a large space for years without losing any perceptible part of its weight. Thus the air we breathe is perpetually impregnated with an infinity of different particles which stimulate the olfactory nerves, and give rise to the sensation of smell. When our senses are not vitiated by unnatural habits, they not only convey to us exquisite pleasure, *but are the faithful monitors of danger.*" It is probable that all the pestiferous gases, or the materials of contagion, whatever they are, have connected with them a mauvais odeur that will induce to a removal from their sphere of action. I know but of one exception. Some of the most noxious vapours in mines are also attended with a delightful smell, resembling the pea-blossom. These vapours generally come in the summer, and oblige the miners to quit their work, to whom they would otherwise soon prove fatal. (*Phil Trans.*) In that exquisite poem, the Mine, the author has touched this subject with great taste. He adopts the Rosycrusian fancy of Gnomes, spirits which inhabit the earth, and who by their power form the ores of metals, and all the wonders met with in the inmost recesses of the globe.

"Wheresoe'er our footsteps turn,
Rubies blush, and diamonds burn;
Every grot and silver cave
Streams of milk and amber lave;
And our bow'rs such perfumes give
As mortals cannot taste and live."

SONG OF THE GNOMES.

* ADAMUS HAHN, before cited, in a series of questions on the properties and uses of Tobacco, has one "*An fumus Tabaci crustus nigrans in cerebro gignat?*" The response to this question gives an epitomé of opinions which once prevailed.

"Quilibet pro sua sententia confirmanda experientiam adducit. Ita ex affirmantium ordine se sistit. P. Pavius Lugdun. Anatomicus, qui in juvene cultro anatomico subjecto tales se invenisse crustas gloriatur;

sonant to observation, that the brain, though not encrusted with Tobacco soot, has often suffered by the constant use of

tur; fuit verò fumifugus celeberrimus. *Falckenburgius*, qui in *Epist. ad Neandam* profitetur se easdem observasse. Rationes sunt, 1. quod tabacum in se habeat unctuosam, oleosam, viscosam materiam, quæ successu temporis viscidæ & tenaci cerebri substantiæ poterit adhærere, atque talem concretionem facere. 2. spontanea ad superiora fumi ascensio & pororum cerebri ad recipiendum aptitudo adsit. A negantium parte stant *J. Dan. Horst. in manud. ad med. C. Magn. l. c. p. 111.* qui opponunt illis observationem *Gvil. van der Meer*, fatentis, se in pluribus fumifugis dissectis tale quid invenire non potuisse, imò se in fure καπνιφιλα celeberrimo, ita ut in ipsa quoque hora mortis fumum hunc avidius sumserit, tale quid cerebro dissecto, observare nequivisse. Ita in virili cadavere, (quod dum erat in vivis, avidus fumum hunc hauriebat) peritæ ante biennium *Nobiliss. atque Excell. Dn. D. Præsidis* sectioni subjecto non licuit quidquam talium crustarum deprehendere. Hoc tamen in ipso notabatur, quod sinistra cerebri substantia sese totam putredine corruptam, cum colore ad cæruleum vergente, exhiberet. Num verò hæc corruptio a nimio fumi hujus usu ortum traxerit, (cum dextrum latius adhuc saluum, hic verò ad utrumque; æque possit ferri) aliis judicandum offerimus. *Hoferus* alio exemplo adducto, hoc itidem negat, similiter *Primar. l. 4. c. 34.*, rationes habent 1. quod si fuligo talis fieret sensibilis, non possit aliter fieri, quin inducat gravissima symptomata. 2. quod aer non feratur ad cerebrum, de quo vid. *CL Schneider. l. c. Higmor. disquisit. anatom. p. 222.*

Pro affirmantium parte faciunt illa, quæ habet *Hoffman. l. c.* *Audivi, inquit, a militibus in Belgio versatis, vidisse se dissecta capita eorum, quibus patera ab anatomicis dicta, tota interius esset nigra, licet a carnifice interiissent. Audivi, pergit, a patritio Norico, qui in superiori bello Bohemico vidit omnes, qui in conflictu cum hostibus interierint, Anglos, habere talia capita. Pro his etiam facere posset aeris in cerebrum ingressus, quem concedit *Excell. D. D. Rolfinc. in dissert. anat. p. 711, & 569*, attractio aeris, *inquit*, fit per ossis cribrosi foramina, & non solum aer cerebri meningem ambit, sed & ventriculos ipsos ingreditur. Quo cum facit etiam *Nobiliss. Dn. D. Schenckius in Schola Part. p. 42.* Cum aere ergò, dixerit aliquis, junctus fumus hic, utpote summe penetrans, atque ad cerebrum delatus, unctuositate, lentore ac pinguedine sua tales generare posset crustas, si non ita palpabiles, tamen visibiles.*

Nos interim hæc decidenda doctioribus relinquimus, contenti jam opinionum quarundam recensitionibus, circa quas ut quilibet suo sensu abundet, æquo fermius animo, addendo saltim ex *C. Lang. in Misc. C.* exempla & observationes in arte medica quidem plurimi esse momenti, sed illa tamen cum ratione conjungenda."

The excellent and laborious Mongagni did not think this subject quite undeserving his notice, and shews, in his great work, "*de Causis et Sedibus Morborum*," that when this fuliginous matter was detected by dissection, it either arose from some other cause, or the anatomist was imposed on by some legerdemain trick.

this narcotic, (we shall see hereafter that a very contrary opinion has prevailed) ; and that when used in the form of snuff the perfection of the organ of smell has always been injured. My own observation has led to a conclusion, that the constant and profuse employment of this herb has been injurious to the brain and nervous system. In twenty-five years actual practice, a great number of cases of *Paralysis* have come under my notice ; in all, or in the far greater part of these, the men were smokers, and the women snuff-takers.*

(To be concluded in the next Number.)

* It is not to be doubted that the immoderate use of Tobacco has, in some idiosyncracies, produced alarming effects on the most efficient organs of the animal machine. "I have observed," says Cullen, "several instances of great snuff-takers being affected in the same manner as persons are from long continued use of other narcotics, such as wine and opium ; that is, by loss of memory, by fatuity, and the other symptoms of the weakened or senile state of the nervous system, induced before the usual period. I have found also," adds this ingenious physician, "that excessive snuff-taking produces all the symptoms of dyspepsia, particularly pains of the stomach, occurring every day." Almost two hundred years ago, Dr. Venner, in the quaint but forcible language of that time, objected to the use of Tobacco. "I will summarily rehearse," says the author of the *VIA RECTA*, "the hurts that Tobacco inferreth, if it be used contrary to the order and way I have set down. It drieth the brain, dimmeth the sight, vitiateth the smell, hurteth the stomach, destroyeth the concoction, disturbeth the humours and spirits, corrupteth the breath, induceth a trembling of the limbs, exsiccateth the winde pipe, lungs, and liver, annoyeth the milt, scorseth the heart, and causeth the blood to be adusted. Moreover it eliquateth the pingue substance of the kidnies, and absumeth the geniture. In a word, it overthroweth the spirits, perverteth the understanding, and confoundeth the senses with a sudden astonishment and stupiditie of the whole body. All which hurts I affirme, that the immoderate and intemperate use of Tobacco doth affect, both by reason of its temperament (hot and dry in the third degree) ; but especially through the properties of its substance (deleteriall or venomous) : Wherefore the use of it is only tolerable by way of physick, not for pleasure or an idle custome. To conclude, therefore, I wish them that desire to have *mentem sanam in corpore sano*, altogether to abandon *insanum praeposterumque Tabacci usum*." *Via Recta ad Vitam Longam*, 4to. Lond. 1638. p. 363. The destroying spirit of man taught the wandering savages of America to envenom their arrows with a poison prepared with this plant. The black pigment which collects in long-used tobacco-pipes, is a strong poison to some animals. Barrow (*Travels in Africa*) relates that he saw a snake poisoned with it. The effect was instantaneous as the electric shock. I remember to have seen the common English snake thus instantaneously destroyed. Barrow asserts, that the snake he saw thus
killed

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I SINCERELY regret that the letter which you did me the favour to publish in your last number has considerably offended Mr. Ramsden; it is considered by him as containing animadversions on his practice. In justice, therefore, to myself, and in the hopes of removing all such unpleasant impressions from that Gentleman's mind, I feel myself called upon to state thus publicly, that such never was in the most remote degree my intention.—If that letter admits of any interpretation different from Mr. Ramsden's own account of the operation, I am sorry that I should have adopted expressions capable of a construction which it was not my design they should carry.—By inserting this you will oblige,

Gentlemen,

Your obedient Servant,

HENRY EARLE.

Hanover Square, Jan. 14th, 1811.

killed became immediately hard and rigid, as if dried in the sun. The Hottentots consider this substance, which they call oil of tobacco, as the most deadly of poisonous substances; but it is never applied to the points of their arrows, because it is too volatile to retain its deleterious quality. One Manwaringe, a chemical doctor, or a trading chemist, in 1666, brought a severe charge against tobacco. He accused it of producing scurvy, and wrote a duodecimo pamphlet to prove his accusation.

For the Medical and Physical Journal.

DOCTOR POLE'S Thermometrical, Barometrical, and Udiometrical STATEMENTS for the Seven preceding Years; from Daily Observations, made by the assistance of accurate Instruments employed for that purpose, in St. JAMES'S SQUARE, BRISTOL, Jan. 15, 1811.

The average temperature of each month, from observations made at eight o'clock in the morning.

Numerical order of the months.	Months as denominated in the Calendar	The average temperature of each month, from observations made at eight o'clock in the morning.													
		1804	1805	1806	1807	1808	1809	1810	100ths of a deg.						
1	Jan.	32	50	33	16	37	73	31	33	33	47	33	17	32	24
2	Feb.	36	33	35	26	37	75	35	75	34	15	42	11	34	57
3	March	36	33	40	20	37	94	33	46	33	66	30	56	39	45
4	April	37	39	42	27	43	80	42	23	43	10	39	77	45	50
5	May	57	57	50	54	17	55	66	56	90	56	78	50	12	
6	June	62	57	50	61	80	59	45	59	90	58	85	60	53	
7	July	62	61	52	63	64	44	66	22	61	96	61	74		
8	August	60	33	63	33	62	22	63	52	63	17	61	44	61	32
9	Sept.	56	32	58	54	52	48	27	45	80	56	76	56	40	
10	Oct.	49	99	43	48	66	51	46	44	34	46	17	47	71	
11	Nov.	42	10	36	45	30	34	53	42	52	36	40			
12	Dec.	33	50	37	44	44	31	55	33	10	37	94	38	32	

The average state of the Barometer for each month, from observations made at eight o'clock in the morning.

Numerical order of the months.		1804	1805	1806	1807	1808	1809	1810							
	Months as denominated in the Calendar	Inches	Inches	100 of an inch	Inches	100 of an inch	100 of an inch	100 of an inch							
1	Jan.	29	60	29	62	0	530	10	30	11	0				
2	Feb.	30	25	29	35	30	5	29	91	30	5	30	75	29	75
3	March	29	74	40	—	29	50	30	15	30	30	29	58	29	91
4	April	29	80	29	90	29	90	30	30	30	15	30	80	29	67
5	May	29	40	30	—	30	5	30	95	30	15	31	10	29	35
6	June	30	35	30	5	30	20	30	7	30	25	31	30	30	—
7	July	29	90	30	—	29	90	30	15	30	25	31	42	29	72
8	August	30	—	30	35	30	—	29	75	29	45	31	49	29	80
9	Sept.	30	61	30	5	30	10	29	90	29	50	31	40	29	94
10	Oct.	29	75	29	95	29	90	30	10	29	45	31	4	29	82
11	Nov.	29	90	30	30	29	85	29	75	29	65	31	10	29	37
12	Dec.	29	85	29	20	30	20	30	15	29	60	29	13	29	18

The highest temperature of the Atmosphere indicated by the Thermometer, at any one time during the last Seven Years.

The months noticed	Months as denominated in the Calendar.	Days of the month.	Degrees of temperature.	Years.
6	June	25	86	1804
7	July	17	86	1805
9	September	18	77	1806
6	June	10	84	1807
7	July	22	85	1808
7	July	12	91	1809
7	July	27	78	1810
9	September	2	80	1810

An account of the quantity of rain fallen in each month.

Numerical order of the months.	1804	1805	1806	1807	1808	1809	1810
1	4.43	2.44	5.97	3.28	1.5	4.12	0.90
2	2.48	2.30	2.14	2.1	0.59	2.26	2.30
3	1.80	0.98	1.67	0.84	0.35	1.27	0.62
4	2.27	2.78	1.29	0.49	5.37	3.75	1.42
5	2.75	1.43	1.50	5.82	2.99	1.45	2.59
6	0.25	2.58	1.32	0.15	1.75	1.75	1.55
7	3.78	2.60	3.27	4.21	2.76	1.7	4.52
8	2.26	2.22	4.27	2.55	3.6	4.38	2.66
9	0.28	1.59	1.81	3.69	4.39	4.16	2.66
10	2.80	1.94	1.49	2.14	5.26	0.8	3.45
11	5.44	1.32	3.36	5.44	3.8	1.54	6.80
12	1.45	3.73	6.39	2.4	1.52	2.68	5.24
Total in each year	29.77	26.13	32.31	31.32	28.29	51.35	71.71

The quantity of rain fallen in each month, upon an average of the last Seven Years.

Numerical order of the months.	Months, as denominated in the Calendar.	Inches	100ths of an inch	Fractions.
1	January	3	3	5-7
2	February	2	17	3-7
3	March	1	14	5-7
4	April	2	48	1-7
5	May	2	64	5-7
6	June	1	33	4-7
7	July	3	25	6-7
8	August	3	5	5-7
9	September	2	65	-
10	October	2	45	1-7
11	November	3	85	3-7
12	December	3	29	3-7

The lowest temperature of the Atmosphere, indicated by the Thermometer, on the two coldest days in the last Seven Years, according to observations made at eight o'clock in the morning.

The months noticed numerically.	Months, as denominated in the Calendar.	Days of the month.	Degrees of temperature.	Years.
3	March	23	20	1804
12	December	24 & 30	21	1805
2	February	2	23	1805
11	November	21	18	1806
1	January	30	20	1806
10	October	24	29	1807
1	January	15	18	1807
12	December	23	16	1807
1	January	22	12	1808
12	December	21	19	1808
1	January	23	10	1809
11	November	20	16	1809
2	February	18	16	1810
12	December	31	21	1810

Correct statements of Atmospheric changes in temperature, gravity, humidity and dryness, quantity of rain, falls of snow, direction, force, and continuance of winds, when comprehending a long series of time, may be expected to develop some principle, or demonstrate some state of the air connected with widely spreading epidemics. The physicians of former periods, from Hippocrates to Sydenham, very uniformly

uniformly fell into this opinion. But as they wanted instruments, their observations had a confined range, were vaguely made, and consequently indeterminate. In their details the seasons are distinguished as very hot, dry, cold, or wet: the summers are described as unusually cold, or oppressive from heat; the winters are characterized by the long or short duration of frost. It was not possible to shew the precise degree of any of these. From the want of meteorological records, it is still disputed what changes have taken place in the climate of the British islands. If we were to admit the statements of some of our old historians, who, in pages of flowery eloquence, describe the genial warmth of the British vallies, where even the vine flourished with luxuriance, and produced the richest grapes, it must be allowed that the temperature of this country has been considerably lowered. But an observation has been made by an ingenious naturalist (p. 97 of this Number), from a nearly demonstrable fact, that in some very early period, these regions, the *ultima thule* of the Romans, were much colder than at present. If in these early periods it had been possible to have kept correct registers of the weather, and such registers had been continued from age to age, they would, it is probable, have afforded data explaining operations of the atmosphere upon animal life, which now remain in obscurity. Let us bear in mind that we possess the means of delivering down to future ages meteorological facts, which may prevent our successors experiencing difficulties with regard to the present which we now feel of the past time.

Of all the diseases which appear to be diffused by the atmospherical medium, the epidemical catarrh, under the popular term *Influenza*, has the strongest character, and the widest range. If we could know the exact state of the atmosphere, in all its bearings, of 1510, the earliest recorded instance of this epidemic, and in the subsequent times of its recurrence in 1557, 1580, 1587, 1591, 1675, 1709, 1733, 1743, 1762, 1767, 1775, and 1782, there would be a probability of arriving at some principle explanatory of its cause, and of its connection with or dependence on some state of the air. These observations have been suggested by the preceding statement of Dr. Pole, the correctness of which we cannot doubt; and to its utility we are perfectly alive. As far, however, as these meteorological statements regard the practice of medicine, we will suggest that they would be greatly improved by adding to them a column, containing a register of the prevailing diseases, or such trains of morbid actions as constitute epidemics, in each year or subdivision of the year.

To the naturalist, as well as the physician, it would render these registers more distinct and perspicuous, if the particular kinds of instruments employed were described. *Ed.*

Theoretical Suggestions for the Improvement of Practical Surgery.

(Phil. Magazine.)

1st. **I**N that part of the operation of amputation when the bone is to be sawed through, it appears that a steady support to the bone would materially facilitate and secure the correct action of the saw: In the present mode, when the only means of steadying the bone and resistance to the action of the saw is made by the grasp and manual force of frequently agitated assistants, the difficulty of dividing the bone, without splintering and ruggedness, is very considerable. Might not a perpendicular prop from the floor, with a semicircular hollow to receive the bone, be of great effect in rendering it steady? When a retractor is used, might not such prop form part of that instrument? Carpenters, when they saw timber, always take care to make it steady previous to the application of the saw; why should not the same mode be used when sawing the bones of the arm or leg? The soft parts could not be injured by such a method; as by the present mode of amputation, by double incision, a considerable length of bone is bared before the saw is used, and why might not the proposed support be applied to that part?

2d. In the operation of trepaning the skull, when the scalp is sufficiently removed, it is essential to remove just so much of the pericranium and no more, as the head of the trephine will include; because the cranium, when denuded of its pericranium, will, like other bones denuded of their periosteum, grow carious. This part of the operation is now generally performed by an instrument called a raspatory, or by scraping the skull with a small scalpel. Would not this be performed much more complete by having a head adjusted to the trephine handle, precisely the dimensions of the serrated head, and which head would have a circular cutting edge, with a species of concave plane or scraper within it? One turn of such an instrument, which any person could easily contrive, but which is difficult to describe by words, would completely remove the exact portion of pericranium and no more.

3d. Were surgeons to make themselves acquainted with the implements used in different mechanical professions, it is possible

sible some valuable additions might be made to the present instruments of surgery. They should likewise observe with a professional eye, the various mechanical improvements which are daily taking place. Might not the circular saw be introduced in some operations? Small circular saws, cutters, or wheels with toothed edges of different sizes and thickness, might perhaps be used with effect in insulating and removing the depressed angular pieces of bone which occur in fractures of the skull. When the trephine is admissible, a circular cutter applied to the edge of the fracture might, if used with proper precaution, cut away the bone with safety, and make a space sufficient to admit the elevator. Such a cutter might be turned by the hand, as great velocity would be dangerous. A method could easily be contrived to apply such an instrument with the requisite steadiness to the part.

4th. The centre point of the trephine necessarily protrudes beyond its teeth; in consequence of which, when the inexperienced operator neglects too long to remove it, the most serious effects are sure to follow. Might not this be easily prevented by having a shoulder, as mechanics term it, to surround the point, just so far down from the extremity of the point, as to permit the saw to fix itself, and no more?

5th. Would not a contrivance be useful, in trepanning the skull, to fix the head in the most favourable posture?

6th. The best shape for the points of one description of piercing instruments has never yet been exactly ascertained; and it is certainly a question of considerable importance. Those piercing instruments are meant, where breadth is requisite immediately on insertion; for, as to common needles, and other small instruments merely for piercing, it is evident the more acute their points are made, the better. In some instruments, however, where a point is merely necessary for their insertion, when that point is much prolonged beyond the efficient part of the instrument, it becomes injurious: What point will suit such an instrument best? Is it well ascertained that the drill or shear point is the most advantageous? If the point formed an acute angle, sloped to one side, would it not answer as well? What is the proper angle for such a point? Mechanics pierce brass, copper, and steel with drills of different shapes: May not there be an appropriate point for piercing animal membranes? The French discovered by experiments (fatal experiments!) that the descending blade of the guillotine cut best when sloped to a certain angle. However confident may be our opinion, experiment should always be had recourse to, when possible; and in satisfying the present doubts, it is very possible. An apparatus might easily be

contrived for the purpose. All that is requisite is, a piece of brass, about four inches long and two inches square, supported by two or more feet, and perforated longitudinally, to admit a thick steel pin, which pin is to be fitted to the perforation in the brass, so as to move very freely, and to exceed the brass about two inches or more in length. On the upper end of this pin, a small flat piece of brass should be fixed, capable of holding weights; and in the lower end, a hole made, into which the different shaped points on which we are desirous to make experiments are to be fixed, similarly to the shifting feet of common compasses. Immediately below this pin should be placed a species of drum, consisting of a small box, with bladder or other elastic substance stretched over it to imitate the animal tonics. Now it is evident, that by placing different weights on the upper end of the pin, until the point experimenting on pierce the stretched bladder, may be exactly appreciated the comparative advantage of the different kinds of point.

7th. The operation of couching frequently fails, from the cataract or opake crystalline lens being of a soft consistency; which the couching needle, instead of depressing, passes through and divides. If the broad part, which is frequently used in depression, were made concave so as to fit the convex edge of the lens, might it not in some degree remedy this evil?

8th. Considering that the majority of calculi in the bladder are more or less spherical, it appears that the forceps now used in lithotomy is not of the most advantageous construction. By each side of the beak of the usual forceps being concave, with an oval hole at the bottom of the concavity, similar to the forceps once used in extracting polyp, the edges of which hole, and the sides of the concavity, might have teeth, Would it not be more likely to lay hold of even an irregularly spherical calculus than the forceps at present used, with toothed beaks and flat sides? and which seems better contrived for crushing a soft calculus to pieces, than for holding it fast and withdrawing it whole.

9th. Another kind of forceps for extracting the stone may be suggested. Suppose a forceps with the beaks formed of two narrow elliptical rims, jointed so as in some degree, by the pressure upon a calculus, to conform themselves to its size. To the edges of these rims attach a piece of linen or leather, forming to each beak a small purse or sack. When these forceps should be closed upon a calculus in the least spherical, the steel rims would extend to let it pass, and it would then be completely surrounded. The advantages of these forceps would be, that the calculus could

could not escape; and the bulk to be withdrawn through the wound, would be very little more than the exact bulk of the calculus.

On the Barometer. By RICHARD WALKER, Esq.

(Continued from p. 52 of our last.)

(Phil. Mag.)

A warm temperature of the air, at any degree of density of the atmosphere, will retain a greater portion of water in a state of chemical combination, than a cold temperature of the air at a similar degree of density of the atmosphere. Hence we may account for the almost constant dry state of the lower stratum of the atmosphere during the SUMMER SEASON, and the almost constant moist state of the lower stratum of the atmosphere during the WINTER SEASON; the air, however, being sometimes sufficiently dense, as in the clear weather which accompanies a freezing atmosphere, to retain the water in a state of chemical combination, notwithstanding the diminution of temperature.

The same circumstance accounts likewise for the different states, with respect to moisture and dryness, of the middle seasons, viz. SPRING AND AUTUMN, accordingly as these participate in their nature more or less of either of the former seasons; observing that, *ceteris paribus*, there is more rain and misty weather during AUTUMN than SPRING, and consequence of the greater quantity of water which has been raised into the atmosphere during the SUMMER than the WINTER SEASON.

All the circumstances I have had occasion to mention, depending upon the greater or less density, and the higher and lower degrees of temperature of the atmosphere, are exemplified by the two following familiar experiments:

In the first instance, by means of pumping out of a glass receiver (containing air apparently dry and perfectly transparent) a certain portion of the air it contains, when the air being rarefied deposits a certain portion of the water it originally contained in chemical combination in a cloudy vapour, which, upon re-admission of the air, is re-absorbed; and in the second instance, by abstracting heat from a glass vessel containing atmospherical air, and again restoring the heat. The latter circumstance is likewise instanced, *naturally*, by what commonly happens in the course of a hot summer's day, particularly when the ground has become very moist by previous rain; the vapour ascending visibly in the morning, dis-

disappearing during the middle of the day, and descending visibly again in the evening.*

The variations of temperature in the atmosphere, independent of those which proceed from the direct influence of the sun, arise from the conversion of water into vapour, which produces cold; and the condensation of vapour into water, which produces heat. Hence it commonly follows, that in proportion as the barometer rises, the thermometer sinks, and vice versa, throughout the year; the direct influence of the sun in clear weather being abstracted†.

Thunder frequently follows a considerable duration of dry hot weather, both these circumstances being favourable to the collection and insulation of electric matter.

The extraordinary elevation of the barometer which sometimes happens, is said to arise from two currents of air, from opposite directions, meeting and accumulating over a particular spot; and the extraordinary depression of the barometer, from the circumstance of two currents of air setting out from any particular spot: in either case a commotion of the air is necessarily produced, whilst the equilibrium is restoring.

That the atmosphere, as well as the sea, is affected periodically in a small degree by the attraction of the moon, is well ascertained; but it does not appear that the weather is in the least influenced by any mechanical effect of the moon.

I was led to remark a difference of the weather during the increase and during the wane of the moon, by observing that eclipses of the moon were much seldomer obscured by a cloudy atmosphere than eclipses of the sun; and subsequent observations of a general nature have somewhat confirmed me in the same opinion.

Like a cream, and now and then

For the Medical and Physical Journal.

Observations on White Serum.

WE have been favoured, by Joshua Brooks, Esq. (Theatre of Anatomy, Blenheim Street), with a portion of SERUM of Human Blood, which in appearance exactly resembles milk.

* At Lima, in Peru, it never rains; the moisture in the day time being restored again at night in the state of mist.

† In summer, during fair weather, the nights, or rather the mornings before sun-rise, are cold, approaching even to frost.

The

The blood, of which this serum made a part, was taken from a person suffering under *splenitis*, which was believed to arise from repeated attacks of intermittent fever. When drawn from the arm, it separated almost immediately into a white opake serum of the colour and consistence of milk, and a crassamentum (buffy and cupped) which floated in it. The patient was bled five times. The first, second, and third bleedings exhibited the milky serum; the fourth and fifth had the serum of a natural colour and consistence, with a less sily crassamentum.

The blood, from which this milky serum separated, was taken from the arm on the 24th of November ult.—and now, on the 25th of January, 1811, this serum has not undergone any change in its appearance and qualities, remains perfectly free from putridity, and looks like milk fresh from the cow.

The Gentleman, Mr. Cullen, Surgeon of Sheerness, from whose patient the blood was taken, and who transmitted the serum to Mr. Brooks, describes the bason of blood as precisely resembling a bason of milk, with the crassamentum floating in it.

The rare occurrence of this phenomenon, and the little that is at present known either concerning its cause or properties, or its connection with health and disease, induce us to lay before our readers the observations of that ingenious anatomist, Mr. Hewson, on the subject. Possibly this will be more acceptable, as we extract from a work become extremely scarce, and of a high price. EDITOR.

“ALTHOUGH the serum of human blood be naturally transparent, and a little yellowish, yet it is frequently found to have the appearance of whey, and sometimes to have white streaks swimming on its surface like a cream, and now and then to be as white as milk, whilst the *coagulum* is as red as usual. In all these three cases of whiteness, I have examined it in a microscope with a pretty large magnifier, and have found it to contain a number of very small globules, although naturally, when transparent, no globules can be observed in it, notwithstanding what has been affirmed by some authors. These globules differ from the red particles (improperly called globules) in their size, which is much smaller; and likewise in their shape, which is spherical, whilst the red particles are flat. They agree more with the globules of milk. I have compared them with those of woman's milk, and have found, that in the milk the globules are of different sizes, some being three or four times as large as others, and the smallest little more

more than just visible, when viewed with a lens of $\frac{1}{3}$ of an inch focus, whilst those of the white serum are more regular, and are all of them about the size of the smallest globules of milk. Of white serum I have met with the following instances in books. In Tulpius, one instance,* in Morgagni, two,† in the Philosophical Transactions, some instances,‡ in Skenckius's Observations, two cases are related from other authors. § I have likewise heard of the same appearance having been observed by the learned Sir John Pringle, Dr. Pitcairn, Dr. Hunter, Dr. Watson, Dr. Bromfield, Dr. Garthshore, and Dr. Fothergill of Northampton. And other instances have lately occurred to persons of my acquaintance who have favoured me with a short account of them.

“ Mr. French, apothecary in St. Alban-street, having informed me, that he had some blood by him, taken from a woman the day before, whose serum was as white as milk; he favoured me with a small quantity of it for examination, and with it the following particulars of the case. ‘ Mary Rider, about twenty-five years of age, of a fresh complexion, and lusty, has not had her menses for these seven months. She discharges blood sometimes by vomiting, and sometimes by stool; complains of a pain in her left side, and in her stomach: she has an inclination to eat, but when she tries, she soon after loathes her food. She complains of great lassitude and sleepiness; her pulse is ninety-five in a minute. She has been bled twelve times within these six months, and every time the serum was as white as milk.’ ”

“ Mr. Robertson, apothecary in Earl Street, acquainted me, that ‘ Mr. Herbert, a publican, of about thirty-five years of age, and corpulent, had been subject to a bleeding at the nose, to the piles, and to such profuse sweats in the night, as to be frequently obliged to change his shirt in the morning before he got out of bed, but that, for some time past, his sweats had ceased. That, on September the 23d, he was seized with a bleeding at his nose, which had been preceded by a pain in his head for two or three days. That his bleeding continued till he had lost about two pounds of blood, and then stopt; and that the serum of his blood was as white as milk. That at ten o'clock the same night, the hemorrhage returned, and he lost a considerable quantity; nevertheless, it was thought proper to take sixteen ounces of blood from

* Tulp. Ob. l. 1. cap. 58.

† Morgagni, Ep. XLIX. Art. 22.

‡ Philosoph. Transact. No. 100, and 442.

§ Skenckij Obs. lib. 3.

his arm, during which evacuation he fainted, but his bleeding at the nose stopt. That the *serum* of this last blood was likewise very white. That on the 25th, in the morning, he again complained of a pain in his head, and about ten o'clock his nose began to bleed again; but the *serum* now appeared no whiter than whey. That he continued to lose blood during most part of the night, so that it was supposed he could not lose less than two or three pounds, the *serum* all this time being a little whitish, but so little, that the bottom of the vessel in which it stood could now be seen through it. That his bleeding returned repeatedly till the third of October, when it entirely stopt, the *serum* having become more transparent towards the last."

"Mr. Eustace, apothecary in Jermyn-street, sent me a phial of white *serum* from one of his patients, by trade a butcher. 'This man,' he told me, 'was tall, of a strong make, a hard drinker, subject to puke every morning, took little food, sweated a good deal, but did not waste in his flesh. He was bled for a slight *asthma* to which he was subject, and of which he had always been relieved by bleeding. In other respects he was in a good state of health, so as to follow his business without much inconvenience.'"

"Besides these cases, my friend Mr. Lambert, surgeon at Newcastle upon Tyne, told me, 'that he had a patient some years ago with a violent rheumatic pain in his hip, whom he was obliged to bleed thrice, and every time his *serum* was as white as milk, but the *coagulum* of its natural colour. This gentleman,' Mr. Lambert adds, 'was a free liver, of a full make, but rather muscular than corpulent, and remarkable for being a great walker.'"

"When I first saw this unusual colour of the *serum*, I was inclined to adopt the opinion of those who have attempted to explain it by the patient's being bled soon after a meal, or before the chyle was converted into blood. But afterwards, on considering the cases above related, I found this could by no means be the cause, as none of these patients had taken a sufficient quantity of food to occasion this appearance; on the contrary, most of them had a bad appetite, and had taken remarkably little food, and were subject to vomitings. I therefore concluded it was owing to something else, and what confirmed me in this opinion was an observation I had repeatedly made in dissecting geese, whose *serum* I had frequently seen white, whilst their chyle was transparent; although they had been killed only three or four hours after eating. And as the whiteness, in all the cases that I examined, was owing to a quantity of small globules like those of milk (which are known to be oily) I con-

cluded that these in the human *serum*, when white, were oily likewise, and recollecting to have read somewhere of an experiment by which butter had been got from such human *serum*, I tried, by agitating some of it a little diluted, to separate its oil, or to churn it, but without success. I then inspissated some of it to dryness, and compared it with the natural *serum* of human blood prepared in the same way, and found it less tenacious, and much more inflammable; and when thus dried, its oil oozed out so much as to make the paper in which it was kept greasy. Another portion of this white *serum* being kept some days, putrified, and when putrid, it jellied as milk does when become sour; but it differed from milk, in being extremely foetid.

“ Now, as the white globules appear from these experiments to be of an oily nature, and as it is improbable, from these patients having taken little food, and from the transparency of the chyle in birds, that this whiteness of the *serum* should be owing to unassimilated chyle, accumulated in the blood-vessels; we must therefore believe it to be owing to some other cause. And as we know there is a considerable quantity of oil laid up in the cellular substance of animals, which is occasionally re-absorbed, is it not most probable that this curious appearance was, in the above-mentioned cases, owing to such a re-absorption? And as all these patients had symptoms of a *plethora*, and were relieved either by spontaneous hemorrhages, or by blood-letting, is it not probable, that, to whatever purpose the oil is applied in the body after it is re-absorbed from the cellular membrane, in these patients it had been re-absorbed faster than it was applied, and by that means was accumulated in their blood-vessels? This conjecture seems to be confirmed, from considering that in most of these cases the people were inclined to corpulency, and that two of them laboured under a stoppage of a natural evacuation.*

“ Another conclusion which these observations lead us to is, that since the chyle of the birds which I dissected was not white, but transparent, at whatever time after eating it was examined, it follows, that the fat (in these animals at least) is

* Although it appears probable that the whiteness of the *serum* in the above-mentioned cases was not owing to the chyle, yet I would not conclude that the chyle does not in the human subject occasionally colour the *serum*. We frequently observe the *serum* of such people as are bled a few hours after a meal, a little turbid, like whey, which I believe may be owing to the chyle. But if the milk-like serum was occasioned by a full meal, it is likely we should oftener see it than we do.

not merely the oily part of the chyle or of the food ; but is a new substance, or a new combination of the principles or elements, which is made probably in the secretory organs of the adipose membrane : the form of oil being made use of by Nature in preference to any other for the nutritious substance of the body, from its being the least liable to putrefaction, and from its containing the greatest quantity of nourishment in the least bulk. This circumstance was clearly proved by my valuable and ingenious friend the late Dr. Stark, who, in a course of curious experiments, made by weighing himself after living for some time on different sorts of food, discovered that a less quantity of suet was sufficient to make up for the waste of his body, than of any other sort of ordinary food ; and that, when compared with the lean part of meat, its nutritive power was, at least, as three to one.

“ I may here add another circumstance that occurred to me when I first thought on this subject, which is, that since we believe the oil, or animal fat, is re-absorbed from the adipose membrane to serve for nourishment to the body ; and as some of the patients (whose cases have been related above) could not take food, the re-absorption therefore of this oil might not be so much the cause, as the effects of the disorder under which they then laboured : or, in other words, that upon some defect in the digestive organs, the powers of nature drew from their magazines of oil in the adipose membrane, a supply of that fluid then perhaps necessary for the use of the body. In order to clear up this point, I thought it would be a satisfactory experiment, to compare the *serum* of the blood of animals at different periods after feeding them. For, if the re-absorption of the oil was merely to make up for the want of other food, or, if the *serum* was white merely from a greater quantity of oil being taken up in order to supply the wants of the body, then the *serum* ought to be whitest in the animal kept longest without food, or whose body was most in want. And as I had found that geese had very commonly this white *serum*, though their chyle was transparent, I chose to make the experiment on them. I therefore took two of them that were very hungry, and feeding both of them with oats, one I killed four hours after, when I knew a part of the oats were undigested ; and upon examining the blood, I found the *serum* whitish, and full of small globules ; on its being suffered to stand a little time, the white part ascended to the surface like a cream. The other was killed forty-eight hours after eating, when its stomach was found empty, and the *serum* of its blood quite transparent, and without any cream rising to the surface, or any appearance of small globules, when examined with the microscope.

Now, this experiment seemed to me decisive, and to point out clearly, that the whiteness of the *serum* was not occasioned merely by the body being in want of food, and therefore, drawing the oil from its magazines; because here the animal most in want of food had its *serum* least white; but was occasioned by the fat's being re-absorbed faster than it was used (from its place being supplied by the fresh chyle) and thence was accumulated in the blood-vessels, so as to give whiteness to the *serum*. And from the same observation it likewise appears probable, that the great re-absorption, and the accumulation of the fat in the vessels of the plethoric patients above-mentioned, was the cause of their want of appetite, and of their other complaints, and not the effect of them.

May not therefore a too great re-absorption of the fat, and its accumulation in the blood-vessels, be now admitted as the cause of one species of a *plethora*?

And may it not likewise be useful in some complains of the stomach, to attend to the whiteness of the *serum*? For, although fat be a substance little liable to disease, yet it may perhaps be sometimes so vitiated or may so incommode nature, that she may be obliged to take it up from her magazines, and to use it, or throw it out of the body. Whilst this is doing a sickness of the stomach, and want of appetite, may be indications of fulness; and therefore, instead of wanting remedies to strengthen the stomach, may require bleeding, and other evacuations.

An analytical Essay on the Scammonies of Aleppo and Smyrna, with some Observations on the reddening of Litmus by Resins: by Messrs. BOUILLON-LAGRANGE and VOGEL.

[Nicholson's Journal.]

THE two sorts of scammony are obtained from the root of a plant, that grows in Syria. The finest and purest scammony is procured by making an incision in the root, and drying in the sun the juice that exudes. But frequently, in order to obtain a larger quantity, the people of Syria and Natolia express the juice, and not only from the root, but from the stalks and leaves also. Often too they adulterate it, by mixing with it the juice of some other milky and acrid plants, as that of the spurges; or increase its weight by a mixture of ashes and other foreign matters. To know that the

the scammony contains none of these heterogeneous substances, the buyer should break the lumps, choose those that are shining interiorly, and reject those that appear too black, burnt, or containing sand.

Aleppo scammony is light, of an ashen grey, shining, transparent in its fracture. That of Smyrna is very compact, heavy, of a darker colour, and more difficult to powder.

Examination of Aleppo scammony.

When this scammony is pure, it melts entirely on a heated plate of iron, and emits fumes of a nauseating smell. Triturated with water it renders it milky. With boiling water it concretes into a lump: the water becomes yellow, and has a bitter taste; but it is neither alkaline, nor acid; which proves, that this substance is not adulterated with ashes, as some authors affirm.

Alcohol at 40° [sp. grav. 0.817] produces a slight precipitate in this aqueous solution; and the acetat of lead occasions a yellow flocculent precipitate soluble in nitric acid.

The alcoholic tincture of scammony has a brownish yellow colour. It reddens tincture of litmus: and leaves on evaporation a yellowish white and transparent resin.

This resin dissolves entirely in nitric acid, which it colours yellow. The addition of water renders this solution slightly turbid.

It is equally soluble in a solution of pure potash, even without heat, when its colour is yellow: but, if heat be employed, it is brown. Water, even in pretty large quantity, does not precipitate any of the resin. If the solution be saturated with muriatic acid, the resin does not separate. This triple compound of resin, acid, and potash, claims the notice of practitioners; perhaps we may thus discover a solvent for resins, that water would not render turbid.

The part of the scammony that was not soluble in alcohol assumed a grey colour when dry. Treated with boiling water it coloured it yellow, and alcohol occasioned a white flocculent precipitate in it.

To determine the proportion of the constituent principles of Aleppo scammony, we took 100 parts of this substance, and exhausted them by alcohol. The solution was yellow. A grey substance remained, which, when dried, weighed 26.

The alcoholic solution was evaporated to a sirupy consistence. Cold water precipitated from it a resin, which formed a homogeneous mass. The supernatant liquor was clear and colourless. Evaporated to dryness a brown matter was obtained, soluble both in water and in alcohol, and precipitable

by

by acetate of lead. This substance appeared to be what is called extract. When dried it weighed 2 parts.

The resinous mass, separated and dried, was yellow, and weighed 60.

The 26 parts insoluble in alcohol were then treated with boiling water. After evaporation a glutinous matter remained, weighing 3 parts, and having all the characters of gum. The remainder consisted of fibres of vegetables and a little silex.

The distillation of Aleppo scammony exhibited nothing remarkable. Its products were a very acid brown liquor, and a light, blackish oil. The coal was black, shining, and compact. It contained the carbonates of potash and lime, alumine, silex, and a little iron.

Examination of Smyrna scammony.

The fusion of Smyrna scammony is less complete than that of Aleppo. Instead of concreting into a lump with boiling water, it becomes clotty; but the water poured off has similar qualities.

An equal portion of this scammony, exhausted by boiling alcohol, afforded a tincture of a deeper colour, though containing less resin. By evaporation a brownish, transparent resin was obtained, weighing 28 parts. The matter insoluble in alcohol weighed 66. This residuum, treated with boiling water, coloured it yellow. The solution had a faint sweetish taste; and alcohol produced in it a flocculent precipitate soluble in water. On evaporation it left a thick glutinous matter resembling mucilage, soluble with heat in weak nitric acid, and letting fall on cooling a white pulverulent substance, that had all the characters of mucous acid.

In this experiment water took up only 8 parts of the matter insoluble in alcohol. The remainder was subjected to the action of nitric acid assisted by heat, which dissolved it with effervescence. Ammonia added to this solution threw down a precipitate solution in potash. Potash and oxalate of ammonia too occasioned a precipitate. This residuum therefore, beside vegetable fibres and the substance insoluble in water and alcohol, which appeared to be oxygenized extract, was composed of alumine and carbonate of lime.

This substance, being incinerated, left a whitish powder, soluble in great part with effervescence in muriatic acid. This solution contained alumine, lime, and a little iron. The portion not soluble in muriatic acid, being treated with potash, yielded a siliceous precipitate on the addition of an acid.

The water employed to precipitate the resin left after evaporation

poration a brown matter, weighing five parts, of a bitter taste, attracting the moisture of the atmosphere, soluble in alcohol, and copiously precipitated from its aqueous solution by acetate of lead. This substance exhibited all the properties of extract.

From this analytical essay therefore it follows, that Aleppo scammony is composed of

Resin	60
Gum	3
Extract	2
Vegetable fibres, earthy matter, &c. .	35
	100

and that Smyrna scammony contains

Resin	29
Gum	8
Extract	5
Vegetable fibres, &c. .	58
	100

Though the resins obtained from the two sorts of scammony have considerable analogy, yet, as that of Aleppo is yellow, transparent, and friable, while that of the Smyrna is darker coloured, and more difficult to powder, we thought it would not be useless to ascertain, whether there was any difference in their medicinal properties. In consequence several physicians undertook to make comparative trials on persons of nearly similar constitutions, but they have not yet observed any difference in their purgative effects.

From the preceding analysis we may conclude, that scammony is a true gum-resin mingled with a little extract. It is true it contains much less gum than the other gum-resins, yet enough to form a milky liquor with water.

The action of the alcoholic tincture of scammony on litmus led us naturally to examine, whether the property of reddening this blue colour was owing to an acid. None of our experiments having furnished a direct proof of this, we made a comparative trial of some resins, which we subjected to the following experiments.

1. *Sandarach.* The resin is converted into a grumous mass by boiling in water. The filtered liquor remains clear; and, when evaporated to a certain point, slightly reddens tincture of litmus; its taste is bitter; it does not alter infusion of violets; it is not precipitated by alcohol, or acetate of

of lead, which shows, that it contains neither gum nor extract. It is therefore a pure resin.

The resin thus treated with boiling water was dissolved in alcohol. This tincture strongly reddened that of litmus, and had no action on sirup of violets.

Powdered sandarach was digested in alcohol, and boiling water poured into the hot filtered solution, which precipitated the resin. The filtered liquid grew turbid on cooling; it had the strong smell of resin of sandarach; its taste was bitter; and its action on the tincture of litmus was so weak, that it could not be supposed to contain a free acid.

2. *Mastic*. This substance exhibits nearly the same phenomena as the preceding; but the resin concretes into a mass in boiling, like turpentine. The water has a bitter taste, and has no action either on litmus or sirup of violets. The resin, on the contrary, strongly reddens tincture of litmus.

3. *Olibanum* forms with hot water a thick pap, which is separated from the liquid with difficulty even by filtration. This water has a blackish brown colour, is not precipitated by acetate of lead, and does not alter the colour of litmus; but alcohol throws down a copious precipitate from it, which proves, that this substance is composed of gum and resin.

The alcoholic tincture strongly reddens that of litmus.

If the resins that have most action on the colour of litmus be heated with all due precautions on a sand bath, no acid sublimes.

Treated with lime, according to Scheele's process, no calcareous benzoates are formed.

4. Lastly, the gum resin ammoniacum, myrrh, elemi, anise, galbanum, tacamahacca, resin of jalap, both prepared by ourselves and that of the shops, Venice turpentine, oil of turpentine, and several other resinous and gum-resinous substances; afforded the same results as those obtained from scammony, sandarach, and olibanum. From these facts it appears still difficult to solve the question, whether the reddening of litmus by resins be owing to the presence of an acid in them.

If acids alone had the property of reddening vegetable blues we should not hesitate to admit their existence in resins, though not yet otherwise demonstrated by experiment. - As to the infusion of violets not being reddened by resins, this property occurs in the sublimed acid of benzoin, which strongly reddens infusion of litmus, but does not alter the colour of violets. Has this acid, notwithstanding its solubility in water, some analogy to resins? On this we refrain from giving a decided opinion; yet we are inclined to believe, that this substance is a compound of a vegetable acid and a small

small portion of resin, to which perhaps its solidity is owing. Finally, as all the vegetable acids are soluble in water, it is difficult to ascribe to an acid this property in resins of reddening litmus. It appears more proper therefore, to consider the reddening of litmus as a character of resins, till fresh experiments have proved the contrary.

CRITICAL ANALYSIS OF RECENT PUBLICATIONS

IN THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL
PHILOSOPHY,

Transactions of the Medical Society of London.

(Concluded from p. 63 of the Journal.)

MR. WARE, one of the Vice Presidents, has favoured the Society with an interesting account of some diseases of the eye, which forms the subject of the 6th article. The first of these he styles *staphyloma*, this term has been used to designate the protrusion of a part of the iris through a wound or ulcer of the cornea; but Mr. Ware uses the term to denote a projecting opaque cornea.

"It has been disputed by authors (he remarks, p. 116) whether the projection of the opaque cornea in the staphyloma, is occasioned by a thickening of this tunic, or by a morbid accumulation of aqueous humour behind it. I believe, in general, both these circumstances combine to produce the disorder; the cornea becoming not only opaque, but softer and thicker than in its natural texture, and, in consequence of this, the aqueous humour behind the cornea pushes it forward, and thus enlarges the anterior chamber of this humour. I have sometimes seen the whole cornea sloughed off during an acute purulent ophthalmia, and a white opaque substance gradually effused from the ulcerated surface, sufficient to form a complete cover to the iris; after which this opaque body has gradually projected in a conical shape, until at length it has become so prominent as to hinder the eyelids from closing over it. I have at other times seen the projecting cornea partly opaque, and partly transparent: the pupils being distinctly visible through the transparent part, but the power of vision wholly destroyed. Sometimes the circumference of the opaque cornea projects, its central part appearing depressed, and resembling the bottom of a plate or dish; and sometimes near to the center of opacity, in the last case mentioned, there is an irregular black appearance, which a cursory observer might mistake for a pupil. No part of this aperture, however, is perceptible on a careful inspection, and the eye of course is deprived of all useful vision.

(No. 144.)

Y

Mr. Ware

Mr. Ware next considers the means of affording relief. When the projection of the opaque cornea can be covered by the eyelids, without painfully stretching them, if the surface of the cornea continue regular, and the sight of the other eye perfect, no inconvenience, except the unseemly appearance, is produced. This may be remedied by wearing spectacles containing plain window glass in the ring opposite the sound eye, and glass that is ground in a slight degree opaque, in the ring opposite the affected eye. In some cases it is necessary to sink the eye. For this purpose caustics and other strong applications have been proposed; but Mr. Ware deems them dangerous and inadequate. The mode of compressing the tumour, he states, is difficult, and he only remembers one case in which it afforded advantage.

"The more direct way of affording relief in the staphyloma is by removing the whole of the projecting substance; in consequence of which the humours of the eye are discharged, and the posterior part of its tunics collapse, so as to form a kind of button at the bottom of the orbit. On this button, when the wound is healed, an artificial enamelled eye is capable of resting; by which the uniform appearance of the face may be restored."

Our author proceeds to enquire into the best mode of performing the operation. He objects to the method of passing a double ligature through the tumour, and tying it on each side, as practised by Neister, St. Yves, and others, because it is a painful and indirect mode of accomplishing our object. He thinks Scarpa's method of removing a small portion only of the projecting cornea, and forcing out the crystalline and vitreous humours, is liable to considerable objections, for which, however, we must refer to his paper, and content ourselves with giving Mr. Ware's own mode of operating, which he informs us has uniformly succeeded in a considerable number of cases during a practice of more than thirty years.

"The operator is directed to stand behind the patient, who is to be placed on a chair, sufficiently low to allow the operator to carry his hand with ease over the patient's head. A large crooked needle, armed with a strong thread, should then be passed through the opaque projecting cornea, and after separating the needle from the thread, a knot should be tied in the latter, at a small distance from the eye, in order to hinder the thread from slipping. The operator having thus obtained, by means of the thread, a secure hold of the eye, a knife similar to that which is used to divide the cornea in extracting the cataract, or, if this be not at hand, a long sharp-pointed lancet, should be pushed through the sclerotic coat, about a quarter of an inch from its connection with the cornea, and be carried quickly but accurately round the cornea, as nearly parallel to it as can be accomplished. Sometimes, as soon as a puncture is made through the sclerotica, so large a portion of the vitreous humour escapes, as to cause the cornea to become flaccid, in consequence of which the operator may find it difficult to complete the incision

sion round this tunic with either the lancet or the knife, and in this case a curved blunt-pointed scissars will be found useful to finish the operation. The only objection to the use of the scissars is drawn from the additional pain which it is supposed to give; but the duration of the operation is so short, that the difference between the pain produced by the instruments is scarcely worthy to be named. The hæmorrhage that succeeds is seldom considerable; and the less the eye is examined afterwards, the less danger will there be of pain and inflammation. A compress wet with a saturnine lotion should be applied over the eye, and it should be moistened as often as it becomes dry; but no lint or any other application should be put within the lids, since this has been known to give great pain, and in one instance to occasion alarming symptoms. An anodyne should be given after the operation, of greater or less strength according to the age of the patient; but it is seldom necessary to repeat this medicine, since the patient has usually more sound and quiet sleep after the operation than he had for a long time previous to its performance. At the end of about a fortnight, that part of the sclerotica which remained in the orbit will be found to have collapsed, and sometimes a small fungous substance will then protrude through the wound. This in the course of time would subside of itself, but, as the delay may be irksome, the fungus may be easily removed, and with very little pain, by nipping it off with a pair of sharp scissars. The fungus is usually smaller in its neck where it joins the sclerotica than in its top; in consequence of which its removal is effected with very little difficulty; and though it sometimes reappears, it may be nipped off again and again, until at length the wound will completely close, the inflammation cease, and the orbit become fit to receive an artificial eye. This, however, ought not to be introduced until the inflammation be perfectly removed, and when such an eye is used, it is advisable to withdraw it every night and replace it in the morning, which may be effected with ease by the patient himself after a short experience. P. 127.

Hydrophthalmia, to which Mr. Ware next calls our attention, is an enlargement of the whole eye, produced by an increase of the vitreous as well as of the aqueous humour, which causes the eye to occupy an undue portion of the orbit, and occasions pain when the eye-lids are closed over it. Children are sometimes born with the corneæ large, prominent, and opaque; these, in general, are removed as the child grows older, by what Mr. Ware terms, "the *vis naturæ medicatrix*," without any particular remedy being employed. But when the enlargement is not confined to the cornea, and extends to the sclerotica, and the eye-lids cannot be closed without difficulty; the patient being at the same time blind, and unable to sleep without opiates, it becomes necessary to devise some means of affording ease, and obviating deformity; for the prospect of restoring sight is lost. For this purpose we are recommended to perform the operation for diminishing the eye, as directed in cases of staphyloma.

"Before an operation of so much importance be performed, it is, however, essentially requisite to ascertain that the disease consists solely in

an enlargement of the different parts of the eye ; and that it is not produced by the formation of purulent matter within the eye ; by a morbid alteration in the structure of either its coats or humours ; nor by the undue accumulation of aëps, or of any other substance, behind this organ." P. 134.

Some cases illustrative of Mr. Ware's mode of discriminating these affections, and his method of treatment are related. For his account of Carcinoma, we must refer to the volume itself, having already advanced too far beyond our limits.

The 7th article, by Mr. Burns, of Glasgow, is a case of suppuration of the liver, with appearances resembling Ascites, which terminated favourably. A girl aged twelve, on the 20th of June, 1798, complained of sickness, pain about the upper part of the abdomen, shooting to the right shoulder, heat, and frequency of pulse. An emetic was given; the pained parts were rubbed with some embrocation, and saline draughts were prescribed. The pain continuing, on the 10th of July, a blister was applied over the lower ribs, and was repeated on the 15th without much advantage. For some days previous to this, the belly had been fuller than usual ; and the swelling having increased, diuretics were ordered. Mr. Burns saw her, for the first time, on the 19th of July, and says,

"I found the right hypochondrium tumid and painful to the touch, especially near the stomach, and toward the lower part. She had pain in the right shoulder, and could not lie with ease except on her back, or inclining to the right side. The tongue was furred, the tunica adnata of the eye was of a yellowish colour ; the urine was high coloured, and deposited a copious pink coloured sediment. The belly was bound, and the stools, when procured, were of a light colour. The appetite was much impaired, and she had frequent fits of sickness and retching. The pulse was 115, sometimes 120 ; the body emaciated, and the skin wet with perspiration, whilst a hectic blush pervaded the cheek. The belly was considerably swollen, and a fluctuation could be discovered. The tumor had not so diffused an appearance as is observed in Ascites, but was more rounded, as if a large globe had been placed below the umbilicus.

"She was now put on a course of mercury which was continued three weeks, so as to keep the mouth somewhat sore. During this time the symptoms of hepatic inflammation went off, she slept better and felt easier ; but the hectic symptoms continued, and, although the diuretics had not been discontinued, the belly increased in size."

On the 12th of September, she was tapped in the usual way, and about six pounds of well conditioned pus were drawn off. After this she soon got entirely well. In the middle of October the belly again swelled, but not to half its former size ; the umbilicus protruded and inflamed : a poultice was applied, and in a few days the skin burst, and
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nearly two pounds of matter were discharged. Pus continued to ooze out of the aperture for a fortnight, after which it healed up, and the patient has remained in good health ever since.

Observations on the hare-lip, by Isaac Rand, form the subject of the 8th article. This paper was read in 1797, since which two volumes of the Society's memoirs have appeared. Perhaps the editors of the former volumes were startled at the author's first paragraph, which seems to us somewhat paradoxical. He advances the following curious position, "Natural deficiencies are more frequent in the upper lip than in any other part of the body; but, happily, these are very rare." What are very rare? Deficiencies in the upper lip, or in the other parts of the body? The object of the paper is to demonstrate the propriety of operating at a very early age in hare-lip. In two cases Mr. Rand performed the operation two days after birth. The first case was going on very finely, when an unlucky diarrhoea arrested "the efforts of nature, in completely uniting the bones in the middle and posterior parts of the fauces," and "destroyed the child in its seventh month." The other case, however, completely succeeded; as did another in which the operation was performed at three months. The advantages which result from performing the operation at an early period, the author observes, are many.

"Children, for some days after birth, seem to be in a torpid state, and in general require but little nourishment. They are easily managed, and make no opposition during the operation. If there is only a fissure in the lip, and sometimes when there is one in the bones, immediately after the union of the fissured part of the lip, the child is capable of sucking, by which the chance of surviving the infantile state is increased. The disagreeable impression upon the mother's mind, of propagating the deformity in the family by future births, is removed." P. 165.

At this advanced period of the surgical art, such a paper as this presents no novelty in practice, and we find nothing in it to induce us to commend the diligence of the present Editors, in disturbing its quiet repose in the Society's treasury of manuscripts.

The next article, by Mr. Norris, contains the histories of two extraordinary cases. The first is that of a lady, aged 51, who, about the middle of April, 1803, in going down the cellar stairs, fell and pitched with her forehead against a heap of wood. She was sick and faint for a short time, but on the following and succeeding days, thought little of it. In the beginning of June, she had an erysipelatous inflammation in the arm. In July she was affected with violent pain in the head, which continued, without alleviation, though Dr. Nankivel prescribed for her during more than a fortnight,

fortnight. August the 2d, she consulted Mr. Upton, who "found her labouring under a smart active fever; a hot and dry skin; quick pulse, with considerable anxiety and agitation; and complaining of violent pain in her head generally, but especially on the os frontis. Upon this bone was a tumour with a large hard base, terminating in a conical point, exactly resembling the growing horn of a young heifer. This evidently contained a fluid, which on the following day was set at liberty with the point of a lancet, and upon examination, a considerable surface of the bone was found bare." P. 170.

Mr. Norris saw this patient on the 9th of August. He enlarged the opening on the scalp, advised the head to be fomented, and the bowels to be kept open. At the end of a week, no abatement in her suffering having taken place, he applied the trephine. When the operation was over, he was surprized to find that the dura mater exhibited a perfectly healthy appearance; and that no matter was discharged than what oozed from the substance of the bone. Some alleviation of pain followed, which he attributed to the medicines that were prescribed.

In the course of a week, she complained of pain toward the posterior and upper part of the left parietal bone, and a little tumour, tender to the touch, and containing a fluid, was observed there. On opening it, the bone was found bare. "After a few days, this portion of bone, of the size of a sixpence, separated, leaving a healthy granulating surface, and the wound very soon healed."

From this time, similar tumours, with similar results, occurred almost daily. During the first two or three months the separated pieces of bone were from the outer table of the skull; after that time the dura mater was generally exposed by the separation of each piece, and the wounds in the scalp no longer healed. She died, worn out with suffering, on the 10th of May, 1804.

This patient had not one other, even doubtful, symptom of syphilis, and from Mr. Norris's inquiries, he thinks it certain that she was never affected with that disease. A plate accompanies the description, and the fragment of skull which remains has the appearance of being worm-eaten.

For the second case, *de Satyriasmō*, we must refer our readers, at least, those who understand Latin, to the volume itself. The tenth article is "on the Medicinal properties of *Sanguinaria Canadensis*, or Blood Root. Communicated to the President by Dr. N. Smith, Hanover (North America). Dated February, 1807. Its medical virtues are very considerable. "The dried root, pulverised and given in doses of four or five grains, generally pukes pretty violently, producing a great prostration of strength during its operation, which continues for some time." "The taste is acrid and unpleasant."

sant. The pulverised root taken into the nose excites sneezing, and produces a sense of heat in that organ. It also acts as an escharotic on fungous flesh." Dr. Smith has not known it act as a cathartic. He has cured several polypi of the soft kind, by the continued use of it as a snuff. He has given it with great success in hæmoptysis, and in coughs.

"From more than two years experience of the use of blood root in affections of the lungs, attended with cough, I cannot assert (the Doctor observes) what has been asserted of fox-glove, that it will cure a confirmed consumption; but I can in confidence say, that, in my opinion, it is capable of doing more towards preventing that fatal disease than any one remedy I have ever been acquainted with.

"I have given blood root in powder, in tincture, and in simple infusion; which last is the better mode of giving it. In powder it operates more roughly, and spirit does not appear to extract its active principle sufficiently. When I give it for a cough, if the symptoms are urgent, I begin with a dose sufficient to excite puking; but generally endeavour to give it in as large doses as can be borne without that effect, and repeat it four or five times each day. Where there is great irritation and a constant disposition to cough, I join opium with it. Given in this manner, if the patient has not a confirmed hectic, it generally cures the cough." P. 184.

It is also useful in inflammatory rheumatism. It has been recommended in jaundice, and has cured epilepsy. It has never been known to produce any lasting bad effects, and never affects the head like fox-glove. If then it be not a valuable addition to our *Materia Medica*, it may at least become the basis of a profitable nostrum. Mr. Mason Good has subjoined an accurate botanical description of the plant.

The next article is a short and very unsatisfactory case of *Tic Douloureux*, by Dr. Anthony Fothergill, of Philadelphia. Most of the medicines usually prescribed in this painful complaint were given without any benefit. The operation of dividing the nerve was proposed and rejected; and for any thing we know to the contrary, the patient is still afflicted with the disease.

The 12th article contains "*Remarks on the Land Winds and their Causes*," by William Roxburgh, M. D.

In the 13th are related "Cases illustrating the effects of oil of turpentine in expelling the tape-worm." By Drs. Lettsom, Hancock, Fothergill, Birkbeck, and Mr. Saner. The result of these cases establishes the efficacy, and confirms the safety, of a mode of practice which has only lately been known. Dr. Lettsom gave nine drams of the rectified oil of turpentine, desiring the patient to swallow a little honey after it. The medicine occasioned less heat than would have been occasioned by as much brandy or other spirit, and the flavour

your and heat were removed by the honey. "In about three hours after taking this dose, a laxative motion was produced, without any discharge of *tænia*: but soon afterwards, with the second stool, more than four yards of the worm were discharged, and also a quantity of matter, resembling, as the patient expressed it, the substance and skins of the *tænia*." No pain or uneasiness was experienced in the urinary passages after taking the medicine, and the patient has since remained in perfect health. Dr. Lettsom concludes that the best mode of taking the oil is without admixture. Dr. Hancock began by prescribing the oil of turpentine in doses of two drams twice a day, mixed with treacle. "This produced no other effect than an increase of pain and uneasiness, and particularly on going to stool, as if it irritated the rectum. The dose was now increased to half an ounce, at longer intervals. The first dose in this quantity, which she took without treacle, produced a little sickness and confusion of ideas, and afterwards operated as a purge. She complained of no uneasiness whatever in the urinary organs." After these doses, she passed a quantity of slimy mucus, and obtained so much relief in all her painful symptoms that she begged for a double dose. She accordingly took an ounce of the oil which produced slight intoxication, till the cathartic effect followed. This was repeated several times without, however, any appearance of *tænia* in her stools, though the dose was increased to an ounce and a half. Dr. Hancock observed that the mucus which was abundantly discharged by the operation of the medicine, "sometimes exhibited the appearance of white films, as if the substance of the worm had been broken down."

Dr. Fothergill gave a patient affected with *tænia* half an ounce of the oil of turpentine. It was taken in tea, sweetened with honey. "In a quarter of an hour he (the patient) was seized with retching, and in the course of the day passed four copious stools, in one of which was a tape worm several yards in length." It was dead and had a livid appearance. "The dose of the oil was increased to six drams, and was repeated twice a week for the space of a month. During the first fortnight small pieces of worm continued to pass away, both after taking the medicine and at other times; but in the second fortnight the stools were natural, and contained no vestige of *tænia*." The remedy was consequently discontinued, and the patient regained his strength and cheerfulness with an entire freedom from complaint.

Dr. Birkbeck administered the oil of turpentine to two middle aged females who had long been troubled with the tape-worm. In the first case, half an ounce was given, and produced two evacuations from the bowels, in one of which
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more than four yards of the worm were contained. "It was dark-coloured, shrivelled, filmy, and lifeless." A second dose of the oil did not expel any more of the worm, nor had it again appeared three months afterwards. "Considerable derangement of the general health and great pain in the pit of the stomach were produced by the tape-worm, in the second case in which the oil of turpentine was employed. Although one tea-spoonful only was introduced, sickness and acute pain followed: this dose was repeated several successive mornings, always with the same immediate effects; but occasionally it was succeeded by the expulsion of large portions of the worm." After continuing the medicine some time, the patient became free from any appearance of tænia in the stools, and from all those sensations which had so long denoted its presence in the intestines.

Mr. Saner gave an ounce of the rectified oil of turpentine, with an equal quantity of syrup of saffron, to a woman who had long been troubled with tænia, portions of which for seven years past had come away, whenever she took a dose of jalap. Several feet of the worm, with the head attached, speedily came away, and she has remained well ever since. The second case was not so favourable. One dose of the oil of turpentine brought away a quantity of worm, without occasioning any unpleasant effects; but on repeating it, it produced "violent retchings, tenesmus, strangury, and great pain in the back; the urine was also a little tinged with blood." The patient afterwards took a drachm of jalap, and passed a considerable quantity of the worm. From the evidence of these histories, and a variety of other cases with which we are acquainted, we have no doubt that the large doses of oil of turpentine may be given with safety, and in general will succeed in expelling tænia from the bowels.

The volume concludes with an account of the life and writings of Dr. Hulme, by Dr. Clutterbuck.

Additional Cases, with further Directions to the Faculty, relating to the use of the Humulus, or Hop, in Gout and Rheumatic Affections. By A. FREAKER, Apothecary, 8vo. sewed, pp. 43. Highley.

NEARLY six years have elapsed since Mr. Freaker gave, in this Journal, an account of the medicinal qualities of the Hop. As his experience extended, in 1806 he was enabled to form a pamphlet, which contained some interesting facts on the subject. The Royal College of Physicians has subsequently introduced

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roduced two preparations of the medicine into the last edition of their pharmacopœia, and we doubt not that they will prove efficacious in many cases. Mr. Freake has adduced some additional instances of the success of the remedy, one of which we quote as a specimen.

April 13, 1806. This day I was sent for to a gentleman 46 years of age, much troubled with Gout. I found him on a sofa complaining of violent pain in his left ankle, which was swelled but did not appear inflamed, tongue white, pulse 96, skin hot and dry, his nights were restless, and his spirits very low. He had a violent shock the preceding day from being thrown out of a chaise, by which accident he had a slight contusion in his right knee, yet he was able to use considerable exertion in the evening, and did not feel pain or uneasiness in the left ankle until this morning. He had not long recovered from a fit of Gout, which had confined him for some time, as it usually had done two or three times in each preceding year. I directed for him some aperient medicine, and then gave him the Humulus with saline draughts; these had the usual effect of throwing off more Gout, promoting perspiration, procuring rest, and keeping the bowels gently open, at the same time lessening the frequency of the pulse. The symptoms varied occasionally, Gout attacked different limbs, and afterwards subsided kindly; the patient now took the medicines regularly, without the saline, and amended so rapidly, that on the

19th, I was able to declare him in a convalescent state; the bowels were not now sufficiently active, therefore I ordered an aperient draught, which procured three motions, and on the

20th, When I called, my patient informed me he was better in every respect, that he was happy to say, I had done him a great deal of good. He had slept well, his tongue was clear, pulse 76, his appetite had increased, and his spirits were very much improved, the swelling and inflammation had subsided, and he had got on his small gout shoes, and was able to use considerable exertion: the medicines were continued.

27th, Last night he was in such health and spirits, that he exerted himself with increased agility, and unfortunately strained the instep of his left leg, which occasioned considerable uneasiness and pain, and brought on fever, which, by the addition of saturated lemon juice to his Humulus medicine, he was relieved from on the following day.

28th, He is now considerably better, and has gone through a very fatiguing evening. The medicines were repeated.

30th, Ordered the draught and pills to be taken only at bed time.

May 3. This day, I received the thanks of my patient and his wife, on his being restored to better health than he had experienced for many months past.

7th, I called to see my patient, who remained well, but had not fortitude sufficient to persevere with the medicine when out of pain. He, however, was free from Gout for nearly *eighteen months*.

By persevering for some time in the use of the remedy, after the complaint is removed, its future accessions have been rendered less violent, till at length, the patient has become altogether

altogether free from the disorder. Mr. Freake gives the following directions for administering the medicine.

DIRECTIONS.

In acute Gout, after the bowels have been cleared, the patient cannot too soon begin the use of the Humulus. Ten grains of extract should be formed into pills, with rhubarb and ginger for a dose; a drachm of the tincture should be added to a saline draught to be taken after the pills, or the pills may be dissolved in the draught; this draught with the pills should be repeated every four hours, and double the quantity of extract and tincture may be put into the night draught if the symptoms are urgent.

The medicine thus administered, has in general given relief in one, two, or three nights. This plan must be continued every four or six hours, while fever is present; after which the saline may be lessened, as well as the number of doses of the Humulus for a few days. A decoction of the Peruvian or Cascarilla bark may then be substituted for the saline draught, and continued two or three times a day, until strength is regained, or for about a fortnight after the symptoms of Gout have subsided. In some cases, when I could not prevail on my patient to take the number of doses, I have made the medicines proportionably stronger, and given them less frequently, allowing a drachm of the extract, and six drachms of the tincture in each twenty-four hours, as the extent of quantity.

The regimen in acute Gout should be similar to that recommended in inflammatory fever.

Attention must be paid to keep the bowels gently open, if the medicine is not sufficient for that purpose.

The above plan has succeeded in acute Rheumatism, assisted by the lancet when needful, and occasionally repeating the aperient medicine.

In chronic Gout the medicines must be given in a very different manner, and for a much longer time, for two or three months at least, so that whatever Gout is in the system may be thrown off.

Some gentle aperient medicine must also be taken previous to the administration of the Humulus in chronic Gout, and when that has operated, two drachms of the tincture and twenty grains of the extract must be taken at two doses, viz. at night and at noon, (in pills, with draughts or mixtures) daily for the first month, three drachms and thirty grains for the second month, and two drachms and twenty grains for the third month, which quantity in general will be amply sufficient to strengthen the system, and expel all the present Gout. At any future time, when more Gout is generated, and accumulates sufficiently to produce a paroxysm, attended with fever, pain, and inflammation in the affected part, it must be treated as acute Gout, but it will seldom last many days if attended to directly.

Whatever sufferings patients may have endured, when restored to health, they are too apt to be negligent with respect to keeping the bowels clear from crudities, that may gradually collect; therefore, I strongly recommend persons who are subject to Gouty affections, never to fail, however healthy they may appear, taking an aperient draught or pills.

pills every month or six weeks, as from experience I am convinced, that a paroxysm of Gout has often been prevented by such attention.

The regimen to be observed by persons suffering from chronic Gout will of course vary, according to the symptoms and constitution, as well as habits of the patient, which being known, can best be regulated by the attending medical gentleman. All however should attentively observe moderation, and cautiously avoid excess of every kind.

Those patients who have suffered from chronic rheumatism, have generally been relieved by the plan above directed.

Memoirs of the Life of THOMAS BEDDOES, M. D. with an analytical Account of his Writings. By JOHN EDMONDS STOCK, M. D. &c. &c. 4to. pp. 413. Murray. 1811.

WITHOUT preface or comment, we shall present our Readers with the most interesting particulars of this valuable work; not doubting but they will be gratified with the memoirs of a man, whose serious hours were intensely devoted to the attainment and propagation of medical science; whilst his lighter moments were happily directed to the cultivation of polite literature.

Thomas Beddoes was born of respectable parents, at Shiffnall, on the 13th day of April, 1760. He received the first rudiments of his education at a school in his native town, and from thence was removed to a seminary at Brood, in Staffordshire. He read perfectly well when five years old. An insatiable thirst for books, and a disinclination to partake of the usual amusements of children of his own age, characterized his infant years.—At the age of nine, he was placed at the free grammar-school in Bridgnorth, where he remained nearly four years; and made considerable progress in classical learning. He did not participate in the amusements of his young associates; but in the season allotted to recreation, was accustomed to walk round the play-ground with an air of thought and reflection which frequently excited the attention of his playful companions, who “wondered why he was always thinking.”

Upon leaving this seminary he was placed under the tuition of an eminent scholar, the Rev. Samuel Dickenson, Rector of Plymhill, in Staffordshire, to be prepared for the University. Mr. Dickenson remarked, that whilst under his care young Beddoes was so intent upon literary pursuits, and especially classical learning, that he never devoted a single hour to diversions or frivolous amusements of any kind, whilst his moral conduct was irreproachable.

In 1776, he entered at Pembroke College, Oxford; continued

nued his habits of unremitting application, and soon established his reputation as a classical scholar. He acquired a competent knowledge of the French, German, and Italian languages, without the aid of a master. Having received a bias at his early age for the medical profession, he began to cultivate chemistry with ardour. The discoveries made about that period, by Black, and by Priestley, powerfully impressed his mind. He studied the subject deeply, and soon became acquainted with all that was known of pneumatic chemistry. He then proceeded to the study of mineralogy and of botany, and in both made rapid advances.

"His vacations at this period were generally spent in Shropshire, and he devoted much of his time to shooting and whist. To both these amusements he was equally partial. In his long morning rambles with his gun, he was accustomed to unite scientific research with his amusements. He explored every recess of the most rugged mountains; he searched every dell, and seldom returned home without his pockets filled with mineralogical or botanical specimens. As a whist-player, he was in much request: he was supposed to play that game as well as almost any man in England. He sometimes on these occasions amused his friends by a surprising effort of memory. He would relate, at the termination of a game, the exact order in which all the cards were placed, and particularize who had played them." P. 10.

In the year 1781, having taken his degree of Bachelor of Arts, Mr. Beddoes repaired to London, and entered upon the study of anatomy under the celebrated Sheldon. Having diligently dissected and acquired a knowledge of physiology, he attended the classes of the most distinguished lecturers in the metropolis, in other branches of the profession. About this period he executed a spirited translation of the physiological dissertations of Spallanzani. In a second edition, he added several observations of his own, and experiments instituted by others to illustrate the subjects treated of in the work.

He took his Master of Arts degree in 1783, and in the autumn of the following year proceeded to Edinburgh, and continued, during three successive winters and one summer, to prosecute his studies in the celebrated medical school of that city.

He soon distinguished himself in the Royal Medical, and Natural History Societies; of both of which he was elected President in the ensuing session.

In 1786, he returned to Oxford, and was admitted Doctor of Medicine on the 13th of December. In the spring, however, he again visited Edinburgh, where he remained some months, and afterwards made an excursion to the Highlands, during which he amused himself in botanizing and in collecting mineralogical specimens. Whilst on this tour, he accidentally

dentally witnessed the beneficial effects of cold immersion in fever. Before ascending the mountain Schehallien, he had prescribed for a young woman labouring under a low fever then prevalent in the country, and which had in her case manifested symptoms of peculiar violence.

"On his return he was surprised to find her fever subdued, and no traces of indisposition remaining except weakness. It appeared that in her delirium she had uttered a wish for cold water, which being refused her, she had crawled, during the absence of her attendant, to the brink of an adjoining river; from which she immediately perceived a herd of cattle, with the drovers at some distance, on their way to cross the bridge. The sight induced her to make for the water, in hopes of concealing her nakedness. She waded up to her middle, and leaned against a fragment of rock; nor was it till one of the drovers turned his horse towards the inn, that she was discovered in this position; and it was believed that she had occupied it not less than five minutes. Her delirium was gone, and the symptoms of fever had quitted her."—P. 16.

In the autumn of this year Dr. B. visited the Continent, and associated with Guyton de Morveau and Lavoisier. Shortly after his return, he obtained the chemical lectureship at Oxford.

His acquaintance with Dr. Darwin, about this period, is thus introduced by our biographer.

"A congenial spirit of philosophical inquiry, and a corresponding ardour for the improvement of medicine, procured for him the distinguishing notice and regard of this truly illustrious medical philosopher. A frequent and friendly epistolary intercourse was kept up between them, confined chiefly to medical and philosophical subjects. In the course of it, it appears that the proof sheets of *Zoonomia* were regularly sent to Dr. Beddoes, and his opinions and criticisms were freely invited by the author. They seem to have been communicated with the same candour with which they had been solicited. He was not afraid to use the language of commendation, for the intrinsic merit of the work repelled the suspicion of flattery, and he offered his objections with as little reserve, because truth was the object of both."—P. 19—20.

It will readily be supposed that when Dr. Beddoes undertook to read lectures on chemistry at Oxford, he was not an idle occupant of the chair. In a letter to a friend he expresses the gratification he felt at the success of his lectures. He observes, "that they were attended by a full and overflowing audience, and that "the interest for scientific researches was not confined to the younger members of the University only." One of his pupils and friends, who was long connected with Oxford, speaks of the effect of his lectures in the following terms:

"The time of Dr. Beddoes' residence in Oxford was a brilliant one in the annals of the University. Science was cultivated more than it has been since, and I believe that I may say the same of the period which

which preceded. Dr. Thomson's lectures on anatomy and mineralogy, and Dr. Sibthorp's on botany, were delivering at the same period; and produced a taste for scientific researches which bordered on enthusiasm.

(To be continued.)

Practical Observations on the Sclerocele and other morbid Derangements of the TESTICLE; also on the Cause and Cure of the acute, the spurious, and the chronic HYDROCELE. The whole illustrated by Cases. To which are added, four Cases of Operation for ANEURISM, Subclavian, femoral, popliteal, and femoral-popliteal; with practical Remarks and Plates. By THOMAS RAMSDEN, Surgeon to the Royal Foundation of Christ's Hospital, to the Foundling, and Assistant-Surgeon to Bartholomew's Hospital. 8vo. Lond. 1810. pp. xxiv. 347. Plates 2.

If the opinion that medical literature is occupied, principally, by men of little practical knowledge, is founded on fact, it is not a doubtful assertion, that even this circumstance is accompanied with peculiar advantages. Though discoveries may not be made by this class of writers, though they may not suggest new modes of treating diseases on the ground of experience, they develope, by their erudite labours, the pages of antiquity; they select, examine, and condense, the knowledge of past times; and they render accessible to those, whose days and nights are employed in hurried visits to the sick, facts and observations which men of extensive practice have not leisure to seek among the frightful multitude of learned, dull, ingenious, obscure, illiterate, or trifling books.

In the instance before us we have the satisfaction to notice, however, a book written by a Gentleman of extensive practice, of undoubted chirurgical skill, and of deserved reputation for operative dexterity.

As it is our intention to pass by, as much as we can, all hypotheses, and to dwell upon practical facts, and that intelligence which leads to new and improved methods of treating diseases, we shall touch but slightly on the Preface or introductory chapter of Mr. Ramsden's work, which contains what he denominates "a new theory with regard to schirrus and cancer of the Testicle." But it will be proper to observe, that we are instructed in this prefatory part, that accident directed its author to an inquiry which ended in a conclusion, that, *most of the cases of enlarged and indurated Testicle are symptomatic.*

"While it is not my intention," he says, "to deny the existence of idiopathic diseases in the testicle, I am fully authorized in asserting, that such a disease is extremely rare, and that very many cases of morbid induration,

induration, hitherto supposed to be idiopathic, may be safely considered, and successfully treated, as arising from a principle of irritation concealed within the urethra."

In pursuing this investigation, the object is to shew that—

"Irritation frequently applied to a testicle, will produce appearances and consequences very similar to what are esteemed true characteristics of schirrus and carcinoma. And it is deduced from this fact, that the malignancy of the ulcerative stage of true schirrus in the testicle does not, as has been supposed, depend on the presence of any morbid poison, but differs from the malignancy of the ulcerative stage of common indurated testicle, merely with regard to the part of the gland in which irritation causing its derangement has been primarily established.

"In illustrating this opinion, it is to be remarked that when a testicle is affected by true schirrus, as it is termed, its morbid alteration will be found to originate within its organic structure; but when the gland becomes indurated and enlarged in consequence of exterior causes of excitement, the morbid symptoms are, in the first instance, entirely confined to the surrounding or intervening cellular substance."

This is not to be considered as an hypothesis founded on conjecture, or arising out of analogical deductions, but as a plain demonstrable fact.

"If a testicle, enlarged and indurated by idiopathic, schirrous derangement, be divided and examined, its organic structure, even before the gland has become painful or inflamed, will be found imperfect or obscured; the centre is more compact and has a more uniform texture than the rest of the tumour, and is nearly the consistence of cartilage. This middle part does not exceed the size of a silver penny, and from this in every direction, like rays, are seen ligamentous bands of a white colour and very narrow, looking in the section like so many irregular lines passing to the circumference of the tumour, which is blended with the substance of the surrounding gland. In the interstices between these bands the substance is different, and becomes less compact towards the edges."

"If a testicle, indurated and enlarged from excitement exterior to itself, be examined before it becomes painful or inflamed, the morbid alteration will be found in the cellular substance only, and will appear more and more faint as it approaches near to the organic structure, which is yet entire."

Upon these premises, and admitting there are two very distinct classes of enlarged and indurated testes, symptomatic and idiopathic, Mr. Ramsden states, with a propriety of limitation that becomes the investigator of the laws of nature, and the inquirer after truth,

"That the disease which we are accustomed to call true schirrus in the testicle, consists solely in irritation primarily established within the organic structure,* and that such idiopathic induration differs from symptomatic induration in the following particulars: the former always

* By organic structure those parts of a gland are meant which are necessary to its particular functions, and the office which it holds in the animal economy.

proceeding FROM organic structure towards the surrounding cellular substance; the latter as uniformly proceeding from the surrounding and intervening cellular substance TOWARDS organic structure."

In conformity with this arrangement Mr. Ramsden proposes to distinguish these different forms of morbid alteration in the testicle, by the terms

SCLEROCELE, for the symptomatic induration.

IDIO-SCLEROCELE, for the idiopathic induration.

HYDRO-SCLEROCELE, when the symptomatic induration is accompanied with a serous effusion into the tunica vaginalis testis*.

CARCINOMA, if retained at all, may be used to describe the ulcerative stage of symptomatic induration; and

IDIO-CARCINOMA, to express the ulcerative stage of idiopathic ulceration.

There is another form of disease in the Testicle, known by the term *Sarcocele*, upon which Mr. Ramsden treats, though he has not comprehended it in this arrangement. This morbid enlargement of the testicle, which appears distinctly to differ from the preceding, he thus describes.

"The *Sarcocele*, which has been unfortunately (I say unfortunately, because I believe it to be a circumstance which has perplexed and confounded our enquiries) considered by our best authors merely as a variety of *Schirrus*, in fact possesses very few morbid characters in common with it; it is true, indeed, that the *Sarcocele* commences within the organic structure of the gland, and proceeds according to the laws of common irritation, but in outward character and on dissection it displays features which are peculiar to itself; since it is fleshy and elastic to the feel, and when divided is often found to contain within its substance partial collections of bloody sanies; it is also in a great measure freed from that ligamentous radiated appearance, which, in true *schirrus*, is uniformly observable."

Having premised this statement as explanatory of the fundamental principles in Mr. Ramsden's work, we shall proceed in our next Number to present our Readers with an analytical view of such diseases of the testicle as are detailed by the author, under the general head of affections of the testicle dependent on a principle of latent irritation within the urethra, particularly as arising from a *membranous fence* at the aperture of the urethra—of the *sclerocele*, or indurated testicle—of the *schirrous* testicle, and its morbid distinctions—of the morbid state of the testicle which has been called *venereal*—of the *serophulous* testicle—of the *sarcocele*—of the acute, spurious, and chronic *hydrocele*.

(To be continued.)

* Does the lymphatic effusion ever accompany the *Idio-Sclerocele*? if it does it will require, consistent with this nomenclature, a term to express it.

*An Account of Diseases in an Eastern District of London,
from Dec. 20, 1810, to Jan. 20, 1811.*

ACUTE DISEASES.			
Pneumonia	7	Dysuria	3
Pleuritis	2	Prolapsus Vaginæ	2
Hæmorrhagia Intestinalis	1	Amenorrhœa	5
Dysentery	2	Scrophula	3
Rheumatismus Acutus	3	Hypochondriasis Herpes	12
		Rheumatismus Chronicus	17
CHRONIC DISEASES.		PUERPERAL DISEASES.	
Tussis	20	Ephamera	5
Dyspnœa	12	Menorrhagia Lochialis	4
Tussis cum Dyspnœa	10	Dolor post partum	3
Catarrhus	3	Enterodynia	6
Pleurodyne	4	INFANTILE DISEASES.	
Phthisis Pulmonalis	2	Aplthæ	2
Hæmoptysis	4	Ophthalmia	5
Cephalalgia	3	Herpes	7
Gastrodynia	7	Convulsio	3
Diarrhæa	4		

¶ In addition to this account it is sufficient to observe, that the state of disease during the last few weeks is very similar to that which was given in the last report. The different diseases of the lungs, which form a large portion of the list during the winter season, had then appeared, but in a more mild form. The extremely severe cold which has since prevailed, and which seems to have exceeded almost every thing which can be recollected for a considerable number of years, has produced a great aggravation of symptoms, amongst those who were before labouring under the complaint, and has given occasion to it amongst those in whose constitution there was a peculiar predisposition to it.

REPORT OF DISEASES,

*Under the Care of the late Senior Physician of the Finsbury Dispensary,
from the 20th of December, 1810, to the 20th of January, 1811.*

THE Reporter was a few days since consulted by letter from a remote part of the country, with regard to the expediency of a surgical operation in a very grievous instance of scrophulous disease. At a distance from the spot, and the case being of a nature partly surgical, it was of course only in a very qualified and conditional manner that he ventured to give his medical opinion. The circumstances and history of the complaint, however, were represented to be such, as led him to discourage the

the two hasty performance of the meditated operation. Scrophula being a disease of the constitution, is seldom to be remedied by the extraction or amputation of parts. The human frame rarely indeed suffers, unless when it is induced by external violence from any morbid affection that may strictly be regarded as *local*. The appearance of it may be superficial, or confined to a particular spot, but the real root is for the most part fixed in the interior, and is secretly ramified throughout the whole substance of the frame. For want of a due regard to this circumstance, limbs may be lost without life being preserved, or health in any degree amended by the deprivation.

A case of epilepsy, that has recently fallen under the Reporter's notice, was a considerable time before anticipated, in a certain degree, by feelings which not unfrequently occur in a person who is destined, at some future period, to be the subject of this affection. Not merely an acquaintance with the actual symptoms of a disorder, but with the previous history also of the patient, are highly interesting and instructive: the latter knowledge is often as necessary to the prevention, as the former is to the cure, of a disease. It is of importance to know and to interpret rightly those signs which portend the approach of any formidable malady, that our fears may be aroused in time, and that we may seasonably oppose to the morbid tendency all the means of precaution and counteraction in our power. In complaints which fall under the denomination of nervous, this is more particularly incumbent. Upon minute enquiry of the patient alluded to, it appeared that several years before the complete formation of an epileptic paroxysm, she had been liable to a sleepiness, which was not removed by actual sleep, to a frequently recurring sense of intoxication, without having taken any inebriating draught or drug, to an almost habitual unsteadiness upon the feet, and sometimes to an actual staggering. She had been also remarkable for some months before her late, which was her first attack, of this complaint, for an incessant restlessness, and propensity to locomotion, a continual disposition to change her posture or her place. This mobility extended likewise to the mind, so that a permanent direction of it to one subject was an effort beyond her power. The attention was always fluttering on the wing. Not long before her epilepsy, she mentions having frequently experienced a variety of uncomfortable feelings, such as flashes of light before her eyes, head-ach, violent rushings as it seemed of blood towards the head, dizziness, dimness and confusion of vision, and a frequent sense of faintness approaching to syncope. She also states the having been subject to transient absences of the intellectual faculty, which would seem to desert her for a few minutes, and then return in a manner that she could not account for. It is but seldom that we meet with a person whose previous life afforded so many admonitory hints of the specific danger which threatened her constitution; although perhaps it is for want of a scrutiny sufficiently strict that we do not ascertain, in every case of true epilepsy, the occurrence of most at least of these preliminary circumstances of awful presage.

J. REID.

Grenville-street, Brunswick-square;
Jan. 26, 1811.

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

ROYAL SOCIETY.—The reading of Mr. Davy's Bakerian Lecture was continued on the 6th of December, and concluded on the 13th. In this part of the lecture Mr. Davy detailed a number of experiments, which he regarded as showing that when any metallic oxide is converted into the substance improperly called a muriate, but which is a binary combination of oxymuriatic gas and a metal, the oxygen produced is exactly that which had been absorbed by the metal: and he stated, that the proportions of oxygen or of oxymuriatic gas which combine with metals, are always definite; and that when two proportions combine, the one bears a simple ratio to the other.

Mr. Davy, inferring from the whole series of facts that oxymuriatic gas must be considered as a substance as yet undecomposed, and analogous in many of its properties to oxygen gas, but having stronger attractions for most inflammable bodies, suggests the necessity of altering its name; which conveys so false an idea of its nature.

Conceiving it dangerous in the present improving state of science to adopt any names connected with theoretical arrangements, which may require alteration as knowledge advances, he ventures to suggest for the consideration of chemical philosophers the name of *chlorice*, derived from its green colour; and he proposes to signify its compounds by the name of the basis, with a termination in *ine* or *ane*: thus hornsilver, improperly called muriate of silver, would be named *argentane*; muriate of barytes, *barytine*, &c.

The Croonian Lecture on Muscular Motion was read by Mr. Brodie, on the 19th and 20th of December. The subjects introduced in this lecture were less numerous, and the discussions less varied, than usual on similar occasions; and very little or no reference was made to muscular action, the ingenious lecturer confining himself to a simple detail of the thermometrical effects on the animal body, in consequence of dividing the spinal marrow and afterwards inflating the lungs artificially with a pair of bellows, and continuing the circulation of the blood under such circumstances for nearly two hours. The subjects of operation were chiefly rabbits: and the author made a great number of experiments on these animals by dividing the spinal marrow and suffering them to die in this manner, noticing their temperature and that of the room at particular periods; or, after dividing the spinal marrow, inflating the lungs, and thus keeping up the circulation for an hour, and even an hour and a half; noting also the temperature of the heart, intestines, and rectum, at various times during the experiments. The result of the author's inquiries was, that animal heat does not appear to be produced, as generally supposed, by the action of the air on the lungs, and the circulation of the blood; as those animals whose lungs were inflated, and the circulation artificially continued, were always from one to three or four degrees colder in a certain time than those whose spinal marrow was divided and suffered to die. Professor Davy suggested to the author, that the cold air thrown into the lungs (which produced the

the usual change in the colour of the blood) might contribute to this effect; and accordingly an experiment was made to obviate such consequence by means of ligature; when it appeared, that in an hour and forty minutes the body in which the circulation was artificially continued after dividing the spinal marrow, was only one degree colder than that which died immediately. Mr. B.'s experiments seem to militate against the doctrine of the vitality of the blood; but they do little towards illustrating the fact, that tortoises can live and walk about long after having been deprived entirely of the brain, and even part of the spinal marrow.

On the evening of the 20th, part of a letter from Dr. Parry, of Bath, was read, on certain nervous affections; as convulsions, tremulous motions, and sudden startings or pulsations of what is vulgarly called the life blood.

ROYAL SOCIETY OF EDINBURGH.—On Monday the 5th of November, the Royal Society of Edinburgh met for the first time in their new apartments in George-street, when Dr. Thomas Thomson read two papers, giving the account of the analyses of two new minerals from Greenland. To one of them he has given the name of allanite, and to the other sodalite. In the first he discovered a considerable portion of cerium, and in one analysis he detected a quantity of a metallic oxide perfectly new in its properties, for which he proposed the name of junonium. The other mineral, according to his investigation, affords 23 per cent. of soda and three of muriatic acid. By an analysis of Mr. Ekeberg, the same constituents were yielded in the proportions of 25 per cent. and six per cent.

At the next meeting on the 19th, a short communication was read, respecting a singular water-spout observed at Ramsgate.

On the 3d inst. a paper by Dr. Brewster was read, being a new demonstration of the fundamental properties of the lever.—Also a communication by Sir George Mackenzie, bart. relative to the hot springs of Iceland; when Sir George exhibited some beautiful drawings and part of a series of magnificent specimens from that country, which he proposes to deposit in the cabinet of the Society: and at the last meeting, on the 17th, Sir George began a description of the minerals of Iceland, when he exhibited specimens from the district called the Guldbriège Syssel.

Vaccination in France. The following document, which appears to be official, points out the system pursued by the French legislature to promulgate vaccination, and to disseminate the evidence of the benefit arising from adopting that discovery.

Ten years of labour and success have at length decided the important question, as to the vaccine possessing the power of preserving all those in whom it has regularly gone through its progress, from the small-pox. This has been carried to such a degree of certainty by the experiments of the Central Committee, and its numerous correspondents, as well Frenchmen as strangers, that there is not at present any fact in medicine better proved, or more certain, than that which establishes the truly *anti-variolous* power of the Vaccine.

His

His Majesty the Emperor and King, to whom the different reports of the Central Committee have been presented, has been sensible of the advantages which would result from the general propagation of the new inoculation. His Majesty has seen the preservation and increase of the population of his vast empire, immediately connected with the adoption of this method. He has had an account rendered to him of the obstacles which, in some districts, might yet oppose its progress, and has found that these consisted principally in the great difficulty of procuring and preserving the vaccine fluid.

In consequence, his Majesty, wishing to give to his people a signal mark of his paternal solicitude, has granted to his Excellency, the Minister of the Interior, an annual and special credit, destined to provide for the expences necessary for extending the practice. He has formed, in twenty-four of the principal cities of France, depots of the vaccine fluid, where every one who wishes to practice vaccination may be sure of always finding disposable matter. These are, Besançon, Bourdeaux, Brussels, Caen, Clement-Ferrand, Dijon, Florence, Lisle, Lyons, Marseilles, Mentz, Montpellier, Nancy, Nantes, Orleans, Parma, Rheims, Rennes, Rouen, Saintes, Strasbourg, Thoulouse, Tours, and Turin.

His Majesty has further created a Vaccine Committee at each of these depots, and has preserved to the Central Committee, established near his Excellency the Minister of the Interior, its original organization, in charging it with the central depot of Paris.

In conclusion, his Majesty has appointed, by his decree of the 6th of November last, annual rewards for those who shall have performed the greatest number of operations—collected the most important facts—overcome most obstacles—and arrested the course of variolous epidemics. These rewards have been so distributed that every effort has been noticed, and every labour proportionably recompensed.

They are thus determined:—1st, A prize of 3000 francs; 2d, two prizes of 2000 francs; 3d, Three prizes of 1000 francs; and 4th, a hundred silver medals bearing the head of the Emperor.

These powerful motives always to keep up and preserve the Vaccine fluid; this energetic incentive to an emulation which must direct all the efforts of the practitioners towards a rapid propagation of the Vaccine, leads to the hope that the public communication of his Majesty's benevolent intentions, will be sufficient to give a general impulse in favour of the new method, and banish in a few years that scourge, the small-pox, from the French territory.

Already the returns of the mortality in the city of Paris, for the year 1809, exhibit only 213 deaths, by small-pox. This number, though yet too considerable, since the vaccine offered to these 213 victims a certain method of preservation, is yet extremely small in comparison of that of some years, when the epidemic small-pox has carried off, in the same city, more than 20,000 individuals. The Committee does not hesitate to attribute this diminution of mortality to the zeal with which the different Members, who compose it, have extended the practice in the large establishments to which they are attached, as physicians and surgeons; to the efforts of all the professional men, and of some ecclesiastics in the capital; and lastly to the conspicuous exertions of Messrs the Counsellors of State, the Prefects of the Seine and of Police, the

the Mayors and their assistants, who have always seconded the Committee with the greatest zeal, and in many instances anticipated its intentions.

Every good man, and every friend to mankind, may hope then, that the new measures taken by his Majesty will at length effect that which the labours of the Committee have long led them to expect. There is reason to believe, that they will so stimulate the emulation of all physicians and surgeons, that very shortly the small-pox, already unknown in many departments, where the zeal of the prefects has been such that there remain none to vaccinate but the infants born in every year, will entirely disappear from France, as the leprosy has done, of which no traces are found, except in the history of the worst governed ages of our Monarchy.

The Committee embraces this opportunity of reminding the public, that the Central Establishment of the Vaccine, founded the 7th of February, 1801, and situated in No. 1, Rue du Battoir, St. Andre-des-Arcs, is still carried on; that vaccination is practised gratuitously there every Tuesday and Saturday, at noon; that the children of the poor are admitted gratuitously during the course of the Vaccine; and that application for vaccine fluid should be addressed, under cover to his Excellency, to M. Husson, Physician of the Hotel Dieu, and of the Imperial Lyceum, Secretary to the Committee.

Given at the sitting of the 11th of May, 1810, the day of the 10th Anniversary of the foundation of the Committee.

Signed by all the Members.—Duchanoy, *President*; Corvisart, Delasteyrie, Doussin-Dubreuil, Guillotin, Hall, Hazard, Jadelot, J. J. Leroux, Marin, Mongenot, Parfait, Pinel, Salmade, Thouret—Husson, *Secretary*.

Inquiries concerning the Eau Medicinale and the Rhododendron Chrysanthum.

Has the Rhododendron Chrysanthum been lately used in Scotland? Has it obtained any reputation for the cure of gout or rheumatism? Is it cultivated in Britain? If not cultivated in this country, where or how is the genuine plant to be procured? Have the other species of rhododendron any medical powers?

The reasons for wishing to obtain information on these points, are the following: A medicine has lately been imported from France under the title of Eau Medicinale d'Husson, and now much used for the relief of the paroxysms of gout, with great efficacy and perfect safety. The effects and operation of the Eau Medicinale, and those said to arise from the use of rhododendron, are so strikingly similar, that it is suspected the Eau Medicinale is prepared from the rhododendron. The Eau Medicinale is professed to be prepared from a vegetable substance, which vegetable is said to be discovered, and an imitation of the Eau Medicinale is made from it, and advertised for sale in London, but still as a secret.

Dr. Home's experiments with rhododendron were unsuccessful in acute rheumatism, but it was found to be active and powerful, and as it has obtained a place in the Materia Medica of the Edinburgh Pharmacopœia, I am in hopes, that you, Gentlemen, or some of your readers, will

will be able from later experience, to say whether it is possessed of the virtues attributed to it by Koelpen, and others upon the Continent.

In Dr. Woodville's Medical Botany, there is a figure of the *Rhododendron Chrysanthum*. It is a native of Siberia, and he says is not yet introduced into Britain. I have not found it in the catalogues of our nurserymen, nor in our plantations and shrubberies; but my local and confined situation may be the means of my not knowing where it is to be procured.

Should my suspicions prove well-founded, and the *rhododendron* be possessed of similar powers to the *Eau Medicinale*, it will be an acceptable service to gouty sufferers, and also to the faculty, to rescue an useful medicine from the hands of Quackery.

The Editors of the *Edin. Jour.* to whom these inquiries were addressed, say, that the last *Rhododendron Chrysanthum* used in Scotland, was a parcel of the dried leaves sent from Russia by Dr. Guthrie of St. Petersburg, to Dr. Duncan, senior. It was introduced into the *Edinburgh Pharmacopœia*, chiefly on account of the reputation it had procured in Russia as a cure for rheumatism; but the trials here did not correspond with its reputation, as we never saw any remarkable benefit from its use. In particular, it never produced a purgative effect, and is therefore probably not the basis of the *Eau Medicinale*, which is said to operate powerfully even in small doses. It has not yet been cultivated in Scotland, although the *rhododendron Dauricum* has been mistaken for it. It is however mentioned in Don's catalogue of the Cambridge Botanical Garden, as introduced there in 1801, and is, as might have been supposed, marked *hardy*. It is figured in the *Botanical Magazine* for March or April last. The *Rhododendron Ferrugineum* is supposed to possess similar virtues.

We have lately been informed, that the *digitalis lutea* is supposed to be the basis of the *Eau Medicinale*. *Edin. Jour.* 1811.

Extract of a Letter concerning the Empirical Gout Medicine, called Eau Medicinale d'Husson.

A number of respectable testimonies, it must be granted, have appeared within the last six or eight months in favour of this nostrum. But a keen and experienced observer will not feel conviction, notwithstanding the tide of popular opinion: 1. Because he will recollect, that on former occasions the public admitted the testimonies of patients, and even of medical men, as quite satisfactory of the efficacy of various gout medicines, which, however, proved to enjoy but a temporary existence.

2. Because the influence of public opinion is at present such as to carry efficacy along with the exhibition of any medicine which is not positively hurtful, but especially if it be a medicine which is really beneficial on account of purgative, and perhaps some sedative virtues.

3. The shocking ignorance of medical science displayed in the printed directions by the author of the *Eau Medicinale d'Husson*, at least proves that the public is not indebted to any person capable of adequate observation, for this medicine.

4. The known discredit, and even prohibition of this nostrum in Paris, serve to shew, that in all probability it has, on trial, been proved not to answer the expectations of the Parisians.

With

With respect to the composition of the present favourite gout medicine, conjectures only are offered. It seems to contain, in a vinous solution, a purgative ingredient in a very small quantity of matter: a slightly bitter ingredient; and perhaps a narcotic or sedative one. The foxglove was early suspected as one of the articles, and although many trials seem to have disproved its existence in this preparation, some persons still are of opinion that it is one of the ingredients. Tobacco has been proposed, but on no just ground whatever. Toadstool has been named, on account of some similarity of colour and smell, and exhilarating effects. The purgative ingredient has been suspected by some to be scammony, by others to be elaterium.

I have just had a bottle of the Eau Medicinale shewn to me which has been twenty-five years in London; it was administered at that time but gained no credit.

It is not intended by these observations to discourage prudent trials of the medicine in question, for certainly the evidence in its favour is quite enough to justify them; but, as it is of importance that the truth be determined as soon as possible, medical practitioners may probably be assisted by the above observations.

Case of Rupture of the Gall-Bladder.

An athletic man, about forty years of age, after violent and protracted sufferings from a remittent fever, was for many weeks afflicted with symptoms of derangement of the stomach and chylopoietic viscera. He had a fixed pain at the pit of the stomach, constant nausea, and a short time after eating, the food was generally rejected in the form of chyme. The bowels were very torpid, and his stools untinged with bile: at length he became jaundiced, and for many weeks suffered all the aggravated symptoms of that disease in a violent degree. One morning, whilst raising himself in bed, he was suddenly seized with a most violent pain in the right hypochondrium, which in a very few minutes extended throughout the whole abdomen. The pain rapidly increased; the belly almost immediately became tense and much swollen; the pulse was quick, contracted, and intermittent; his respiration was difficult; his extremities cold; his countenance ghastly, and he had constant vomiting. These symptoms increased for forty-eight hours, when the abdomen was as much swoln as in an advanced state of ascites. The pain and tension were excessive: he became delirious and died. During this time fomentations were applied to the abdomen; he was repeatedly bled, and anodyne glysters were injected, with very little and but temporary relief. Upon dissection, upwards of three gallons of yellow serum mixed with flakes of lymph were first drawn off. The peritoneum lining the muscles and covering the anterior surface of the intestines was universally inflamed, and of as deep a scarlet colour as the conjunctiva in the most acute stage of ophthalmia. The bowels were collected in the posterior part of the cavity, and glued together by a layer of coagulated lymph, which adhesion bounded the inflammation, for it did not in the least degree extend between their convolutions, although extreme on their anterior surface. They were much distended with air, and the pelvis was filled with masses of lymph. The edge

of the right lobe of the liver adhered firmly to the beginning of the arch of the colon; and between the concave surface of the liver and the arch of the colon a large cyst was formed, which had burst by an ulcerated aperture, about as large as a sixpence, into the cavity of the abdomen. When pressed externally, a quantity of thick bile issued from this aperture: when cut into, it was found to be of sufficient size to hold a quart of fluid, and contained the gall bladder, which communicated with the cyst by an apparently ulcerated opening of considerable size, a little above its fundus.

Thus the gall bladder had first given way, and the issued bile had caused this *épanchement* between the liver and colon, which had ulcerated from distention, and the effusion of its contents into the cavity of the abdomen had produced this fatal inflammation.

The pancreas formed a tumor as large as an orange, a section of which exhibited the membranous bands peculiar to the schirrous structure: the pressure had obliterated the ductus communis choledicus, and communicated by a ragged ulcerated surface with the cavity of the duodenum. The liver and other viscera were natural.—*Lond. Med. Rev.*

The Spring Courses of Lectures at St. Thomas's and Guy's Hospitals, will commence the 1st of February, viz. at *St. Thomas's*, Anatomy, and the Operations of Surgery, by MR. CLINE, and MR. ASTLEY COOPER. Principles and Practice of Surgery by MR. ASTLEY COOPER. At *Guy's*, Practice of Medicine, by Dr. BABINGTON, and Dr. CURRY.—Chemistry, by Dr. BABINGTON, Dr. MARCET, and Mr. ALLEN.—Experimental Philosophy, by Mr. ALLEN.—Theory of Medicine, and Materia Medica, by Dr. CURRY, and Dr. CHOLMELEY.—Midwifery, and Diseases of Women and Children, by Dr. HAIGHTON.—Physiology, or Laws of the Animal Economy, by Dr. HAIGHTON.—Structure and Diseases of the Teeth, by Mr. Fox.

Dr. WATT, of Glasgow, will begin his summer course of Lectures on the Theory and Practice of Medicine, on Monday the 6th of May.

Dr. HOOPER, and Dr. AGER, will re-commence their Lectures on the Theory and Practice of Physic, Chemistry, and the Materia Medica, at the Theatre in Cork-street, Burlington Gardens, on Monday, February 4, 1811, at Eight o'clock in the Morning.

Dr. MILLAR, of the University of Glasgow, has in the press, *Disquisitions on the History of Medicine*, exhibiting a view of Physic, as observed to exist during remote periods, and among nations not far advanced in refinement.

Mr. WHITE has nearly ready for the press, the *Flora of the counties of Northumberland and Durham*, of which the Botanist's Guide through those counties may be considered as the Prodrômus. It will comprize about two thousand indigenous plants, and be illustrated

frated by some coloured engravings, from drawings made by Sowerby.

Sir George Alley, M. D. of Fermoy, Ireland, is engaged in arranging for the press, a work to be entitled "Reports of the Utility and Employment of Mercury, in the Treatment of Inflammatory, and other diseases, in which the exhibition of that remedy has been neglected, or considered as inadmissible." As this publication will necessarily embrace many important medical subjects, the author earnestly solicits the assistance of the respectable practitioners, civil and military, of Great Britain and Ireland, and will be happy to acknowledge any communications with which he may be favoured.

MONTHLY CATALOGUE OF NEW MEDICAL PUBLICATIONS.

Osteologia, or an Anatomical Description of the Human Bones: illustrated by fourteen accurate engravings, designed for the use of students. 12mo. Cox.

Anatomical Plates of the arteries of the Human Body, accurately coloured, and reduced from the Icones of Haller; with concise Explanations. Second Edition. 8vo. Cox.

Observations on the Act for Regulating Mad-Houses, and a correction of the statements of the case of Benjamin Elliott convicted of illegally confining Mary Daintree; with remarks addressed to the friends of Insane Persons. By James Parkinson. 8vo. Sherwood and Co.

Additional Cases with further directions to the Faculty, relating to the use of the Humulus Lupulus, or Hop, in Gout and Rheumatic Affections. By A. Freake. 8vo. Highley.

MONTHLY BOTANICAL REPORT.

The BOTANICAL MAGAZINE for last month contains,

Alöe radula of Jacquin, the *attenuata* of Haworth. Of the smaller alöes, which are better suited to the size of the work, Mr. Edwards has given some excellent specimens of his superior skill as an artist. Indeed we have seldom witnessed any thing superior, even in the splendid botanical productions of the Paris Press.

Alöe saponaria (β . *latifolia*;) one of the old varieties of *perfoliata*; a very large species, but of which a good idea is given by the insertion of a diminished outline, representing the habit of the whole plant. Mr. Ker has in this, as in all the tribe, taken great pains to elucidate the confused synonymy. He informs us that the smaller variety of this (β *minor*) is the *umbellata* of Decandolle, excluding all his synonyms, which belong to *A. picta*; and is also the *picta* (*minor*) of the new edition of the Hortus Kewensis, as far as regards the synonym of the late edition, but that those quoted from Lin-

neus

næus and Dillenius belong to *A. picta*. Although this species has been called American alœe, and Carolina alœe, it is not a native of America, but of the Cape.

Tamus elephantipes. A female plant of the Cape Bryony, from Mr. Knight's collection, in the King's-road, Chelsea. A male plant flowered in 1783 in the Kew garden, from which M. L'Heritier had a drawing taken for his *sertum anglicum*; the engraving, however, though quoted in books, was never published; nor is there any figure of it, that we know of, extant. To those who have never seen this very singular plant, Mr. Edwards's outline sketch behind the flowering stem, will not be easily understood. It represents the curious root stock, which rises above the surface of the ground, and somewhat resembles a hemispherical section of the trunk, or rather of a warty excrescence of some old tree. In this apparently lifeless state it sometimes remains many months, now and then putting forth climbing stems, bearing alternate cordate leaves, with here and there bunches of flowers in the axils of their footstalks, much in the same manner as the common black bryony. It is this shapeless, massive rootstalk that has occasioned its being called, by the inhabitants of the Cape, the Elephants-foot.

Hermannia tenuifolia; a new species, which is probably lost to our gardens, as the drawing was taken in Mr. Curtis's time, and except an imperfect specimen in the Banksian herbarium, Dr. Sims has not been able to find any thing respecting its existence.

Hermannia flaminea; a beautiful little shrub from Mr. Knight's collection. Although we are presented with a good drawing of this plant, with flowers fully expanded, yet it is rarely seen in this state, we could have wished that some of the flowers at least had been represented in their very remarkably light-twisted state, in which they look almost as if the tips had been rounded off with a pair of scissors. Mr. Andrews, in the Botanist's Repository, though his figure is otherwise very indifferent, has seized this peculiarity. The nocturnal fragrance of the flowers adds to the value of this plant.

Astragalus sinicus. It seems remarkable that this pretty little annual should never have been before figured, though it has been at times in our gardens for forty years past.

Tropæolum peregrinum. This is at present a scarce and considered as a tender plant, but being a native of the same country as the common *Tropæolum majus*, there seems no reason why it should not become as hardy as that, which is now almost naturalized to our clime; for Miller says, that this last will sow itself and come up spontaneously the following summer, in favourable situations.

There are several species of this singular genus recorded in the Flora Peruviana, and it is not improbable that distinct plants have been confounded under the name of *T. peregrinum*; Dr. Sims doubts, if Feuillée's plant, cited as a synonym of this by all preceding writers, be the same. However this may be, there is no doubt respecting Jacquin's plant, well figured in his *Hortus Schoenbrunensis*.

The ENGLISH FLORA for last month offers to our notice:—

Rubus saxatilis, as a native of high mountains in the northern part of the island. The specimen from which the drawing was taken, was gathered by Mr. Borret, at Roslin, famous for its antique chapel, and delicious strawberries.

Brassica campestris. Dr. Smith remarks, that great uncertainty has existed among British authors, even from the time of Ray, respecting this plant.

Hudson's *campestris* is a mere yellow variety of *orientalis*. According to Mr. Edw. Forster, this is the common Wild Navew, growing abundantly by the sides of rivers, marsh ditches, &c. and that the *B. Napus* of English Flora, is the rape or cole-seed, so commonly cultivated.

Hieracium prenanthoides. Brought from Scotland many years ago, by Mr. Dixon, and has been ever since in Mr. E. Forster's garden, from whence this drawing was made. Dr. Smith observes, that in the Flora Britannica he had confounded this plant with *denticulatum*. There continues to be great difficulty in settling the species of this genus. Dr. Smith believes, from the dried specimens he has received from Mr. G. Don, that the Scottish species are not yet all determined, but that the greatest attention to living plants can alone enable him to reduce them to order. When that is accomplished, he possesses ample materials for settling their synonyms.

Carex Micheliana, introduced into Dr. Smith's Flora Britannica, he is now convinced is only a variety of *recurva*, as which he first received it from Dr. Beattie of Aberdeen. The name of *Micheliana* being therefore superfluous, as Dr. Smith himself allows, ought not surely to have been suffered to stand as the title of this mere variety of *recurva*.

NATURALIST'S MONTHLY REPORT.

DECEMBER.

Dead Winter Month.

Now joyless, rains obscure
Drive through the mingling skies with vapour foul;
Dark on the mountain's brow, and shake the woods.

DURING nearly the whole of the present month the weather has been as variable as I almost ever recollect it. On the first and second the wind was Northerly, accompanied with sharp frost. From the 3d to the 6th it was westerly; North West from the 7th to the 9th; South-West on the 10th; North North East on the 11th; Westerly from the 12th to the 15th; North on the 16th and 17th; South West and North West on the 18th; Easterly on the 19th; South West and West

West on the 20th ; Westerly from the 21st to the 24th ; North West from the 25th to the 27th ; Northerly on the 28th and 29th ; and North East on the 30th and 31st.

We had strong gales from South West or North West on the 6th, 18th, 21st, 23d, 25th, and 27th, and hard gales on the 12th and 14th. The latter was a tremendous day.

There has been rain on sixteen days of this month, but on the 3d, 6th, 10th, 12th, 18th, 20th, and 22d, much more than on any of the others. A hard frost commenced in the night of the 28th, and continued till the end of the month. In the night of the 31st there was a considerable fall of snow, the first we have had this year.

December 1.—The season has hitherto been so mild that several of the field flowers are yet in bloom. Among them I observe the hedge Lychnis, (*Lychnis dioica*), common fumitory, (*fumaria officinalis*) and Gorse.

December 6.—A great quantity of herrings were caught in the evening of this day ; and to the westward of this neighbourhood, herrings have continued to be caught during the greater part of the month.

December 7.—The weather was so warm that a large blue fly came in at the window of my sitting room, and buzzed about upon the glass in the same manner as these flies do in summer.

No pilchards have hitherto, this year, migrated so far eastward as to our shores.

December 13.—Ewes have yeanned some days ago, and lambs are now, in several places, to be seen in the fields.

December 16.—So warm does the weather still continue, that a snake was this day seen out of its hole ; and in the evening I observed black beetles of various species (*scarabeus stercorarius*, &c.) flying about in every direction.

December 17.—Spiders appear upon their webs, and seem to be unaffected by the lateness of the season. The black long legged insects which run upon the surface of the water, and are usually denominated by the common people, water spiders (*Cimex lacustris* and *stagnorum* of Linnæus) continue to be seen.

Bats are still to be seen flitting about in the evenings.

December 21.—The following plants are in flower, sweet-scented violet, wall-flower, mezereon, and hepatica.

Snipes have in a great measure left the marshes, and are found on the dry lands.

December 25 and 27.—In the evening of each of these days there was much lightning.

December 31.—No wild fowl, except a very few ducks and geese, have yet visited us. The variable weather has no doubt been the cause of this. A tolerably severe frost with the wind from the eastward, are the usual prognostics of the arrival of these birds.

Hampshire.

METEOROLOGICAL TABLE.

From Dec. 29, to Jan. 27.

D	Therm.		Barom.		Hygrom.			Weather.
					dry	—	damp	
29	34	—	35	30 ³	—	—	4 10 15	cloud . . snow . fair . . .
30	33	35	34	—	—	—	14 1 16	fair . . . — snow . cloud . .
31	32	34	32	—	—	—	14 12 —	cloud . . snow . cloud . . .
1	32	31	30	— ³	— ²	— ¹	10 15 9	cloud . . snow . . fair . . clou . .
2	—	31	30	—	29 ⁹	— ⁸	9 4 11	clou snow . snow . .
3	29	27	25	— ⁷	—	— ⁸	15 10 7	clou snow SW
4	29	30	29	—	— ⁷	—	10 — 1	clou snow . clou . . . E . .
5	27	29	28	— ⁸	—	—	15 20 16	fair clou . . . E . .
6	29	—	27	—	—	—	16 — 15	clou fair NE . .
7	28	29	30	—	—	—	12 — 11	clou fair . . . clou . . NE . .
8	29	30	29	—	—	—	9 — 10	clou — NE . .
9	31	32	—	—	—	—	1 10 4	clou snow . . rain . NE . .
10	28	32	36	29 ⁹	—	— ⁸	20 22 35	fog rain . . inn . .
11	42	43	38	— ⁶	— ⁷	— ⁸	15 32 16	rain . . clou . . fair . . SW . .
12	42	46	—	— ⁶	— ⁵	—	14 17 12	clou rain . . fair . SW . .
13	40	46	—	— ⁶	—	—	5 2 —	1 fair . . rain inn . . SW . .
14	47	46	—	—	—	—	10 13 9	cloud rain . . clou . . SW . .
15	45	40	37	— ⁷	—	—	8 9 20	clou fair . . . SW . .
16	36	40	—	— ⁸	30	—	32 — 30	fair — . . . W . .
17	46	51	44	29 ⁸	— ⁶	— ⁷	55 66 50	rain . . cloud W . .
18	42	—	37	— ⁷	—	30	50 45 29	cloud fair W . .
19	36	41	38	— ³	— ⁴	—	30 28 38	fair — . . . W . . N . .
20	37	40	36	— ³	— ²	— ¹	47 28 30	fair — . . . W . .
21	37	40	30	30	—	— ¹	34 40 38	cloud rain . . fog . . SW . .
22	35	—	39	— ²	—	—	52 — 48	fog — . . . SW . .
23	37	42	40	— ²	—	— ³	48 — 52	rain . . fair . . . cloud . . W . .
24	38	40	39	— ³	—	— ⁴	50 48 47	fair — cloud . . . E . .
25	38	39	36	—	—	—	45 38 36	cloud — . . . NE . .
26	35	40	—	— ²	30	29 ⁸	40 45 51	fair . . cloud W . .
27	41	40	36	— ⁶	—	—	50 27 24	rain . . fair . . . cloud . . W . .

30th December. Snow covers the ground. Ice an inch and half thick.

Jan. 1. Heavy fall of snow in the night, and morning of the 2d.

3. Though wind at S. W. snow falling, and the temperature sensibly warmer, the thermometer falls to 27, and in the evening to 25.

4, 5, 6, 7, and 8. Wind from N. and N. E. with a sensation of cold far beyond the degree indicated on the thermometer. Atmosphere very dry. Ice from four to six inches thick.

9. The approach of a change indicated by the hygrometer returning to the humid point; on the 10th, an entire break up of the frost with light rain followed by very dense fog.

13. When rain was falling, the hygrometer rises to the dry side of the scale; and on the 15th and 16th, when fair, shews considerable humidity.

Prince's-Street, Cavendish-Square, Jan. 29, 1811.

NOTICES TO CORRESPONDENTS.

WE are indebted to an intelligent writer who signs himself SENEX, for some wholesome advice. The case, however, which called forth his animadversions, in our apprehensions hardly deserved them. He observes respecting it---“ I have never visited America ; yet I would not give credit to any person, with whom I was not well acquainted, however *respectable*, who should tell me of *opening arteries in wrists and ankles*. I could never hear it without suspecting that he intended to impose upon my understanding ; and I shall never read it without hoping it to be an oversight of the writer or printer.”

We assure SENEX that in this instance there was no mistake of the printer, and we cannot for a moment suppose that any medical gentleman, much less Dr. Harrison, would attempt to deceive us with a false relation. Whatever opinion may be entertained of the propriety of taking blood from the arteries, at the wrists or ankles, the operation is practicable. Senex will find his wish for a case in favour of the Eau Medicinale d'Husson, gratified in our present Number. We shall be happy to receive the Case of “ Change of Colour in a Lady,” resembling that related by Mr. Goodwin in a recent Number.

We have been favoured with Communications from Dr. Bradley of Huddersfield, Mr. Baxter, Mr. Eagland, and Mr. Harrold.

The Communication from A. B. which has been accidentally overlooked, will appear in our next Journal, with the extract from the Repertory, with which A. B. wishes it to be accompanied.

THE
Medical and Physical Journal.

VOL. XXV.]

MARCH, 1811.

[NO. 145.]

Printed for R. PHILLIPS, by E. Hemsted, Great New Street, Fetter Lane, London.

To the Editors of the Medical and Physical Journal.

Dr. Bradley on an epidemic Puerperal Fever.

GENTLEMEN,

IN the west-riding of this county we have had, for more than twelve months past, an epidemic puerperal fever, which has excited such alarm among pregnant females, especially in some of the larger towns, as to induce many to remove to distant places for the period of their confinement. From the best information I can collect, this fever has been exceedingly fatal, insomuch, that for several months after its first appearance, none, I believe, recovered.

I have not yet learnt that any medical man has favoured the public with remarks on this most formidable complaint, in which, I am happy to say, my experience has been very circumscribed; and I am therefore incompetent to offer any pathological information, as the result of extensive practice. I have seen but six of these cases, three of which were in the last stage of the complaint, and only survived a few hours after first seeing them. A fourth, I attended at an earlier period of the disorder, but was not more successful; and the two last (of one of which I can only give a summary detail), and which constitute the subject of this communication, I have sent you for insertion, if you deem them worthy of a place in your Journal. These involve neither much novelty nor interest, but with regard to their therapeutic or medical treatment, they may not only afford some practical hints, but matter of reflection to a few of my provincial brethren.

Mrs. Wood, aged thirty-two years, of a full habit and a sanguine constitution, was eighteen hours after delivery of her first child, on the 6th of December last, seized with a severe rigor, succeeded by nausea, heat, and great pain in the hypogastric region, especially towards the left side. Eleven hours after this attack, I found her complaining of great pain, soreness, and tension of the lower part of the abdomen,

(No. 145.)

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insomuch,

insomuch, that she could scarcely bear its being touched. Her pulse was at 122, small, thready, and irregular. She had great thirst, with a tongue a good deal furred, and inclinable to be yellow, and was costive. She made water tolerably well, but the lochia was in very small quantity, and flowed irregularly, and there were no signs of lactation. The pain in her belly was so severe, as to prevent her receiving any rest, and to confine her to one position; for she was the easiest when laid on her back or rather inclining to the right side. Her respiration was also rather obstructed, yet she was without either cough, or pain in the chest, but complained of head-ach.

About three hours previous to my seeing her, she had lost eighteen ounces of blood from the arm, which appeared rather sizy, and somewhat relieved her pain. She had likewise taken opening medicine which had not operated. I ordered her fifteen grains of the hydrarg. subm. in a bolus, to be taken immediately, drinking after it a scruple of jalap, and eight grains of purified nitre, made into a draught, and clysters, consisting of a pint of warm water-gruel, well sweetened with coarse sugar, with the addition of a spoonful or two of castor-oil, to be frequently injected. She was also ordered to dilute well, by drinking large quantities of balm-tea, water-gruel, barley-water, &c.; and her diet to consist of tea, cocoa, and weak chicken-broth. After an interval of six hours, I found the medicine had operated five times, and that her pulse was no quicker, and rather less irregular. Her tongue, also, was in no respects worse, and she declared that every motion had procured her additional relief. Ordered of the hydrarg. subm. and pulv. jalap, each six grains, to be given in the form of a bolus, swallowing after it a draught, consisting of the solution of a dram of the magnes. sulph. and to be repeated every four hours, with the exception of the hydrarg. subm. and jalap being reduced to five grains each dose. Whence, it will be seen, that in the first twenty-four hours she took thirty-three grains of hydrarg. subm. thirty-seven of jalap, and half an ounce of magn. sulph. These, with the occasional administration of clysters, procured about ten copious motions. In the evening her pulse continued the same in number as in the morning, but was less irregular, and more distinct. Her thirst also was diminished, and her tongue no more furred, and was less yellow. The pain and soreness of the abdomen were greatly relieved, and she felt little of them, except on motion or pressure. A considerable circumscribed hardness, however, occupied the hypogastric region, especially towards the left side. This appeared to me to be internal, and
on

on pressure gave more pain than any of the contiguous parts. Her face was likewise flushed, and though her skin was hot and without moisture, yet her spirits were better, and she slept two hours this evening, which she attributed to a diminution of her pain.

7th. Her pulse this morning was small, and at 120, but softer and less irregular, and she had slept about one third of the night, at intervals. Her tongue was equally furred, but rather whiter, and her thirst not immoderate. She was also free from rigors, but complained of being hot in the night; and her countenance was still a good deal flushed this morning. The abdomen continued to be less sore, and tumefied, and the hardness, already described, was rather diminished. The lochia was still in very small quantities, and sometimes for a while suspended, and the urine, as far as could be ascertained, was high-coloured. In the evening her pulse was soft, less irregular, somewhat more elevated, and at 108; her tongue rather cleaner, and her thirst still moderate. Her urine also was paler, and her skin had been more moist, and somewhat cooler all the day than at any time since her first attack. In other respects no variation. In the last twenty-four hours, she took half a dram of hydrarg. subm. thirty-one grains of jalap, and half an ounce of magnes. sulph. at nearly three equal portions, and at the distance of six hours betwixt each dose. These procured nine or ten liquid stools, most of which were slimy, though copious. Ordered the following liniment to be rubbed gently, and for some time, on the abdomen, twice or three times a day.

R. Lin. Ammon. Carb. ʒx. Camphor. ʒi.

8th. This morning she complained of uneasiness, and some increase of pain, and tumefaction of the abdomen, for about two hours, but by a copious stool, (a discharge that had been interrupted for the last five or six hours) together with a great deal of the crepitus alvinus, and at the same time a small return of the lochia, which had also disappeared, the above symptoms considerably abated. Her pulse was soft, small, and at 106, and her tongue was daily getting cleaner; her thirst also diminishing; her skin becoming moister, and her urine more pale. She slept little yesterday, but in the course of the night had some hours of comfortable repose. The child was ordered to the breasts, as they evidently were distended with milk. She also complained this morning for the first and only time, of her mouth being somewhat sore. In the evening her pulse was at 104, and her belly less sore, painful, and tumefied. The greatest part of her pain was confined to the epigastric region. In

other respects, as in the morning. She took this day at eleven in the forenoon, of the hydrarg. subm. and jalap, each ten grains, and two scruples of magn. sulph. These were repeated at five in the afternoon, and at eleven at night, the consequence was eight loose stools, which, she is confident, always relieve, without weakening her.

9th. Her pulse this morning was at 100, small and soft, and her tongue gradually becoming cleaner. She slept tolerably in the night, and was pretty free from thirst. Her skin was moist and temperate as to heat, and her belly also was soft and but little swelled, and without either pain or soreness, except only on considerable pressure. Her urine still continued to grow paler, and her breasts were distended with milk, notwithstanding the lochia occasionally appeared fresh and in small quantities. She took this day of the hydrarg. subm. and jalap, each eight grains night and morning only, which were productive of four liquid, though somewhat mucous stools. She had greater inclination for nutriment, consequently her broths were ordered to be made stronger.

10th. She slept moderately in the night, and was full as well this morning as yesterday. The mammary secretion is now adequate to the support of the child. In the last twenty-four hours she took only six grains of the hydrarg. subm. with the same quantity of jalap, and repeated them but once, at the distance of eight hours. These, however, were sufficient to procure six motions. In the course of the day, she complained of some pain in her bowels, with also some soreness and distention of the abdomen; her pulse, however, was small, soft, and at 96, and her tongue nearly clean; but the lochia, which yesterday was pale and in very small quantity, had disappeared this morning, as I afterwards learnt. Ordered the boluses to be discontinued, and the magnes. sulph. to be substituted, in the dose of half a dram every two hours, or in such a quantity, along with the occasional repetition of her clysters, as to be sufficient to keep her bowels in rather a lax state.

12th. She had a good night, and this morning was free from pain in the bowels, or from tension of the abdomen. Her pulse, also, was soft, and at 95, and her skin moist. She likewise continues taking more nourishment, and sat up to-day and was cheerful. Her farther recovery was progressive, and uninterrupted, till the morning of the 15th, when she again was seized with a severe rigor, succeeded by heat, thirst, and a slight erythematous inflammation of the right mamma, which, by fomentations, leeches, and some cooling purgative medicine, disappeared. On the morning, however,

however, of the following day, she was suddenly attacked with pain, about the middle of the dorsal vertebræ, which extended through the chest to the cartilago ensiformis, and sometimes shooting under the right mamma. I did not see her after this second attack, till the morning of the 18th, when I found her pain so acute, as not only to obstruct respiration, but to prevent her lying down. Her pulse was at 104, and small, but not irregular, and her tongue was rather furred and yellowish, but her thirst was not immoderate. Her urine also was high coloured, her skin moist, and her bowels were rather lax from the opening medicine she had taken. She had likewise some cough with a slight expectoration, of a whitish mucus. Ordered her to lose eight ounces of blood, and to take the following emetic, as she had some degree of nausea:—R. Pulv. ipecac. ʒj. vin. antim. ʒi. aq. font. ʒij. M. This operated well, and after it she was directed to take as follows:—R. Pulv. antim. gr. ij. cons. ros. can. q. s. f. bol. quarta quaq. hora sumend. superbibend. cochl. ij. ampl. mist. seq. R. Liq. ammon. acet. ʒij. spt. ether. nitr. ʒiss. aq. menth. s. ʒss. aq. font. ʒ vss. syr. caryoph. ʒij. M. In the evening, I found the pain had nearly left her, and her pulse at 94. Her tongue was much the same, but her respiration was freer, her cough less troublesome, and she could bear to lie down in bed, but only on her back, and rather inclining to the left side. Some hours, however, later in the evening, the pain returned, and occupied the right side, about the sixth or seventh rib, to which a blister was ordered to be applied.

19th. Pulse soft at 102, and her tongue was rather more yellow, probably from the blister. She had slept tolerably, and perspired in the night. Her breathing was not much oppressed, but her cough was troublesome, and her expectoration copious and of a brownish colour. On account of having four loose motions in the night the pulv. antim. was discontinued till to-morrow. In other respects no variation since yesterday.

20th. Her pulse this morning was at 98, and her tongue rather cleaner and less yellow, and her thirst inconsiderable. Her left breast was full of milk, but her right breast had been empty ever since the inflammation in it had disappeared. The blister had relieved the pain in her side, and as to other circumstances, much the same as before.

21st. Pulse at 92, and she was costive; for which occasional clysters were only recommended. In other respects little alteration.

22d. This day her pulse was at 96, and she had more thirst. Her urine was hotter and less in quantity. Her respiration,

spiration, also; was more difficult, and the pain in her side higher up, and increased; but the cough less troublesome.

23d. She was very ill in the night, but had perspired profusely, which had greatly relieved her. Her pulse this morning was down at 90, and her pain and heat considerably diminished. Her expectoration, also, was more copious, her breathing more free, and her urine paler, with a good deal of sediment.

24th. Her pulse had, this morning, descended to 80, and she was without either thirst or pain. In short, all the febrile symptoms soon left her, and her recovery was speedy and uninterrupted; yet, notwithstanding, her cough continued troublesome, and her expectoration plentiful, for about a week longer, after which, they suddenly disappeared.

The other case, of which I promised to give a summary detail, comprehending some particulars not unworthy to be known, was a woman (Mrs. North), who after having many children, was, twelve days after her last accouchement, seized with a violent pain, a little above the spine of the right os ilium, inclining towards the navel. This was accompanied with most of the symptoms peculiar to Mrs. Wood's case, excepting the pulse, which was less quick, though in other respects the same. Her tongue, however, was browner and more furred, but the tension and soreness of the abdomen were less. Her thirst was not quite so immoderate, but her urine was rather higher coloured. The lochia, also, had ceased, and her milk had been dispersed several days before her attack. Her pain was so acute, as to shoot up into different parts of the chest, to obstruct respiration, and to admit scarcely of any relief from the loss of twenty-six ounces of blood at two operations, nor from blistering, nor cooling purgatives. Under these circumstances of distress, I thought the plan of giving calomel and opium, as recommended by Dr. Hamilton, of Lynn-Regis, in pleurisy, and some other inflammatory affections, might here be adopted, with some prospect of relief. She therefore was ordered a grain and a half of the hydrarg. subm. and three-fourths of a grain of the ext. opii, to be taken every six hours, from which she soon experienced a mitigation of her pain; in ten or twelve hours, her pulse, tongue, and other symptoms, assumed appearances of amelioration; and in less than twenty-four hours after first taking this medicine, a slight ptyalism appeared. From this circumstance it was judged proper to discontinue the medicine for a day, when again it was had recourse to with the happiest effects. This was repeated several

veral times in the course of the complaint, and from circumstances discontinued. It never affected the mouth but once, though the dose was increased to one third more, and longer persisted in; and besides, it must be acknowledged, that as often as it was resorted to, its good effects were somewhat less distinguishable. The pulse, from the third day to the end of the first fortnight, was frequently vacillating from 100 to 112, and apparently under the influence of local irritation; yet the medicine not only abated the latter, but ameliorated the state of the former, by rendering it softer, more distinct, and less irregular; and also by diminishing the brown and unpleasant appearance of the tongue, and promoting an increased secretion of urine, and perspiration, and rendering the former paler.

In this case of Mrs. North, I was led to suspect that calomel was the principal agent in producing these effects, I therefore determined whenever such a case again occurred to push its administration to a greater extent.

On my first seeing this woman I thought her complaint was a case of peritonitis, as there were not that tension and soreness as in the preceding instance: but I soon was convinced of its being a case of puerperal inflammation, and a variety of the same species of epidemic before alluded to. My reasons for this conclusion were, First, because the pulse here was small, thready, irregular and somewhat creeping, and very similar to that, which, I believe, attends this complaint, when well marked. Secondly, because the tongue exhibited a more typhoid appearance than usually attends peritonitis only. Thirdly, that this case resembled in all its leading features, that of a woman not many weeks antecedent, in the same neighbourhood, who was seized with puerperal inflammation within twenty-four hours subsequent to delivery, and died in less than forty-eight hours after its attack. Fourthly, that the case of Mrs. Wood happening in less than a fortnight afterwards, and in the immediate vicinity, their respective places of residence being not more than seventy yards distance, strongly evince, if taken in conjunction with the preceding circumstances, the true nature of her complaint.

Whatever, on further experience, may be thought of the virtues of calomel, as a specific in this affection, it is evident in this instance of Mrs. Wood in particular, that it arrested the progress of her complaint, a circumstance, I think, that may be fairly ascribed to the quantity administered. On experiencing the good effects of calomel in Mrs. North's treatment, I was determined, if another opportunity offered, to introduce it more liberally into the system, cautiously, however,

ever, observing its effects, and regulating my conduct by them.

When I gave Mrs. Wood the first dose, I had not prescribed in my own mind the mode of treatment I should pursue; nevertheless, I was partial to the plan I had adopted in Mrs. North's case; but, when I found that the first purgative dose produced such pleasing effects, and that from every fresh motion she found increased relief, I was led by these circumstances to repeat the large doses, combined as already narrated; and so far were these from inducing any symptoms of debility, that they evidently produced a contrary effect, not only by ameliorating the pulse and tongue, but as it were exciting a new action in the system; for on my first visit, though her skin was hot, yet her countenance was rather pale and dejected, and expressive of that languor and want of vital energy which is partly peculiar to this affection, but in less than twenty-four hours, her whole countenance was flushed, her spirits better, and she was more sanguine of recovery.

She never complained of her medicines operating too much, but more than once observed, that, when her stools were less frequent, she experienced an increased degree of distress. After the operation of the first dose of her medicine the local irritation abated, inasmuch as not to return, except in a partial degree. I have not seen similar effects produced in the few instances of this complaint, which I have met with, by any other purgative. Hence, we may presume, it possesses some anodyne properties.

Whether if the calomel had been longer persisted in, the pleuritic symptoms would have made their appearance, is a question, that perhaps will not be easily solved; but the reason why this medicine was discontinued so soon, was, on account of the griping pain in the bowels, and soreness of the abdomen. These circumstances, together with the mammary and other secretions being copious, impressed me with a conviction, that it was no longer necessary, and by being persisted in, might produce fresh symptoms of irritation, not dissimilar to those, which it had so happily relieved. This supposition, perhaps, was erroneous, for a few hours after discontinuing the calomel she had a slight return of the lochia, which had been for twelve hours previously suppressed, and almost immediately after which, all symptoms of irritation vanished.

Some farther particulars, relating to Mrs. North, it may not be improper to relate. About a fortnight after every symptom of fever and local inflammation had disappeared, and after having regained her appetite, and strength, so as to be enabled to go about her household affairs, she was suddenly seized

seized with apoplexy, which in a few moments terminated her existence.

It may be necessary to remark, this woman had been exceedingly corpulent many years, had a short neck and was about 35 years of age.

Huddersfield, Jan. 10, 1811.

To the Editors of the Medical and Physical Journal.

Mr. Harrold's Case of Fractured Vertebrae.

GENTLEMEN,

THE fifteenth volume of the Medical and Physical Journal contains two Letters of mine on the subject of fractures of the thigh, with a pretty full description and accompanying plate of a machine, invented by me, for the more successful management of such cases, and a short history of a case of fracture of both thighs, where the use of this instrument was followed by very satisfactory success.

As I had bestowed much time, labour and thought upon this contrivance, which I flattered myself would prove useful to the world, I readily confess that I have been disappointed in not having seen so important a subject as the best mode of treating fractures of this description discussed in your Journal*.

The present communication, however, more immediately relates to the application of this machine to another purpose, that of *Fractures of the Spine*.

In page 10 of the 15th volume of your Journal, I observed, that it would be worth the trial in these melancholy cases; and I have lately had an opportunity of so employing it.

There may be much diversity of opinion concerning the value of life prolonged, when subjected to some serious privations and inconveniencies; but there are, doubtless, many

* We feel indebted to Mr. Harrold for thus recalling the attention of the faculty to his ingenious invention for the security of the fractured *or femoris*. Though we fully admit the principle upon which Mr. Pott founded his method, yet we must acknowledge the difficulties which accompany the application of it to practice, and confess that we have too frequently seen deformity result from placing the fractured limb on the side. Ed.

situations where life, if not valuable to the individual on his own account, becomes so in relation to his friends, or to the world at large; especially where the intellectual powers are unimpaired, and where there is not much bodily suffering. Besides, in the imperfect and acknowledged slow progression of medical science, if it have no other value, it may have that of being one step in advance towards a more happy issue.

CASE.

ON the 8th of June, 1810, I was called, at the distance of four miles, to Henry Newland, an athletic labouring man, 28 years of age, who, before his present accident, had, and appeared to have good health, with the exception of some scars about the throat, denoting scrophulous affection which had existed in his childhood. He had been at work in an open chalk-pit, and the vault, about fifteen feet high, suddenly giving way, had buried him several feet under chalk and large flints. He was speedily dug out and conveyed in a cart (the wheels of which being new had large prominent nails in the rim) about two miles over a hard road, to the place where I saw him. He was in bed, and there was, very evidently, a fracture of the last dorsal and first lumbar vertebrae; for the back there formed a considerable angle, and there was a complete paraplegia.

I had seen but one case of the kind before, which terminated fatally in about six weeks; and the death of that patient appeared to me to be occasioned, not so much by the mere fracture of the vertebrae, and consequent pressure and injury of the medulla spinalis, as by there being no opportunity afforded (from the frequent and necessary motion of the patient for purposes of cleanliness, &c.) for the fractured portions of bone to unite properly, if at all, and from the gangrene and destruction of parts which, from their want of feeling, gave no warning of their danger.

The first night my patient lay upon a bed, but he suffered great pain in his back, had no rest, and had made use of the head curtains to assist him in varying his position, in the fruitless hope of obtaining ease.

The next morning he was carefully moved into the fracture bed, his legs and thighs supported by the fracture boxes, a little bent at the knees; and the sacrum resting upon the moveable cushion over the trap-door of the machine, designed for the convenient use of the bed-pan.

It became necessary to pass the catheter every day, as he had no discharge of urine without it, and, as in this position of the patient, a good deal of the water unavoidably ran down

down by the side of the instrument, and would have wetted his moveable mattress, the latter was constantly, during the operation, removed, and the bed-pan substituted, and the discharge of water assisted by pressure upon the region of the bladder.* He never felt the passage of the catheter into his bladder, and seldom much uneasiness from distension till a short time before the usual hour of passing it, except when he had been tempted by some of his acquaintance (and unfortunately, in this instance, he was at a public house) to exceed his usual allowance of liquids, when I have sometimes drawn off two pints and a half of urine. Mischief, however, was going on in the bladder, for after some time there was a good deal of offensive purulent matter discharged, after the thinner part of the urine was removed; and I had reason to regret (as it was impossible for me, at that distance, to see him more than once a day) that I had not used a flexible catheter, and left it in the bladder. But, as in the course of a few weeks, this discharge ceased, and he can now retain a pint or a pint and half of urine at a time, and discharge it when he pleases, some good may have resulted from the evil (though it is an experiment I should not willingly repeat), for Mr. Hey observes, "I have tried these different methods so often, and in cases so nearly similar, that I can scarcely entertain a doubt, that a person regains the power of expelling his urine much sooner when the catheter is withdrawn after each operation, than when it is left in the urethra." P. 399, 1st edit.

It was some time before my patient knew the exact position of his legs; for, though they were perfectly insensible to pinching, &c. he still had a sort of consciousness of their existence (*somewhat* similar perhaps to that which a person has of an amputated limb, from the nerves proper to it still existing), for they sometimes felt as if they were floating about, and at other times as if they were laid across each other, and he had sometimes a good deal of pain extending down the right thigh, which was apparently relieved by friction. Except what I have mentioned, he suffered no pain upon the machine during the whole time that he was upon it, unless when his bowels were once or twice disordered during his confinement.

* Much trouble and some mischief might be prevented by a tube made to fit into the catheter (after its introduction) at a right angle, which might pass between the thighs, and by acting as a syphon, not only prevent the escape of the urine by the side of the instrument, but render pressure upon the bladder, and, consequently, upon the lower part of the spine and sacrum unnecessary.

He had nothing under him but the hair mattress, upon which his spine rested perfectly straight; his head and shoulders elevated about three inches, and, to ease the pressure in a small degree upon the fractured part, a worsted stocking once doubled was gently pressed a little way under, opposite the fracture on each side.

Notwithstanding all our care, the death of the integuments over the sacrum could not be prevented; for, it must be remembered, that there was no feeling of injury, and no power, by any slight motion, to lessen, what might be called, a dead weight.* To obviate this as much as possible, and at the same time to dress the wound more effectually, at the expiration of the month he was moved into a bed by six men, one to each limb and one on each side, steadily supporting the rolled ends of a broad towel which had been previously passed under the back. We were then enabled to turn him every day (at first very carefully, to prevent any twist of the spine) to dress his wound, which went on favourably (though its progress was long interrupted by pressure), and was perfectly healed by the latter end of October: during the last two months he generally dressed it himself.

His present state is this—his back is as straight and flexible, and apparently as strong as ever; for he can sit perfectly erect in a chair, and can stoop sufficiently, as he sits, to rub his feet upon the ground; and the only mark of fracture remaining is that of the spinous processes of the fractured vertebrae being a very little more prominent than the rest. He retains and passes his urine as he pleases, but I suspect that the abdominal muscles are much more concerned in expelling its contents, than the muscular coat of the bladder. He commonly has a stool once in three or four days, and then always at the time he is expelling the contents of the bladder; and except when his stools are liquid, he now begins to be conscious of their passage.

He has hitherto recovered no feeling or power, in themselves, of moving his legs and thighs, for even the glutei muscles do not perform their office; but his appetite and

* Pressure seems so apt, in these cases, soon to produce destruction of the integuments of the nates, that, but for the speedy reproduction of the destroyed parts, I should be disposed to consider it as arising from diminished vital energy; for, in cases of fracture of the thigh upon the same machine, I have not seen the smallest tendency even to inflammation; perhaps, for *this* purpose a cushion of wool might be better than horse-hair; but, whatever the material, it must possess sufficient firmness to preserve a proper position.

bodily health and spirits are good, and he is so active as to have made a practice, not only of dressing himself entirely, but for some time of letting himself, step by step, down stairs; by which means he has produced a wound over the tuberosity of the left ischium: this, however, is now healing, and he is about to receive instruction in the business of a taylor.

How much more, in the course of time, nature may do for him, it may perhaps, be difficult to conjecture; but as the case appears to me very interesting in various views, I shall be happy to see any new light thrown upon the subject by some of your ingenious and experienced correspondents.

C. HARROLD.

Cheshunt, Herts, Jan. 10, 1811.

P. S. I should have observed, in its proper place, that soon after my patient was removed from the machine into a bed, there was some œdema of the legs and thighs, and that though friction of them was not felt, it was followed by a sense of warmth and by perspiration of the parts; and that, after a while, a compleat desquamation of the cuticle of the legs, thighs and feet followed.

I have also observed, when upon the machine, that, though there was no feeling in the penis, there was sometimes evident action of the cremaster muscle.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING, in the course of practice, met with an unusual Midwifery case, I am induced to send it for insertion in your Journal, and

Remain, &c. &c.

WIDDOWS GOLDING.

Reading, Jun. 31, 1811.

Sept. 25th, 1810.—I was desired to attend M. B. who resides seven miles in the country. I returned with the messenger about eleven A. M. The midwife who was present, informed me she had been with the woman for twenty-four hours. The child, she said, came footling, and had remained in that situation for some hours, as she was unable to get the head away. Upon inquiry, I found the patient was in her forty-first year, and married late in life. Twelve months since, she was delivered of a dead child; the present was her second. She informed me nothing unusual occurred during

during the period of gestation. Her pains were now regular, pulse quick, but no hæmorrhage had taken place. On examining the child I found it dead; the midwife had tied a garter round the neck, in which she included the funis, and by the force made use of to bring the head away, all the cervical vertebræ were separated, and the integuments worn so thin by extension, that had I attempted to make use of more force to deliver by the neck, there would have been great danger of separating the head from the body of the child. My first object was to remove the ligature; I then introduced my hand, to examine the situation of the head, and found the chin resting upon the symphysis pubis: it was with more than usual difficulty that the head was brought into its proper position. After waiting a little time to refresh and encourage my patient, I introduced my finger into the mouth of the child to depress the chin, hoping by that means to accelerate the delivery. Meeting with considerable resistance, and knowing the child was dead, I employed more force, at which time the lower jaw separated in the middle. I then passed my fore-finger down the esophagus, and obtained a firm hold, but found the resistance so great that the delivery was impossible. After waiting some time, and finding no advantage had been gained, I suspected some præternatural enlargement of the head. To be perfectly satisfied, I again introduced my hand, and found the body of the uterus completely occupied. I was very particular in this examination, and was convinced that the enlargement was produced by an hydrocephalus internus. With great care I passed up the perforator, and made an opening between the temporal and occipital bones; a profuse discharge of bloody water followed, and soon after the head came away without any difficulty. I waited the usual time, and removed the placenta. I am happy to add, that no unfavourable symptom appeared: the patient soon recovered her strength, and obtained convalescence.

During the delivery, I observed an unnatural appearance on the back of the child, which I now examined more minutely. Upon the lumbar vertebræ, there was a space extending three inches down the spine, and nearly two in breadth, which appeared florid, and the common integuments were wanting. The vertebræ of the spine were all perfect, nor could I discover any aperture that led to that part which I have observed in cases of spina bifida, when situated in the cervical vertebræ.

To ascertain the quantity of fluid contained in the head, I filled it again with water, and it held rather more than two quarts.

To the Editors of the Medical and Physical Journal:

Fatal Effect of Eau Medicinale. Communicated by MR. RING, Member of the Royal College of Surgeons in London.

GENTLEMEN,

THE Eau Medicinale has acquired a high reputation for the cure of the gout; but the following case, in which it appears to have proved fatal, shews the necessity of a little more caution in the use of that medicine, than has hitherto been observed.

I am, Gentlemen,
Yours, &c.

JOHN RING.

*New Street, Hanover Square,
Jan. 31, 1811.*

Mr. Smith, of Bishop's-yard, Charles-street, Grosvenor-square, sixty-five years of age, was troubled with the gout when twelve years old; and in general had it twice a year, for the last twenty-five years. He frequently had it in his stomach as well as in his limbs.

In the spring of 1810, he took half a bottle of the Eau Medicinale, which operated as a cathartic; and in the space of twelve hours, he was much relieved.

On Sunday, the 25th of November, he was seized with the gout in his foot; but was not confined to his bed. On Wednesday, the 28th, he took half a bottle of the Eau Medicinale, which operated violently as an emetic, a cathartic, and a sudorific. On Thursday his foot was well; but he complained of a pain in the pit of his stomach, which he could cover with his finger. This increased till five o'clock, when it became very violent, and continued so during the night; alternately affecting his stomach and his bowels.

On Friday the pain gradually abated; on Friday night the black vomiting came on, and on Saturday afternoon he expired.

The medicine, which seems to have proved fatal in this case, was bought at Mr. Bafort's, in St. James's-street; and there is no reason to doubt that it was genuine. The mischief seems to have been occasioned by the patient's taking a larger dose than his constitution could bear.

The printed paper accompanying the Eau Medicinale, directs laudanum to be taken when the operation is too violent; but this he neglected.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING for the last fifty years been actively engaged in the practice of medicine, and read and studied all the theories and new plans of curing diseases, nothing has more surprised me, than the *directly opposite means* recommended for the cure of many, particularly scalds and burns, gout, chorea sancti viti, &c. &c. Professional gentlemen of the highest talents are still at war, respecting their opposite and favourite plans, and have left their humbler brethren at a loss, which to pursue, and occasioned many to adhere to that mode of practice from which they have experienced the best results. I have seen numerous cases of chorea s. v. and having invariably succeeded by the tonic and stimulating plan, I was the more surprised to see purging advised in one of your late valuable Journals, with a case or more cured thereby. Without at all doubting the fact, I beg leave to relate, as shortly as possible, two or three cases recently cured by the tonic plan.

A young married woman, of a feeble habit, was brought to me in a cart, from Hoxne in Suffolk; she had many months been affected with chorea, and rendered unable to look after her family. She looked like an idiot, was in a very weak state, with spasmodic affections in different muscles, particularly in those of her neck and arms.

The complaint was preceded by a lying-in, accompanied with a great loss. She had been taking medicines, and was believed by her husband and neighbours to be in "bad handling," the Suffolk vulgarism for witchcraft.

I encouraged my patient in the belief of my power to lay the evil spirit, if she would follow my advice to have her head shaved and plaistered, and take a gentle emetic, &c. which she agreed to do; after which a moderate dose of calomel was directed to clear the bowels. Tonic pills with ferrum, zinc vit. opium, camph. and an aromatic, were given night and morning, and a cordial decoct. of cort. cascar. with vitriolic acid, completed her cure in a short time; a second blister was found necessary to apply to her head, which part of the plan is most necessary to attend to, and without which, or a strong rubefacient plaister, there is much less expectation of success.

A gentleman consulted me for his daughter, a fine girl of about nine years of age, who had been under the care of two very able medical gentlemen several weeks, for chorea; from whom

whom I was favored with a letter, stating the plans they had pursued, and particularly their having depended on *purg-ing*, as recommended by Dr. Hamilton, of Edinburgh, but were sorry to say, not only without benefit, but they found their patient getting worse; so said her father, observing she could neither walk or stand, and had entirely lost the use of one arm.

The complaint seemed to be induced by her having been kept poorly at a boarding school, and growing unusually fast; this made the tonic, restorative and stimulating plan, evidently necessary. Her head was directed to be shaved, a *strong* rubefacient plaister applied and to be repeated; a calomel purge to clear the bowels, after which steel, zinc, cortex, &c. as in the first case. These remedies so far recovered her, with the assistance of a generous regimen, that in ten days she could walk with safety and feed herself, with her before useless arm, to the surprise of her disconsolate parents, who brought her down ten miles rejoicing to show her me. Cold sea-bathing was found of great service towards completing her cure.

Mr. Tydiman, a fine young farmer of nineteen, from growing very fast, has been attacked with chorea, especially in his arms; he is now under my directions, and has found immediate benefit by shaving and blistering his head, taking medicines as above directed and living on a generous diet. I could bring forward numerous other cases of chorea, successfully treated by the above general plan, modifying it according to circumstances.

I have also frequently seen insanity *sine febre*, proceeding from grief, lowness of spirits, and debility, give way to *blistering the head* and the tonic stimulating plan, as above recommended.

I am, Gentlemen,
Your obliged Servant,
VERAX.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MR. Baxter, a surgeon of great respectability at Montgomery, has very obligingly communicated to me an extraordinary case in midwifery, which I think ought to be preserved; he has favored me with several documents to prove the facts here recorded, but as these do not seem necessary

(No. 145.)

E c

to

210 *Mr. Baxter's Case of Excision of the Uterus.*

to be published, I content myself with sending you a simple relation of the case, which I doubt not you will readily insert in the next number of the Medical and Physical Journal.

I remain, &c.

SAMUEL MERRIMAN.

Curzon Street, Feb. 6, 1811.

A Case of Excision of the Uterus ; by MR. RICHARD BAXTER, Surgeon to prisoners of war, on parole at Montgomery, and to the Montgomery and Pool House of Industry.

MARY Griffiths, a married woman, thirty-seven years of age, residing in the parish of *Guilsfield*, near *Welsh-Pool*, in Montgomeryshire, was delivered of her first child about six years ago ; her labour was natural and rather quick ; she recovered speedily and perfectly from this confinement, and afterwards enjoyed an uninterrupted good state of health, till the period of her second labour, which began on Tuesday, the first of May, 1810. During that day she had frequent and often strong pains, which continued more or less severe till Wednesday evening about five o'clock, when the child was born, no more difficulty having occurred than commonly happens in a long and what may be called a *laborious* labour.

Though there was no flooding nor other ill symptom, yet as at the end of half an hour the placenta had not separated, the midwife proceeded to extract it, in doing which she employed so much force, that she dragged out the placenta and uterus together, when the placenta immediately separated from its attachment, and the uterus remained without the os externum. The poor woman says, that she repeatedly requested the midwife to desist, as she fancied that she was drawing her inside out, but the midwife persevered in her forcible attempts, till, at length, the patient being sensible of something very large passing from her, believed herself to be delivered of another child. From this period till a considerable time afterwards she knew not what passed, as she fainted, and on her recovery found that there had been a profuse flooding, and that there was a large tumour externally.

No attempt was made to return this tumour, and in this situation she remained three weeks, when, with the greatest difficulty, she walked to *Welsh-Pool*, a distance of nearly three miles, where she received medical attendance. What was done for her I have not been able to learn, but the exertion of walking brought on a very violent inflammation of the parts ; during the first fortnight of which there had been
a great

a great sloughing of the internal (now external) coats of the uterus, attended with a very foetid ichorous discharge.

A fortnight after this, and five weeks from the accident, she was sent a most miserable object to the *Montgomery and Pool House of Industry*, there to linger out, as it was supposed, the short remaining period of her life, rather than from a hope that any relief could be afforded her.

In this deplorable and debilitated state she came under my care. I found on examination that reduction of the tumour was now impracticable, and that extirpation was the only chance left to put an end to her sufferings. This operation I therefore determined on, and performed as follows; having first submitted the patient to the inspection of Dr. E. Jones, an eminent physician in this neighbourhood, "who had not the smallest doubt that the case was a complete inversion of the uterus."

I passed a flat seton needle through the vagina, edgeways, in the direction of the longitudinal fibres; then dividing the ligature, I tied each half moderately tight, and fearful lest these might slip, I tied another ligature* round the whole, close above the former. I then divided the vagina with a scalpel immediately below the lower ligatures. The hemorrhage that ensued was trivial, and that, principally, from the introduction of the needle. By this operation the whole of the uterus and at least an inch and a half of the vagina were extirpated. In about nine days, the lower ligatures came away, but the upper one remained much longer. The patient in a fortnight began to increase in her flesh, and in six weeks from the operation was perfectly recovered; so much was she improved in her appearance, that those who saw her but a few weeks before scarcely knew her again.

On making an incision through the tumour thus extirpated, commencing at the vagina, and continuing it along the whole length and through the body of the uterus, no vestige of a cavity remained, not even to admit of a fine probe; for from the great inflammation that ensued, before *any proper medical advice was afforded*, the parts were become so completely diseased, as to preclude any possibility of disco-

* I much repented having used the upper ligature, as it very much retarded the cure, and I found the two inferior ones amply sufficient. The great thickness and scirrhusity of the vagina, prevented the ligature which was passed round the whole from penetrating through its substance, and occasioned great delay, till I afterwards drew the strings much tighter, when it came away and left the parts in their present state.

vering the ovaria or fallopian tubes : it was indeed one solid schirrous mass, the effect of the inflammation.

Soon after this patient was discharged from the *Montgomery and Pool House of Industry*, she went to a distant part of the country, and I did not see her for some months ; I have, however, lately examined her, and made the following remarks.

Her present state of health is nearly as good as prior to her delivery, except that she complains of her breath being shorter than formerly.

Her stools and urine are natural, and were so most of the time. Two days after the operation I thought it proper to give her some castor oil, which greatly relieved her ; she took very little other medicine, excepting the cinchona, during the cure, neither was the symptomatic fever at all considerable.

She perceives, at times, an unusual emptiness in the lower region of the belly, but no appearance or feel of the descent of the bowels. For a few days after the operation, she felt as if the wind was passing into her abdomen, particularly every time the parts were exposed in order to have fresh applications made to the wounds.

She had an appearance of menstrual discharge on the 24th of October last, nearly five months from her delivery, and more than two months after she was discharged as cured, and the same circumstance has happened once since. She did not feel the usual fulness of her breasts nor any other symptoms to indicate the approach of this appearance. The discharge was not so copious nor so florid as usual. These are the only times she has observed any thing like a menstrual discharge ; but for a short period subsequent to the operation, she had a mucous discharge, which had altogether ceased.

Upon examining the parts, when the finger is passed about half its length, there may be perceived an hiatus at the termination of the vagina, of an irregular figure, but not large enough to admit a crow quill.

Cases of excision of the uterus are very rare ; one is related in Duncan's "Annals of Medicine" for 1799, but this gives not the least clue as to the mode of operation. Another is recorded by Professor Wrisberg, a translation of which has been published by Dr. Hooper, in the "London Medical Review and Magazine," vol. 5, for the year 1801 ; in this the inverted uterus was cut away by the midwife.

Heister thinks, that even if the inverted uterus were to be secured by a ligature, and extirpated, it would not save the life of the woman, for, he says, Ruysch gives us an example of this disorder, in which the surgeon attempted to relieve

lieve the patient, by making a ligature and cutting off the prolapsed body of the womb, but his design miscarried and the woman died soon after.

Palfyn* does not believe that the uterus itself has ever been amputated; he says, "Au reste ce qui est rapporté par quelques auteurs de l'amputation de la matrice en entier, doit être réputé pour un conte." He conceives that the tumour supposed to be the prolapsed uterus, is produced by an elongation of the internal membrane of the vagina. His words are, "La membrane interne du vagin est quelquefois tellement relachée par les humeurs superflues qui l'abreuvent, qu'elle descend beaucoup plus bas que la partie honteuse, et qu'elle se montre au-dehors; ce qui les anciens ont pris pour une descente de matrice."

In Palfyn's second volume, is a representation of the uterus divided lengthways, pl. xv. fig. 3, which gives an exact appearance of the tumour I removed, with this difference, that in Palfyn's figure, the cavity of the uterus is shewn, but in mine it was obliterated; what he describes as "*les fibres charnues de la matrice*" are an exact resemblance.

Inversions of the uterus are, I fear, more common than is usually known, or at least acknowledged; four cases have occurred within my own knowledge, two of which being speedily reduced were attended with no ill consequences; the third was the case which I have just related; and the fourth has since happened at Bishop's Castle, where the midwife tore off the uterus, mistaking it for a mole, and the poor woman instantly died.

RICHARD BAXTER.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF you think the inclosed Tables, collected with some labour for my own use, likely to afford either amusement or information to your readers, they are very much at your service. In return I should be happy to receive from any of your intelligent correspondents, replies to the annexed queries.

I remain, &c.

Feb. 11, 1811.

OBSTETRICUS.

* In his "Anatomy," edited by Petit. PALFYN has two works on the subject of anatomy. *Description anatomique des parties de la femme qui servent à la génération, avec le Traite des monstres* de Fortunio Liceti, &c. 4to. 1708, and in Flemish, 1724. Leyden.—*Anatomie Chirurgicale, ou description exacte des parties du corps humain, avec des remarques utiles aux Chirurgiens dans la pratique de leur Art.* 8vo. 1710, 1718, Leyd.—8vo. in German, 1717. Leipsic. Ed.

214 *Proportion of Deaths in Child-bed to Births.*

A TABLE taken from the Annual Bills of Mortality, shewing from averages of ten years from 1661, the proportion which the deaths in child-bed bear to the births.

1st Series of Ten Years, ending	1670	.	1 in	39		
2d Do	.	.	1680	.	1 in	49
3d Do	.	.	1690	.	1 in	47
4th Do	.	.	1700	.	1 in	65
5th Do	.	.	1710	.	1 in	67
6th Do	.	.	1720	.	1 in	72
7th Do	.	.	1730	.	1 in	73
8th Do	.	.	1740	.	1 in	70
9th Do	.	.	1750	.	1 in	74
10th Do	.	.	1760	.	1 in	81
11th Do	.	.	1770	.	1 in	72
12th Do	.	.	1780	.	1 in	92
13th Do	.	.	1790	.	1 in	107
14th Do	.	.	1800	.	1 in	113
15th Do	.	.	1810	.	1 in	106

A TABLE of two years in each of the above periods of ten years, in which, the greatest number of deaths in child-bed took place, with the number of those who actually died.

1665	.	625	Deaths.	1741	.	256	Deaths.
1670	.	288		1750	.	228	
1679	.	300		1754	.	213	
1680	.	302		1760	.	238	
1681	.	354		1761	.	289	
1688	.	355		1762	.	272	
1694	.	262		1777	.	222	
1697	.	293		1779	.	209	
1704	.	266		1781	.	209	
1705	.	287		1787	.	213	
1714	.	309		1792	.	201	
1719	.	292		1796	.	202	
1721	.	299		1803	.	250	
1722	.	293		1806	.	235	
1733	.	292					
1737	.	284					

A TABLE

Proportion of Deaths in Child-bed to Births. 215

A TABLE of two years in each of the above periods of ten years, in which the mortality in child-bed was least, with the number of those who actually died.

1662	.	175	Deaths.	1743	.	176	Deaths.
1663	.	206		1744	.	184	
1673	.	224		1752	.	156	
1674	.	217		1753	.	169	
1686	.	288		1767	.	174	
1690	.	236		1769	.	185	
1692	.	218		1771	.	172	
1698	.	169		1778	.	175	
1709	.	215		1782	.	140	
1710	.	217		1784	.	133	
1703	.	217		1795	.	142	
1711	.	195		1799	.	131	
1713	.	178		1807	.	164	
1727	.	221		1809	.	123	
1728	.	216					
1735	.	192					
1736	.	202					

The deaths in miscarriages, by which must be meant abortions under four months of gestation, have only been recorded since the year 1723 : they amount upon an average to three annually : but there seem to be no accurate means of knowing how many miscarriages happen within a year. Information upon this subject would be very useful.

The years 1803, 4, 5, and 6, were remarkable for an increased mortality in child-bed ; the deaths for these four years amounted to 937, which was on an average 1 in 91.

To what causes was this increase owing ?

During the last four years, viz. 1807, 8, 9, and 10, the mortality has been much less, it amounted only to 642, which is on an average 1 in 126.

What are the principal diseases which prove fatal in child-bed ? Are they peculiar to that state ? What proportion do the deaths in childbed, from diseases peculiar to that state, bear to the deaths, from diseases in childbed not peculiar to that state.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

A Correspondent, in the last number of your Journal, having undertaken the defence of Dr. Harrison's projected Bill, I am induced to trouble you with a few cursory observations on a scheme, which has always appeared to me very inadequate to the end proposed, and respecting the good effects of which, if it ever passed into a law, I must still confess myself more than 'sceptical,' notwithstanding the 'explanation' which its present advocate has offered.

In the first place, however, I must beg leave to advert to the very singular attempts which he has made, to repress all free inquiry into the merits of the question, by his mysterious hints concerning the '*subsequent matters in contemplation*,' and by his still more strange insinuation, that as the bill has been '*framed by a Barrister of the first eminence in this department of law*,' no person should '*venture to oppose or condemn*' any of its provisions, *without first taking the opinion of counsel*, or, to use the writer's own words, without '*the sanction of a legal practitioner*.' Now, without any disparagement to this '*Barrister of the first eminence*,' I should conceive that medical men were in general as well qualified to judge of the abuses in their profession, and to suggest the appropriate remedies, as any of the gentlemen learned in the law could possibly be: and if a legislative scheme be radically bad or defective, as I believe is the case with the one now under consideration,* it would be a small merit in my estimation, that it was the production of the united industry of all the *Barristers* in the kingdom, or that, after it was carried, some '*subsequent matters*' were '*in contemplation*.' Nor do I think it necessary to incur the expense of '*legal*' advice, in order to have the privilege of stating '*difficulties*' which must, I think, be obvious to every man of common reflection.

Complying with the suggestion of H. R. I shall endeavour to '*confine my remarks to what is contained in the bill itself*,' and am, in truth, contented to try it on its own merits; for there is quite enough in it to prove its futility and absurdity. What, then, does this great bill provide? Why, that henceforth all physicians, surgeons, apothecaries, midwives, chemists, horse-doctors, bone-setters, &c. shall enter their names in one grand register, for which they shall pay a certain sum, and place their names upon the
doors

doors of their respective dwellings; that the powers of all existing medical corporations shall be confirmed, and in some respects increased to a most dangerous extent; that moreover the magistrates at the Quarter Sessions shall be authorized to licence every ignorant pretender to medical skill who thinks fit to apply; and that the sale of stamped medicines shall be countenanced and legalized "*in omnia secula seculorum*,"—Such are the leading features of the "Bill for the improvement of the Medical and Surgical, and Veterinary Sciences, and for regulating the practice thereof."—Such the glorious offspring of the lucubrations of the 'Barrister of the first eminence in this department of the law.' But are there no clauses by which the mischiefs that must arise from thus confounding the regular physician and surgeon with the '*Ambubiarum collegia, pharmacopolæ, et hoc genus omne*,' would be counterbalanced; which would secure the public from the depredations that might be committed by impostors acting under the sanction of country justices; and which would check, if they did not altogether repress, the inroads of quackery? On the contrary, every thing seems to have been studiously contrived with the view of degrading all that is great, and learned, and respectable, in the profession, of consolidating every abuse that exists, and of perpetuating every irregularity of which Dr. Harrison and his fellow-reformers so loudly complain. These gentlemen, it is true, profess to be actuated by very different motives, and I believe them to be well meaning men; but if we grant them the merit of sincerity, it must be at the expense of their judgment and sagacity. That I have not misrepresented the tendency of their bill will be evident, I think, to any one who takes the trouble to examine it with attention: it is only difficult to imagine what benefits those who framed it expect to accrue from it; for notwithstanding all the declamations of Dr. Harrison about the 'reform of abuses,' the suppression of 'the most dangerous empirics,' and the 'immediate advantages to society at large,' I am unable to perceive, that he or his friends have one clear idea on the subject.

But to return to your correspondent, in whom this measure has found so warm a defender: 'Provision,' he observes, 'is made in the bill, not only for the passing generation to continue their functions unmolested, BUT TO CONFIRM THEM IN THE LEGAL ENJOYMENT OF THEIR SEVERAL PRACTICES; consequently the plan will be highly beneficial to the present establishment. To the quack and empirical pretender undoubtedly it will be 'highly beneficial,' as it tends 'to confirm them in the legal enjoyment of their several practices: not so to the physician and surgeon of education, who want

no such confirmation, and who certainly will not be raised in the public opinion by being classed and 'registered' with the scum of the profession. 'The bill,' however, we are told, 'seems in one material instance to have been misunderstood, and in consequence to have been unjustly abused. An opinion seems to prevail,' your correspondent continues, 'that the bill will forcibly restrain physicians, surgeons, and apothecaries to their respective lines. No such thing was ever in contemplation. Dr. Harrison, to tranquillize the apprehensions of the profession, declares in his pamphlet, "in order to remove the fears, and correct the mistakes of some people, it may be proper to observe, that the bill does not attempt to limit the sphere of medical duty by coercive statutes. Practitioners will be left under it at full liberty to use their talents according to their own discretion." Most satisfactory assurance! all the inconveniencies, jealousies, and enmities, that spring from the jostling of the different classes of practitioners, are accordingly to be cherished by this wonder-working bill: the surgeon may encroach *ad libitum* on the province of the physician; the compounder of medicines may have the whole range of the art; and the illustrious fraternity of quacks may 'use their talents according to their own discretion!' 'It will however oblige all future medical men to pass through a suitable course of study, and undergo examinations for the particular branch, or branches of the profession, into which they are admitted.' This is so far good: but surely the present generation is of some consequence, and ought to have come in for a share of the happiness which the ages yet unborn are to enjoy, instead of being left, as before, to suffer from 'irregularities of the most disgraceful and dangerous kind.'

'*Qui trop embrasse, peu estraint,*' said Grangousier to his prisoner Toncquedillon. To the labours of the Association the remark is strikingly applicable. Wishing to reform every thing, they mend nothing; wishing to please every body, they satisfy no one with their scheme: they leave matters just where they found them, or, rather, they leave them, supposing their plan to receive legislative sanction, in much worse condition; for a bill of the nature of that now proposed would give rise to endless embarrassment and confusion in the practice of the art. Your correspondent will, perhaps, insinuate, that I condemn it too hastily, and without sufficiently examining its different provisions. I can assure him, however, that I have studied it with considerable care; that I have read all the principal publications on the subject; and that if I do not speak of the measure in such respectful terms as its propounders might desire, it is only because

because I find it replete with mischief, while its good effects are to my mind extremely equivocal. If your correspondent will point out in what manner any one beneficial consequence must necessarily flow from his favourite bill, that will not be counterbalanced by an attendant evil, I shall be ready to moderate my censure; but he must give me something more than vague declamation on the abuses in practice, and general assertions as to the efficacy of an act of parliament in correcting and removing them.

I am, Gentlemen,
Yours, &c.

A. H.

London, Feb. 11, 1811.

To the Editors of the Medical and Physical Journal.

Remarks on the History and Use of Tobacco.

(Concluded from page 140.)

TOBACCO has been considered as concentrating in itself the powers of every remedy. It has been employed topically to all sorts of wounds, ulcers, and herpetic diseases: and when taken internally, the most violent morbid derangements were once believed to submit to its medicinal virtues. The same *Castor Duranti* who compared its introduction into Italy with the promulgation of the blessings of religion, has given a poetical catalogue of the complaints it cures.

“ Nomine quæ Sanctæ Crucis herba vocatur, ocellis
Subvenit, & sanat plagas, et vulnera jungit,
Discutit & strumas, cancrum, cancrorsaue sanat
Ulcera, & ambustis prodest, scabiemque repellit;
Discutit et morbum cui cessit ab impete nomen,
Calefacit & siccatur, stringit, mundatque, resolvit,
Et dentem & ventris mulcet capitisque dolores;
Subvenit antiquæ tussi, stomachoque rigenti
Renibus & spleni confert, ultroque, venena
Dira sagittarum domat, ictibus omnibus atris
Hæc eadem prodest: gingivis proficit atque
Conciliat somnum; nuda ossaque carne revestit:
Thoracis vitiis prodest, pulmonis itemque,
Quæ duo sic præstat non ulla potentior herba*.

* The herb which beareth *Santa Croces* name,
Sore eyes relieves, and healeth wounds: The same

This copious list contains but a moiety of the virtues that the gratitude or the credulity of mankind bestowed on this alien, from a, then, new found world.

An accidental, or an empirical application of it, seems first to have raised its reputation in Europe as a cure for wounds, ulcers, and cutaneous diseases. The history of this is remarkable enough. A relation of a page of the *M. Nicot*, before mentioned as having afforded the generic name to this family of plants, had a creeping ulceration upon the cheek, which seems to have been *noli me tangere* or *herpes exedens*. It had spread over the cheek, seized the nose, and corroded its alæ. By an application of the green leaf and juice of the tobacco, which Nicot had then growing in his garden at Lisbon, this corroding ulcer was cured in twelve days. This occasioned its application to be extended. Wounds were suddenly healed* by it; tetter was removed;

Discusses the king's evil, and removes
Cancers and boils: a remedy it proves
For burns and scalds, repels the nauseous itch,
And straight recovers from convulsion fits.
It cleanses, dries, binds up, and maketh warm:
The head-ach, tooth-ach, cholic, like a charm
It eases soon; an antient cough relieves,
And to the reins, the milt, and stomach, gives
Quick riddance from the pain that each endures:
Next the dire wounds of poisoned arrows cures;
All bruises heals, and when the gums are sore,
It makes them sound and healthy as before.
Sleep it procures, our anxious sorrow lays,
And with new flesh the naked bone arrays.
No herb has greater power to rectify
All the disorders in the breast that lie,
Or in the lungs.

Mr. des Maizeaux is less an elegant than a faithful translator: The latin muse of the Italian physician makes a homely appearance in her English vestment. Castor Duranti resided at Rome, where he was esteemed to be a great physician and agreeable poet: Pope Sixtus the 5th held him in high consideration. He died at Viterbo in 1590, and left several works on medicine and botany in Latin and Italian. His work, *Il Tesoro della sanita, nel quale si da el modo di conserver la sanita e prolongar la vita, e si tratta della natura di cibi, e dei rimedi, e dei nocuenti loro.* 4to. Roma, 1589, may possibly state more particularly the grounds of his attachment to the Nicotiana. Perhaps, when he lavished his praises on the plant, he intended, with courtly dexterity, to flatter the cardinal who imported the inestimable treasure.

* There is an interesting circumstance connected with this sudden healing of wounds by the use of Tobacco. When enumerating the virtues

and strumous tumours discussed. So said the oral traditions, and even the written records of that period. Succeeding times have not justified the panegyric. Modern surgery never has recourse, with these views, to any of the species of *Nicotiana*. It is not certain, however, that a fots, catapasm, or even an unguent prepared with the *N. Tabaccum*, might not be employed, with advantage, in some cases of indolently painful tumours, and scrofulous ulcerations. In cases of local spasm, perhaps in Trismus and Hydrophobia, they might be had recourse to as an auxiliary at least. In those obstructions of the canal of the urethra called strictures, it appears that bougies medicated with Tobacco* have been eminently useful.

tues of this plant, old GERARDE says, "I doe make hereof an excellent balsame to cure deepe wounds and punctures, made by some narrow sharpe pointed weapon. Which balsame doth bring up the flesh from the bottome verie speedily, and also heale simple cuts in the flesh according to the FIRST INTENTION, that is, to glew or soder the lips of the wound together, not procuring matter or corruption to it, as is commonly seene in the healing of wounds." Historie of plants, folio. Lond. 1633. p. 360. Who was the discoverer of healing wounds by this simple and rational process is not of much importance. Gerard certainly has the honour of having employed it in the darkness and ignorance of the 16th century, (the 1st edition of the Historie of Plants was in 1597,) of understanding its principle, and using even the same term employed in modern surgery. He certainly did not learn the art of curing wounds by the *first intention* from TALIA-COTIUS, for his work, "*de curtorum Chirurgia per insitionem, &c.*" was but just published at Venice; the princeps edition, folio, bearing the date 1597. With the above passage extant in Gerard, no surgeon of a subsequent period can fairly claim the discovery. The author of the "*Triall of Tobacco*," is so enamoured of Master John Gerard's balsam, that he considers it to have an excellence surpassing all others. After inserting the recipe, he adds, from Gerard, "I send this jewell to you women of all sorts, especially to such as cure and helpe the poor and impotent of your countrey without reward. But unto the beggarly rabble of witches, charmers, imposters, and such like cozeners, that regard more to get monie, than to help for charitie, I wish this medicine farre from their understanding, and from those deceivers, whom I wish to be ignorant herein." He entirely overlooks, as many others did, the efficient point so clearly stated by Gerard, "*that is, to glew or soder the lips of the wound together, not procuring matter or corruption to it.*"

* In two cases of stricture in the urethra, Dr. Shaw of Philadelphia, employed bougies medicated with Tobacco. Both cases appear to have received permanent cures. In one case, a thin smooth leaf of strong Tobacco, (*N. Tabac.*) previously moistened with water, was wrapped around a small sized bougie, and carried down to the stricture,

In the topical application of this plant the practitioner must carefully watch for the effects it may produce on the general system. Disturbance in the first passages, torpor of the brain, and a deathlike syncope, seem to have arisen from its application in the form of poultice or ointment. Where the cutis is exposed by a removal of the cuticle, or in extensive ulceration, this is most likely to happen. From its application to the *scrobiculus cordis*, where the cuticle has been whole, these symptoms have occurred.* To the varied forms

ture, where it was kept fifteen minutes, when it passed the stricture and went into the bladder. At this time the patient complained of sickness, and perspiration appeared on the forehead. As soon as the bougie was withdrawn, he discharged half a pint of urine, which flowed in a natural stream. The application of the bougie was repeated twice a day for three days, and the patient was cured. In another similar case the bougie was smeared over with an extract of Tobacco. A sensation of sickness and debility also took place in this case, while the bougie remained in the urethra. The operation was repeated three times, and produced such torpor and relaxation of the sphincter vesicæ, as to render the patient unable to retain his urine. This inconvenience was removed by T. Lyttæ. These cases are sufficiently marked to raise an expectation of great utility from the employment of bougies medicated with Tobacco. *In those deplorable suppressions of urine, where every effort is unavailing to pass an instrument into the bladder by the urethra, is it justifiable ever to proceed to the desperate operation of puncturing the bladder, without first trying the effect of the TOBACCO BOUGIE?*

* Its property of occasioning severe vomiting, when applied in the form of cataplasm to the region of the stomach, though an inconvenience in some instances, presents a powerful resource in others. In that torpor of the stomach occasioned by an over dose of opium, or in any instance where it is desirable to evacuate its contents, the organ itself being insensible to the stimulus of emetic substances taken into it, or the power of deglutition being lost, may some good be expected from the Tobacco cataplasm? In cases of asphyxia, and, perhaps, apoplexy, where bringing the stomach into action is to be considered as the most powerful means of exciting the system, may not the same application be employed? The injection, whether of smoke or decoction, is certainly less manageable. The cataplasm can be instantly removed, but the practitioner must submit to the frightful energy of the enema. Even the external application of this potent substance requires careful attention. A middle-aged countryman and his wife applied an infusion of Tobacco to the skin for the cure of the itch. In an hour they felt as if intoxicated with spirits. This was followed by violent head-ach, dry hot skin, excessive vomiting and purging; spasmodic contractions of the hands and arms, and considerable dyspnœa. These symptoms continued as long as the solution of Tobacco remained on the skin. The warm bath speedily removed the derangement. *Med. Comment Edin. xi. 327.*

of cutaneous diseases Tobacco has been applied either as a lotion or an unguent; even modern practice does not reject it in *Tinea Capitis*. Until the introduction of the quicksilver ointment superseded it, a decoction of Tobacco was the remedy used by shepherds for that contagious disease in sheep called the scab.*

The external application of Tobacco has not been confined to the cure of local affections. It has been thus employed with a view to the removal of some diseases of the system over which the *materia medica* has generally had but little influence. Epilepsy and general convulsions have been cured by the application of Tobacco in cataplasm and injection. For the verification of this we fortunately have not to look into the records of remote and credulous ages. The most enlightened physician of the present age, the late Dr. James Curry, has left this evidence of its medicinal powers.† “In a case of epilepsy, which occurred in the hospital practice, the paroxysm returned periodically every afternoon. In this instance a cure was effected by a cataplasm, formed chiefly of Tobacco, to the scrobiculus cordis, about half an hour before the expected return, by which a powerful impression on the system was produced, and the paroxysm of epilepsy prevented. This practice, repeated several days at the expected periods, probably destroyed the diseased association, for the cure was permanent. I was induced to use Tobacco on this occasion from having observed it to succeed in the cure of obstinate intermittents, when applied in the same manner, previous to the accession of the paroxysm.” “In two recent cases,” Dr. Curry adds, “I have employed the remedy in a different manner. Each of the patients laboured under general convulsion, and the paroxysm had returned so fre-

* The external application of Tobacco makes a great figure in the first writers on this plant. Magnenus has a section of his *Exercitatio* xiv. entitled, “*Morbi particulares externi quibus Tabacum subvenit.*” The subdivisions of this section are, 1. Ad ulcera omnia. 2. Ad pediculas, phthyriasim et tineam. 3. Ad porriginem, achores, et poly-pum. 4. Ad ranulam. 5. Ad strumas, tumores thymum. 6. Ad œdema, gangrenam, cancrum, lupum fistulasque. 7. Ad hæmorrhoides, et herniam. 8. Ad verrucas, clavos, cirones, perniones, lapsos ungues. 9. Ad vulnera omnia. 10. Ad morsum canis rabidi, ictus urticæ, punctiones, venenatosque morsus. 11. Ad mures, glires, cimices, pulmones marinos, &c. 12. Ad inflationes ventris, pruritus, ambusta, scabiem, pustulasque et furunculos. To this formidable catalogue may be added its honorable station in the *Ars Cosmetica*, ad ruborem faciei, dentium nigredinem, cutis asperitatem, VULTUSQUE TRISTITIAM.

† Medical Reports, Vol. I. 163.

quently, as to produce continued coma, and in the bystanders an absolute despair of recovery. I ordered a decoction of half a drachm of Tobacco in four ounces of water, to be thrown up as an enema. This powerful agent penetrated the system to its very centre, roused the sensibility which the effusion of cold water and other external impressions could not awake; excited sickness, vomiting, and profuse perspiration, and interrupted the convulsive actions, which have never since returned. In each of these cases the recovery was altogether unexpected.”*

The Tobacco ENEMA, whether in the form of smoke or decoction, is undoubtedly one of the most powerful agents of the *Materia Medica*. Its operation is sudden, violent, and in many instances, effectual.† This mode of employing the *Nicotiana* was early known to writers on the subject. Magnenus recommends *clyster tabaci*,‡ for colics, flatulence, in-

* In the “TRIAL of TOBACCO,” a thin 4to. written in the early part of the 17th century, by *Edmund Gardiner*, the author asserts that “the suffumigation of Tobacco being taken, is a good medicine for the starknesse or stiffnesse of the neck, called *Tetanus*, and for any pains or ACHES in the bodie, proceeding of the cause that *Tetanus* doth.” Fol. 25. When externally applied, especially the *Oleum Tabaci*, to the neck and spine, the old writers had much confidence in it as a remedy for *Tetanus*. Vid. Magnenus and Neander.

† The author of the “*Use and Abuse of Tobacco*,” 8vo. 1720, has this ridiculous direction for the management of the patient after the injection of the Tobacco Enema. “I have known it used,” he observes, “with very good success, by making a decoction of it in *urine*, for a glyster, in a violent iliac passion, when several other things failed. The method was this; after having, with much difficulty, injected the glyster, and spread a carpet upon the ground, the patient was constantly rolled upon the floor for some considerable time, till he felt a strong motion for stool; at which time there was a copious discharge of hard excrements and wind, to the sudden relief of the tormented patient, and the joy of his despairing friends.”

‡ MAGNENUS has this curious formula for the Tobacco Enema. R. Fol. Tabac. m. j. fiat decoctio in jure pulli gallinacei pinguis q. s. R. Hujus decocti ʒix. Succi tabacini, sacch. rubei āā ʒss. Mell. violati, olei communis āā ʒij. fiat clysteri. There cannot be a more striking instance of the complex absurdity of the extemporaneous formulæ of this period than is seen in the following recipe for a Tobacco Enema. Take Mercury (*Mercurialis perennis*, a plant which has manifested some deleterious properties, and is one of our indigenous vegetables which should not be overlooked), rue, marshmallow, little centaury, each six handfuls; Tobacco leaves six; root of marshmallow ʒss.; linseed and fenugreek each ʒij. cummin and anniseed each ʒiss. boil in a sufficient quantity of water, until one-third part be consumed;

strain

durated fæces, nephritic complaints, &c. ; and Everhard recommends the enema in ileus. In the practice of modern surgery the value of the Tobacco Enema is fully appreciated. In every species and degree of hernia, where medicine is required, it may be serviceable ; but especially in that alarming and dangerous state when the protruded parts become inflamed and painful, and cannot be returned. In the *Zoonomia* there is a case of hæmorrhage from the rectum cured by an injection of tobacco-smoke.* Neither must it be forgot-

strain lbj. add hiera picra ʒss. ; benedicta laxativa ʒij. ; fresh butter and honey of roses each ʒiss. oil of rue and dill each ʒiss. ; common salt ʒj. These are to be mixed to make an enema, the only efficient material of which is the Tobacco. The formula of Mr. Pott presents an admirable contrast. Pour a pint of boiling water on a drachm of Tobacco, is the plain recipe for the Tobacco enema of this celebrated surgeon.

* “ Mrs. ——— had for twelve or fifteen years, at intervals of a year or less, a bleeding from the rectum without pain ; which, however, stopped spontaneously when she became weakened, or by the use of injections of brandy and water. Lately the bleeding continued above two months, in the quantity of many ounces in the day, till she became pale and feeble to an alarming degree. Injections of solutions of lead, of bark, and salt of steel, and of turpentine, with some internal astringents, and opiates, were used in vain. An injection of the smoke of Tobacco, with ten grains of opium mixed with the Tobacco, was used, but without effect the two first times on account of the imperfection of the machine ; on the third time it produced great sickness, and vertigo, and nearly a fainting fit ; from which time the blood entirely stopped.” *ZOONOMIA*, ii. 69. In a pamphlet published in 1720, on the “ Use and Abuse of Tobacco,” there is an instance recorded of this plant suppressing a hæmorrhage from the rectum. A leaf of Tobacco was thrust up the anus, and continued there some time : by this the discharge of blood was completely restrained. This case may suggest the propriety of employing the Tobacco Enema in other instances of hæmorrhage. So powerful are the effects of Tobacco, that whenever or however it is used, great caution is required. Those who have seen either the smoke or infusion thrown into the rectum, will not forget the symptoms of its potency. Perhaps some unfortunate events have followed the careless or improper use of this remedy. FULLER, who seldom wrote or spoke with reserve, hints at an unfortunate case where an unknown glyster, he conjectures of tobacco, was given. In the same paragraph he asserts, that one Mr. Osbeston, after an Enema of Tobacco infused in sack for a colic, “ fell presently into horrid burning pains, convulsions, faintings, and so perished miserably upon the spot, as it were all in flames.” And he cites from *Etmuller*, “ Clyster ex decocti Tabaci summe periculosus est, cum usum ejus (subito ac modò applicatus fuerit) præcordiorum anxietates, lipothymias, vomitus, sudores circa frontem frigidos, totius feralem quasi pallorem, aliaque symptomata insecuta fuissè noverim.”

ten, that in cases of asphyxia,* it has been employed to rouse the torpid system into action by the medium of the intestinal canal.

As the Tobacco injection produced such marked effects when thrown into the intestines, and was known to be destructive to insect life in many instances, the probability of its proving an active anthelmintic was an obvious conclusion. Many instances of its beneficial effects in cases of intestinal vermes are related, and also as the means of dislodging the larvæ of flies from other parts of the body. In obstinate cases of tape-worm, and where the patients are robust adults, this active remedy may, possibly, be used without hazard; but in children, who are the subjects most liable to vermes, it will be advisable to act with great caution, or, perhaps, to

* M. DESGRANGES, M. D. has enquired, with much research, into the use of Tobacco-smoke Enema in different species of asphyxia, particularly that of submersion, and in the treatment of many other diseases. His work is extremely valuable in that part of it which treats on the various kinds of asphyxia. *Journ. de Medicine*, 1791. The old writers on this plant seem to have been aware that it had the property of curing diseases in the lower part of the intestinal canal. "The powder of tobacco alone, or mingled with other lenitives, is a present remedy for the *Emrods*: for it perfectly cures them." *Panacea*, 29.—VITET, who is a determined enemy to Tobacco, is compelled to allow that—La fumigation des feuilles introduite dans l'anus, calme les coliques venteuses, convient dans l'apoplexie pituiteuse, la léthargie pituiteuse, l'asphixie hystérique, l'asphixie par les passions de l'ame, l'asphixie des noyés, la tympanite sans inflammation ni disposition inflammatoire; et favorise l'expulsion des matières fécales. L'infusion des feuilles en lavement, est indiquée dans les mêmes especes des maladies, lorsque la fumigation n'a été d'aucun secours; elle produit une évacuation, beaucoup plus abondante des matiere sfecales, elle irrite d'avantage l'intestin rectum. *Pharmacopée Medico-Chirurgicale*, 4to a Lyon. 1783. p. 198.—The powers of the Tobacco Enema are so remarkable, that they have arrested the attention of practitioners in a remarkable manner. Of the effects and the method of exhibiting the smoke of Tobacco *per anum*, much has been written. Beside the writers of our own country, I refer to ROZIER, *Observations sur la Physique*.—JEAN-ANDRE STISSER, *de Machinis fumiductoris curiosis, sive, fumum impellende intra corpus instrumentis, eorumque in praxi Medica adhibendi ratione et usu*. 4to. Hamb. 1686.—SCHAEFFER, *Gebrauch und Nutzen des Tobacksraus-clystier*.—DE HAEN, *Rat. Med.*—GAUBIUS, *Adversariorum varii argumenti*. 4to. Leyd. 1771.—JOS. JACQUER GARDANE, *Avis au peuple sur les Asphyxies*. Paris. 12mo. 1774.—FELLER, *De enematis, atque nova, fumum Tabaci inferendi, methodo*. Leips. 1781.—PIN, *sur le succès de l'établissement à Paris en faveur des personnes noyées*.

reject

reject it altogether, except where there may be peculiar and urgent danger from the disease.*

From the internal use of Tobacco more has been expected than any individual remedy will ever perform. Apoplexy, asthma, consumption, dropsy, rheumatism, and gout, have submitted to its powers, if we can believe the records of medicine.

That Tobacco has been employed for various affections of the brain is not to be denied. In apoplexy, coma, vertigo, and epilepsia, it was once thought to be a remedy of importance; but in the shifting of medical opinions, it has at length become more suspected of producing this class of diseases, than believed to cure them. We have, however, a well-authenticated instance of its curative powers in epilepsy and convulsions, (vid. Curry); and one of the most learned and judicious physicians of the latter end of the 17th century, says, "though I know many have an opinion of its (Tobacco) being narcotic, or otherwise injurious to the brain, and consequently disposing to apoplexies; yet (to say nothing of my having used it, and not sparingly, for many years, without finding any such effect of it) the very common custom of taking it for so many scores of years since it began to be in vogue, must have made such a quality, if it had it, evidently taken notice of; and consequently common prudence would have obliged people to have left it off long ago, as deleterious, if experience did not evidence the contrary: for there is no man but if, laying aside prejudices, he will give himself the trouble to observe, may easily find, that very many live to great years, and in as great a state of health as those who take it not, that have long used it, even immoderately. My sense of it is, that in those persons with whom it is found to agree, 'tis a very good drainer of humours, and may supply the place of fontanels, or at least that fewer of these may be necessary to those who abound with moisture. But there seems another reason why Tobacco may be useful to those who are disposed to apoplexy (under a supposition of its agreeableness), viz. that by reason of the vellication the

* The juice of the leaves of Tobacco clarified, and with sugar made into a syrup, and taken in a morning in a small quantity, drives forth stomach and belly worms; yet you must bruise the leaves and wrap them in a cloth, and lay them to the navel of the patient, and give him a glyster of sugar and milk. Panacea, p. 2. 29. *Magnenus* says nearly the same. De Tabaco Exertitationes, 247. A long string of authors might be quoted in evidence of the anthelmintic properties of Tobacco. It is, however, sufficiently certain, that it has vermifuge powers, but great caution is required in the employment of them.

smoke of it impresses on the nerves of the mouth, it makes them contract themselves, and so by consecution the whole brain comes to be analogously affected. So that if the brain happen to be more lax than ordinary, and thereby disposed to receive an afflux of blood and serum, as I take it to be, especially after a person has had and escaped one fit, as well indeed as in many other cases of preceding nerval indispositions, I see nothing but it may prove a very useful administration toward restoring the tone of it."*

Notwithstanding the evidence of men who daily smoke largely without inducing apoplectic symptoms, which Dr. Cole uses in support of his opinions on the effects of Tobacco, there are many facts to be produced of its having occasioned somnolency, and at length fatal coma.† But this species of dangerous operation of Tobacco, in direct opposition to Dr. Cole's conclusion, can only arise in systems accustomed to its use, and with which it appeared to agree when taken in moderate quantity. The brain is only endangered when use permits an excessive dose to be taken without disturbance, and allows its soporific principle to act silently on the sensorium. In those unaccustomed to its use, its operation is always on the *primæ viæ*; it then seldom manifests narcotic properties, but the whole frame is thrown into violent commotion. An attention to this double principle of action will, perhaps, enable practitioners to manage this plant with more success, and in very different trains of diseased action. When employed as a narcotic with a view to appease irritation, the dose must be small, and prepared in a particular

* *Physico-Medical Essay concerning the late frequency of Apoplexies.* By WILLIAM COLE, M. D. 8vo. Oxon. 1689. It may be observed, *en passant*, that Dr. Cole deduces the increase of apoplexies and convulsions in 1684, from the continued intense cold of 1683.

† *Ephem. Nat. Cur. Dec. 2, Ann. 10.*—HELLWIG, Obs. Phys. Med. give instances of this effect. Hellwig, in particular, has two instances of coma from smoking eighteen pipes of Tobacco. But a much larger quantity has been smoked without producing this deleterious effect. In the *Prax. Mayern.* there is recited an instance of the whimsical practice of Dr. W. Butler, about the year 1600. For a defluxion on the teeth, Dr. Butler directed a patient to smoke Tobacco without intermission until he had consumed an ounce of the herb. The man was accustomed to smoke, and took twenty-five pipes at a sitting. This first occasioned extreme sickness, and then a flux of saliva, which, with gradual abatement of the pain, ran off to the quantity of two quarts. The disorder was entirely cured, and did not return for seventeen years. The observation of Butler, "that a hard knot must be split by a hard wedge," shews that he considered this to be a desperate remedy.

way : * when intended to rouse the system from *asphyxia*, the mode of employing it is well understood. Tobacco has another degree or mode of action, intermediate between the preceding, partaking of both, but being exactly neither. When employed to relax spasm the quantity should be sufficient to excite nausea, debility, and the approach to syncope. If it is ever useful in apoplexy it is, when acting with the full energy of its stimulant powers, it rouses the brain from torpor through the medium of the stomach and intestinal canal. From observing in many cases, and perhaps in the greater number, that as soon as the stomach and bowels are acted upon, especially the stomach, persons come out of the apoplectic paroxysm ; a conclusion is formed favourable to the employment of this remedy. If apoplexia is to be considered with Nosologists as a genus containing many species, this remedy can hardly be considered as equally proper in all of them. In *apoplexia sanguinea* it cannot be admissible until the vessels are emptied by the lancet. In *apoplexia-serosa*, *venenata*, *mentalis*, *cataleptica*, *suffocata*, *immersorum*, *hysterica*, *epileptica*, *verminosa*, *ischuriosus*, † there is reason to expect it may be serviceable, if managed with sufficient expertness. The *apoplexia hydrocephalica* is an hopeless case. In the apoplexy, or asphyxia, arising from narcotic poisons, (among these is tobacco itself) and from excessive drinking of spirits, it seems peculiarly proper either in enema, or in cataplasm to the *scrobiculus cordis*. In many of these cases it is impossible ‡ to get remedies into the stomach, the power of deglutition being lost : how valuable then is one of certain action, when applied externally, or thrown into the bowels *per anum*. In the apoplexy that arises from a deleterious dose of the narcotic poisons, and in the fatal asphyxia consequent to the excessive drinking of spirits, there is no vomiting. When vomiting does occur, persons recover, or

* A portion of the active part of Tobacco may be dissipated by long boiling ; and we are of opinion that the preparation in extract, as prescribed in the Wirtenberg Dispensary, may be employed in pectoral cases with more advantage and safety than the simple infusion or decoction made by short boiling.—CULLEN, MAT. MED.

† It can hardly be necessary to recal the reader's attention to the cases of suppression of urine treated by Dr. Shaw, with the tobacco bougie.

‡ I am certainly aware that a tube may be passed by the *æso-phagus* into the stomach, and that medicines may be conveyed by this means into that organ, when the power of swallowing is lost. But the application of the *Nicotiana* either to the bowels by enema, or in some form to the region of the stomach, seems far preferable.

have a better chance to recover, from intoxication and the *apoplexia venenata*.*

On the use of Tobacco in *Asthma* and consumption, particularly the smoke of it, the old writers are minutely laborious. They assert its efficacy with confidence, and cases are produced to support their assertion. The following, from Edmund Gardiner, is a favourable specimen; perhaps, its quaintness recommends it.

“ I know my selfe a verie learned gentleman dwelling at Buckworth in Huntingdonshire, who had long languished of an orthopnoia; so that by reason of too many slimy and waterish humours which distilled downe from the braine into the chest, his lungs were so choaked, that hee could not breath, but by holding his necke upright, insomuch that many times, especially in the night season, he was in danger to be suffocated: by meanes of which, and his extreame cough, together with an extenuation of the whole bodie, he was adjudged *Tabidus* of most physicians that visited him, yea, and to be almost past all hope of recoverie; and one of the physicians being first asked his opinion, concerning the sicke patient, cast out these words:

Virtus lassa cadit, solvuntur frigore membra,
Vitaque tartareas fugit indignata per umbras.

And because I being his familiar friend, and one that was best acquainted with his whole course, and order of physicke and diet, which was both rationally prescribed, and diligently taken and observed, yet nothing taking effect that was administered, when all men thought he would have died, he was at length counselled to take Tobacco in fume; which he daily did, and onely by this way by little and little, he recovered his former health of bodie. His friende before

* I have no inclination to enter on the controverted point of the employment of emetics in apoplexy; the connection I have mentioned to exist between the reversed action of the stomach and the subsidence of the fit, has been suggested by my own observation in a great variety of cases, and under very different circumstances. I have never seen a case of apoplexy or asphyxia, when full vomiting spontaneously arose, or was excited by art, that did not escape the immediate danger of the paroxysm. The obscure history of the reciprocal sympathies that operate from the brain to the stomach, and from the stomach to the brain, I leave to be unravelled by *profound* physiologists. To those who would see much ingenious, much learned, and much useful investigation, on the employment of emetics in apoplexy, I recommend the perusal of the controversy between Langslow and Crowfoot, as found in the preceding volumes of this Journal.

spoken being a doctor of physick, and he who cast forth the former verses, seeing the sodaine mutation, and wondring at the good successe, he thus again pleasantly and conceitedly answered :

Mors aderat, cymbamq; Charon remosq; parabat :
Asseruit medicina senem iam ætate trementem,
Restituitq; novas effæto in corpore vires.

“ Smoaking Tobacco, says Dr. BREE, (certainly the most valuable writer on the subject of asthma) is practiced by some asthmatics, who mistake the great secretion of saliva for a necessary evacuation. I am satisfied that a much more copious determination of lymph is made to the bronchia and salivary glands by smoaking, and it will be entirely conformable to the rules of the animal economy, if the habit of such secretion be confirmed, though this exciting cause be absent. I have persuaded some asthmatics attacked with the first species (*convulsive asthma from the irritation of effused serum in the lungs*) to abandon the practice, with great advantage to their health. The system cannot obtain the necessary supply of oxygen sufficiently fast in this species of the disease, even if the disoxygenating property of tobacco fumes be not employed.”

Much as the opinions of this physician, in all parts of medical science, deserve to be respected, and especially in every form of disordered respiration ; we must not be led to reject, out of veneration for those opinions, tobacco fume in every difficulty of breathing, or disorder in the chest. He speaks here of its inutility in one species of asthma only. There are forms of *dyspnæa* which do not arise from mechanical obstructions, nor are occasioned by effused serum irritating the sensient fibrilla of nerves, but result from some disturbed or irregular sensibility not easily explained ; in which no organic alteration, or abundant morbid secretion is observed. In these cases it is that the fume of tobacco and other narcotics has been serviceable by mitigating the paroxysm ; and by obviating the effect, finally perhaps, so weaken the habitual morbid action, as to wear out the disease. Taken in this view, no reasoning *a priori* can convince that the smoking of tobacco may not be serviceable in some form or degree of asthma. It is obvious, however, that as it is capable of exasperating the complaint, its use will require the superintendence of an experienced physician.*

* *Neander* goes very minutely into the efficacy of tobacco in asthma. *Tobacologia*, 4to. Lugd. Bat. 1622. p. 36, gives many formulæ of the plant

IN *Dropsy* Tobacco has been employed with more effect than in any other disease. At least the evidence of its efficacy is more distinct, and the history of its employment more rational, than is remarked in other instances.

The earliest writers on this subject were sufficiently impressed with an opinion of the powers of *Tobacco* in hydropic complaints; but their details are vague, and generally unauthenticated by actual observation.* At length an experimental inquiry into the powers of this substance on the kidneys, was undertaken by *Dr. Fowler*; and to him the faculty is indebted for a collection of facts which elucidate the extent and quality of its diuretic properties. This physician was so strongly influenced by a letter sent by *Dr. Garden*, of *Charleston*, *South Carolina*, to *Dr. Hope*, of *Edinburgh*, in 1775, stating the surprising effects of the *ashes of tobacco*† in hydropic cases, that he undertook an investigation of the subject; and in 1785, published ‡ the result of his inquiries.

plant as employed in this disease. Among these are syrups, powders, wines, waters, cerates, &c. As a specimen of the mode of prescribing the *Nicotiana* in the 16th century, I cite the following, *Syrupus optimus ad Hydropicos*. R. Foliorum sanæ sanctæ Indorum. m. vj.—Hysopii sicci, Pulegii regalis, Ceterach (seu asplenii) ana M. jss.—Calamenti minoris, p. ij.—Sem. anisi, sem. urticæ, sem. anethi, ana ʒiij.—Galangæ, hellebori albi, ana ʒiiiss.—Asari, agarici, ana ʒij.—Rad. angelicæ hort. R. iridi, costi, amomi, polipodii quercini, ana ʒj. These, in powder, are ordered to be infused in six pints of wine vinegar for three days in the sun, in a glass vessel; afterwards evaporate one half over a slow fire, strain and add mel rosarum, lbj. sacchari lbss. Boil again, to the consumption of the vinegar, and aromatize with saffron, ginger, and mace, ana ʒij.

* Everard, Gardiner, Neander, and many others, were fully, if not rationally, convinced of its efficacy in hydropic effusions.

† "Here we use with surprisingly great efficacy, in dropsical cases, the alkaline fixed salts of tobacco. It is given from the quantity of half a dram to a whole dram, twice a-day, in as little liquid as possible. During its operation, also, the patient is enjoined to use very little liquid and much exercise. This remedy proves deobstruent, diuretic, and purgative, and does make great cures. After it, however, I generally give purges of rhubarb and sal martis every second or third day, according to circumstances. Besides this, I sometimes use a strong decoction of the radix scillæ, with some syrupus scilliticus, and two, three, or four grains of kermes mineral or tartar emetic. These I find a most efficacious purgative and diuretic." *Extract of a Letter from Dr. Garden. Med. Comment. V. iii. 330.*

‡ Medical Reports of the Effects of Tobacco, principally with regard to its diuretic Quality in the Cure of Dropsies and Dysuries: together with some Observations on the Use of Glysters of Tobacco, in the Treatment of the Colic. By THOMAS FOWLER, M. D. 8vo. Lond. Dr.

From this it appeared that Tobacco might be exhibited both as a *safe and efficacious diuretic* in cases of dropsy and dysuria. In thirty-one dropsical cases in which Dr. Fowler employed it, eighteen were cured and ten relieved. In eighteen cases of dysuria ten were completely cured, and seven relieved. Since the period of Dr. Fowler's publication, many instances have occurred of its efficacious operation in *anasarca*, in *ascites abdominalis*, and in *hydrops ovarium*. The ingenious Dr. Ferriar often found it to be a ready diuretic.* The fashion for using it as a diuretic has unwisely

Dr. Fowler gave the *Nicotiana* in various forms. He employed it chiefly in infusion, but thinks it may be used with advantage in a spirituous or vinous tincture, in an *acetum nicotianæ*, and also in pills. A pound of each of the preceding menstrua with an ounce of the leaves of the *N. Tabacum*, are the quantities he employs, for the tinctures and acetum. For the pills he gives the subsequent formula.

R. Pulveris foliorum nicotianæ Virginienſis cautè ſiccatorum.

Conſervæ roſarum rubrarum, utriuſque drachmam unam.

Mucilaginis gummi Arabici, quantum ſatis ſit. Miſce, fiat maſſa de qua pilulæ ſexaginta formantur.

This he conſiders as one of the moſt certain modes of exhibiting the *Nicotiana*, and obſerves, that upon ſeveral trials he found theſe pills to be powerfully diuretic.

* The lateſt and the beſt medical Dictionary in the Engliſh language, compiled by BARTHOLOMEW PARR, M. D. of Exeter, (we have now to lament the loſs of this moſt induſtrious and ingenious man, who died a few weeks ſince) ſays of the *N. Tabacum*, that "its emetic power prevents its acting as a laxative, except in glyſters; and as a diuretic, except in the form of its alkali after burning. The oil which remains adhering to the ſalts, adds to the diuretic power of the alkali, and it has been ſuppoſed uſeful in dropsy. In the days of its faſhion we uſed it, but without ſuch decided ſucceſs as to continue it." *Art. N. Americana*. This is an imperfect account of its powers, and incorrect, inasmuch as Dr. Fowler found an infusion of the plant to be the moſt convenient and efficacious form for its exhibition. Under *Ascites* Dr. Parr does ſome juſtice to the *Nicotiana*; for he ſays, "it appears to be an active, uſeful medicine, *meriting much more attention than it has received*." He ſtill ſeems to miſtake when he dwells on its alkaline ſalt as the form preferred for its diuretic properties, by Dr. Fowler.

It would be a violation of candour to ſuppreſs the opinion of CULLEN. "The infusion of tobacco when it is carried into the blood-veſſels, has ſometimes ſhewn its ſtimulant powers exerted in the kidnies; and very lately we have had it recommended to us as a powerful diuretic of great ſervice in dropsy. Upon the faith of theſe recommendations we have now employed this remedy in various caſes of dropsy, but with very little ſucceſs. From the ſmall doſes that are proper to begin with, we have hardly obſerved any diuretic effects; and though from larger doſes they have in ſome meaſure appeared, we have ſeldom found them conſiderable:

passed away, and affords an impressive instance of disappointed expectation, succeeded by injudicious neglect.

MODERN science knows nothing of the employment of Tobacco in Gout; we must apply to the uncertain and equivocal records of the first writers on the subject, for the antipodagric qualities of this plant.* Everard speaks very positively of its possessing such qualities, and that it even radically cures the disease, when taken in the form of snuff. Its external application either as cataplasm or ointment was esteemed to quiet the painful part of the arthritic paroxysm. The *extractum peticum* of some of the old Pharmacopœias was believed to be a powerful remedy in jaundice, dropsy, asthma, and gout; and that it was almost a specific in tertian and quartan agues. The violent operation of Tobacco may possibly point it out as a medicine likely to remove chronic affections not depending on organic alterations in the vital parts; and especially as affording a probable means of removing the gouty diathesis. It is evident that the fact of its acting with great and unexpected violence will demand the most cautious employment, and a minute investigation of the peculiarities of the patient.

If a detailed examination of all the diseases in which tobacco has been used, were to be given, with the reasons for its employment, and the rationale of its action, as founded on the shifting hypotheses of different periods, these remarks would swell into a volume. It may not be deemed improper, however, before the subject is dismissed, to add some observations, conjectural indeed or analogical, on the probable effect this *potent vegetable* might have on a disease, the frightful symptoms of which are only to be paralleled by its unvarying fatality.

ble: and when to obtain these in a greater degree, we have gone on increasing the doses, we have been constantly restrained by the severe sickness at stomach, and even vomiting, which they have occasioned: so that we have not yet learned the administration of this remedy so as to render it a certain or convenient remedy in any cases of dropsy." *Materia Medica*. GERARD mentions a curious fact: "A strong country man having a dropsie, tooke four ounces of the juice of tobacco, and having waked out of his sleepe, called for meate and drinke, and after that became perfectly whole." In this instance it operated upwards and downwards; the patient exhausted fell into a deep sleep, and awaked perfectly cured.

* If the *Eau medicinale* were proved to be a composition made from tobacco (vid. this Journal, vol. xxiv. p. 353) it would shed a temporary brilliance on the genus *Nicotiana*. Temporary, however, it would only be, for this wonder-working *nostrum* is following its brethren, with rapid strides, to the tomb of the Capulets.

The

The disease produced by the bite of a *rabid* animal, denominated improperly, perhaps, *hydrophobia*, as far as I know, is always fatal. Stimulant, tonic, narcotic, and antispasmodic remedies have been employed in every shape: but in whatever form or quantity they have been had recourse to, they have disappointed the prescriber. Among the expedients which have been employed to arrest the progress of HYDROPHOBIA, I am not aware that Tobacco has been used to the maximum of its powers.

This disease seems to consist of a series of spasms, readily excited by many trivial circumstances. Attempts to swallow drink, the sight and perhaps the thought of cold water, and in a degree of all fluids whether heated or cold, the sound of water dashed on the ground, a current of cool air, the appearance of polished and reflecting surfaces, the sudden shutting of a door or the waving of a bed curtain, (perhaps as putting the air in motion), all excite the paroxysm; which recurs at short intervals, until the patient is exhausted. A highly morbid sensibility, an extraordinary increase of irritability, or possibly a combination of these, reciprocally acting upon and exciting each other, appear to constitute the *hydrophobia rabiosa*.

The property that the whole of the genus *Nicotiana* possesses, but peculiarly in one of its species, *N. tabacum*, of resolving the spasm of muscular fibre, mark it to be a remedy decidedly proper in a disease, the essence of which is a series of spasmodic actions.

The failure of every means hitherto used to overcome this disorder would justify the employment of Tobacco, did not a knowledge of the nature of the disease and of the qualities of the plant afford a rational prospect of advantage.

In the management of the *H. rabiosa* an impediment arises from the difficulty, and in some of its stages, from the impossibility of giving medicine. In this dilemma the Tobacco presents a peculiar facility. Its power over the system, when injected in fume or decoction, into the intestinal canal *per anum*, or, when the prepared plant is applied in the form of cataplasm to the *scrobiculus cordis*, is well known.

I am not sanguine enough to be convinced that the *Nicotiana* will prevent the hitherto invariably fatal termination of this disease; but I am convinced, from its manifest actions on the animal fibre, and on the functions, that it may be prescribed on more rational grounds than many remedies which have been employed in the HYDROPHOBIA RABIOSA.

THESE "Remarks" will probably afford ample evidence, that no vegetable substance has more excited the attention of

236 *Case of Morbid Enlargement of the Clitoris.*

mankind than *Tobacco*. That its properties are of a character to demand attention, also appear to be incontrovertible.

When employed as a luxury, it possesses a peculiarly soothing quality; it relieves corporeal fatigue, and it calms mental perturbation. In a ratio agreeing with these fascinating powers, it becomes dangerous, however, from the hazard of its abuse. When used in moderation, especially when smoked, no evil arises; on the contrary it produces quiet and equanimity, without benumbing the imagination, or weakening the judgment. When used to excess, either in the form of snuff or smoked, the corporeal faculties of taste and smell lose their acuteness of sensibility; and sottishness, dyspepsia, torpor, coma, apoplexy are often the final result.

Considered as an Article of the *Materia Medica*, it requires to be looked upon with prudent suspicion; but when managed with caution and judgment, it is,

1st. A ready evacuant of the first passages, and often an active diuretic.

2d. A soothing sedative, used in a particular form and appropriate quantity, in some morbid sensibilities of the nervous system, especially as occurring in the trachea and its bronchial ramifications.

3d. An effectual resolvent of local spasm when topically applied, as in stricture of the urethra.

4th. A powerful stimulant, possessing possibly some specific property, "capable of penetrating the system to its centre; rousing the brain from torpor; and by exciting new and extraordinary actions, breaking the chain of morbid habits and associations."

MEDICUS.

February 10, 1811.

To the Editors of the Medical and Physical Journal.

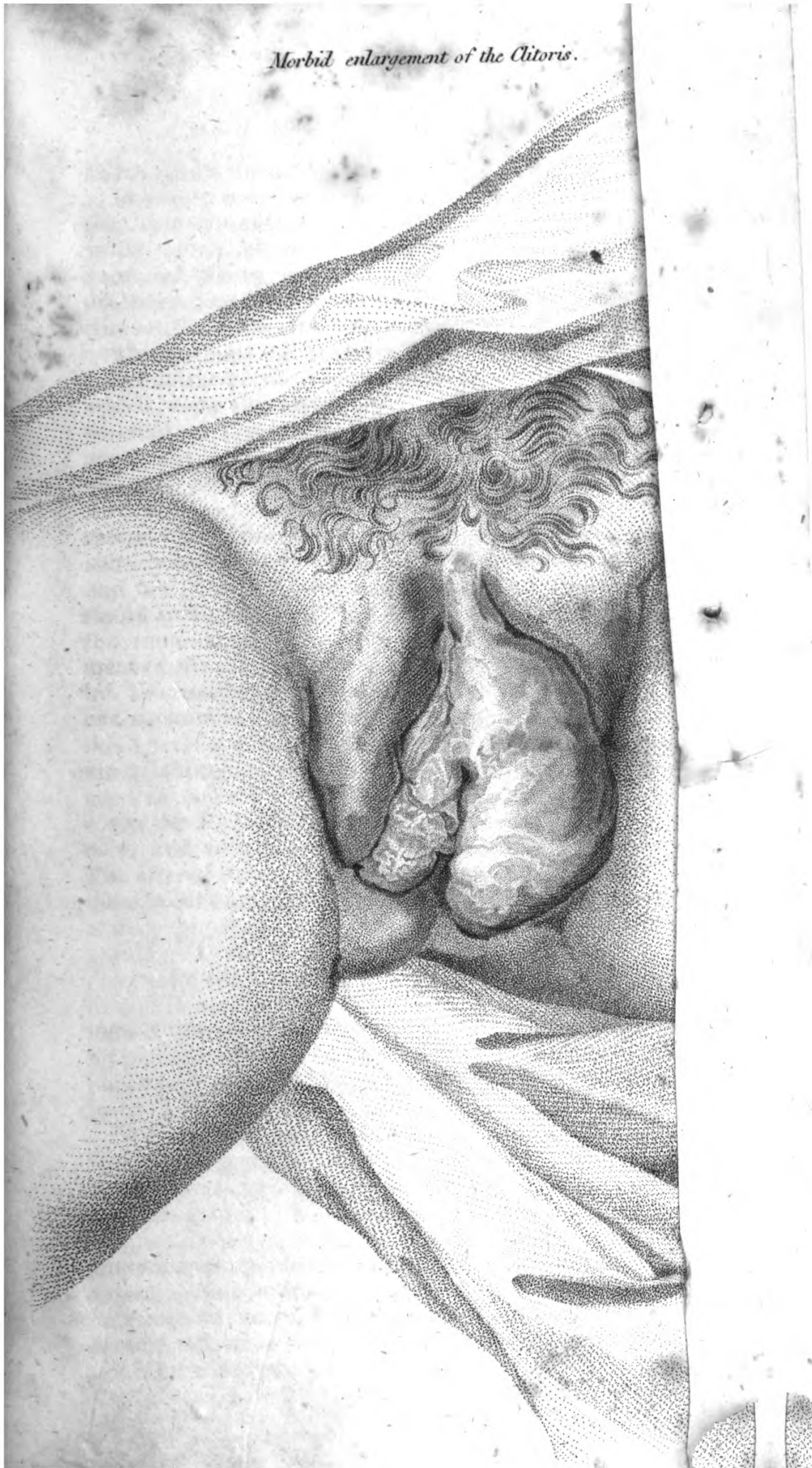
Case of Morbid Enlargement of the Clitoris.

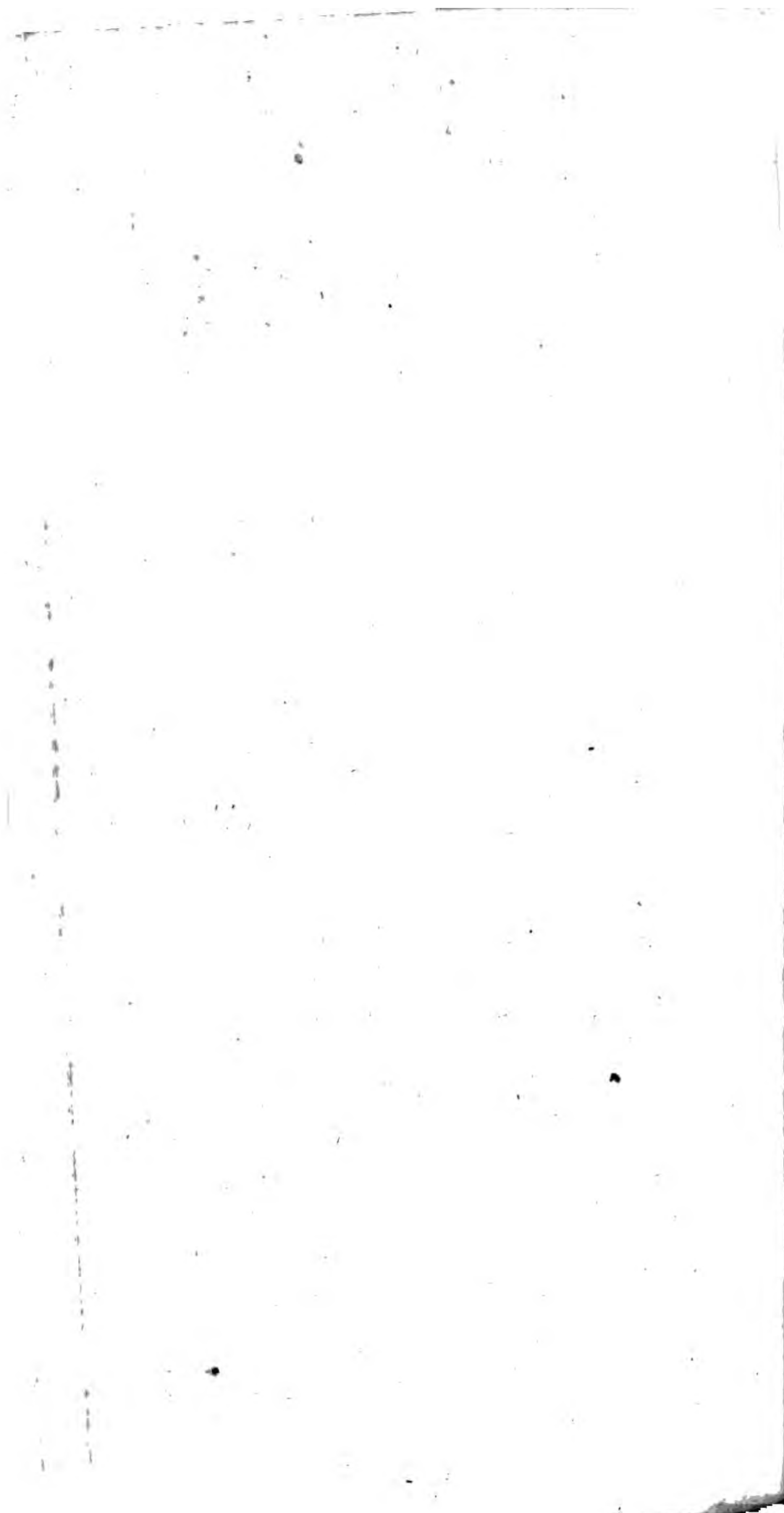
(With an Engraving.)

GENTLEMEN,

THE subject of this case is a female about twenty-seven years of age, has been twice infected with syphilis, the periods of which I have satisfactorily ascertained, in order that the rapid progress of the morbid enlargement of the *Clitoris* might be estimated. I first saw her on the 5th of March,

Morbid enlargement of the Clitoris.





1810, when the clitoris was exceedingly enlarged and altered in its form, concealing the opening of the vagina. On raising this diseased mass, clusters of warts were discovered, which occupied, as far as could be ascertained, the whole course of the vagina: there was a most offensive and copious discharge, which had excoriated the neighbouring parts to a degree that prevented her walking.

The account she at this time gave, was simply that she had contracted the venereal disease six months before, from which time the *clitoris* had been progressively enlarging. She had, during this period, refrained from medical assistance, nor had she used, directly or indirectly, any curative means. She was immediately put on a course of mercurial friction; and at the expiration of six weeks the general character of the disease was much amended, the discharge had subsided, the warts had yielded to the influence of mercury, and her general health was considerably improved. I now stated to her the propriety of submitting to an operation for the removal of the tumour formed by the morbid enlargement of the clitoris, and which in no degree had been lessened by the mercurial course. To this, however, she did not choose to submit. Thus ended my first attendance; when the specific was supposed to have destroyed the syphilitic virus, though *sequela* of its depredations still remained; the most remarkable of which was the diseased clitoris.

On the 15th of December last, she again came under my care, and with more aggravated circumstances than before. The altered structure and enlargement of the clitoris had now the appearance shewn in the Engraving; the discharge was more copious and offensive; and her health was seriously impaired. I was particular in my inquiries whether she had received a fresh infection, and by those inquiries I was confirmed in an opinion suggested by the symptoms: no doubt indeed remained of her having again contracted syphilis. She underwent a second course of mercury, the same favorable change was experienced, with the exception of the warts in the vagina remaining both stationary and numerous.

When it was presumed that the mercurial action had destroyed the syphilitic, and her general health was in a proper state, it was again proposed to her to have this inconvenient and distressing tumour removed by an operation. It may be proper to observe, that under these two mercurial courses this tumour had remained unreduced in size, and without melioration of its condition: indeed, during the whole period of its existence, it rapidly increased, and no estimate can be formed of what magnitude it might have reached, had it not been removed by the knife.

Under

Under these circumstances the patient was induced to consent to the operation ; and on the 24th of January last, the diseased mass was removed by MR. BROOKS *at his Theatre during lecture*. Some hemorrhage took place on the division of the parts, rendering an application of ligature necessary to several vessels. There was very little subsequent inflammation or symptomatic fever, and the wound is nearly healed.

W. M. LEWIS.

Feb. 12, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the Number of your Journal for January last, a letter is inserted, in which an attempt has been made by Mr. H. Earle, to deprive me of the invention of an Aneurismal Needle described under my name. As it is my intention, however, not to surrender the claim I hold to the originality of this contrivance, *which is well known at St. Bartholomew's Hospital to be my own*, I must beg the favour of your allowing me a place in your useful Journal, merely to shew, that I have not condescended to become the copyist of that gentleman.

I am, Gentlemen,

Yours, most respectfully,

JOHN JAMES WATT.

Bartholomew Close, 94,

Feb. 14, 1811.

For the Medical and Physical Journal.

Upon the Physical Causes which arrest the progress of Mexican population. (Political Essay on the Kingdom of New Spain. By ALEXANDER DE HUMBOLDT. Translated by JOHN BLACK, 1811.)

“ These causes are the small-pox, the cruel malady called by the Indians *Matlazahuatl*, and especially famine, of which the effects are felt for a long time.

The small-pox, introduced since 1520, appears only to exercise its ravages every seventeen or eighteen years. In the equinoxial regions it has, like the *black vomiting* and several other diseases, its fixed periods, to which it is very regularly subjected. We might say that in these countries the disposition for certain miasmata is only renewed in the natives at long intervals; for though the vessels from Europe frequently introduce the germ of the small-pox, it never becomes epidemical but after very marked intervals; a singular circumstance, which renders the disease so much the more dangerous for adults. The small-pox committed terrible ravages in 1763, and especially in 1779, in which year it carried off in the capital of Mexico alone more than nine thousand persons. Every evening tumbrels passed through the streets to receive the corpses, as at Philadelphia during the yellow fever. A great part of the Mexican youth was cut down that year.

The epidemic of 1797 was less destructive, chiefly owing to the zeal with which inoculation was propagated in the environs of Mexico, and in the bishopric of Mechoachan. In the capital of this bishopric the city of Valladolid, of 6800 individuals inoculated only 170, or $2\frac{1}{2}$ per cent. died; and we must also observe, that several of those who perished were inoculated at a time when they were probably already infected in the natural manner. Fifteen in the hundred died of individuals of all ages, who, without being inoculated, were victims of the natural small-pox. Several individuals, particularly among the clergy, displayed at that period a very praiseworthy patriotism, in arresting the progress of the disease by inoculation. I shall merely mention the names of two enlightened men, M. de Reano, intendant of Guanaxuato, and Don Manuel Abad, penitentiary canon of the cathedral of Valladolid, whose generous and disinterested views were constantly directed towards the public good. There were then inoculated in the kingdom between 50 and 60,000 individuals.

But in the month of January 1804, the vaccine inoculation was even introduced at Mexico through the activity of a res-

pectable citizen, Don Thomas Murphy, who brought several times the virus from North America. This introduction found few obstacles; the cow-pox appeared under the aspect of a very trivial malady; and the small-pox inoculation had already accustomed the Indians to the idea that it might be useful to submit to a temporary evil for the sake of evading a greater evil. If the vaccine inoculation, or even the ordinary inoculation, had been known in the new world in the sixteenth century, several millions of Indians would not have perished victims to the small-pox, and particularly to the absurd treatment by which the disease was rendered so fatal. To this disease the fearful diminution of the number of Indians in California is to be ascribed. The ships of war commissioned to carry the vaccine matter into America and Asia arrived at Vera Cruz shortly after my arrival.

Don Antonio Valmis, physician general of this expedition, visited Portorico, Cuba, Mexico, and the Philippine islands; and his stay at Mexico, where nevertheless the cow-pox was known before his arrival, contributed singularly to facilitate the propagation of this salutary preservative. In the principal cities of the kingdom vaccine committees were formed (*juntas centrales*), composed of the most enlightened individuals, who, by vaccinating monthly, preserve the miasma from being lost. It is so much the less liable to be lost, as it exists in the country. M. *Valmis* discovered it in the environs of Valladolid, and in the village of Atlisco, near la Puebla, in the udders of the Mexican cows. The commission having fulfilled the beneficent views of the king of Spain, we may indulge a hope that through the influence of the clergy, and especially of the religious missionaries, vaccination will be gradually introduced into the very interior of the country. The voyage of M. *Valmis* will thus remain for ever memorable in the annals of history. The Indies saw for the first time those vessels, which were formerly freighted only with instruments of carnage and destruction, bearing about the germ of relief and consolation to distressed and suffering humanity.

The arrival of the armed frigates in which M. *Valmis* made the circuit of the Atlantic and Pacific oceans gave rise on several coasts to one of the most simple, and therefore most affecting, ceremonies. The bishops, military governors, and persons of greatest distinction, repaired to the shore, where they took in their arms the children who were to carry the cow-pox to the indigenous Americans and the Malays of the Philippine islands, and, followed with public acclamations, they laid at the foot of the altar those precious preservative deposits, returning thanks to the Supreme Being
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for having been the witnesses of so happy an event. We must have some knowledge of the ravages occasioned by the small-pox in the torrid zone, and especially among a race of men whose physical constitution seems adverse to cutaneous eruptions, in order to feel all the importance of M. Jenner's discovery. It is a much greater blessing for the equinoctial part of the new continent than for the temperate climate of the old.

It may be useful to relate here a fact of some importance, for those who take an interest in the progress of vaccination. It was unknown at Lima till the month of November 1802. At that period the small-pox prevailed on the coast of the South Sea. A merchant vessel, *Santo Domingo de la Calzada*, put into Lima in the passage from Spain to Manilla. An individual had had the good sense to send by this vessel vaccine matter to the Philippine islands. They availed themselves of this opportunity at Lima; and M. Unanue, professor of anatomy, and author of an excellent physiological treatise on the climate of Peru*, vaccinated several individuals by means of the matter brought by the merchant vessel. No pustule appeared; and the virus appeared either altered or too weak. However, M. Unanue having observed that all the vaccinated individuals had a very mild small-pox, employed this variolous matter to render, if possible by the ordinary inoculation, the disease less fatal. He thus perceived in an indirect way the effects of a vaccination supposed to have failed.

It was accidentally discovered in the course of the same epidemic in 1802, that the beneficent effect of vaccination had been long known to the country people among the Peruvian Andes. A negro slave had been inoculated for the small-pox in the house of the Marquis de Valleumbroso who shewed no symptom of the disease. They were going to repeat the inoculation, when the young man told them that he was certain of never having the small-pox, because in milking cows in the Cordillera of the Andes, he had had a sort of cutaneous eruptions, caused, as the Indian herdsmen said, by the contact of certain tubercles sometimes found on the udders of cows. Those who have this eruption, said the negro, never take the small-pox. The Africans, and especially the Indians, display great sagacity in observing the character, habits, and

* This work, which displays an intimate acquaintance with the French and English literature, bears the title of *Observaciones sobre el clima de Lima y sus influencias en los seres organizados en especial el hombre, por el Dr. D. Hipolito Unanue*. Lima, 1806.

diseases of the animals with which they live. We need not therefore be astonished, that, on the introduction of horned cattle into America, the lower people remarked that the pustules on the udders of cows communicated to the herdsmen a species of benignant small-pox, and that those once infected are secure from the general contagion during the epochs when the disease is epidemical.

The *matlazahuatl*, a disease peculiar to the Indian race, seldom appears more than once in a century. It raged in a particular manner in 1545, 1576, and 1736. It is called a plague by the Spanish authors. As the latest epidemic took place at a time when medicine was not considered a science, even in the capital, we have no exact data as to the *matlazahuatl*. It bears certainly some analogy to the yellow fever or black vomiting; but it never attacks white people, whether Europeans or descendants from the natives. The individuals of the race of Caucasus* do not appear subject to this mortal typhus, while, on the other hand, the yellow fever or black vomiting very seldom attacks the Mexican Indians. The principal site of the *vomito prieto* is the maritime region, of which the climate is excessively warm and humid; but the *matlazahuatl* carries terror and destruction into the very interior of the country, to the central table-land, and the coldest and most arid regions of the kingdom.

Father Torribio a Franciscan, better known by his Mexican name of Motolinia, asserts that the small-pox at its introduction in 1520, by a negro slave of Narvaez, carried off the half of the inhabitants of Mexico. Torquemada advances the hazardous opinion that in the two *matlazahuatl* epidemics of 1545 and 1576, 800,000 Indians died in the former, and 2,000,000 in the latter. But when we reflect on the difficulty with which we can at this day estimate, in the eastern part of Europe, the number of those who fall victims to the plague, we shall very reasonably be inclined to doubt if the viceroys Mendoza and Almanza, governors of a recently conquered country, were able to procure an enumeration of the Indians cut off by the *matlazahuatl*. I do not accuse the two monkish historians of want of veracity; but there is very little probability that their calculation is founded on exact data.

* Who are the individuals of the race of Caucasus? The Europeans. So at least we learn from the context, where they are opposed to the Mexican Indians. This involves the theory of the mountains of Asia being the nursery of the old continent. Every one, however, will not so easily be able to understand Europeans by this denomination. Such attempts to elevate the style, at the expence of perspicuity, can never enough be reprobated. *Trans.*

A very interesting problem remains to be resolved. Was the pest, which is said to have desolated from time to time the Atlantic regions of the United States before the arrival of the Europeans, and which the celebrated Rush and his followers look upon as the principle of the yellow fever, identical with the *matlazahuatl* of the Mexican Indians? We may hope that this last disease, should it ever re-appear in New Spain, will be hereafter carefully observed by the physicians.

A third obstacle to the progress of population in New Spain, and perhaps the most cruel of all, is famine. The American Indians, like the inhabitants of Hindostan, are contented with the smallest quantity of aliment on which life can be supported, and increase in number without a proportional increase in the means of subsistence. Naturally indolent, from their fine climate and generally fertile soil, they cultivate as much maize, potatoes, or wheat as is necessary for their own subsistence, or at most for the additional consumption of the adjacent towns and mines. Agriculture, it is true, has made great progress within these last twenty years; but the consumption has also increased in an extraordinary manner from the augmentation of population, and an excessive luxury formerly unknown to the mixed casts, and from the working of a great number of new seams, which require additional men, horses, and mules. Few hands, no doubt, are employed in manufactures in New Spain; but a great number are withdrawn from agriculture from the necessity of transporting on mules goods and the produce of the mines, iron, powder, and mercury, from the coast to the capital, and from thence to the mines along the ridge of the Cordilleras.

Thousands of men and animals pass their lives on the great roads between Vera Cruz and Mexico, Mexico and Acapulco, Oaxaca and Durango, and the cross roads by which provisions are carried to the habitations established in arid and uncultivated regions. This class of inhabitants, called by the economists in their system, sterile and nonproductive, is consequently more numerous in America than might be expected in a country where manufacturing industry is yet so little advanced. The want of proportion between the progress of population and the increase of food from cultivation renews the afflicting spectacle of famine, whenever a great drought or any other local cause has damaged the crop of maize. Scarcity of provisions has always been accompanied in all times and all parts of the globe with epidemical diseases fatal to population*. The want of nourishment in 1784 gave

* This position requires qualification. Dr. Smith has, I believe,
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rise to *asthenical* diseases among the most indigent class of people. These accumulated calamities cut off a great number of adults, and a still greater number of children; and it was computed that in the town and mines of Guanaxuato more than 8000 individuals perished. A very remarkable meteorological phenomenon contributed principally to the scarcity: the maize, after an extraordinary drought, was nipt by frost on the night of the 28th of August, and, what is more singular, at an elevation of 1800 metres*. The number of inhabitants carried off by this fatal union of famine and disease throughout the whole surface of the kingdom was estimated at more than 300,000. This number will appear the less astonishing to us when we consider, that even in Europe the population is sometimes diminished by scarcity, more than it is augmented by the excess of births above the deaths for four consecutive years. There perished in Saxony, for example, in 1772, near 66,000 inhabitants, while the excess of births above the deaths was not, *communibus annis*, from 1764 to 1784 more than 17,000†.

well remarked that in years of scarcity there are, perhaps, fewer diseases and deaths than usual, from the diminished consumption of spirituous liquors by the common people, one of the most productive sources of disease. The position will undoubtedly, however, hold with regard to a Hindoo or Indian population, who, in years of plenty, have no more than merely supports animal life, and to whom, therefore, any reduction must always prove fatal. *Trans.*

* 5904 feet. *Trans.*

† The translator is afraid that this number of 66,000 includes the whole deaths of Saxony in 1772, in which case the statement that the diminution of population from the famine exceeded the augmentation from the excess of births for four consecutive years will fall to the ground. Every one knows that it is impossible to state exactly the number of deaths from famine in any country, as literally few or none die of famine, but of diseases occasioned by a defective diet, which can never be separated in any bill of mortality from diseases owing to other causes. The nearest approximation, however, is to be found by deducing the average mortality from the increased mortality in any given year of scarcity. I think it extremely probable that M. de Humboldt has not adopted this method. He elsewhere states that the adjacent country of Prussia had, in 1802, on a population of nine millions, 282,109 deaths. If we take Mr. Pinkerton's estimate of the Saxon population, 2,104,000, say, however, 2,000,000, and assume a mortality for it proportionate to that of Prussia, we shall find the number of deaths 62,869. If, supposing then 60,000 the mortality of 1772, and 62,869 the average mortality, the increase by famine in 1772 would only be 3311. This is a much more likely number than the enormous one given by M. de Humboldt; but the fact can easily be ascertained. *Trans.*

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The effects of famine are common to almost all the equinoxial regions. In the province of New Andalusia in South America I have seen villages whose inhabitants were forced by famine to disperse themselves from time to time in the deserts to pick up a subsistence from the wild plants. In vain the missionaries employ their authority to prevent this dispersion. In the province *de los Pastos*, the Indians when the potatoes fail, which are their principal nourishment, repair sometimes to the most elevated ridge of the Cordillera to subsist on the juice of the achupallas, a plant related to the genus *pitcarnia*. The Otomacks at Uruana, on the banks of the Orinoco, swallow, during several months, potter's earth, to absorb by this load the gastric juice, and to satisfy, in some sort, the hunger which torments them*. In the islands of the South Sea, in a fertile soil, where nature has lavished all her blessings the inhabitants are frequently driven by famine to devour one another. Under the torrid zone, where a beneficent hand seems every where to have scattered the germ of abundance, man, careless and phlegmatic, experiences periodically a want of nourishment which the industry of more civilized nations banishes from the most sterile regions of the north.

The working of the mines has long been regarded as one of the principal causes of the depopulation of America. It will be difficult to call in question, that at the first epoch of the conquest, and even in the seventeenth century, many Indians perished from the excessive labour to which they were compelled in the mines. They perished without posterity, as thousands of African slaves annually perish in the West Indian plantations from fatigue, defective nourishment, and want of sleep. In Peru, at least in the most southern part, the country is depopulated by the mines, because the barbarous law of the *mita* is yet in existence, which compels the Indians to remove from their homes into distant provinces, where hands are wanted for extracting the subterraneous wealth. But it is not so much the labour as the sudden change of climate, which renders the *mita* so pernicious to the health of the Indians. This race of men has not the flexibility of organization for which the Europeans are so eminently distinguished. The health of copper-coloured man suffers infinitely when he is transported from a warm to a cold climate, particularly when he is forced to descend from the elevation of the Cordillera into those narrow and humid valleys, where all the miasmata of the neighbouring regions appear to be deposited.

* See my *Tableaux de la Nature*, t. I. P. 62, 191, and 209.

In the kingdom of New Spain, at least within the last thirty or forty years, the labour of the mines is free; and there remains no trace of the *mita*, though a justly celebrated author* has advanced the contrary. No where does the lower people enjoy in greater security the fruit of their labours than in the mines of Mexico; no law forces the Indian to choose this species of labour, or to prefer one mine to another; and when he is displeased with the proprietor of the mine, he may offer his services to another master who may pay, perhaps, more regularly. These unquestionable facts are very little known in Europe. The number of persons employed in subterraneous operations, who are divided into several classes (*Barenadores*, *Faeneros*, *Tenateros*, *Bareteros*), does not exceed in the whole kingdom of New Spain 28 or 30,000. Hence there is not more than $\frac{1}{80}$ of the whole population immediately employed in the mines.

The mortality among the miners of Mexico is not much greater than what is observed among the other classes. We may easily be convinced of this by examining the bills of mortality in the different parishes of Guanaxuato and Zacatecas. This is a phenomenon, so much the more remarkable, as the miner in several of these mines is exposed to a temperature 6 deg. above the mean temperatures of Jamaica and Pondicherry.† I found the centigrade thermometer at 34 deg. ‡ at the bottom of the mine of Valenciana (*en los planes*), a perpendicular depth of 513 metres,§ while at the mouth of the pit in the open air, the same thermometer sinks in winter to 4 deg. or 5 deg. || above 0. The Mexican miner is consequently exposed to a change of temperature of more than 30 deg. **. But this enormous heat of the Valenciana mine is not the effect of a great number of men and lights collected into a small space; it is much more owing to local and geological causes which we shall afterwards examine.

It is curious to observe how the Mestizoes and Indians employed in carrying minerals on their back, who go by the name of *Tenateros*, remain continually loaded for six hours with a weight of from 225 to 350 pounds, and constantly exposed to a very high temperature, ascending eight or ten times successively, without intermission, stairs of 1800 steps.

* Robertson's History of America, vol. ii. p. 378.

† Nearly 11 deg. of Fahrenheit. *Trans.*

‡ 93 deg. of Fahrenheit. *Trans.* § 1681 feet. *Trans.*

|| 39 deg. or 41 deg. of Fahrenheit. *Trans.*

** 54 deg. of Fahrenheit. *Trans.*

The appearance of these robust and laborious men would have operated a change in the opinions of the Raynals and Pauws, and a number of other authors, however estimable in other respects, who have been pleased to declaim against the degeneracy of our species in the torrid zone. In the Mexican mines, children (*enfans*) of seventeen years of age* are able to carry masses of stone of a hundred pounds weight. This occupation of Tenateros is accounted unhealthy, if they enter more than three times a week into the mines. But the labour which ruins most rapidly the robustest constitutions is that of the *Barenadores*, who blow up the rock with powder. These men rarely pass the age of 35, if from a thirst of gain they continue their severe labour for the whole week. They generally pass no more than five or six years at this occupation, and then betake themselves to other employments less injurious to health.

The art of mining is daily improving, and the pupils of the school of mines at Mexico gradually diffuse correct notions respecting the circulation of air in pits and galleries. Machines are beginning to be introduced in place of the old method of carrying minerals and water on men's backs up stairs of a rapid ascent. In proportion as the mines of New Spain resemble more and more those of Freiberg, Clausthal, and Schemnitz, the miner's health will be less injured by the influence of the *Mofettes**, and the excessively prolonged efforts of muscular motion.

From five to six thousand persons are employed in the amalgamation of the minerals, or the preparatory labour. A great number of these individuals pass their lives in walking barefooted over heaps of brayed metal, moistened and mixed with muriate of soda, sulphate of iron, and oxide of mercury, by the contact of the atmospheric air and the solar rays. It is a remarkable phenomenon to see these men enjoy the most perfect health. The physicians who practice in places where there are mines unanimously assert, that the nervous affections, which might be attributed to the effect of an absorption of oxid of mercury, very rarely occur. At Guanaxuato part of

* I should be inclined to think that the author meant to say *enfans de sept à dix ans*, instead of *enfans de dix sept ans*, for *enfant*, it is believed; can hardly be applied with propriety to a youth of 17; and if a full-grown man could ascend eight or ten times, without intermission, 1800 steps of a stair with 350 pounds, it certainly could not add to the evidence of the strength of this race to say, that a young man of 17 could carry little more than the fourth part of that weight. *Trans.*

† The translator professes his ignorance of the meaning of this word.
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the inhabitants drink the very water in which the amalgamation has been purified (*aqua de lavaderos*) without feeling any injury from it. This fact has often struck Europeans not intimately acquainted with the principles of chemistry. The water is at first of a greyish-blue colour, and contains in suspension black oxid of mercury, and small globules of native mercury and amalgamation of silver. This metallic mixture gradually precipitates, and the water becomes limpid. It can neither dissolve the oxid of mercury nor the muriate of mercury, which is one of the most insoluble salts which we know. The mules are very fond of this water, because it contains a little muriate of soda in dissolution.

In speaking of the progress of the Mexican population, and of the causes which retard that progress, I have neither mentioned the arrival of new European colonists, nor the mortality occasioned by the *black vomiting*. We shall discuss these subjects in the sequel. It is sufficient to observe here, that the *vomito prieto* is a scourge which is never felt but on the coast, and which does not, throughout the whole kingdom, carry off annually more than from two to three thousand individuals. As to Europe, it does not send more than 800 to Mexico. Political writers have always exaggerated what they call the depopulation of the old continent by the new. M. Page*, for example, asserts in his work on the commerce of St. Domingo, that the emigrations from Europe supply annually more than 100,000 individuals to the United States. This estimate is twenty times higher than the truth; for, in 1784 and 1792, when the United States received the greatest number of European colonists, their number did not exceed 5000†. The progress of population in Mexico and North America is solely derived from an increase of internal prosperity.

On some Exotics which endure the open Air in Devonshire.

By A. HAWKINS, Esq.

(From the Transactions of the Horticultural Society of London.)

IN October, 1795, a CAMELLIA JAPONICA was planted, (in the South Hams of Devonshire) among other shrubs, in the open ground; it has stood every winter since, without the smallest shelter, thrives well, and has never had a branch

* Vol. ii. p. 427.

† Samuel Blodget's Economics, 1806, p. 58.

or leaf injured by the weather; it is now about four feet high, the size of a gooseberry bush, but has not flowered.

Two plants of the *FUCHSIA COCCINEA* were planted about four years ago under a brick wall, facing the South. At first the branches suffered by the frost, but they put forth new shoots in the spring, with much strength, and have flowered well every summer. During the two last years I was absent, but I understand that only the extremities of the branches were injured, and they have always flowered in great perfection.

Some plants of the *SOLANUM PSEUDO CAPSICUM*, or *AMOMUM PLINII*, are also under a brick wall, (but not nailed against it), which have stood many years, and only a small part of the extremities of their branches has been injured by frost.

MYRTLES of every kind (even the double-blossomed and orange) do exceedingly well in the open ground, though the *Silver*, from the richness of the soil, soon becomes plain.

The *BUDDLEIA GLOBOSA* likewise stands the climate, and some of the plants are ten feet high, spread wide, and make a handsome appearance. One of them is placed in a situation open to the North-east winds, where the sun cannot shine during the short days, yet it has stood there since 1794, and never had more than the extremities of the branches hurt.

About two miles from my house is the small sea-port town of Salcombe, just between those two well-known points, the Prawl and Bolt-head; the latter of which is in the parish whence this letter is written, a place that the sea washes on three sides. Perhaps of all spots in the British isles, Salcombe is the very first for climate and shelter. The celebrated Doctor Huxham used to call it the Montpellier of England. In 1774, a large *AMERICAN ALOE*, only twenty-eight years old, and which had always stood in the open ground, without covering, flowered there; it grew to the height of twenty-eight feet, the leaves were six inches thick, and nine feet in length, and the flowers, on forty-two branches, innumerable.

Several plants of the *VERBENA TRIPHYLLA* are growing at Salcombe in the open ground, and are now six feet high. I have not tried any of them myself; but as I expect to be more at home in future, than for some years past, I shall not fail to add this plant to those tender shrubs already growing around me.

Oranges and Lemons, trained as peach trees against walls, and sheltered only with mats of straw during the winter, have been seen in a few gardens of the South of Devonshire for these hundred years. The fruit is as large and fine as any from Portugal. Some lemons, from a garden near this place, (No. 145.)

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were about thirty-five or forty years ago presented to the King by the late Earl Poulett, from his sister Lady Bridget Bastard, of Gerston; and there are trees still in the neighbourhood, the planting of which I believe is beyond memory. The late Mr. Pollexfen Bastard, uncle of the M. P. for Devon,) who had the greatest number of oranges and lemons of any one in this country, remarked, above thirty years since, that he found trees raised from seed, and inoculated in his own garden, bore the cold better than oranges and lemons imported.

Of the Koumiss of the Calmucks, and of the ardent Spirit which they distil from Milk. By EDWARD DANIEL CLARKE, LL.D.

[Clarke's Travels in Europe, Asia and Africa.]

EVERY body has heard of the koumiss and the brandy which the Calmucks are said to distil from the milk of mares. The manner of preparing these liquors has been differently related, and, perhaps, is not always the same. They assured us that the brandy was merely distilled from butter-milk. The milk which they collect over night is churned in the morning into butter; and the butter-milk is distilled over a fire made with the dung of their cattle, particularly the dromedary, which makes a steady and clear fire, like peat. But other accounts have been given both of the koumiss and the brandy. It has been usual to confound them, and to consider the koumiss as their appellation for the brandy so obtained. By every information I could gain, not only here, but in many other camps which we afterwards visited, they are different modifications of the same thing, although different liquors; the koumiss being a kind of sour milk, like that so much used by the Laplanders, called *pina*, and which has undergone, in a certain degree, vinous fermentation; and the brandy, an ardent spirit obtained from koumiss by distillation.

In making the koumiss they sometimes employ the milk of cows, but never if mares milk can be had; as the koumiss from the latter yields three times as much brandy as that made from cow's milk.

The manner of preparing the koumiss is by combining one-sixth part of warm water with any given quantity of warm mare's milk. To this they further add, as a leaven, a little old koumiss, and agitate the mass till fermentation ensues.

ensues. To produce the vinous fermentation, artificial heat and more agitation are sometimes necessary. This affords what is called koumiss.

They gave us this last beverage in a wooden bowl, calling it *vina*. In their own language it bears the very remarkable appellation of rack and raky, doubtless nearly allied to the names of our East-India spirit, rack and arrack. We brought away a quart bottle of it, and considered it very weak bad brandy, not unlike the common spirit distilled by the Swedes and other northern nations.

Some of their women were busy making it in an adjoining tent.

The simplicity of the operation and of their machinery was very characteristic of the antiquity of this chemical process. Their still was constructed of mud, or very coarse clay; and for the neck of the retort they employed a cane. The receiver was entirely covered by a coating of wet clay. The brandy had already passed over. The woman who had the management of the distillery, wishing us to taste of the spirit, thrust a stick with a small tuft of camel's hair at its end, through the external covering of clay: and thus collecting a small quantity of brandy, she drew out the stick, dropped a portion upon the retort, and, waving the instrument above her head, scattered the remaining liquor in the air. I asked the meaning of this ceremony; and was answered, that it is a religious custom, to give always the first drop of the brandy which they draw from the receiver to their god. The stick was then plunged into the receiver a second time; when more brandy adhering to the camel's hair, she squeezed it into the palm of her dirty greasy hand, and, having tasted the liquor, presented it to our lips.

We traversed continued *steppes* [immense flats] from Kamenskaia. Camps of Calmucks were often stationed near the road. We paid visits to several of them. In one of them, containing not more than four tents, we found only women, who were busy in distilling brandy from milk. The women confirmed what we had been before told concerning the materials used for distilling, and said that, having made butter, they were distilling the butter-milk for brandy. We could not credit that brandy might be so obtained; but to prove it, they tapped the still as upon a former occasion, offering us a tuft of camel's hair soaked in brandy, that we might taste, and be convinced.

On the Alteration which Air and Water produce on Meat.
By M. BERTHOLLET.

[Phil. Magazine.]

I BOILED some beef, renewing the water until the liquor no longer gave any precipitation with tannin: I then suspended it in a glass cylinder filled with atmospheric air, and which I placed on a plate filled with water: in a few days the oxygen was changed into carbonic acid; the interior of the cylinder was infected with a putrid smell; the beef that had been boiled gave once more an abundant precipitation with tannin: the ebullition was repeated until the water was no longer disturbed by the tannin: the beef had then almost entirely lost its smell, and it was put again into the apparatus.

The operation was repeated several times, when the following were the results:—

The alteration of the atmospheric air and the disengagement of the putrid smell gradually slackened: the quantity of gelatine formed became progressively smaller: the water upon which the vessel rested gave only feeble indications of ammonia. When I finished the operation there was no longer any putrid smell; but a smell similar to that of cheese, and in fact the animal substance which now preserved scarcely any fibrous appearance, had not only the smell, but precisely the taste of old cheese.

I distilled, separately, an equal weight of beef and of Gruyere cheese, making use of two bell-glasses, each of which communicated with a tube inserted in water; the operation was conducted so as to decompose, as much as possible, the two substances, and to retain all the ammonia which was set free: I compared the quantities of ammonia; that which was furnished by the cheese was to that of the beef nearly in the ratio of 19 to 24: hence it appears that it is one of the distinctive characters of the caseous substance to contain less azote than meat does.

If we may be permitted to draw any inferences from the foregoing imperfect experiments, we may conclude,

1st. That the gelatine which we may obtain from an animal substance is not completely formed in it; but that when this substance has been exhausted by water, it may be once more formed by the action of the air, the oxygen of which is combined with the carbon, while a portion of substance formerly solid becomes gelatinous, as a solid vegetable part becomes soluble by the action of the air.

We must, however, remark; that the property of precipitating with tannin belongs to substances which have very different

different properties in other respects : I found that the decoction of Gruyere cheese formed an abundant precipitate with tannin.

2d. That azote enters into the composition of the putrid gas, forming without doubt with hydrogen a combination of an equilibrium less stable than ammonia, or rather an intermediary combination ; but when its proportion is diminished to a certain point, it is more strongly retained by the substance, and it ceases to produce putrid gas. This substance, which the putrid odour characterizes, seems rather to be a very evaporable combination, allied to all the gases like the other elastic vapours, than a permanent gas.

3d. Since the caseous part has less azote than most other animal substances, we may conjecture that during life this part is animalized more and more by acquiring a greater proportion of azote and hydrogen : this may be explained by the more intimate combination of oxygen and hydrogen which enter into its composition, and by a separation of the carbon by the act of respiration ; so that the last term of chemical action during life has urea for its product, according to the opinion of M. Fourcroy.

A new and expeditious Mode of Budding. By THOMAS
ANDREW KNIGHT, Esq. F. R. S.

[Transactions of the Horticultural Society of London.]

PARKINSON, in his *Paradisus Londoniensis*, which was published in 1629, has observed, that the nurserymen of his days had been so long in the practice of substituting one variety of fruit for another, that the habit of doing so was almost become hereditary amongst them : were we to judge from the modern practice, in some public nurseries, we might suspect the possessors of them to be the offspring of intermarriages between the descendants of those alluded to by Parkinson. He has, however, mentioned his "very good friend, Master John Tradescant" and "Master John Miller," as exceptions ; and similar exceptions are, I believe, to be found in modern days. It must, however, be admitted, that wherever the character of the leaf does not expose the error of the grafter, as in the different varieties of the peach and nectarine, mistakes will sometimes occur ; and therefore a mode of changing the variety, or of introducing a branch of another variety, with great expedition, may possibly be acceptable to many readers of the *Horticultural Transactions*.

The

The luxuriant shoots of peach and nectarine trees are generally barren; but the lateral shoots emitted in the same season by them are often productive of fruit, particularly if treated in the manner recommended by me in the Horticultural Transactions of 1808, p. 88. In the experiments I have there described, the bearing wood was afforded by the natural buds of the luxuriant shoots; but I thought it probable that such might as readily be afforded by the inserted buds of another variety, under appropriate management. I therefore, as early in the month of June, of the year 1808, as the luxuriant shoots of my peach trees were grown sufficiently firm to permit the operation, inserted buds of other varieties into them, employing two distinct ligatures to hold the buds in their places. One ligature was first placed above the bud inserted; and upon the transverse section through the bark: the other which had no farther office than that of securing the bud, was applied in the usual way. As soon as the buds (which never fail under the preceding circumstances) had attached themselves, the ligatures last applied were taken off, but the others were suffered to remain. The passage of the sap upwards was in consequence much obstructed, and the inserted buds began to vegetate strongly in July: and when these had afforded shoots about four inches long, the remaining ligatures were taken off, to permit the excess of sap to pass on; and the young shoots were nailed to the wall. Being there properly exposed to light, their wood ripened well, and afforded blossoms in the succeeding spring: this would, I do not doubt, have afforded fruit; but that, leaving my residence at Elton for this place, I removed my trees, and the whole of their blossoms in the last spring proved, in consequence, equally abortive.

On Cystic Oxide, a new Species of Urinary Calculus. By
WILLIAM HYDE WOLLASTON, M. D. Sec. R. S.

[Phil. Trans. Part 2. 1810.]

THE principal design of the present essay is to make known the existence, and to describe the leading properties, of a new species of urinary calculus from the human bladder; but I shall at the same time take the opportunity of correcting an inaccuracy or two that I have observed in my former communication on this subject. (Phil. Trans. 1797.)

I on that occasion took notice of five kinds of urinary calculi.

1. The *lithic acid*, since called *uric acid*, originally analysed by Scheele.

2. The

2. The *oxalate of lime*, or *mulberry calculus*.
3. The *phosphate of lime*, or *bone-earth calculus*.
4. The *ammoniacal phosphate of magnesia*.
5. The *fusible calculus*, which consists of the two last species combined.

It is now about five years since I first met with another species, evidently differing from each of those before described. It was in the possession of Dr. Reeve, of Norwich, who obligingly gave me a portion of it for the purpose of examining its chemical qualities. It had been taken from his brother when he was five years old, and at that time was covered with a coating of phosphate of lime very loose in its texture, and consequently very soon separated.* This species is probably very rare; for, although I have omitted no opportunity of paying attention to any urinary concretions to which I could have access, I have, to this time, seen only one other specimen of the same substance. This last is in a collection of calculi belonging to Guy's Hospital, given by Mr. Lucas, surgeon to that institution, having been formed partly by his father, and partly by himself, in the course of their practice; and according to the present arrangement, (which, it is hoped, will not be altered) the calculus to which I allude may be found by reference to No. 46 of that collection. It was extracted by the usual operation, from a man of 36 years of age, of whom no record is preserved, except that his name was William Small. It weighed, when entire, 270 grains.

In appearance, these calculi resemble more nearly the triple phosphate of magnesia, than any other calculus; but they are more compact than that compound is usually found to be: not consisting of distinct laminae, but appearing as one mass confusedly crystallized throughout its substance. Hence, instead of having the opacity and whiteness observable in fusible calculi, which consist of a number of small crystals cemented together, these calculi have a yellowish semi-transparency; and they have also a peculiar glistening lustre, like that of a body having a high refractive density.

When this substance is submitted to destructive distilla-

* I am informed that another stone formed afterwards in the bladder of this boy, and that he died in consequence, without submitting to the operation a second time. The stone found in his bladder after death, consisted principally of uric acid, but was peculiar in one respect, as its centre was hollow by the removal of some more soluble substance, of which the nucleus had consisted.

tion, it yields foetid carbonate of ammonia, partly fluid, and partly in a solid state, and a heavy foetid oil, such as usually proceeds from animal substances; and there remains a black spongy coal, much smaller in proportion than is found after the distillation of uric calculi.

Under the blow-pipe it may be distinguished from uric acid by the smell, which at no period resembles that of prussic acid; but in addition to the usual smell of burnt animal substances, there is a peculiar foetor, of which I cannot give a correct idea, as I know no smell which it can be said to resemble.

This species of calculus is so readily acted upon by the generality of common chemical agents, that its character may perhaps be most distinctly marked, by an enumeration of those feeble powers that it can resist.

It is not dissolved (excepting in very small proportion) by water, by alcohol, by acetic acid, by tartaric acid, by citric acid, or by saturated carbonate of ammonia.

The solvents, on the contrary, are far more numerous. It is dissolved, in considerable quantity, by muriatic acid, by nitric acid, by sulphuric acid, by phosphoric acid, and by oxalic acid.

It is also dissolved readily by pure alkaline menstrua: by potash, by soda, by ammonia, and by lime-water. It is even dissolved by fully saturated carbonates of potash or of soda. Accordingly, these alkalies are not so convenient for the precipitation of this matter from acid solutions, as the carbonate of ammonia, which is not capable of redissolving the precipitate, though added in excess.

For a similar reason, the acid best suited for its precipitation from alkaline solutions, are the acetic and citric acids. But the tartaric acid may occasion an appearance of precipitation, by forming a supertartrate with the alkali employed.

The combination of this substance with acids may be made to crystallize without difficulty, and they form slender spicula radiating from a centre, which readily dissolve again in water, unless they have been injured by being in any degree over-heated.

The muriatic salt is decomposed by the heat of boiling water, on account of the volatility of the acid, and the rest are easily destroyed by a greater excess of heat.

The salt formed by combination with nitric acid, does not yield oxalic acid, and does not become red, as the uric acid does, when similarly treated; but it turns brown, becoming gradually darker, till it is ultimately black.

When the combinations with alkalies are evaporated, they leave

leave small granular crystals; but as I was desirous of rendering my experiments as numerous as a limited quantity would permit, the portion which I could employ in any one experiment was too small for me to attempt to determine the form of such crystals.

When a hot solution in potash was neutralized by distilled vinegar, the precipitate did not immediately take place, but formed gradually during the cooling of the liquor in minute crystals, some at the surface of the fluid, and others attached to the sides of the vessel. The only definite form which I could observe, was that of flat hexagonal plates, but I could discern nothing which enabled me to judge of the primitive form of the crystal. On the surface of the calculus belonging to Guy's hospital, some minute crystals may be discerned, of a different shape, being nearly cubic. And it is possible, that the hexagonal crystals may owe their figure to a small portion of alkali remaining in combination.

From the ready disposition of this substance to unite with both acids and alkalies, it would appear to be an oxide; and that it does, in fact, contain oxygen, is proved by the formation of carbonic acid in distillation. The quantity of oxygen present in the calculus is not, however, sufficient to give it acid properties, for it has no effect on paper coloured with litmus.

I am therefore inclined to consider it as an oxide: and since both the calculi that have yet been observed have been taken from the bladder, it may be convenient to give it the name of *cystic oxide*, which will serve to distinguish it from other calculi; and as this is unlike any other term at present employed in chemistry, it is to be hoped that it will not be thought to require any alteration.

Since the period of my first essay on gouty and urinary concretions, the general results contained in it have been confirmed by others, and I believe are incontrovertible. But I am under the necessity of acknowledging a mistake in the analysis of the mulberry calculus, though not of much importance. An acid is mentioned to have arisen by sublimation, and it was supposed to originate from a partial decomposition of the oxalic acid. But since pure oxalate of lime yields no such sublimate, it most probably arose from the mixture of a small quantity of uric acid in the calculus then under examination.

In the analysis of the triple phosphate of magnesia, there is another mistake of more consequence. In my selection from numerous experiments for ascertaining the presence of phosphoric acid, I gave the preference to one in which nitrate of mercury was employed, on account of the facility

of extracting the acid from the phosphate of mercury, by heat alone. But since the whole of the phosphoric acid is not precipitated by nitrate of mercury, sulphate of magnesia will not be formed on the addition of sulphuric acid, and the magnesia cannot be obtained separate by the same process.

It may have been in consequence of this oversight, that a mistake on that subject has occurred in the succeeding volume of the *Transactions*.

A calculus is there described, which had been taken by Mr. Thomas from the bladder of a dog, and a series of experiments are related, from which it was inferred to consist of super-phosphate of lime, and phosphate of ammonia. But from the appearance of this calculus (which was exhibited to the Society at the time when the paper was read) I was much inclined to think that the nature of it was mistaken, and upon full consideration of the experiments, they did not appear to me conclusive.

I therefore obtained a portion of the calculus, and by the following process, the earth contained in it was proved to consist almost wholly of magnesia.

It was dissolved, with the exception of a very small residuum, by distilled vinegar.

The whole of the phosphoric acid was then precipitated by acetate of lead, added to excess.

The liquor was then poured off, and sulphuric acid was added, which precipitated the excess of lead, and at the same time formed sulphate of magnesia in solution.

By evaporation to dryness, the acetic acid was removed, and by subsequent increase of heat, the sulphate of ammonia and excess of sulphuric acid were expelled.

The residuum being then dissolved in water, and the liquor suffered to crystallize by spontaneous evaporation, there remained a quantity of sulphate of magnesia, that weighed rather more than the quantity of calculus taken for the experiment.

It was evident, therefore, that in this instance, the calculus examined did not consist of super-phosphate of lime, and there is some reason to doubt, whether a compound, that is so very soluble in water, ever forms a part of urinary concretions.

Although the treatment of diseases is not in general a fit subject to occupy the time of this Society, there is nevertheless one suggestion, with respect to the prevention of calculous complaints, so nearly connected with my present subject, that I think it may deserve to be recorded.

Since the white matter contained in the urine of birds,
which

which is voided along with their dung, has been remarked by M. Vauquelin to consist principally of uric acid, I have paid some attention to the different proportion in which this matter is voided by different species of birds, to see how far it accorded with the different qualities of their food. And I found that in the dung of the goose, feeding wholly on grass, the proportion did not seem so much as $\frac{1}{200}$ of the whole dung. In that of a pheasant kept in a cage, and fed on barley alone, it was about $\frac{1}{4}$ part. In that of a hen, having the range of a garden and farm-yard, and consequently procuring insects, and possibly other animal food, the proportion was manifestly much greater, and combined with lime. In the dung of a hawk, fed upon flesh alone, the quantity of matter voided in a solid state bears but a small proportion to the residuum of uric acid that is left by the urine when dry. And in the gannet feeding solely on fish, I have observed the evacuations in some instances to be mere urine, for it contained no solid matter, excepting the uric acid.

It seems consequently deserving of inquiry, what changes might be produced in the urine of any one animal, by such alterations of diet, as its constitution would permit; for as far as any inference can be drawn from these varieties, which naturally occur, it would appear, that persons subject to calculi consisting of uric acid, as well as gouty persons, in whom there is always a redundancy of the same matter, have much reason to prefer vegetable diet; but that the preference usually given to fish above other kinds of animal food, is probably erroneous.

CRITICAL ANALYSIS OF RECENT PUBLICATIONS

IN THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL
PHILOSOPHY,

Stock's Life of Beddoes.

(Continued from p. 175.)

IN 1790, Dr. Beddoes published at the Clarendon press, an analytical account of the writings of Mayow; under the title of *Chemical Experiments and Opinions extracted from a work published in the last century.*

“ Till the appearance of this treatise, (observes Dr. Stock) these
L 12 brilliant

brilliant discoveries which had outstripped, by upwards of a century, the more tardy advances of other chemical philosophers, had either remained totally unknown, or had received only a scanty or derogatory notice."

Amidst his other pursuits, Dr. B. cultivated the science of mineralogy with great assiduity and success; and in 1791, read a paper before the Royal Society, entitled, *Observations on the Affinity between Basaltes and Granite*, in which he aspired to elucidate some of the most intricate questions relative to geology. In the same year he also contributed a valuable paper, containing an account of some appearances attending the conversion of cast into malleable iron. The following year he diversified his studies by writing botanical dialogues.

About this period the memorable revolution which was effecting in France, excited deep interest in every reflecting mind.

"At such a period, it was not an easy task for any person possessed of an independent mind and ardent feelings, to avoid taking a part, and expressing an opinion, upon the important questions which were daily agitating. Dr. Beddoes, at least, was not that man. He hailed the dawn of French freedom with enthusiasm, and cherished, 'through many a dark and stormy year' hopes of an issue in favour of mankind." P. 45.

In this year he wrote a treatise upon the subject of early instruction; and composed a poem, called "*Alexander's Expedition to the Indian Ocean*."

"This originated," he observes, "in a stratagem, which, if not entirely innocent, can be charged only with the guilt of presumption. In order to impose upon a few of their common acquaintance, the writer, in a few passages at least, attempted to assume the style of the most elegant of modern poets." (Dr. Darwin.)

In this he succeeded, but never ventured to publish the whole of the poem; part of it was inserted in the *Annual Anthology* in 1796. From the specimens which Dr. Stock has quoted, it seems to possess considerable merit; and many passages bear a striking resemblance to some parts of the "*Botanic Garden*."

Soon afterwards, he resigned his lectureship at Oxford; and about the same time, published "*Observations on the Nature of Demonstrative Evidence, &c. with Reflections on Language*." And a medical work, entitled, "*Observations on the Nature and Cure of Calculus, Sea-scurvy, Consumption, Catarrh, and Fever; together with Conjectures upon several other Objects of Physiology and Pathology*." In the first division of the work, he speaks of the great efficacy of
alkaline

alkaline remedies in calculus, and especially recommends the carbonate of soda,

"Of which the water of chrySTALLIZATION has been dissipated by exposure to a warm dry air, or by being spread before a fire. This is combined with rather more than an equal weight of soap, and made into pills. One or two samples of the powder are taken in the course of the day." P. 77.

Immediately upon quitting Oxford, Dr. B. returned to Shiffnal, and having remained there a short time, paid a visit to Ketley. During his residence at this place, he published his celebrated history of Isaac Jenkins; an admirable moral fiction, which gives an account of the Reformation of a drunken Labourer, and his return to Habits of Sobriety and Industry. The success of this little work was extraordinary. Forty thousand copies were disposed of before the end of the year 1796; and the author issued a large impression, a few years since, at the particular request of a society for the promotion of knowledge and virtue by the distribution of books. "It was during this visit also, that he first developed those ideas on the medical use of the permanently elastic fluids, which afterwards attracted such general attention."

A pneumatic establishment was determined upon, and Dr. Beddoes, with three friends, subscribed each 200*l.* to institute it, Dr. B. engaging to superintend the undertaking; he also voluntarily proposed that the whole of the fees he might receive pending the issue of the experiment, should be devoted to the same purpose.

After encountering many difficulties in the prosecution of his scheme, he succeeded by the friendly agency of Mr. Edgeworth, who happened to be at Clifton at the time, in securing an establishment at the Hot Wells. Our biographer informs us,

"The society of this gentleman (Mr. Edgeworth) was a most valuable acquisition to Dr. Beddoes, upon his arrival in a place where he was personally known to so few. There existed between them a similarity of opinion upon a variety of subjects, which rendered their intercourse more pleasant and unrestrained. The science of education, in particular, had already occupied the attention of both, and the practical and enlightened views of the one were still farther extended by the philosophical theories of the other." P. 93.

Dr. Beddoes soon became more intimately connected with this excellent man by marrying one of his daughters. In 1793, he published a letter to Dr. Darwin, containing a farther explanation of his theory of the treatment of consumption, in which he points out two principle varieties of the disease. The one, he terms florid consumption, is denoted by a vivid redness of the cheeks at the accession of a paroxysm,

roxysm, and an extraordinary permanent redness of the lips, tongue, and fauces.

“ The eyes too, in such cases, are remarkable for their vivacity. The blood discharged by epistaxis, or hæmoptysis, has a colour evidently more fluid than usual.”

From these symptoms of hyperoxygenation, he draws the following inferences.

“ It is an evident consequence of my leading opinion, that a phthical patient would take a longer time than another in being drowned, or in being suffocated in most of those airs that are unfit for respiration. Being already provided, as I suppose them to be, with a larger proportion of that principle which respiration introduces into the body, they must be able to continue, for a longer time, without the necessity of a new supply ; and as the left cavities of the heart seem to be more irritable in such patients, it is probable they would be more easily recoverable from accidents of this kind, than persons in an ordinary state of health.”

His attention to the effects of different gases in consumption procured him the correspondence of many eminent physicians, who were gratified with his discoveries, and disposed to assist his inquiries. He was now occupied with considering the means of establishing a hospital for the administration of pneumatic remedies ; the late accomplished Duchess of Devonshire, who had been much pleased with his apparatus in Hope-square, entered into the plan with great eagerness.

“ In the mean time, however, he found leisure to publish a little tract, addressed to the more humble classes of society, entitled a Guide for Self Preservation and Parental Affection. In this work, he points out in the most simple language, a variety of errors generally prevalent upon subjects in which health is concerned.”

This little tract had a rapid and extensive sale. Dr. Darwin in one of his letters to the author, says of it, “ I have read a little work of yours about preserving health with great pleasure. You deserve a Civic crown for saving the lives of your fellow citizens.”

Soon after his marriage with Miss Edgeworth, he engaged in the superintendence of a new edition of the works of the celebrated John Brown, for the benefit of his widow and children. His motives for undertaking this task were very honourable to him ; we state them in his own words, “ to administer this consolation to men of genius languishing in penury and neglect ; that when they are gone from the scene, some notice will be taken, for their sakes, of those nearest and dearest to them.”

In this year also, he published, under the title of a “ Proposal for the Improvement of Medicine,” his plan for determining the power of factitious airs, by the formation of an institution

institution for that specific purpose. He had previously secured the powerful assistance of Mr. Watt, to construct his apparatus. In four months a second edition with additions and improvements was published : in this, Dr. Beddoes has related many interesting experiments, illustrative of the effects of the different gasses.

" In the mean time, his attention was not unawakened by the political occurrences which took place at the close of this year. He wrote for a certain society, an address to Thomas Hardy upon his acquittal. It is conceived in a style of forcible and indignant eloquence ; and animadverts with the most poignant severity upon the conduct of Mr. Pitt, in persecuting the most consistent adherents of a cause, of which, he himself had once been one of the most distinguished advocates." P. 106.

His published writings this year finished with a narrative of the good effects of opium in counteracting an excessive dose of digitalis ; this appeared in the 5th vol. of the Medical Facts and Observations.

In the year 1795, his well-known edition of Brown's Elements of Medicine was given to the public. This was almost immediately followed by a translation, from the Spanish, of Gimbernat's New Method of operating in Femoral Hernia. His labours in promoting the pneumatic medicine were ardently continued, and many cases in which it had been practised, being communicated to him, he was enabled in the autumn to publish a third part of the Considerations.

" He complains, in a letter written in November of this year, that his literary pursuits were suspended and interrupted ' by a concourse of patients.' Notwithstanding this complaint, however, it appears that he found leisure for the composition of some of his most celebrated political productions." P. 114.

These followed each other in rapid succession.

" The following are the names and dates of these writings : A Word in Defence of the Bill of Rights against Gagging Bills. Where would be the Harm of a speedy Peace ? Both published in the Winter of 1795 : An Essay on the Public Merits of Mr. Pitt : A Letter to Mr. Pitt on the Scarcity ; both in 1796 : Alternatives compared, or, What shall the Rich do to be Safe ? 1797."

These tracts are written with much spirit, energy, and manly freedom : the argumentative parts are occasionally enlivened by the warm colouring of a powerful imagination ; and sometimes an admirable vein of irony is introduced. We regret that our limits, and the nature of this Journal, preclude us from inserting some of the numerous extracts which Dr. Stock has cited from these productions, which, independently of their literary excellence, do great honor to Dr. Beddoes, as a man of humanity, keen penetration, and inflexible integrity.

Dr.

Dr. Beddoes' opinion of the zoonomia which appeared about this time, and of which he had seen the proof sheets, merits a particular notice. Of the first volume he observed in a letter to a friend :

"Dr. Darwin has in the press a work of the most astonishing ingenuity, and I believe I may add, truth. It is a treatise upon the laws of animal nature, which he has been the first to discover fully. It is, as to materials and arrangement, perhaps the most original work ever composed by mortal man."

Of the second volume he remarked, "Dr. Darwin's second volume is out, and his analysis of morbid phenomena is one of the greatest exertions of the human understanding. The foundation of the most important and difficult science is fairly laid. There will be an end of medical imposture in due time; and if the profession continue to exist, the number of its members will be wonderfully diminished."

Towards the end of 1796, Dr. B. published the fourth and fifth parts of the *Considerations on Factitious Airs*.

"The fourth part consists of reports of cases treated by the pneumatic remedies. The fifth contains a variety of miscellaneous articles. The greater part of it is occupied by a description of Mr. Watt's improved pneumatic apparatus, drawn up by the inventor; and including many hints and cautions with respect to the preparation or employment of the gasses."

In 1797, he published, "Suggestions towards setting on foot the projected establishment for ascertaining the powers of factitious airs in medicine."

He also wrote a small volume of reports of cases in which nitrous acid had been administered, and an introductory lecture of a course of lectures on anatomy, which his biographer ranks amongst the most valuable of his publications.

The following year, Dr. Beddoes had the satisfaction of opening the pneumatic institution, and of obtaining the assistance in superintending it of a gentleman, whose rising talents Dr. Stock observes—

"Eminently qualified him to enter into his views, and to assist in ascertaining and developing the resources of pneumatic medicine; and the more mature expansion of whose powers has since at once established his own fame, and extended the scientific reputation of his country. In one of the most remote parts of Cornwall, a young man, only nineteen years of age, 'with little access to philosophical books, and none at all to philosophical men,' during the course of an education, designed only to qualify him to act as a country practitioner of medicine, detected some inconsequent reasoning upon Caloric, which deformed the French theory of chemistry, struck out new views both upon that subject and upon lights, and supported them by a variety of novel experiments, ingeniously conceived and diversified." P. 154.

After this extract we need scarcely mention that this gentleman was Mr. Davy, who now occupies a foremost station in the ranks of science.

(To be continued.)

Practical Observations on morbid Enlargements of the Testicle, &c. By THOMAS RAMSDEN, Esq.

(Continued from page 177.)

IN the preceding number we endeavoured to lay before our readers a general statement of the principles of this work, which, both from the character of its author, and from the novelty of remark it promises, cannot fail to interest that particular department of the medical profession, to which it peculiarly applies. We now purpose to enter on an analysis of its contents.

The work opens with an assertion that many of the diseases of the testicle depend on a *latent* irritation within the urethra. This species, form, or degree of irritation, is denominated latent, on account of its extreme subtlety, and because the change in the membrane of the urethra from a natural healthy state is of a concealed nature, is shewn only by effects on other parts, and passes unobserved by the patient.

"The power of this principle to effect a derangement of the testicle can be exemplified in the gland itself; and may also be inferred from analogy in a variety of instances, in which other parts of the body (much less susceptible than the testicle, and situated also at a greater distance from the source of excitement than that gland is from the urethra) are occasionally placed under induration, from causes equally subtle and unobserved as that which is so frequently concealed within the urinary passage."

This subtle or insensible irritation is considered to constitute the basis of many formidable complaints, and is a fertile source of morbid derangements.

"Many instances of the baneful effect of this latent yet powerful agent of disease daily present themselves in various parts of the system, but which we have not been accustomed to trace to this particular source; I shall therefore introduce a few familiar examples of the general influence of insensible and slight irritation, previous to the more particular examination of its effect on that important gland, which is exclusively the subject of the present enquiry.

"When a susceptible or bloodshot point of membrane exists within the cavity of a joint, although so slight and subtle as to create no sensible uneasiness to the patient, it will cause such enlargement and induration of the adjoining parts as has been frequently mistaken for an expansion of the condyles themselves; this state of parts commonly *

* I believe I might say always, instead of commonly. I am indeed of opinion that a bloodshot state of membrane is the common basis of the white swelling; in other words, that the chronic enlargement and induration of parts surrounding joints, and the hectic fever which ensues, are solely dependent on such a source of slight excitement within their cavities. I ground this opinion on the strict analogy which the progress of white swelling seems

exists in that derangement of the knee joint which is called the white swelling.

"A similar effect takes place in those affections which we term scrofulous, and which seem to commence in the medullary parts of bones, in the tibia for instance, when a partial absorption of the body of the bone is taking place, or any very minute particle of osseous matter is slowly making its way towards the surface, the surrounding parts, without being in any degree inflamed or painful, will increase in bulk, and assume a resistant hardness, bearing every external resemblance to an increase of bony substance: yet these appearances immediately subside on the exfoliating bony particle being set at liberty.

"The common corn on the toe or foot is capable of inducing a flinty induration and enlargement of the inguinal glands, without in itself being sufficiently painful to awaken the attention of the patient to the part on which it is situated; in these cases, indeed, not only the source of irritation, but the affected gland also, will be so entirely free from uneasiness, that the induration will often advance to a considerable size before the patient becomes conscious of it.

"The mischiefs of insensible irritation frequently extend beyond these parts which are first exposed to its influence; when, for instance, it has occasioned an induration of any distant or neighbouring gland, such gland in its turn becomes a source of excitement to others, until the whole lymphatic system successively be affected.

"Latent irritation, besides inducing enlargement and hardness of glands, and other parts as rugged and resistant as that state which we frequently call scirrhus, has the further property of placing distant or neighbouring parts under characters and symptoms which are generally believed to be distinctly characteristic of certain constitutional affections.

"Thus in cases of confirmed syphilis, long after the venereal virus has been eradicated by a sufficient and judicious use of mercury, and the patient has been apparently restored to health, ulcerations will take place in the throat or on the palate, so exactly resembling the symptoms of venereal disease in these parts as to deceive even an experienced practitioner; yet such ulcerations eventually disappear on the exfoliation of some particle or portion of bone from the interior of the nose, which had latently produced the mischief.

"A singular example of the effect of subtle and distant excitement is afforded in worm cases, in which the sympathetic irritation within the nose, by long continuance, will cause thickening and abrasion of the membrane, and even exfoliation of the bones. These appearances in children have been occasionally mistaken for hereditary venereal disease; and a hasty, incautious expression of such an opinion by a professional man has sometimes involved parents in the deepest distress."

Two cases of *steatoma*, rendered malignant by common irritation, are given in exemplification of the principle Mr. Ramsden labours to establish.

¹ to bear to those morbid derangements of various parts of the system which can be traced to similar sources of latent irritation.

From these analogies, the main object of the volume, diseases of the testicle, is entered upon. It appears that enlargement and induration of the testicle often arises from stricture in the urethra, not known to have existence; and a strongly marked case is given, where the disease resisted every remedy, but was at length removed by the bougie. In this case it was not probable that the stricture had been the result of gonorrhœal inflammation, but arose from some other irritation.

“The causes tending to produce a derangement of the membrane of the urethra are too numerous to admit of being distinctly specified; many of them are very remote, and others probably too minute and latent to be discovered by surgical investigation. In general it may be said, that whatever occasions a frequency of muscular action upon the urethra, or a frequency of excitement within it, or whatever induces a temporary inflammation of the canal, may establish a state of irritation in its membrane.

“Thus constitutional irritability, high living, excess in venery, indulgence in onanism, gonorrhœal inflammation, irritating injections, calculi in the bladder or kidneys, piles, and other affections of the rectum, &c. may become, through the medium of increased action, excitement, or inflammation within the urethra, the remote causes of morbid derangement of the testicle.”

There is a state of the urethra, or unnatural diminution of its external opening, upon which Mr. Ramsden more particularly dwells, as being a fertile source of derangement in the membrane which lines that canal.

“In the majority of persons who apply for assistance under complaints of the testicle or of the urethra, which are not to be traced to gonorrhœal inflammation, the urethra will be found to be more contracted at its orifice than at any other part of the canal. This state of its extremity is very different from the stricture which is sometimes situated immediately within the aperture, as well as from that appearance of this part, which is called the blind urethra.

“This diminution of the orifice of the urethra is occasioned by membranous fence, which partially closes up the lips of the extremity of the canal; it may sometimes be an original mal-formation; yet I apprehend it is for the most part produced by cohesion during infancy, and is analogous to the union we sometimes see between the prepuce and glans penis in the male child, and between the nymphæ in the female.

“Unimportant as this diminution of the extremity of the urethra may at first appear, many valuable facts may be deduced from it. It is the only instance, I believe, in which an immediate cause of spasmodic stricture in that canal can be demonstrated, by occasioning too strong and too frequent action of the adjacent muscles upon its diameter; at the same time, it affords an excellent illustration of the manner in which other causes, although more remote, may either predispose the urethra to stricture, or establish in its membrane a state of latent irritation.

"Whenever this membranous fence exists, or whenever the orifice of the urethra, from any cause, is smaller in its diameter than that of other parts of the canal, a sudden check is opposed to the free exit of the urine or semen at each attempt to propel them, and the increased muscular action, which is induced by the revulsion of those fluids upon the membranous part of the urethra, becomes at length the foundation of some of its diseases.

"Patients who have not been aware of this peculiarity of structure at the extremity of the urethra, have frequently, on my pointing it out to them, described to me the painful check and sense of distension they have experienced at each act of passing urine or semen; but for which they could never before satisfactorily account.

"The presence of this membranous fence, besides being the cause of derangement in the membrane of the urethra, also becomes the means of retarding its recovery, after disease has been there established: it aggravates all the symptoms in gonorrhœa, and if stricture has taken place, the removal of that state of membrane will be interrupted by the difficulty of introducing a bougie of sufficient size to make the necessary pressure on that part where the stricture is situated."

If we understand Mr. Ramsden aright, this mal-formation of the extremity of the urethra, to which he gives the odd term MEMBRANOUS FENCE, is not the immediate but the remote cause of indurated testicle. It produces that unobserved morbid state of urethra, here called *latent irritation*, from which arises a gradual, and for a considerable time, unnoticed enlargement of the gland. As this morbid state of the canal of the urethra, arising from the *membranous fence*, is unknown to the patient, and, according to Mr. Ramsden's statement, hitherto, as well as the membranous fence itself, unobserved by the surgeon, it will require a peculiar dexterity in the management of the bougie, and an extraordinary portion of delicacy in the tactus, however erudite on other occasions, to ascertain its situation. On this subject the following instructions are given.

"Latent irritation may be established at any part of the urethra between the bulb and the bladder. When this is the consequence of previous inflammation, it is confined to some distinct and acutely sensible point of the membrane, which bleeds on the slightest pressure of the bougie.

"When it is the result of preternatural muscular action, or of excitement, it is not confined to so distinct a point, neither is it so acutely sensible; but consists rather of a tenderness of the membrane, and particularly of that part of the canal which is within the prostate gland; it will also bear the pressure of the bougie without either bleeding at all, or not to that degree as in the former instance.

"As the state of membrane which constitutes a source of derangement to the testicle is only discoverable by the bougie, and the immediate object of the enquiry is to detect an unhealthy state of urethra not indicated by obstruction, and sometimes confined to a minute point, the greatest

greatest gentleness and accuracy will be requisite in the examination.

"The bougie should be larger at one extremity than at the other, and should be of sufficient size at its larger end to occupy the whole diameter of the canal without distressing it by distension; previous to its being used the bougie should be oiled, and drawn through the fingers until it has acquired a proper degree of curvature to correspond with the sweep of the urethra: if a bougie be introduced which does not fill up the area of the canal, it will not only be liable to entangle in the lacunæ and thus embarrass the enquiry, but will miss or pass over any obscure point of irritation, upon which some degree of pressure ought to be made. A bougie also which has not been previously tempered and curyed will stop at the sweep of the canal, and will not pass forward into the bladder, until sufficient force has been applied to make it, by pressure against the membrane, adapt itself to the rising course of the passage. Such a degree of pressure will produce some hesitation and a sense of pain in the most healthy urethra, which may lead an inexperienced practitioner to suppose he has detected a stricture or unhealthy state of membrane, when in reality no such state exists.

"The bougie, prepared as above described, is to be gently and gradually introduced with its larger extremity foremost: when it reaches the seat of irritation, which I have before said will be found between the bulb and the bladder, if such seat be confined to a distinct point of the membrane, the patient will express an acute pricking sensation, and the bougie on being withdrawn will generally be followed by some drops of blood. But when the seat of irritation consists in a derangement of a greater extent of membrane, the patient will describe a sensation of tenderness or soreness rather than of acute pricking, and the removal of the instrument will be seldom followed with any appearance of blood.

"In each of these deranged states of the canal, more or less of spasm will occasionally occur during the act of passing the bougie; if the unhealthy state of membrane is limited to a distinct point, the spasm will be momentary, and the bougie will be felt as if suddenly to start from the affected part; but where a greater extent of membrane is deranged, the spasm will be of longer duration, and the extremity of the bougie will appear to be gently grasped during the remainder of its passage into the bladder."

When an indurated enlargement of the testicle exists with either of the above states of the urethra; that is, with a *latent irritation*, either arising from previous inflammation, from preternatural muscular action, or from excitement, Mr. Ramsden assures us that his experience authorizes him to say, that such derangement of the gland is to be considered as dependent upon the altered state of the urethra; and that the surgeon must direct his attention to the restoration of the natural state of that canal, in order to relieve the affection of the testicle.

To this elucidation of the causes of disease in the testicle, investigations of particular *morbid enlargements of that gland*

gland naturally follow. These investigations begin with SCLEROCELE, or indurated testicle from latent irritation within the urethra; and its morbid characters and progress.*

"The alteration which latent irritation first produces in the testicle, for the most part consists in an enlargement and induration of the epididymis, very much resembling that state in which the epididymis is frequently left after hernia humoralis. Sometimes, however, the body of the gland is the first part which becomes hardened, at others the induration will commence in the spermatic chord. As the induration advances it acquires a peculiar callosity and craginess; and the vas deferens, the epididymis, the body of the testicle, and the spermatic chord, all partaking of the derangement, eventually become blended in one hardened, irregular mass, in no way, that I am aware of, differing in outward character, or immediately distinguishable, from that morbid alteration of these parts which has been generally denominated scirrhus.

"During the progress of such morbid alteration in the gland, an undue effusion of serous fluid will occasionally take place within the tunica vaginalis, or underneath the coverings of the spermatic chord; in the former case producing a hydro-sclerocele, and in the latter a hydro-spermato-sclerocele.† When a testicle has reached this state of disease, the progress of its farther derangement becomes uncertain and indefinite, but the most usual course is a languid suppurative inflammation at the lower part of the scrotum, with the projection of an irregular granulating fungus through the aperture of the abscess.

"Notwithstanding the sclerocele will in some few instances, on account of the constriction of fluid, become painful at a very early period of the induration, yet in most cases the morbid derangement is so subtle at its commencement, and its progress is so extremely gradual, that the disease seldom becomes the object of surgical care, until the patient's

* It is an observation of practical importance, that "when a testicle from any cause whatever becomes deranged, the true pathognomonic characters will be obscured or lost as soon as the painful or inflammatory state of such derangement commences: in other words, the sclerocele, the scirrhus, the sarcocele, the serophulous testicle, and that which has been called venereal, though characterized by certain distinct features previous and even up to the time when they become painful, or are rendered so by accident, will from that period all assume a common mixed character, so alike in appearance, that unless a surgeon attends carefully to the preceding history of the disease, and to the symptoms which have marked the progress of such derangement, he will not be able to discriminate these diseases in their more advanced stages." "The features which distinguish the sclerocele, the scirrhus, and the sarcocele from each other, will be found to be less strongly marked between the sclerocele and scirrhus, than between either of those two affections and the sarcocele. The state of the testicle, which has been called venereal, bears some slight resemblance to the sarcocele, but the serophulous testicle differs from all."

† This is a consideration of great importance, since fluid, when tightly constricted, will oftentimes feel equally hard and resistant as the indurated gland or chord, and therefore add considerably to the obscurity of the case on examination. Fluid, when tightly bound down upon an irritable testicle, is also capable of producing general symptoms in the system which might seriously mislead an inexperienced practitioner.

attention is either attracted by the inconvenient bulk of the tumor, or some accidental circumstance occurs, and diverts it from the usual course. There is scarcely an instance of sclerocele of the testicle which does not corroborate this remark, by bearing incontestible evidences of its having existed long before the time at which the patient dates the discovery of his complaint. On this account a patient will frequently attribute the enlargement of the gland to hard riding, to a strain, to a cold, to a fever, or to some other occurrence which has had no influence in the production of the complaint, but merely induced disturbance in a testicle previously indurated, and ready to become enlarged upon the application of any exciting cause.

"We sometimes however meet with patients whose cases are to be considered as an exception to this general rule or course, in whom the common sclerocele of the testicle will advance with great rapidity, independently of any constricted fluid, and of all the accidental circumstances to which I have referred. These are persons who are constitutionally irritable, and in whom the testicle and membrane of the urethra partake of the general susceptibility of the system.

"But if a surgeon be consulted in a case of sclerocele of the testicle before the gland has taken on a diseased action of its own, the rapidity with which such derangement has proceeded will be found to be rather favourable to the cure than otherwise.

"I have observed in cases in which the seat of irritation within the urethra is acutely sensible, and in which the enlargement of the testicle has been rapid, that the cure is much more obedient to the treatment by the bougie than in those in which the source of irritation is less sensible, and in which the gland has been more slowly habituated to its influence. In the former cases, also, the removal of the source of irritation will be always sufficient, alone, to perfect the recovery of the testicle; but in the latter it will frequently be requisite after the cause has been removed from the urethra, to have recourse to local mercurial friction for the purpose of dispersing some remaining point of induration in the gland.

"The preceding observation, however, is to be considered as only applicable to that rapidity of progress in the sclerocele of the testicle which is solely dependent upon an increased degree of susceptibility in the seat of irritation within the urethra, and must on no account be confounded with the quickened course of disease, which is occasionally excited by general indisposition, or by injury to the gland itself. These cases differ essentially from each other, and require a very different mode of practice. In the former the early treatment of the urethra will stay the progress of derangement in the testicle, and probably effect a speedy cure; but in the latter such resort to the immediate use of the bougie will frequently be injurious, and by aggravating all the symptoms, may place the gland beyond remedy.

"If we reflect on the anatomy of the testicle, we must believe that when the breaking open or the actual exposure of its organic structure takes place, the functions of the gland will be destroyed; and this state of parts, which has been commonly called the "spoiling of the testicle," has at all times been admitted as a sufficient ground for advising the operation of castration. It must be of great importance, therefore, to ascertain whether we are not liable to be misled by appearances, and

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to condemn a testicle to the knife, under the idea of its being spoiled, even whilst its vascular structure yet remains entire.

Of the several morbid affections of the testicle, which are presumed to be fatal to its vascular structure, the formation of matter within the body of the gland may be considered as the most frequent. I suspect, however, in many instances in which abscess takes place within an indurated enlarged testicle, that the suppurative process is restricted to the previously thickened cellular substance, which by its intervention must necessarily be supposed to maintain the vascular structure of the body of the gland, as well as the continuous convolutions of the epididymis, in a state of extensive separation*.

"When, in consequence of suppuration within the sclerocele, a fungus is projected from the lower part of the scrotum (which is a very common occurrence), such morbid affection has been extensively admitted as authorizing the extirpation of the testicle, and I will acknowledge I have myself, on some occasions, acted upon such opinion; but later observation has shewn even this state of disease, in the early period of such fungated appearance, to be frequently confined to the cellular substance, or to the coats of the gland, and for the most part therefore totally independent of the vascular structure.

"If in true sclerocele the organic structure was liable to be "spoiled" at all times when suppuration takes place within the substance of the tumor, we should surely obtain frequent proof of such a fact, and yet I can truly declare (in cases in which I have had an opportunity of controlling the derangement in the gland by the timely and early treatment of the urethra), I have scarcely seen a single instance where I had reason to suppose the functions of the gland to be eventually "spoiled," merely in consequence of matter having formed amidst the induration.

"Allowing, however, the exposure of the organic structure of the indurated testicle to be sometimes an immediate consequence of suppuration within its substance, when such an effect results solely from a source of irritation within the urethra, it would by no means justify the early removal of the part as a measure of necessity.

"Even under such distressful circumstances, if the patient be content to retain the gland in its defective state, the treatment of the urethra will, I believe, in most instances, prove competent to the preservation of the remaining portion, and render it in future perfectly inoffensive to the constitution; provided such treatment be resorted to, when the patient is not suffering under general indisposition, and before the neighbouring parts have taken on a diseased action in consequence of the long continuance of irritation.†

* It may be observed in the common varicocele of the testicle how easily its organic structure admits of extensive separation.

† This is one of the circumstances which distinguishes the sclerocele essentially from the sarcocoele. When the structure of the testicle is exposed by that suppurative process, which is merely a consequence of irritation within the urethra, the gland may be restored to a quiescent state, and may be so far recoverable; but when the organic structure of the testicle is exposed by the progress of sarcocoele, such a compromise must not be expected.

This observation applies also to the scrofulous testicle. Although large portions of the gland will slough away, in what is called the scrofulous testicle, yet in many instances the remaining parts will heal up, and continue through life without occasioning farther inconvenience.

These opinions are illustrated by the subsequent cases :
“ sclerocele of the testicle from latent irritation within the urethra ; sclerocele of the testicle from latent irritation within the urethra, mistaken for omental hernia ; sclerocele of the testicle in the groin ; sclerocele of the testicle commencing within the body of the gland ; sclerocele of both testicles, one of which suppurated, arising from latent irritation within the urethra ; fungous sclerocele from latent irritation within the urethra, in which the induration commenced within the body of the gland. The next section treats of

SCIRRHUS in the Testicle, and its morbid Distinctions.

The difficulty of discriminating between sclerocele and scirrhus, is often a source of great embarrassment to the surgeon, and of hazard to the patient. This is fully felt by our author, and he gives the following pathognomonic symptoms with doubt and hesitation.

“ Whenever a testicle increases in size, is craggy on its surface, and of a stony hardness, whether with or without watery fluid within the tunica vaginalis, at whatever part of the gland the induration may have begun, the first enquiry ought to be whether such a diseased alteration be dependent upon an unhealthy or too susceptible a state of urethra. If in spite of a proper attention to the urethra, and of a general or local trial of mercury seasonably and judiciously used, such induration and craginess continue to extend, and especially if severe darting pains* in the direction of the loins come on before the skin appears reddened and inflamed, the disease must be viewed as scirrhus.”

A case of sclerocele is annexed, which had the characteristics of true scirrhus.

The testicle is occasionally met with in a state of considerable enlargement and induration, free from pain for the most part, without fluid in the tunica vaginalis, unattended with thickening of the spermatic chord ; and though hard and resistant, yet retaining an uniform smoothness and equality of surface. This has generally been considered as having a syphilitic origin, and is here noticed in a section treating of that

Morbid State of the Testicle which has been called Venerical.

“ This state of gland is unconnected with any derangement of the urethra ; and being frequently observed to take place during the pro-

* Even this character should be received with caution and reserve. The common sclerocele, in an irritable habit, will be painful at an early period of the induration ; and if accompanied with fluid constricted within an unyielding tunica vaginalis, will (in consequence of the pressure of such fluid against the gland) be attended with darting pains toward the loins.

gress of syphilis, and to yield to mercury, has been supposed to constitute one of the symptoms of that disease.

"In its general features it bears some resemblance to the sclerocele, the scirrhus, and the sarcocele; but in its particular characters it is essentially different from them all. It resembles the sclerocele and scirrhus in hardness and resistance, but differs from them in its uniform smoothness and equality of surface; it resembles the sarcocele in smoothness and equality of surface, but is distinguishable from it by hardness and resistance."

Mr. Ramsden doubts if this morbid state of the testicle ever has a venereal origin, but observes,

"Whether these opinions on the nature of that affection of the testicle which has been called venereal are well founded or erroneous, is perhaps of no great practical importance, since experience has taught us that whenever the gland presents the characters of that morbid enlargement, which I have defined, it will be proper to subject the patient to a judicious and well regulated course of mercurial frictions, which, for the most part, has the effect of restoring the gland to its natural state.

"This affection of testicle, however, is sometimes blended with the sclerocele; and whenever therefore a derangement of the urethra shall be ascertained to be present with it (I have already said that in every instance of morbid enlargement of the testicle the urethra should be examined), it will be right to resort to the occasional use of the bougie during the mercurial course.

"I have to remark also, that in a majority of instances where the case is of this mixed kind, the back part of the testicle will be found, on a careful examination, to be more rugged and unequal, than the general bulk of the tumor."

The next morbid alteration of the testicle, noticed by Mr. Ramsden, is,

The Scrofulous Testicle.

"When a testicle increases in fullness of size, retaining in a great measure the outward features of the gland, is at the same time free from pain, or any affection of the spermatic chord, and is characterized by a soft, pulpy, relaxed feel without elasticity; such a state of the gland, is called a scrofulous testicle.

"Children and adults are equally liable to this affection. It occurs in those children who have light or red hair, a delicate skin, with a florid complexion, and such other general external appearances as are supposed to mark a disposition to scrofula, and especially in those who shew any tendency to mesenteric obstruction.

It takes place in those adults who are naturally of a weakly, delicate constitution, or whose system has been weakened, and general health impaired by a long residence in hot climates, or by an irregular course of life.

In children it is no unusual occurrence to find, even before the testicle has acquired any considerable degree of fullness of size, the skin of the

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the scrotum to give way, the testicle repeatedly to slough, and the parts afterwards to cicatrize without much difficulty.

"But in adults the skin of the scrotum seldom gives way, so as to expose the body of the testicle until a very considerable increase of bulk* has taken place; yet such enlargement is not attended with pain or affection of the spermatic chord, neither is there any derangement of the health, farther than seems to arise from general debility.

"In such an enlarged state of gland the skin of the scrotum will red-den and break sometimes in several places, and will expose different parts of the substance of the testicle in a state of slough. The progress of the sloughing, however, is commonly very slow, and only takes place at intervals; so that a patient will carry a diseased testicle of this description, from time to time throwing off sloughs and for many years, without the mischief extending up the chord, without much injury to the general health, and without being incapacitated for the common avocations of life.

"If the sloughing ceases before the gland be quite destroyed, the surface of the remaining portion frequently becomes elevated above the level of the skin of the retracted scrotum, and projects luxuriant granulations, which, from the difficulty of being restrained within proper bounds, very much impede cicatrization."

It is not contended that this morbid state of the testicle arises from irritation in the urethra; but that such irritation will induce upon a testicle previously disposed to, or suffering under scrofulous affection, such a change in its appearances as will materially alter its pathognomonic symptoms.

In the former part of this analysis, we observed that our author did not include *sarcocoele* in his arrangement of morbid alterations in the testicle. He, however, described this disease in the prefatory part of his work, as differing specifically from *scirrhus*; that on dissection it displayed features peculiar to itself; that it was fleshy and elastic to the feel; was often found to contain within its substance partial collections of bloody sanies; and that it did not present the ligamentous radiated appearance, which in true *scirrhus* is uniformly observable. He also gives it a place in the body of the work; and we consider it to be an affection of such importance both to the patient and to the surgeon, inasmuch as it is intractable to medicine, and demands a prompt decision on the part of the practitioner, that we shall insert the whole of the section which treats on it.

* It is to be remarked, that when the scrofulous testicle is about to enter into its second stage, which is generally a short time before the skin begins to appear discoloured, it gradually loses its grand characteristic feature, viz. its soft, pulpy feel, and acquires a degree of general hardness very much resembling what is attendant on the first stage of that state of the testicle which has been called venereal.

"When the body of a testicle increases in bulk, feels fleshy and elastic, is perfectly smooth and uniform on its surface, without thickening of the spermatic chord, and occasions no pain or inconvenience but from its weight, or on being handled, I should suspect such affection of the gland to be sarcocele.*

"This disease is idiopathic, and has hitherto been incurable; although it may occasionally exist for years without making much progress, it is always liable to sudden and dangerous changes, which may place it even beyond the reach of an operation.

"As the disease proceeds, it induces derangement of the system, and the countenance of the patient assumes a peculiar sallowness of appearance.

"In the more advanced stage of sarcocele, even without the presence of pain, there will occur partial collections of fluid, commonly of bloody sanies, within the body of the gland, which present themselves by mamillary elevations of the tunica albuginea. The fluctuation in these elevations will be so distinctly felt as occasionally to mislead the surgeon, and induce him to puncture them, under a supposition that the bulk of the tumor wholly consists of a collection of fluid.†

"Such a mistake may lead to the most serious results, since it seldom happens that the gland will again subside into a quiet state.

"When the disease in its regular progress, or by the excitement of any accidental circumstances, reaches its painful or suppurative stage, it will lose its elasticity, assume the common characters of irritation, and projecting a painful gleeting‡ fungus from the ruptured part, extend with a rapidity which not only sets all means of relief from surgical treatment at defiance, but sometimes renders castration itself ineffectual.

"It will appear from the preceding observations that the fleshy elas-

* "If the body of the testicle, though enlarged and 'indurated' to some degree, be perfectly equal in its surface, void of pain, has no appearance of fluid in its tunica vaginalis, and produces very little uneasiness except what is occasioned by its mere weight, it is usually called a simple sarcocele, or indolent scirrhus." POTT.

† In some few cases of sarcocele a small quantity of fluid, but of a limpid kind, will also be found within the tunica vaginalis, and will be bound down so tightly on the diseased gland as to render it painful and progressive at an early period. I have a patient at this time under my observation with true sarcocele, and I have twice within the last eighteen months stopped the progress of the disease by cautiously evacuating a small quantity of fluid from the tunica vaginalis. I do not, however, venture to recommend the practice; and would gladly prevail upon my patient to part with his testicle, but he has hitherto resisted my advice, and will probably repent it, as the gland is daily liable to be placed beyond the reach of an operation.

‡ "Gleeting." This sort of discharge, or a discharge of "bloody sanies," is not a pathognomonic character, though it has hitherto been considered as such. When a fungus of any description is projected through the tunica vaginalis, the natural but excited secretion of that sacculus mixes with the purulent discharge of the fungus, and gives the "gleeting appearance." When this secretion of the sacculus happens also to be tinged with blood in passing over the irritable surface of the fungus, it constitutes "the bloody sanies," on which so much stress has been laid as a supposed character of cancer in the testicle.

ticity, with the total absence of induration* and cragginess, are the chief characters which distinguish sarcocele from other morbid enlargements of the testicle; on this account a collection of blood or watery fluid within a diseased or thickened tunica vaginalis may easily be mistaken for sarcocele.

"The fleshy elasticity of a testicle in the first stage of sarcocele is so similar to the feel of fluid through the medium of thickened membrane, that the most experienced surgeons have been deceived by it. This deception indeed is acknowledged to be so imposing, that it has now become an established point in practical surgery, invariably to puncture a supposed sarcocele, previous to the intended operation of castration.

"Since sarcocele is idiopathic, in all its stages incurable, and even in an apparent quiet state liable to sudden and dangerous changes, it will be the duty of the surgeon, as soon as he has distinctly ascertained its character, even before the gland has acquired a painful state, to explain to the patient the danger of his retaining a testicle under circumstances of such extreme hazard, and to submit to him the propriety of its removal."

The remainder of the volume appropriated to the diseases of this part of the frame, consisting of one hundred and forty pages, is occupied by observations on "*Watery Effusions into the Tunica Vaginalis.*"

(To be continued.)

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

ROYAL SOCIETY.—The Society, on meeting after the holidays, concluded the reading of Dr. Parry's paper on the means of curing certain nervous affections merely by pressure on the carotid artery; a method which he proposed several years ago, and has found effectual in almost every case.

The same evening a mathematical paper on the hyperbola was laid before the society by the Rev. Mr. Helens; but it was of a nature not to be read.

A curious account of a child born in Wales without eyes, or rather without eye-balls, was communicated by Mr. Jones: a small round white ball is found in the place of the eye, and the tunica conjunctiva was perfect. The mother attributes this organic defect to a fright which she received when seven months gone with child.

A letter from Dr. Wollaston to Dr. Marcet was read, in which Dr. W. related his experiments formerly made with a view to ascertain the existence of sugar in the serum of the blood of diabetic patients. The result of a considerable number of experiments, as

* "Every species of sarcocele consists primarily in an enlargement, 'induration,' and obstruction of the vascular part of the testicle." Vide POTT.

well as the imperfect attempts of Mr. Cruikshank and Dr. Rollo, convinced him of the non-existence of sugar in such serum. Dr. Marcet, at the instance of Dr. Wollaston, also made some experiments with the same view, and administered five grains of prussiat of potash (without danger) to a patient whose urine yielded a blue colour on the addition of iron.

On the 17th and 24th, a long paper by Mr. Macartney was read on the nature of vital heat. Mr. M. related the appearances exhibited in a great number of experiments on eggs and rabbits, made with a view to ascertain the origin and progress of animal heat in the young chick, &c. and from them concluded, that vital heat does not depend on respiration, and that it may exist in any form of matter. This conclusion, however, he expressed with extreme diffidence; and, as if either afraid of its validity or of the accuracy of his own experiments, partly wished to decline giving any opinion on a subject which he still deemed very complex and imperfectly understood.

The National Vaccine Establishment is about to circulate the following letter, addressed to the Director, Manager, or Superintendent of Public Charities, &c. &c. &c.

*National Vaccine Establishment,
Board Room, Leicester Square, Feb. 14, 1811.*

Sir,—This establishment has been directed by Government to extend the benefits of vaccination to all parts of the British dominions, and I am instructed by the Board to submit to your judgment the propriety and humanity of procuring the adoption of this Innocent Preventive of Small Pox among the children of
and among the poor in general.

Since vaccination has been generally employed in the nurseries of the nobility, gentry, and more informed class of society, the mortality occasioned by small pox has been confined to the poor.

In behalf of this description of persons, many of whom, from prejudice, are induced to reject the benefit offered to them; I have the honour to address you at the instance of the Board, and to lay before you the examples of some Charities, in which Vaccination has been successfully adopted.

In the Royal Military Asylum for the Children of Soldiers, where between eleven and twelve hundred children are now received, Vaccination has been practised from the commencement of the establishment in the year 1803; from that period to the present time, but one instance of death from small pox has occurred, and it is worthy of remark, that the individual who suffered had not undergone Vaccination, in consequence of a declaration of the mother that the child had passed through the small pox in infancy.

Vaccination was introduced into the Foundling Hospital in the year 1801, and every infant, soon after its admission, has since that period been vaccinated. From the commencement of this practice to the present time, no death has occurred from small pox, and in no instance

instance has the preventive power of vaccination been discredited; although many children, as a test of its efficacy, have been repeatedly inoculated with the matter of small pox, and exposed to the influence of its contagion.

I am also directed by the Board to acquaint you, that in their opinion, the local and constitutional maladies which frequently follow the small pox, rarely, if ever succeed to the vaccine inoculation; that it produces neither peculiar eruptions nor new disorders of any kind, and they wish to call your attention to the fact ascertained by the Society for teaching the indigent Blind, namely, that nearly one fourth of the persons admitted into that charity have been deprived of their sight in consequence of small pox.

The Board have been induced to submit the above observations to your notice, on account of the number of deaths by small pox announced in the Bills of Mortality of the year 1810, which they are persuaded have arisen from the contagion propagated by persons of the poorer class, who from prejudice and unfounded alarms, have been induced to use small pox inoculation in preference to vaccination.

The Board have directed me to assure you that they disclaim every idea of interfering with the concerns of the Charity, but they have confidence that in the event of their suggestion meeting with the approbation of the Committee, the best and wisest plans will be adopted by that Body, for the public advantage.

I have the honor to be, Sir,

Your obedient humble Servant,

JA. HERVEY,
Register.

A singular case of derangement of structure in a foetus, in consequence of original malformation, has lately occurred to Dr. Merriman. The mother had scarcely completed her eighth month, the foetus was born alive, but died in about two hours; it was of the male sex; the penis was flattened and imperforate, and there were no traces of testicles; the rectum likewise was imperforate: but what particularly excited attention was an immense enlargement of the belly, evidently formed by a tumour within the abdomen, extending far above the navel. Dr. Merriman being very desirous of ascertaining what could produce this unusual appearance, obtained the consent of the friends to have this child opened, which was accordingly done the same evening by Mr. Howship.

On cutting into the abdomen, the tumour was found to consist of the bladder and ureters immensely enlarged and distended with urine; the ureters were become tortuous, and pouches were formed in them equaling in size the bladder at birth. The quantity of urine contained in the bladder and ureters exceeded half a pint, which is perhaps ten or twelve times as much as the bladder of a full grown foetus generally contains. The kidneys were nearly covered with hydatids. This curious preparation is preserved in Mr. Heaviside's very valuable Museum.

Mr.

MR. GEORGE SINGER, a gentleman of extensive acquirement in the various branches of experimental philosophy, and of most assiduous application to the objects of his particular pursuit, is now delivering a Course of Lectures on *Electrical, and Electro-Chemical Science*. The comprehensive scope of these Lectures, is distinctly shewn by the subsequent statement.

The First Part, comprizing the History and Practice of Electricity, will give the origin and progress of Electrical Discovery, an experimental illustration of the principal historical facts; by which the epochs of the science are marked, and impressed on the memory by an appeal to the senses. An investigation of the Nature of Electrical Phenomena, in which an interesting diversity of experiments will be exhibited, and the Laws of Electrical Action investigated, and explained, on principles at once competent, intelligible, and consistent. In this part of the course some original experiments on the excitation of electrical effects, and on the variable appearance of charged surfaces will be detailed; the structure and management of the apparatus described; and instructions given for the successful prosecution of electrical inquiries.

The Second Part, on the natural Agencies of Electricity, will trace the influence of electricity in the production of various important phenomena of nature; connected with meteorology, vegetation, geology, and animal life. It will include a very full explanation of the nature and cause of thunder and lightning, in all its variety of effect; an account of the means devised for the protection of buildings, and ships, from injury by thunder storms; an investigation of the merits of the various means proposed, with directions for the most perfect insurance of safety; instructions for personal security, and for the defence of carriages, &c. &c. The influence of electricity in the production of meteors, falling stars, and other atmospheric phenomena, will be next examined and illustrated by a variety of experiments. The existence of water in the atmosphere, and its connection with electrical appearances will be also demonstrated, and applied to the explanation of some important natural arrangements. The experiments and inquiries on the connection of electricity with the functions of vegetable and animal life, will be also considered, and the opinions advanced on this subject examined. The facts which prove the active existence of electric powers in the animal economy, will be illustrated by a description of the Torpedo, Gymnotus, and other electric animals. The means by which these phenomena are produced being next considered, will lead to an investigation of the experiments of Galvani, and others, on the excitation of muscular motion, by electrical powers; these experiments will be illustrated by some striking phenomena, and the theories advanced to account for them will be fully explained.

The Third Part, on the Chemical Agencies of Electricity, is intended to exhibit a view of the rise and progress of that connection of electricity with chemical inquiry, which has contributed so rapidly to the improvement of the latter science. The experiments of Franklin, Priestley, Cavendish, Cuthbertson, and Morgan, constitute the first epoch, and are eminent for their influence in the propagation of chemical inquiry. The circumstances that led to the discovery of the voltaic battery; the invention of this instrument; and the discovery of its chemical agency are

are the next objects of consideration ; and here the names of Nicholson, Henry, Cruickshank, and Davy claim the highest attention. The discovery that different chemical bodies had a tendency to arrange themselves at the opposite surfaces of the battery ; the opinion that these substances were formed by its influence ; and the experiments of Mr. Davy in contradiction of this opinion, lead to the consideration of that brilliant series of discoveries which have so recently enriched and diversified chemical philosophy. The decompositions effected, the means of Analysis discovered, and the prospect of discovery opened, by these researches, will be attentively considered and exemplified by original observations and experiments.

The Fourth, and concluding Part will contain an examination of the present state of theoretical knowledge in the science of Electricity.

This part of the series is intended to render the exposition of the subject as complete as possible. It is presumed it will at the same time effect another important purpose ; that of impressing on the memory the principal facts of the Science ; as they will be recalled to the attention very powerfully, during the investigation of the most distinguished theories. The enquiry will be rendered interesting by the introduction of a variety of original experiments, some of which have been made in pursuance of *Mr. De Luc's* recent Analysis of the Voltaic Instrument. This analysis will be amply considered, as will also every other opinion of importance on the same subject.

To the extensive development of the phenomena of the electric fluid, which this promises, we can add that Mr. Singer is particularly happy in illustrating the various opinions and theories, by the correctness and success of his experiments. We recommend this course of evening lectures to the medical student, not only as an ornamental branch of study, but as elucidating many laws of nature connected with MEDICAL SCIENCE.

On the Treatment of Pulmonary Inflammation in Horses ; on Inoculating Glanders and Farcy.

We are informed, on good authority, that Mr Colman, of the Veterinary College, has adopted a plan, successfully, of treating horses labouring under inflammatory affections of the lungs, and coughs, viz. that of exposing them to the open, fresh, and cold air, in place of keeping them in warm stables.

Also the experiments of transferring the blood of glandered horses into the ass have been repeated, by which the glanders was produced ; and again, of inoculating the horse with the matter of the nose of the glandered ass, and with the matter of farcy, by which the glanders was excited. Likewise the glandered horse became affected with the farcy.

On the cause of the Red Colour of the Blood.

No fact seems to be more positively ascertained, by many respectable physiologists, than that the red colour of the blood is owing to red oxide of iron: there are, however, many others of
(No. 145.) O O equal

equal authority, who do not allow that the asserted fact is proved. I shall be glad if the evidence on this point be further examined, and in the mean time offer the following experiment and observation.

Experiment—I collected a quantity of the red part of human blood by repeated ablutions of the crassamentum, by which I separated, of course, the coagulated lymph or albumen, and obtained the part desired in the form of a deposit from the water. This deposit was evaporated to dryness. It weighed 110 grains. By burning in a platina crucible, it afforded a half-fused, brown, tasteless substance in weight two grains and a half. It was boiled in muriatic acid, which dissolved part of it. On evaporating the solution duly, it was not found styptic to the taste; on the addition of tincture of gall-nut it became blackish; on the addition of prussiate of potash it afforded a deep blue coloured precipitate, which on calculation, however, did not yield above one half of a grain of reddish-brown powder. Now, by estimation, this half a grain of reddish-brown powder was obtained from 10,000, or twenty ounces of blood. Is it then probable that this quantity of blood should derive its colour from half a grain of iron.

Observation.—On exposing the crassamentum of blood to heat to separate the water from it, as soon as it grows hot, the colour changes from black, or red, to brown or grey. Is it probable that this change from red, or black, to brown, would occur, if iron oxide was the colouring matter of blood? *Edin. Jour.*

Dr. Curry, of Guy's Hospital, has just put to press the first volume of his promised work, "On the Nature of the Hepatic Function, the Purposes it serves in the Animal Economy, and the powerful Influence which a disordered state of it exerts, in exciting, aggravating, and modifying various Forms of Disease, both general and local."—It is expected to be comprised in two volumes, 8vo.

Mr. James Perry will shortly publish, in large quarto, "*Conchology, or a History of Shells*:" illustrated by more than 400 specimens, engraved the natural size of the shells, and coloured.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

Observations on the best Mode of relieving Strictures in the Urethra, with Remarks on the frequent Inefficacy and ill effects of Caustic Applications. By William Wadd. 8vo. boards. Callow.

Practical Observations on the Formation of an Artificial Pupil in several deranged States of the Eye; to which are annexed, Remarks on the Extraction of soft Cataracts and those of the membranous Kind, through a Puncture in the Cornea. Illustrated by Plates. By Benjamin Gibson. 8vo. boards. Cadell and Davies.

A Con-

A Conspectus of the London, Edinburgh, and Dublin Pharmacopœias, in which are clearly explained the Virtues of each Article and Medicine, and the Doses and Diseases for which the several Remedies therein contained are employed. By E. G. Clarke, M. D. 18mo. sewed. Cox.

The Modern Surgeon, or plain and rational Rules for the Direction of Practice. founded on the Observations and Experience of the most distinguished Practitioners. 8vo. boards. Murray.

Natural History of the Human Teeth, with a Treatise on their Diseases from Infancy to Old Age, adapted for general Information. To which are added, Observations on the Physiognomy of the Teeth, and of the Projecting Chin, with Two Engravings. By Joseph Murphy, 8vo. boards. Callow.

Very lately there was a fall of meteoric stones in Caswell county, New Connecticut. Their descent was seen for a considerable distance round, and two reports distinctly heard at Hillsborough, a distance of thirty miles. A fragment weighing a pound and three quarters, struck a tree in the new ground of a Mr. Taylor, near to which some woodcutters were at work, who ran home in alarm. On recovering from their fright they returned to the place, and brought away the stone which was still hot. It is of a dark brown colour, porous, and contains iron.

It is stated very positively, in a recent publication, that horse-flesh now forms a common article for food in Norway; and that since the year 1803, there have been slaughtered at Christiana 400 horses for the consumption of that town.

At the last fair at Leipsic, the number of German books brought for sale, amounted to between 1,000 and 1,100. These were for the most part, either compilations, or insignificant works.

*An Account of Diseases in an Eastern District of London,
from Jan. 20, to Feb. 20, 1811.*

ACUTE DISEASES.		Phthisis Pulmonalis	-	4
Pleuritis	- 2	Hæmoptysis	-	3
Pneumonia	- 1	Cephalalgia	-	4
Peripneumonia Notha	4	Vertigo	-	2
Icterus	1	Ophthalmia	-	2
Rheumatismus Acutus	- 5	Epistaxis	-	1
CHRONIC DISEASES.		Amenorrhœa	-	4
Tussis	- 20	Enterodynia	-	3
Dyspnœa	- 12	Obstipatio	-	4
Tussis cum Dyspnœa	- 17	Hæmorrhœis	-	2
Catarrhus	- 4	Rheumatismus Chronicus	18	
Raucedo	3			

PUERPERAL DISEASES.		INFANTILE DISEASES.	
Ephemera	5	Ophthalmia	3
Menorrhagia Lochialis	4	Erysipelas Infantile	2
Dolor post partum	7	Febris Mesenterica	3
Peritonitis	2	Aphthæ	4
		Herpes	6

As by similar causes similar effects will be produced, so it may well be expected that a uniformity will appear in the accounts which are given of the diseases by which the present season is distinguished. During the winter months, and in the earlier part of the vernal quarter, diseases of the chest form a prominent feature in the list. Coughs, catarrhs, inflammation of the lungs, hæmoptysis, and other affections of the pulmonary system, engage a very large proportion of medical attention. In some subjects, and under some peculiar circumstances, these complaints assume a very formidable aspect. To those who are labouring under the weight of years, and especially to those who have been accustomed to annual returns of one, or other of these maladies, every recurrence of them must be productive of considerable anxiety. In several of the instances referred to in the list a fatal termination took place. In others where there was a more favourable issue, there is reason to suspect that though the patient escaped from the worst effects of primary disease, he may fall a sacrifice to others which very frequently succeed it. Hydrops pectoris too often occurs after some severe attacks of pneumonic disease. This complaint approaches in so insidious a manner that its presence is hardly suspected. Though under the influence of this disease the respiratory functions are impeded, yet this effusion appears trifling, in comparison of what has been experienced under the acute state of the previous disease, and the patient considers himself as convalescent, rather than labouring under a new disease. The anasarca swellings, however, which soon appear, paucity of urine, palpitation of the heart, sudden sense of suffocation upon first awaking in the night, and other symptoms, soon characterize the disease. Into this state, several of the patients referred to in the list seem to be in danger of falling.

NATURALIST'S MONTHLY REPORT.

JANUARY.

Reviving Winter Month.

The horizontal sun
Broad o'er the south, hangs at his utmost noon,
And, ineffectual, strikes the gelid cliff.

THE wind was easterly from the 1st to the 10th of the present month. In the afternoon of the 10th it was south, and on the 11th westerly. On the 12th it was full south, and afterwards south-west; and from the 13th to the 23d for the most part westerly, or north-west. Towards the latter part of the 23d it changed to the north; and on the 24th and 25th was north-east. It was north-west on the 26th and 27th, and easterly during the last four days of the month.

We had strong gales on the 4th, 5th, 6th, 7th, 12th, 17th, and 30th, and fresh gales on the 1st, 8th, 13th, 14th, 15th, 23d, 24th, 25th, 27th, and 31st.

There was rain on the 10th, 12th, 13th, 14th, 15th, 17th, 18th, and 31st; and snow on the 1st, 2d, 3d, 28th, and 30th.

The weather was frosty on the 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 22d, 26th, 27th, 28th, and 29th, 30th; and hazy or foggy on the 10th, 12th, 14th, 17th, and 21st.

In the early part of the month I observed several bulfinches about the hedges, an occurrence which I have seldom remarked except in the extreme cold weather of winter.

January 3d. The starlings, which, in the beginning of November, were much more numerous than they usually are in this neighbourhood, continue apparently undiminished in numbers.

January 8th. Fieldfares are very numerous.

January 10th. Notwithstanding the long continuance of easterly gales and frost, the wild fowl which have come in are hitherto very few. Wild-geese have been exceedingly scarce. One wild swan (*anas cygnus ferus* of Linnæus) has been shot.

The frost has been so hard that the rivers are frozen. The frost broke up on the 10th.

January 15th. A great quantity of what is denominated, in this neighbourhood, ground ice, is now floating down both the Avon and Stour. This ice is formed at the bottom of the water, and is known by the roots and leaves of water plants which it carries along with it. Many persons have been much perplexed to account for the formation of this ice.

January 17th. The weather is now so warm that spiders come out of their hiding places and stand upon their webs; and the house flies have in some degree recovered from their torpidity.

January 19. I this day saw advertised in one of the London Papers, that a single dealer in wild-fowl had just received, for sale, 10,000 Bernacle

nacle geese! The 4000 mallards, 204 cranes, 204 bitterns, 400 herons, 200 pheasants, 500 partridges, 400 woodcocks, and 100 curlews, which are stated to have been served up at Archbishop Nevill's famous intronization feast, in the year 1466, were, I think, scarcely more remarkable.

January 25. Snowdrops and primroses are in flower under the sunny walls of warm and sheltered gardens; and the flower-buds of the mezezon are nearly ready to burst.

January 27. The only salmon which has been caught during the present month, was taken on this day. It weighed twenty four pounds.

Hampshire.

BRITISH ORNITHOLOGY.

Two numbers of the work on British Ornithology, by Mr. George Graves, of which we gave notice in our number for January, have appeared; as this work promises to be complete, and contains much information interesting to the naturalist, we conceive a monthly report of the contents of each number will be acceptable to most of our readers. Mr. Graves has in the preface given the outline of the plan he intends to pursue. We notice in the specific characters he differs from the usual method in not naming the colours, the correctly coloured plates accompanying superseding this necessity. We also observe, that the plates and letter-press are not numbered, which is a judicious omission, as it gives an opportunity of arranging the subjects when the work may be completed, according to their place in the system. Number 1. contains a very good figure of *Loxia Curvirostra*, the *Cross-bill*; this beautiful species is very highly coloured; though it is observed to vary in colour, we do not recollect having seen one so richly marked. *Avocetta Recurvirostra*, the *Avocet*; this beautiful species is not very common in this country, being only met with on the sea shore or in the fenny districts. *Scolopax Arquata*, the *Common Curlew*, a very correct figure. *Motacilla Regulus*, the *Golden-crested Wren*, a beautiful figure, it is observed that this is the smallest species of European bird. *Parus Cærus*, the *Blue Titmouse*, a masterly drawing, but we doubt whether the colours in this instance are not too dull. *Alcedo Tspida*, the *Kingfisher*, a good figure and very beautifully coloured, the description of this bird is particularly interesting. Number 2. contains a fine figure with a very pleasing history of the *Tetrao Perdix*, the common *Partridge*. *Anas Tadorna*, the *Sheldrake*, a very correct and picturesque figure, *Hematopus Ostralegus*, the *Pied Oyster-catcher*, *Corvus Cornix*, the *Hooded Crow*: in a quotation from Pennant we are informed this is the only species of crow found in the Scottish Isles. *Upupa Epops*, the *Hoopoe*, a very rare migrative species. This drawing and engraving were executed for (Mr. Graves's deceased relative) William Curtis, author of the *Flora Londinensis*. *Ardea Major*, the *Common Heron*, this is one of the most elegant figures we remember to have seen, the description is good, and the history contains much interesting and amusing information illustrative of the habits and manners of this beautiful species.

METEOROLO.

METEOROLOGICAL TABLE.

From Jan. 28, to Feb. 25.

D	Therm.				Barom.	Hygrom.		Weather.
						dry	damp	
28	35	34	31	29 ⁶	—	23	8	9 C... F... — W...
29	28	31	34	—	—	15	6	4 F... —... W.. NW..
30	27	31	34	—	—	10	9	3 F... C... snow. SE.. S.
31	35	42	—	—	—	40	52	65 C... R.. C... SE.. S...
1	40	43	42	—	—	55	43	49 P.. R... C... R.. SW.. S...
2	42	45	—	—	—	51	—	50 C... F.. R.. SE...
3	46	44	40	—	—	48	43	38 F... C... F... SW.. W...
4	38	—	42	30	—	38	—	40 F... — SE.. SW..
5	39	40	42	30	29 ⁸	40	39	— F... C... C... SE.. SW..
6	45	48	—	—	—	42	40	34 C... F... C... S.. SW..
7	46	49	44	—	—	27	5	16 F... R.. F... —... W.
8	45	47	48	—	—	25	42	49 C... R... — W...
9	45	48	47	—	—	46	37	— C... F... — E.. W..
10	47	51	—	—	—	45	49	51 C... R... C... SW..
11	50	51	49	—	—	54	46	48 C... R... C... W...
12	48	—	44	—	—	45	46	30 C... R... F... S...
13	39	—	38	—	—	35	40	15 F... s.. h... F... W.. NW...
14	38	42	40	—	—	25	11	9 F... —... C... W...
15	39	41	39	—	—	2	—	5 —... R... SE.. E..
16	39	—	35	—	—	31	11	9 C... F... —... NW... N...
17	33	38	—	—	—	8	5	9 F... Fog... C... — N.. E..
18	38	43	40	30	—	3	—	10 —... F... C... F... S...
19	36	—	37	29 ³	—	—	5	5 —... F... —... SE...
20	37	41	—	—	—	4	5	15 Fog... C... R... E...
21	40	45	—	—	—	34	22	35 C... R... —... E.. SE...
22	44	48	43	—	—	40	18	24 F... —... —... W.. S...
23	43	46	44	—	—	25	15	30 F... R.. F... R. in night S...
24	45	49	45	—	—	36	25	32 C... R... —... C... S.. SE...
25	41	47	44	—	—	33	4	20 C... F... —... NW... W...

30, light fall of snow in the evening; in the night and morning of the 1st, falls in great quantity, lying a foot thick on the level, in the fields; wastes rapidly with rain in the day.

1st, Snow entirely gone.

2d, Very soft and temperate, with light rain.

3d, Stormy wind from the west.

4th, Frosty, fair, and in the evening temperate.

13th, Until this day the weather has been remarkably temperate for the season. Heavy storm of hail mingled with snow from the N.W. Evening clear and stars brilliant, as they were on the evening of the 12th.

This month may be considered, as having been remarkably temperate, the therm. having once only been as low as 33 for a few hours, and has been as high as 51, and generally between 40 and 50. Snow only in a small quantity, once succeeded by a storm of hail. The month of February is esteemed the coldest of the year. The present has produced but little rain. On 13 days there has been rain, but in small quantity. On 20 days of 25 the wind has been from S. S.W. or S.E.

NOTICES TO CORRESPONDENTS.

Dr. Harrison of Thornbury, has deemed it necessary, in consequence of the incredulity of '*Senex*,' to send us the following statement, sworn before the Rev. R. Slade, Vicar of Thornbury, and Justice of the Peace for Gloucestershire.

"To remove every suspicion of imposition of relating a falsehood with any intention to impose on any man or any set of men whatsoever, I declare upon oath on the Evangelists of Almighty God that the case related to me by my son T. E. Harrison, late surgeon of his Majesty's ship Halifax, in your useful Medical Journal for January, 1811, (P. 31.) on the fatal effects of Cherries, I believe to be true, and can safely declare that I know it to be so."

We have copied this affidavit, because Dr. Harrison seems hurt that his former account should have been disputed; but we cannot sanction appeals to magistrates on such occasions; scarcely a nostrum is advertised without a case sworn before a justice or a clergyman; and this distinction between regulars and quacks is in our opinion a wholesome one.

Dr. Harrison has also related some fatal instances of copious bleeding in fever; and one of boiling water being poured on the breast, and afterwards "live wood embers out of the fire" being laid upon it, to raise a blister. As they are not stated with sufficient minuteness, we suppose the Doctor did not intend them for insertion.

We have been favoured with communications from I. F. R. from *Senex*, from Messrs. Eagland and Cullen; and from Dr. Ireland.

THE
Medical and Physical Journal.

VOL. XXV.]

APRIL, 1811.

[NO. 146.]

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For the Medical and Physical Journal.

*On the Sarcocoele of Egypt, from MONS. LARREY'S Relation Chirurgicale de l'Armée de l'Orient.**

THE word Sarcocoele is derived from the Greek (*σαρκὴ κυλῆ*), Fabricius ab Aquapendente, Fabricius Hildanus, Lanfranc, Fallopius, André de Lacroix, and others, have described this disease under the name of *caro adnata ad testem*. Since these authors, whose observations seem to relate to the sarcocoele of warm climates, modern surgeons have confounded it with diseases of the testis, such as swelling, inflammation, scirrhus, hydrocele and hydrosarcocoele. The etymology of the word sarcocoele, and the signification which antient authors seem to attach to it, proves that this denomination

* We are indebted to a valuable correspondent for this translation, from the only copy of M. Larrey's work yet in England, of an interesting history of a most extraordinary disease. Under the term *sarcocoele* a disease is here described differing essentially from the affection, which in this country has been designated by that appellation. The sarcocoele of Europe is a disease of the body of the testicle, liable to become seriously active from external accident, from irritating applications, and from incisions made into it when mistaken for hydrocele. But we are assured in this memoir, that the sarcocoele of Egypt and other hot climates, is a carneous mass enormous in size, possessing little sensibility, having no other connection with the testicle than being in its neighbourhood; bearing the potential and even the actual cautery, and suffering setons to be passed through it, with impunity: and occurring also in the female. The sarcocoele of Europe is an organic disease of the testes; (Vid. Jour. for March, p. 276) the sarcocoele of Egypt is a disease of the scrotum and capsulæ of the testes in the male, and of the common teguments and cellular substance of the labia pudendi of the female, connected with elephantiasis, and being, possibly, one form of that disease. ED.

(No. 146.)

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belongs

belongs exclusively to that disease which distends beyond measure the teguments external to the testicle, particularly the scrotum and dartos; and gives to these parts an extraordinary volume or size. The great number of individuals I have seen attacked with this complaint in Egypt confirms me in this opinion, and induces me to trace the causes, symptoms, progress, and effects, and to point out the means of relief, which are in the power of art.

My researches into the nature of sarcocoele induce me to believe that it is confined to warm climates, at least, that it is very rarely met with in cold regions, for the great number of examples which we meet with in Europe are the produce of Asia or Africa. The scrotal tumour of the minister, Charles Delacroix, is perhaps a single instance of sarcocoele well marked which has taken place in our climates, and the volume of this tumour was small, in comparison of the cases of sarcocoele related in the German Ephemeris for 1692, in Dionis's Chirurgical works, the *Bibliothèque de Médecine*, tome ix, and of those which I have seen with astonishment in Egypt, some of which weighed at least fifty pounds. I shall relate some of those cases which are most worthy of remark. By sarcocoele, properly so called, I mean that tumour which is formed in the scrotum, and is a fleshy mass, broad at its inferior extremity, and attached to the pubis by a peduncle or neck more or less extensive.

Externally it is rugous and irregular, separated by furrows or cavities, corresponding with the mucous cryptæ, or the roots of the hairs; yellow scaly incrustations are usually found on its surface, more particularly if the sarcocoele be of long duration. When these crusts fall off, there are underneath several small ulcers, which discharge an ichorous fluid. The tumour is indolent and harder at some parts than at others; it may be felt and pressed upon in any direction without exciting the smallest pain.

The patient is no otherwise incommoded by it than by its weight, and the impediment it proves to walking, which compels him to have it suspended. The urine flows over the tumour without excoriating it.

In the great number of sarcocoeles which I have seen, I have remarked that the testicles and spermatic chord were in a sound and natural state, and situated on the sides of the tumour; but the vessels of the testis were usually augmented in size (varicose). If the testicle should participate in the disease, it will be accompanied by the symptoms proper to such affection. It does not, however, seem to me, that the testis is capable of so great an augmentation of size with whatever disease

disease it may be affected ; for the patient would sink if the morbid alteration were in the testicle, before the sarcocoele has arrived even to its second stage.

The alteration of the testicle, in such cases, is the original disease, and to be regarded as distinct from sarcocoele, and treated according to its particular character. It is not my design to describe the affections proper to the testis, I am only to relate what I have observed of the sarcocoele of Egypt. Labourers, but particularly those whose occupation requires their sitting, as weavers, embroiderers, taylorers, are most subject to it ; many circumstances seem to contribute to produce the disease. Among the internal causes may be enumerated, depraved humours, inveterate syphilis, which has for one of its symptoms in this country, pustules and pruritus of the scrotum, which is, however, much disregarded by the Egyptians. This singular virus, produced also perhaps by vicious humours, is, probably, the cause of another disease not less distressing, elephantiasis. I have remarked that all those who are affected with sarcocoele have symptoms, more or less apparent, of elephantiasis. The subject of a case at the end of this memoir is a striking example. All these causes produce their effects on the cellular membrane and skin of the scrotum, as being most disposed to the attacks of psoric and similar complaints ; its laxity, its innumerable mucous cryptæ, and the little sensibility it is endued with, predispose it to tumefaction ; the vessels first are surcharged, become weakened in their tone, the scrotum enlarges, and at the same time acquires a density like that of the placenta. The testicle preserves its form and health, but soon ceases to be distinguished, except at the posterior part of the tumour, which continues to increase in every direction, but particularly downwards. The cellular membrane thickens as well as the envelopes of the testicle ; and the skin also augments in density and size. The integument which covers the pubis, the inguina, the penis, and the nates, contributes gradually to form the enormous tumour which is produced ; thus the skin covered with hair, which protects the pubis, descends considerably below that region. The extremity of the prepuce presents itself in the form of a sort of navel on the anterior surface of the tumour. The urine flows down from the aperture without being projected. The external surface of this fleshy mass becomes rugous and scaly ; it retains but little warmth, and the superficial veins are considerably enlarged. Sarcocoele may increase to almost any size ; a case related in the German Ephemeris weighed more than two hundred weight. The case of a Fellah (agricultor) of Upper

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Egypt,

Egypt, which I shall hereafter relate, was considered to weigh one hundred pounds. I have seen in different parts of Egypt ten or twelve different cases. If these tumours are dissected they seem composed of a dense (couenneuse) substance, with little vascularity and harder in some parts than in others; these have but little sensibility, and when cut do not give much pain. This I was able to remark on extirpating a commencing sarcocoele in a cook of the Capuchin convent, at Cairo. At the School of Medicine at Paris, there is a model of a sarcocoele, which was not extirpated, but the dissection after death confirms this description. The testicles were sound, and the tumour was formed by their membranes, then preternaturally distended.

An old man, at Cairo, consulted me for an enormous sarcocoele which he had had for twenty years, the size of which obliged him to keep his bed. Anxiety to be relieved had impelled him to consult the physicians of his country, who had exhausted their efforts in vain. Cautery, caustics, incisions, and discutients, had been employed. The last person he consulted pierced the tumour through its centre with a large needle and ligature; he suffered but little pain, which proved that the testicles did not participate in this disease. This seton, which was moved daily, produced an abundant flow of serous foetid matter; (he was also affected with elephantiasis.) The continued discharge of the seton produced but little diminution of the tumour; and as no more was to be expected from it than other means which had been employed, I proposed the extirpation; and when I was about to perform it an order to go to Alexandria, which the English had threatened to attack, compelled me to leave this unfortunate old man to his fate. To the causes I have adduced may be added, bad diet, intemperance, too frequent venery, the immoderate use of warm baths, to which all classes of Egyptians are addicted; living in damp and marshy places, the effects of climate, mode of dress, or injuries of the scrotum, may also contribute to the formation of the disease.

Sarcocoele has been hitherto considered to belong exclusively to man; the term is limited to the disease in the genital organs. But we may consider the fleshy tumours which take place in other parts, particularly in the face, where the skin is liable, as well as the scrotum, to be affected by venereal and other diseases, as so many sarcomatous tumours of the same nature and depending on the same causes. The examples of such tumours are sufficiently numerous. There are also local causes which determine their formation in one part rather than others, such as falls, mechanical injuries of the skin, or the application of chemical corrosives.

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No author, that I know of, has described a similar disease in the female genitals, although the skin which envelopes these parts, differs but little from the skin of the genital organs of man. The periodical discharge and other resources given by nature to the female, operate, without doubt, against the formation of these excrescences. But a singular case of a woman, named Hammet Fatomi, of Cairo, furnishes me with an example of well marked sarcocoele of the labia; I shall relate this case. Every author who has written on sarcocoele has described it as incurable, from the ill success they have had by internal or topical remedies. All those who have proposed extirpation have been fearful, or at least have not practised it. M. Imbert Delonnes has the merit of being the first to perform this operation, in boldly extirpating the sarcocoele of Delacroix*; I did not know of the success of his operation when I performed a similar one, (the case I have cited) and proposed to extirpate several other enormous sarcocoeles, when the army was removed.

When the complaint is recent it may be treated with the remedies hereafter described; but in an advanced stage there is no other resource but extirpation, preceded, however, by remedies proper to remove the cause of the disease. Among the internal remedies antimonials combined with mercurial medicines, and convenient doses of sudorifics, continued for some time, or alternated with small doses of the mineral acids, diluted in some mucilaginous fluid, produce the best effects, but particularly the sulphuric acid, lowered and applied in form of lotion to the parts, or a weak solution of muriate of mercury, or oxide of copper, or muriate of ammonia, the effects of which are increased by gentle and uniform pressure on the disease. The success of these means will be evident in the diminution of the bulk of the tumour, the retraction of the skin, and the amendment of the patient's countenance. If this be the case, the remedies should be continued until the disappearance of the disease. Incisions or caustics seem to me to be useless. I rest my opinion on the little success which the Spanish and English surgeons had in one of the cases related. It is even possible that these means, if followed by the astringent remedies I have mentioned, may produce cancerous ulceration. But after the use of these remedies differently combined, and for a sufficient time, if the sarcocoele continues in the same state, I do not hesitate to pronounce the necessity of amputation, and the possibility of performing it without danger. Its necessity is marked by the

* See his Memoir.

failure of all other means, and the certainty that the disease will continue to increase, and though the inconveniences are not intense, they lead with certainty to the grave.

It now only remains for me to describe how the operation is to be performed. The vessels which supply the tumour arise from the external pudic artery, and some branches of the internal pudic artery. The spermatic arteries are sent wholly to the testes, and are therefore out of the way; and the hæmorrhage which the other vessels produce is not of much importance, and the arteries are easily secured by a ligature when they are divided: The operation is long and tedious, but not highly painful. The removal of the tumour being complete, if the disease even has been complicated with elephantiasis, which I have usually seen, there is no fear that the sarcocoele will be reproduced; but the remedies for elephantiasis should be continued.

There are some general precepts for this operation: the testes should be carefully avoided, and also the corpora cavernosa and spermatic cords. Two oblique incisions beginning from the prepuce, one passing down below the testis on each side of the tumour. The parts between the testicles and corpora cavernosa, must be deeply cut with a double edged knife, carefully avoiding the testes, and the portion below the line formed by these incisions should be removed. If there still remain some sarcomatous substance round the penis or testes, it should be dissected away. The corpora cavernosa and testes are to be covered by the skin which is left, and the edges may usually be approximated and confined by ligature, or by plaister and bandage. The parts discharge, retire and cicatrize without difficulty. If hæmorrhage occurs, the vessels should be secured immediately with ligature, or (if their orifices cannot be discovered) by actual cautery. The success of the operation will be improved by continuing the use of internal remedies.

CASE I.

Jacques Moline, a Copt, and cook to the convent of Capuchins, at Cairo, consulted me for a considerable tumour in the scrotum, which he had had for many years; it was of a pyramidal form, and weighed about six pounds. The right testicle corresponded with the superior part of the tumour and was sound; the penis had almost disappeared; the left testis was confounded with the fleshy mass which formed the sarcocoele, and could not be felt: I still doubted if it formed part of the tumour, for he had never felt pain. This swelling was formed of a dense (couenneuse), and in
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some parts almost cartilaginous substance. In the middle of the irregular mass the testicle was discovered diminished in size; the wound was properly dressed. The treatment was not disturbed by any untoward accident, and on my departure for Alexandria, I left the patient advancing to his recovery.

CASE II.

Mahammet Ibrahim, about sixty years of age, was blind and affected with elephantiasis, which he had had for many years. His legs were half as large again as his thighs, and his feet were monstrous. The skin towards the superior part of the leg was smooth and marbled, and there were many varicose veins running on it. The other part was round, with thick yellow rugous incrustations, disposed like scales, separated from each other, particularly at the articulations, by deep ulcerated furrows, which discharged an ichorous foetid fluid. The crusts were more considerable at the ancles and the heel than other parts. Deep cavities were observable between the toes, and on the sole of the foot. When pressure was made on the parts of the limb which were most swelled, there was no pain produced, nor was any impression left by the finger; the skin and cellular membrane offered all the resistance of cartilage.

This man had lost his sight by the endemic ophthalmia; he was of dark complexion, of weak constitution, and languished out a miserable life. The tumour weighed about seventy-five pounds, it was of an oval form, and interspersed at its inferior part with furrows and incrustations, hard and resisting in some parts, and soft, but without fluctuation, in others, of a blackish brown colour. At the middle and fore part an oblong aperture, surrounded with a thick and callous border formed by the pressure, was observed. This aperture led to the urethra, which passed upwards and backwards towards the pubis. The corpora cavernosa were felt anteriorly at the neck of the tumour, and the testes on the sides, or rather towards the back part; these last seemed sound, and the spermatic chords were elongated and enlarged, and the arteries, whose pulsation was readily perceived, seemed to have enlarged their calibre; the skin of the abdomen was stretched to accommodate itself to the tumour, and the hair of the pubis was considerably below that region, so much, indeed, that the navel was on the pubis.

This enormous mass, which was supported by a suspensory, produced no other inconvenience, than to impede by its weight the motions of progression.

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CASE III.

An husbandman of Upper Egypt had a sarcocoele for twelve or fifteen years, which was daily augmenting. At the time I saw him at Cairo, his tumour was enormous, and weighed near one hundred pounds; it descended nearly to his feet, separating the legs; it was of an oval form and of a brownish colour, unequal on its surface, and interspersed with incrustations; like the sarcocoele of Ibrahim, the prepuce was in the middle of the anterior part, and the testicles on its sides, or towards the superior portion. After having been treated by the physicians of his country, he consulted an English physician who was travelling in Egypt; in hopes of a perfect cure, he consented to the application of an actual cautery; but the repeated use of this remedy gave him no relief, and the tumour continued in the same state. Some years after he consulted a Spanish physician, who also was journeying in Egypt, who plunged a knife deeply into the tumour, persuaded that it was hydrosarcocoele, but there issued only a little blood, and the disease, so far from yielding to this operation, became worse and larger. These two operations, the patient said, were performed without his suffering much pain; and no accident or inconvenience was produced. The cicatrices were yet tender when I first saw him at Cairo, and he was disposed to submit to its extirpation, which I advised, but the same impediments, as in the former case, prevented my performing it.

CASE IV.

Hamet Fatomi, thirty years of age, wife of a labourer of Cairo, came into the civic hospital on account of two tumours, which she had had for many years. These tumours seemed to have their origin in the external labia, for there was no vestige of these parts to be seen, nor of the nymphæ; they were nearly of the same size, were placed by the side of each other at the entrance of the vagina, and each of them resembled the head of an infant, rugous and unequal on the greatest part of their circumference, smooth on the inner part and of a violet colour; their prominent sides, or rather their base, was covered with pustulous incrustations, like the sarcocoele of Ibrahim, and discharged a similar foetid ichorous fluid, they were attached by small roots to the ischium and pubis, were hard, insensible, and like scirrhus, measured about thirteen inches each in circumference, four inches in diameter, and seven inches long.

The woman, who was of a sickly constitution, had an incipient

ipient elephantiasis. Her lips were thick and of a lead colour, her gums pale and ulcerated, sorrowful appearance of the eyes and countenance, and disposed to melancholy; the digestive functions, however, went on well. I attributed this affection to the incipient elephantiasis, and it is remarkable that she had never menstruated regularly.

I proposed to extirpate the tumour, and began to give her remedies which I had already employed, with benefit, in elephantiasis. In six weeks her limbs and lips were less swelled, and nearly in their natural state; she had become stronger, the tumours were somewhat softer, the discharge which flowed from the ulcerated scabs had become less foetid, in short, I considered her in a fit state for the operation.

The necessity of extirpation in this case, and in the case of Ibrahim, was acknowledged in a consultation, and the operation was fixed for the next day, when the order arrived for me to repair with the army to Alexandria, and obliged me to abandon both of these cases.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

JUDGING it to be the duty of medical men to acquaint each other with their most successful manner of treating diseases, particularly those which are frequently productive of great fatality; and as I am persuaded it not only tends to the improvement of medicine as a science, but will ultimately prove to be for the good of the community at large, I submit the following observations for publication in your highly esteemed Journal.

Observing the mortality which has lately occurred at Debenham, in Suffolk, occasioned by the Scarlatina Anginosa Maligna, I was led to recall to mind the plan from which I had experienced the most favourable results.

The treatment recommended and adopted in this often alarming malady is very opposite and curious; some practitioners enforcing a strict antiphlogistic plan, while others prescribe a tonic, invigorating, and even stimulating mode; though each of these may be useful, yet each may be carried to excess; hence both require limitations.

The practice from which I have experienced the greatest success, has been that of adopting the antiphlogistic plan at the commencement. Venesection as strongly, and no doubt deservedly, recommended by Mr. Hamilton, in my opinion,

(No. 146.)

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can only be had recourse to at the onset of the fever, when it may be considered only of an inflammatory kind, and in plethoric habits, which then may probably put a complete stop to its progress, or at least render it milder during its continuance. I speak cautiously of venesection, not having practised it sufficiently to give a decided opinion: but I can decide more positively concerning the use of emetics when given at the beginning of the attack. The remedies on which I chiefly rely, and may say, generally have administered with a very good effect, are frequent purges of a mercurial kind, and the saline mixture in the state of effervescence; I generally find it necessary to use some astringent gargle, and have usually prescribed the following—R. Cort. Cinchon, contus. ʒss. Fol. rosæ rubr. ʒss. Coque in aq. font. lbss. per min. xv. cola et. adde. Acid. sulph. dil. gtt. lx. Sacch. alb. ʒss. ft. garg. sæpe utend.

When nothing but debility remains I begin the tonic plan, and first give bark with the saline mixture, still in the state of effervescence.

I remain, Gentlemen,
Your obliged Servant,

T. F. R.

London, Feb. 19, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS it is hardly possible to receive too much evidence in support of any eligible practice that is not generally adopted, I venture to send the following remarks for insertion in your valuable Journal.

Since the beginning of the last spring I have spent some time with two extensive and worthy medical practitioners in Suffolk and Norfolk, and I have had an opportunity of witnessing their method of treating Scarlatina Anginosa, a disease which for several months nearly superseded every other. A plan calculated to counteract every inflammatory symptom was invariably recommended and persevered in; repeatedly purging with calomel, &c. spunging the body with a cold fluid, and in the warm weather freely exposing it to the air, low regimen, scarification of the fauces, and, in short, all the antiphlogistic remedies enumerated by Mr. Hamilton

Hamilton (page 102) except phlebotomy*. This was performed only in a few cases (adults) none of which terminated fatally. Effervescing draughts with carbonate of soda and tartaric acid† were constantly given. This treatment was succeeded by the most happy result; and whenever any occasion occurred of comparing its effects, in similar circumstances, with those of an opposite treatment, where wine and nourishing diet were allowed from the commencement, its superiority was frequently evinced by the absence of danger and a more speedy recovery.

That so varying a disease as Scarlatina, which sometimes assumes the most formidable appearances, should be wholly disarmed by the most simple means, is not to be expected. Many have died, under my observation, of the remote consequences of the disease, two or three weeks, or even months from its first attacking them, of abscess, dropsy, mortification, consumption, &c. I have, however, neither seen nor been informed of a single instance, where the antiphlogistic system had been embraced early and adhered to strictly, that ended mortally in a few days; although I have known many patients, in the same neighbourhood, and almost on the same spot, who, after every stimulating tonic and antiseptic means

* In 1788, the scarlet fever was unusually prevalent in some part of Norfolk. An experienced medical man, who was in the midst of it, sent me the subsequent account which I relate in his own words. "Insatiable thirst at the beginning of the disease, pulse very quick, soreness of the throat so as to prevent deglutition, delirium after a few days, and then scarlet eruption. They who had the eruption earlier became easier, and mended sooner, and their pulse were lessened to eighty, yet the tongue and fauces were still lined with a matter of a yellow appearance. The *vis vitæ* shewed great signs of assisting itself by the eruption, by diarrhoea and profuse sweatings, and the younger subjects were always relieved by these. The aged mostly sunk under the disease, their pulse becoming thready and not above thirty. In all their speech was remarkably affected; they could scarcely articulate a word. Bleeding at the nose gave great relief, and those who applied early were blooded and emetic tartar given, until the stomach was well emptied. As soon as the inflammatory symptoms decreased we began with antiseptics, ordering port wine, bark, and a liquid diet consisting of strong broths." He adds, "*All those who underwent blood-letting in the beginning of the disease recovered.*"

† The tartaric acid is perhaps as good as the citric in its effects, and to be preferred on account of being less expensive. Every person who is at all acquainted with chemistry, knows why that acid should be mixed with carbonate of soda rather than of potass: a small quantity only of the compound formed by the latter mixture being soluble in water, chief of it subsides to the bottom.

had been tried, died in the manner related by Mr. Goodwin, on the 5th or 6th day, or sooner. The only case that I have seen of this kind, was a healthy strong man, above thirty years of age, who called in no medical assistance until the third day, when he was in a hopeless and most dreadful state, low delirium, pulse scarcely perceptible, a glossy eye, tongue brown and hard, inability of articulation, skin of a dry burning heat, and all over of a dark copper colour, the whole body furnishing a most noxious fœtor. His throat could not be examined: he died in six or eight hours. This poor man's symptoms for the first thirty hours had, as far as I can learn, nothing in them of peculiar malignancy. After walking a few miles and drinking a little, he was taken in the evening with a cold chill and head-ache; was afterwards very hot; throat stiff, not very sore; and he thought himself but slightly unwell all the next day. I know not why we may not be allowed an opinion, that the active and timely exhibition of proper remedies would have saved him from so quick and shocking an end.

It would greatly assist us in estimating the value of Mr. Hamilton's paper on Scarlatina, to be informed whether he has met with any fatal instances from the immediate effects of the disease, or whether the cases he has given us should be regarded as comprising a summary of his whole experience on that head, and as warranting a conclusion, that his practice has been attended with universal success.

I believe there are not a great many people, at the present time, who do not think the antiphlogistic plan of treatment as successful, in most cases of Scarlatina Anginosa, as what is called the stimulating and antiseptic; and I am convinced there are none who, after a fair trial, will hesitate to pronounce it, in the first stage of every case, far preferable. If such a trial should, in the least degree, be furthered by the recommendation here given, it will be highly gratifying to the wishes of,

Gentlemen,

Your most humble and obedient Servant,

SENEX.

February 12, 1811.

To the Editors of the Medical and Physical Journal:

GENTLEMEN,

AS you have been pleased to notice, in your last number, my communication to Mr. Brooks of a very rare occurrence,

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viz. the serum of the blood of the colour and consistence of milk, I thought a few particulars of the case would be also acceptable to you.

The subject of this singular appearance in the blood, is ——— a labourer in the Ordnance department at this place, aged thirty-five, of a thin spare habit of body, and sallow complexion; addicted in the early part of his life to spirituous liquors; latterly to ale or porter.

He first complained of a pain in his left side on the 14th of June, 1810, which, appearing more of a spasmodic than an inflammatory nature, was treated with aperients, fomentations, and volatile liniment; which it yielded to in a few days. Since that, he informs me, he had been subject to loose stools, and transient pains of the same side; but never had recourse to any medicine for these complaints. From his description, the stools must have been of the dysenteric kind. He was not bled for this first attack.

Nov. 24, 1810. In the morning, he came to my house complaining of a return of the pain of his left side. Recollecting the former treatment, I ordered him immediately an aperient draught of the pulv. jalap, comp. the fofus com. and liniment ammon. which he used. In the evening I was sent for to his lodgings. The draught had operated, the fomentation and liniment had been applied. He was rather worse. The pain was very severe, chiefly seated in the middle of the left hypochondrium, extending from that, forward, as far as the cartilago ensiformis, and backward, to the vertebræ. There was little or no tension of the part, but the pain was increased by pressure made along the edges of the costæ spuria. He was obliged to bend himself forward to ease the pain, by relaxing the abdominal muscles, and could only lie on his right side, suffering greatly by any attempt made to alter this position. From his first attack in June, he has never been able to lie easy on his left side. He had neither nausea, nor vomiting, nor pain of stomach; no dyspnæa, cough, or any pulmonic affection; and the right hypochondrium was free from any uneasiness. Symptomatic fever had taken place. I could not discover any enlargement of the spleen, but all the symptoms were evidently referred to the region of that viscus. The pulse was rather small, or contracted, quick and frequent; tongue whitish, but moist; skin dry, but not very hot. He was immediately bled to the extent of fourteen or sixteen ounces, and the pulse rose accordingly. The stream of blood was full and *florid*, but on reaching the bason I was surprised to observe a whitish appearance forming, like a cloud, on the surface of the blood, which made me suppose that there had been some milk in

in the bason ; but I was soon satisfied to the contrary. The bleeding gave relief. He was ordered pulv. antim. with nitre and digitalis in powder, the saline mixture and an anodyne at bed time, the fomentation and liniment to be repeated. Before I left his chamber, I was surprised to see the serum like so much milk, with the crassamentum floating in it.

Nov. 25.—This morning I found the blood as I had left it, the crassamentum floating in serum of the colour and consistence of milk. The crassamentum, on its upper surface, was cupped and sizzly, on its under, of a black red colour; and loose in its texture. He took some pills of rhubarb and calomel, and continued the other medicines ; and, as the pain was still very severe, he was bled again to the same extent, and with exactly the same appearance. A blister was now ordered. In the evening I was obliged to bleed him the third time, and to the same effect. Each of these successive bleedings exhibited the same phenomena.

Nov. 26.—This day he was so much better as not to require bleeding, and the blister had taken full effect. Continued.

27.—Having some return of pain he was bled the fourth time, to about ten or twelve ounces. The blood had now assumed a very different aspect, the serum was of the natural colour and consistence, the crassamentum was, however, still cupped and sizzly, but more florid. Continued.

28.—The pain not being entirely gone he was bled the fifth time, to about eight ounces. The blood was now natural, and the crassamentum neither cupped nor sizzly. Contin. med. pro re nata.

After this he continued to mend gradually, and as soon as all the inflammatory symptoms had subsided I put him upon a general course of calomel. He has now returned to duty and seems to be better than before his indisposition. I sent a vial of the serum to Mr. Brooks, of Blenheim Street ; and have some still in my possession, which is thicker than it was at first, and emits but very little fœtor.

I here beg leave to correct a mistake in my communication to Mr. Brooks. I there stated " that the splenitis was the consequence of frequent attacks of intermittent fever." But on more particular enquiry I do not find that to be the case. His complaints have been rather of the dysenteric kind, which are, in this place, sometimes attended with a symptomatic fever of the intermittent type. The situation of Sheerness being low and marshy causes intermittents to be endemic here ;

here ; and there are many instances of splenitis, both acute and chronic, the sequelæ of these intermittents.

I am, Gentlemen,

Your most obedient Servant,

P. CULLEN, Surgeon.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

BY consulting Mr. Wardross's treatise on fungus hæmatodes, you will find the case of a boy whose eye was affected with this complaint, communicated to him by Mr. George Bell, surgeon in Edinburgh. The frequency of failure in operating on such cases, induces me to lay before your numerous readers the result of that and two others, as encouraging some degree of hope that a complaint, which has hitherto been considered desperate, may be relieved, if not cured, by the surgeon's art.

The boy, Richard Green, to whom Mr. Bell alludes, lives in Carlisle. In the end of the year 1808, he applied to me in consequence of this complaint of his eye. At that time the tumour appeared to be of the size of a large sized plum ; the tarsi were also affected with swelling and discharge, and every trace of the transparency of the eye was lost. It had become of an irregular tuberculated shape, and as the excruciating pain deprived the boy of rest, impaired his appetite, and was attended with great emaciation and loss of strength ; the boy, though nearly seven years of age, not appearing more than four or five, I advised the extirpation of the eye as the only probable means of recovery. To this his parents consented, and the following was the method I pursued. Conceiving that the tarsi might have partaken of the disease, I made a semicircular incision through them, nearly in a line with the edges of the orbit, and then with a dissecting hook, (not quite so much bent as that in common use) pushed to the bottom of the orbit, so as to act like a lever, I dissected out every part contained in it, so that nothing was left but the periosteum. I next filled the vacuity with lint dropped in tinct. myrrh, and endeavoured to draw the divided edges of the eye-lids together by means of ligatures, leaving a small space for the discharge of matter and the extraction of the lint. The parts were kept in this situation for two days by proper compresses and the aid of an assistant,

assistant, and without any material symptom occurring, the patient completely recovered in about three weeks. The cicatrix is scarce perceptible, and the boy enjoys a good state of health.

I forgot to mention that there did not appear any perceptible change in the state of the optic nerve. I forbear to make any remark on this singular complaint, until I have detailed the other cases.

JOSHUA IRELAND, M.D.

Carlisle, Feb. 15, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following letter, which I lately received from Mr. Park, an eminent surgeon of Liverpool, shews the progress of vaccination in that part of the kingdom.

“DEAR SIR,

“Please to accept my best thanks for your politeness, in sending me your publications on the subject of vaccination; with my warmest wishes for the success of your exertions, in defence of that practice, against the attacks of its enemies; and I shall be truly happy to be assured by you, that there is no foundation for the reports which I hear circulated in this place, that the practice in the metropolis is on the decline. Of the superior advantages of this to the variolous inoculation I conceive no one can entertain a doubt, who will view the subject with an unprejudiced eye; and derive his ideas from that source, which could have no other object in view than the full investigation of truth. In this light only can we consider the inquiry of parliament into the practice; their proceedings clearly prove their conviction of its superiority, although they admit of some failures. If I remember right (for I have not their publication at present in my possession) they admit the possibility of one in 150 being left susceptible of the infection of the small pox; whereas it is allowed that nearly that proportion die under inoculation with variolous matter. But, in drawing a comparison between the advantages arising to the community from one or the other inoculation, there is a more important question which I have not yet seen fairly agitated; viz. if vaccination had never been discovered, is it certain, or even probable,

bable, that variolous inoculation would have been practised to the same extent? Judging from what has passed in Liverpool, I can say decidedly, No :—but that I may not be thought to speak at random, I will state the data on which I ground this declaration. About twenty-eight years ago somewhat more than twenty of us, who were doing the principal business in Liverpool, formed ourselves into a society for the gratuitous inoculation of the poor at their own houses. We divided the town into districts, each taking one ; and canvassed every house from garret to cellar, to offer and recommend inoculation. The annual births were then about 1800 ; and we found somewhat more than 4000 persons who had not had the disease. Of these we inoculated upwards of 400 the first year ; the second not much above 300 ; and each succeeding year below 300, including private as well as gratuitous patients. Upon this we dissolved the society ; giving one final general notice, that we should always be ready in the months of March and October, to inoculate gratis all such as should offer or be recommended as proper objects. From that time till the introduction of vaccination, gratuitous inoculation fell almost into disuse. Scarcely half a dozen applied to me in a year for the purpose ; and I am confident the numbers never equalled one sixth of the births, under the increasing population, if they even equalled the gross number, at the time of the dissolution of our society. But as soon as vaccination became popular, the numbers increased very much indeed. In the beginning of the year 1807, I collected the best account I could, for the information of the College of Surgeons ; although I could not get any statements from several of the practitioners, nor can I pledge myself for the perfect correctness of all that I did obtain ; but it appeared that the gross numbers for the year 1806 were more than 2,300, exclusively of some hundred American seamen. My own number that year was only 402. Since that it has increased as follows ; for 1807, 1010 ; for 1808, 1465 ; for 1809, 1011 ; and for the current year to the time of writing this, Nov. 8th, 1830. The births are now between 3,700, and 3,800. From this it will clearly appear, that if the other practitioners, and the public charities, continue to vaccinate in the proportion which they did in 1806, the gross numbers must now exceed 3000 annually ; or be equal to five-sixths of the births, under the increased population. This will clearly enable any unprejudiced man to form a tolerable estimate, or at least a very probable conjecture, of the great superiority of numbers that must be left exposed to the ravages of the natural small-pox, if vaccination had not been introduced. It may not be

amiss here to state, that of the first 1300 inoculated by our society with variolous matter, seven died; and although I have not been so unfortunate as to have one of those deaths fall to my lot, yet I have suffered much greater alarms for the safety of my patients, and experienced much more distressing sequels from that inoculation, than I ever did from vaccination; although I have vaccinated considerably more than double the number of patients during the four last years, that I ever inoculated with variolous matter during the preceding forty years. Now to return to the admission in the parliamentary reports, that one in one hundred and fifty may have been left susceptible of the natural small-pox, I think my own experience will justify me in expressing a confident hope, that this must have been founded on some erroneous statements presented to them; although it is only to the result of my private vaccinations that I can speak with any degree of certainty. These have never amounted to more than between sixty and seventy in a year, out of the gross numbers which I have stated above; and the total amount of them falls somewhat short of seven hundred. Of these, however, I can confidently say, not a single instance has yet come to my knowledge, of the small-pox occurring after vaccination; although, for two or three of the first years, I inoculated nearly all my patients over again with variolous matter, but without being able to produce disease. Of my gratuitous patients, which amount to upwards of 5000, I cannot speak with the same certainty. They are wholly unknown to me; are vaccinated in my own house; and a considerable proportion of them never present themselves again for inspection. I can, however, say with truth, that only three have yet come to my knowledge, whose mothers say I expressed myself satisfied with their vaccine vesicles, that have since had a disease which might be taken for small-pox; but whether it really was so or not I submit to your judgment, when I give you as faithful a description of them as I can; only saying that they were such a kind of pock as I would not use for inoculation; but have repeatedly rejected when variolous inoculation only was in use. The crops were nearly as copious as could exist, to remain perfectly distinct. They had all the uniformity and purulence of small-pox; but were not so fleshy about the base; being more vesicular, and, though so copious, the greater part of them turned in the face by the end of the sixth day, and in turning did not encrust, but bursted and fell flat on the skin; whereas I had an opportunity, at the same time, of comparing one of them with a crop similar in number, in a young woman, a nurse in a family, who had never been inoculated.

inoculated. Of these very few in the face turned till the eleventh day ; and in turning formed a crust nearly half the size of the pustules in their mature state. I cannot conclude this letter without saying I have been much disappointed with the proceedings of parliament on this occasion. When they had the subject twice before them, I did expect they would have passed some act restraining variolous inoculation, at least to stated periods, and circumstances of certain seclusion from the mass of society ; and not have left medical men, who are straining every nerve for the preservation of the lives of their fellow creatures, completely in the lurch, to contend the point by themselves, unsupported by any act of the legislature. Should parliament, at any future time, think it advisable to pass any act of this nature, I see no reason why it may not extend to a similar seclusion of persons affected with the natural small pox ; or even with typhus, scarlatina, and other destructive epidemics.

I am, Sir, with due regard,

Your obedient Servant,

H. PARK."

Liverpool, Nov. 9, 1810.

Mr. Park is mistaken in supposing parliament to have admitted, that one person in one hundred and fifty may be left susceptible of the small-pox. Parliament did not enter into any calculation of that kind. Mr. Rose expressed an opinion, that in consequence of the distribution of bad matter, about one failure happened in three hundred cases. This opinion, however, appears to have been erroneous ; and another was equally so, that the Jennerian Society was so poor as not to be able to distribute matter equal to the demand.

The Ringwood cases, which Mr. Rose mentioned in proof of his argument, did not warrant such a conclusion ; since it appears, by the report signed by Mr. Rose himself, as well as by the professional men who assisted him in his investigation, that not a single failure occurred there.

It is rather remarkable, that Mr. Park has not happened to see the question, relative to the prodigious extension of inoculation, in consequence of Dr. Jenner's discovery, fairly agitated. That question forms a distinguished feature in the works of all the principal writers in favor of vaccination, and in those of their opponents ; the former rejoicing, and the latter repining at this event. It is also particularly noticed in the Report of the College of Physicians ; where it is observed, that the practice of vaccination had spread with unexampled rapidity.

By a subsequent letter, Mr. Park informs me, that the total amount of his vaccinations for last year was 1720. He also states, that he has now met with one case, which he is convinced was a failure. The small-pox, though rather plentiful, was, as usual, so far mitigated, that it turned about the sixth day. He declares, however, that he has repeatedly seen a recurrency of the same sort of small-pox after variolous inoculation; and that he can produce as many cases of the small-pox occurring a second time, as have occurred, at Liverpool, after vaccination.

Having often experienced a great inconvenience from the want of a constant supply of matter, in consequence of so many of the patients neglecting to attend, Mr. Park has at length resolved to discontinue gratuitous vaccination at his own house; but he has provided a successor, Mr. Dawson, who is also a respectable surgeon, and a member of the College. Mr. Dawson has undertaken to vaccinate at his own house; and as he is surgeon to the Dispensary, and to the Lying-in-Charity, where vaccination is particularly enjoined, his influence will be the greater.

I am, Gentlemen,
Yours, &c.

*New Street, Hanover Square,
March 4, 1811.*

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOU will much oblige me by inserting the following case and observations in your useful miscellany.

Payne, a man about the age of fifty, applied to me, some time since, for relief; he stated, that as long as he could remember, he had always been affected with a pain at the pit of the stomach, which was generally worse at one time than another; but that within the last six years of his life he had suffered more violently from it. That about five years since he was attacked with violent vomiting, unattended (as is usual) by a sensation of sickness; he then applied for medical relief, and was recommended to take an emetic occasionally, which he did several times, but without experiencing the least relief, or abatement of vomiting; other medicines were then resorted to by the practitioners who attended him, but without success. Finding himself no better, and the efforts of regular practice unavailing and ineffective, he applied to a noted water doctor, who, in addition to his medicines,

dieines, strongly recommended the use of stimulants taken into the stomach in the way of food, such as eating a large quantity of mustard, the free use of pepper, &c. this plan of treatment proved, in the end, equally abortive, the vomiting still continued; he frequently brought up the whole of the food that he had recently taken. He says, every act of vomiting is preceded by a great evacuation of wind through the mouth; so much noise has been occasioned by it that it might be heard at a considerable distance, and a very acute pain is always felt after the vomiting. Sometimes a considerable quantity of water is brought up from the stomach, but whether water or food it always appears in a state of violent fermentation. His own description of what is evacuated is, that it is similar to dough in a state of effervescence; his bowels are always in a state of constipation, he frequently has not an evacuation from them oftener than once in six or seven days, and he has frequently been eight days without one. His complaint is strongly marked by dyspeptic symptoms, loss of appetite, dejection of spirits, languor and emaciation. At my first interview with the patient, I was disposed to think his complaint arose from a chronic inflammation of the stomach, but the pain not being aggravated by pressure, nor increased immediately after taking in aliment, I was induced to abandon the idea. It appeared more rational to suppose there must be some obstructing cause preventing the free passage of bile into the intestines, and that in consequence of that obstruction, part of the bile might regurgitate into the stomach, the coats of which being irritable, would endeavour to get rid of the offending cause by vomiting, and that, with the bile, the other contents of the stomach would naturally be thrown off. Under this impression, as emetics had proved inefficacious, I directed gr. iss. of calomel to be taken night and morning, and the use of friction at the pit of the stomach, wishing, by the exhibition of mercury, to induce a different action in the system, and, if possible, to remove the morbid cause of the disease. He continued this plan for four days; on the fifth I saw him, he had had no return of the vomiting, had one alvine evacuation, and his gums were beginning to be slightly sore. I now directed him to take a tonic medicine two or three times a day, with a view to strengthen the tone of his stomach, and desired him to continue the calomel every night at bed time, for a week longer, when I requested to see him again, as he lived at a considerable distance from my residence. At the time that I saw him again, he informed me that in the evening of the day I saw him, he had a little return of the vomiting, but none since, which comprised in the whole since I first

I first saw him, the space of ten or eleven days, in the course of which time he experienced but one act of vomiting, whereas he had previously been accustomed to feel a return of it about every other day; he had had for the last week a motion every second day, which he had not had for several years before; he has little or no evacuation of wind, his appetite and general health are better; the mercury has made his gums unpleasantly sore; I ordered him to continue the calomel every night as before for a week longer, and to take the tonic medicine. At the time I saw him again, he informed me he had had no return of vomiting, he continued regular in his bowels as before, and had improved in his health. His mouth was much sorer than when I saw him last, I desired him to continue in the same plan for a week; when I saw him again his mouth was extremely sore, he spit a great deal, *no return* of sickness, bowels regularly open, and his appetite better, ordered him to discontinue the mercury, and to take the tonic medicine for a week or ten days. His general appearance and health gradually became more evident, and he is now considerably better than he has been for years; the vomiting appears to be entirely overcome. I have thus simply related the history of a case, which I think rather *singular*, and in which mercury seems to have been of *eminent service*; I am not theorist enough to attempt to explain its mode of action on the system, but its utility in this case was conspicuous. I remain, Gentlemen,

Yours, &c.

D. H. DAVIES.

27, Carburton Street,
Fitzroy Square.

For the Medical and Physical Journal.

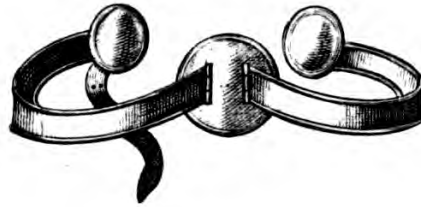
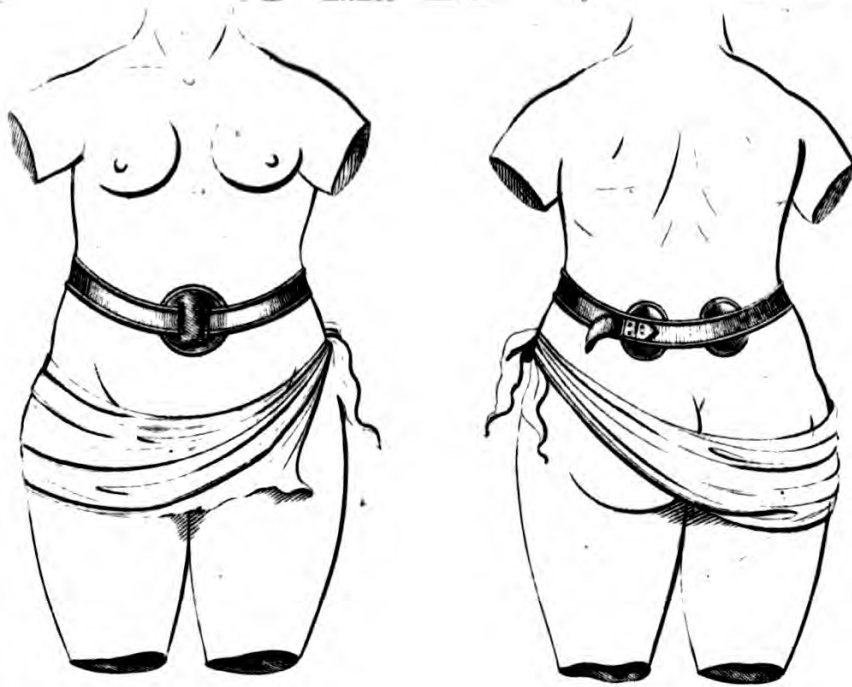
Eagland's newly invented Truss for the Exomphalos.

(With an Engraving.)

THE inventor of this machine has been very fortunate in the combination of its parts; it is simple both in its construction and application, and cannot fail of having the desired effect when properly applied.

It possesses a superiority in *three* essential points; 1st. The certainty of keeping on the part for which it is designed. 2d. Of being perfectly easy to the wearer. 3d. The springs being japanned, are perfectly secure from corrosion by perspiration.

The *principle* of this machine is equally applicable in cases of



A Truss for the Exomphalos.

Invented by

Jas. England, of Leeds.

SURGICAL MECHANICIAN.

Eng.^d for the Med.^l & Phys.^l Journal.

参考文献

of ventral, or even in compound cases of hernia ; as it may be adapted to any part of the abdomen.

Mr. Hey has given a description of its construction in the second edition of his *Practical Observations in Surgery*, p. 577. And in the Preface to the above valuable work, the author has spoken in high terms of Mr. Eagland's machines for supporting the *spine*, and the extremities of the body, in various deformities.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following singular case of twins having lately occurred in this neighbourhood, I am induced to request you will insert it in your highly useful periodical work, that others may have an opportunity to pass their opinion on a case, which I consider of the highest practical importance. A woman between thirty and forty years of age, and rather corpulent, was delivered on Sunday, the 10th of February ; nothing particular occurred during her labour, except that the child was smaller than common. The accoucheur, probably from the rare occurrence of twins, did not examine sufficiently to discover another foetus. On the Friday following, the woman declared to him that she still felt the motion of a child ; in consequence of which he examined *per vaginam*, and could distinctly feel the head of a foetus situated very high in utero. The os uteri was contracted to about the size of half-a-crown. The Sunday following he requested me to see his patient. On applying my hand upon the abdomen I was immediately convinced of the existence of another child ; the motion of which I felt distinctly. The woman having continued as well as could be expected since her former delivery, I gave my opinion, decidedly, to wait patiently, leave the result to nature, and cautiously to observe her operations, which perfectly coincided with the sentiments of the practitioner employed. On Sunday, the 24th of February, a fortnight from the birth of her first child, labour recommenced, and she was soon delivered of a fine boy, much larger than the former. The mother is doing perfectly well, not having felt any unfavourable symptoms since the commencement of her confinement. Her milk did not appear till two days after the birth of the second child.

From the circumstance of the above case terminating so favourably, and having heard of other similar cases, particularly one, in which six weeks had elapsed, and another, a fortnight

a fortnight between the birth of each child ; I am almost inclined to pay some deference to the rejected doctrine of superfœtation ; or at least, to doubt the propriety of the present established practice, to deliver *per artem*, if nature is tardy in her efforts to expel the second child. Most of the public teachers of the present day are not, in my opinion, sufficiently explicit in their directions for the management of cases similar to the one I have related ; namely, *where the placentæ are separate in the uterus, and each follows the body to which it belongs*. Dr. Hamilton certainly gives directions rather more fully : he says, “ the placentæ of twins are often distinct from each other in the uterus, and so loosely connected to it, that one may entirely separate before the second child be born, so that labour pains will sometimes cease for two or three days, and there is the same interval between the birth of the children.” A little further, he says, “ in this interval the patient is apt to suffer from impatience, and anxiety, floodings frequently come on and the labour is more painful and bazardous, in proportion as the time of delivery is protracted.” It is with the utmost deference that I differ from such high authority ; but I would ask you and other professional gentlemen, if we are not justified in drawing the following inference from the cases I have mentioned ; that it would be more prudent, *if no unfavourable symptoms occur*, to leave the expulsion of the second child to nature, rather than to interfere according to the present practice ; the objection that there is danger from hæmorrhage ensuing, in my opinion, principally exists where the placentæ have been at all connected ; and that if they are perfectly distinct, there is little more risk from that cause than in common natural labour ; as I conceive that the uterus would be so much relieved from the expulsion of one child, as to be able to contract sufficiently to guard against such an accident ; but even should hæmorrhage be the consequence, yet, would it not occur soon after delivery of the first child ? and consequently would sufficiently justify the interference of art. I am much inclined to suppose, that instead of the hazard being increased in proportion as the time of delivery is protracted, as Dr. Hamilton asserts, it is considerably diminished ; at least, such an inference I think we are justified in drawing from the case I have related.

I am Gentlemen,

Yours, &c.

Guisbro' Yorkshire,

March 8, 1811.

JOHN JONES,*

Member of the Royal College of Surgeons, London.

* We hope in a future number, probably the next, to give the opinion

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

DURING the present arduous contest for the vacancy in St. Luke's hospital, occasioned by the resignation of Dr. Simmons, I have heard much of the necessity that a physician who undertakes the important charge of the patients in that hospital, should be practically conversant with the treatment of insanity in particular. I admit that in some respects this would be an advantage, but I cannot regard it as an essential one. I ask, is there any one regularly educated physician, accustomed to see and to treat diseases in general, who, if suddenly called for the first time to attend an insane patient, would be so ignorant of the nature of mental derangement, as to be at a loss how to act? I confess that were such a practitioner pointed out to me, I should pronounce him unfit to pursue a profession which demands a knowledge of every variety of disease. The popular cry is in favour of practitioners devoting their attention to one disease in particular, and so well has this been seconded by interested individuals, that the physician is now excluded from treating many com-

nion and observations of a London professor, on this interesting subject. At present we are disposed to adopt, as a general principle, the practice recommended by our ingenious correspondent, liable, however, to exceptions and limitations, arising from the peculiarities of individual cases. If a second child is discovered in the uterus immediately on the delivery of the first, enveloped in its proper membranes, and having a distinct placenta, even if no hæmorrhage to a dangerous degree exist, and there be a total absence of uterine action, it may be a question, if in this open and practicable state of the parts it be proper to rupture the membranes of the second child, and deliver immediately. But if so much time has elapsed before the second child is discovered as shall have given the uterus leisure to contract; and if the os uteri, as in Mr. Jones's case, has diminished to the size of a half-crown, there existing neither dangerous hæmorrhage or other alarming symptom, what reason can be urged for proceeding to immediate delivery *per artem*? The anxiety and solicitude that the mother will feel from the lingering prospect of a second delivery, and the labour becoming more painful and hazardous in proportion as it is protracted, according to Prof. Hamilton, do present some motive, under the most favourable existing circumstances, for immediate delivery of the second child. Will it be difficult to decide between this remote hazard, and the direct danger arising from a manual dilatation of the os uteri; an operation, which if not only, is best justified by the existence of an hæmorrhage that puts the patient's life in danger? The present rational state of the *ars obstetrica*, and the high degree of science manifested by its professors, cannot suffer this question long to remain in doubt. EDITOR.

plaints that formerly were in his immediate province. Thus he has lost all influence over complaints of the eye and the ear; he is not suffered to treat any of the various forms which syphilis assumes; scrofula is no longer under his control; it is now the fashion to consign the diseases of women and children to the diplomatized accoucheur, and whilst the physician very properly refrains from interfering with the chirurgical department, he hears of *chaste* surgeons treating continued fever, pulmonary consumption, and, in short, any other general disorder to which the frame is incident; and their *prescriptions* too ratified with their signatures. Without wishing to excite insidious jealousy between the two branches of the profession; I would call the attention of the readers of your Journal to this rapidly growing *stricture* of the physician's practice in London. Besides the undue and unprofessional encroachment of the surgeon on the function of the physician, he is elbowed out of practice by the apothecary, who in turn is shuffled off by the druggist. Gentlemen, that acute observer, Dr. Beddoes, remarked, that the time was approaching when there would be fewer physicians, meaning that the public would become too enlightened to require so much of their aid; I think that the time has arrived when, for their own interests, there ought to be fewer. So far from this diminution being effected by the superior wisdom of the public, it would seem to be accomplished by its folly; a more expensive, and at the same time a more inferior and dangerous species of medical assistance being substituted for that afforded by the regular physician, who is now in very many instances the last person, except the undertaker, thought of to be introduced into the sick man's chamber. At what period in the annals of medicine has quackery been more triumphant? when have the chariots of illiterate pretenders to the art more abounded, or when have there been a greater number of deserving physicians unemployed? Is this then a time to encourage the belief that a regular physician is not to be entrusted with the treatment of insane persons, as well as with that of any other patient affected with general disease? Unfortunately the malady is usually so little under the influence of medicine, that the keepers have much more to do with the patient than the physician has; and I am at a loss to comprehend how evacuants will operate more effectually when directed by a *mad* doctor, than when prescribed by an ordinary physician; nay, I will venture to assert, that in many instances there is danger of establishing a disease from the dread inspired by a *mad* doctor, which would not have occurred had a common practitioner been consulted. By avoiding restraint and using soothing means, we sometimes avert the threatening malady.

“ The

" ——— the shrewd doctor, in the spleen-struck mind
When pregnant horror sits, and broods o'er wind,
Discarding drugs, and striving how to please,
Lures on insensibly, by slow degrees,
The patient to those manly sports, which bind
The slacken'd sinews, and relieve the mind:
The patient feels a change as wrought by stealth,
And wonders on demand to find it health."

In the hopes that some more able correspondent will pursue this interesting subject,

I am, Gentlemen,
Your's, &c.

CENSOR.

London, March 4, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I MET with the following Recipe for the preparation of James's Powder among some medical Extracts belonging to my late father; it had been in his possession near forty years. As it bears a great resemblance to the able analysis of James's Powder by Mons. Pully, in the *Annales de Chimie*, and inserted in the 8th volume of the Repertory of Arts, you will oblige me by inserting this along with the enclosed Recipe.

R. Reguli antimon.* sal. nitri. ana ponder. æqual. separatim in pulverem trita probe misceantur, deinde gradatim injiciatur mixtura in crucibulum; materiam ab igne remotam aqua bulliente abluta, et pulverem subtilissimum tere.

R. Pulv. ut sup. ʒss. ad ʒj. mercur. D. 6ta. sublim. gr. 1 M. ft. pulv.

Perhaps no preparation in the whole range of pharmacy has given rise to more discussion than the preparation of this active mineral, yet we are still scarcely agreed as to the best mode of preparing it, or even as to its composition, and after all, perhaps, the method of oxydating antimony by the heating it in contact with nitre, though less free from impurities, may be considered as producing an oxyd, in which the extraneous matter is less important with respect to its employment in pharmacy.

Your's,

A. B.

* Vid. regulus antimon. James's Dispensatory and his succeeding Note.

Experiment I.

I took (says M. Pully) nineteen decigrammes of James's Powder, and put them to infuse for some minutes in a small quantity of hot distilled water. I separated the water from them by the filtre, and I obtained by the evaporation of this liquid a salt, which had all the characters of the sulphate of potash. This salt, dissolved and treated with barytes, presented a precipitate of sulphate of barytes.

Experiment II.

As I had perceived, before decomposing the salt by barytes, that the solution contained an excess of free potash, I wished to ascertain whether this potash did not hold in suspension a small quantity of oxyd of antimony. Having decanted the liquor in order to separate it from the sulphate of barytes, I poured into it sulphurated hydrogen, which immediately formed golden sulphur of antimony; consequently the free potash was combined with a portion of antimony at the *minimum* of oxydation. Dr. Pearson speaks neither of this combination nor of the sulphate of potash.

Experiment III.

I took the James's Powder which had been washed with hot distilled water, and heated it with nitric acid of 20 degrees. This acid dissolved the phosphate of lime without attacking the oxyd of antimony at the maximum. I separated this oxyd from the solution, and poured into the liquor ammoniac, which precipitated the phosphate of lime.

Experiment IV.

I decomposed the phosphate of lime by weak sulphuric acid, and afterwards re-composed it by lime-water, in order to determine its proportions.

Experiment V.

I took the oxyd of antimony at the *maximum* of oxydation, and dissolved it in muriatic acid. This solution, treated by sulphurated hydrogen, produced a hydrosulphuret of antimony; containing more sulphur than the Kermes mineral, and less than the sulphur auratum.

According to these experiments, of which I weighed all the products, the nineteen decigrammes of James's Powder which I analyzed were composed of

Decigrammes.

	Decigrammes.
Oxyd of antimony, at the maximum	7
Phosphate of lime	4
Sulphate of potash	4½
Free potash, containing oxyd of antimony at the minimum	3½
	19

To recompose this powder, we must take,

Sulphate of antimony	2 parts
Calcined phosphate of lime	1½
Nitrate of potash	4

These substances are to be pulverised, mixed, and triturated. They are then to be put into a crucible, which is to be closed, and strongly heated. During this operation, the oxygene of the nitric acid, acting upon the sulphur of the sulphuret of antimony, converts it into sulphuric acid, which unites with a portion of the potash, and forms sulphate of potash; the rest of the free potash retains antimony oxydated at the minimum. The white powder which remains in the crucible is the same as that which is sold at such a high price by the English.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE importance of the annexed case is such that I am induced to avail myself of your politeness, in offering to communicate the effects of the Vapour Bath, which I may from time to time have it in my power to send you.

I am, Gentlemen,

Your obedient Servant,

E. KENTISH, M. D.

Bristol, March 3, 1811.

A Case in which the Vapour Bath was employed.

The treatment of the following case in a great measure occurred to me, on reading Dr. Cheyne's Treatise on Hydrocephalus Acutus, in which he has related a case of spontaneous cure taking place, in consequence of a profuse sweat breaking out over the whole head and neck; the case is as follows:—

lows :—Dr. Cheyne says—“ he was informed by a friend, of a solution of this disease by sweating, and does not suppose that it is singular.” His friend says, “ I have frequently observed in the last moments of hydrocephalus, and when the patients were evidently moribund, a profuse sweating about the neck, or back part of the head. My Father used to mention the case of Mr. W. S.’s child, where a very profuse evacuation of this kind had the appearance of being critical. This child was attended by my Father, and an eminent Physician of Edinburgh. The disease was considered by both as hydrocephalus, and treated accordingly, till the child was thought past all hopes. The physician’s visits were discontinued. A profuse sweat broke out upon the head and neck, and flowed so copiously, that the pillows had to be changed one after another, as I have heard my Father say. From that moment the child, who had lain for days in an insensible and hopeless state, is said sensibly to have recovered, and yet lives ; seven years have elapsed since his recovery.”—Having for some time been in the habit of immersing my patients totally in vapour, and from personal experience knowing that profuse perspiration of the head and neck might be thus excited, I determined in my own mind to put this practice to the test of experiment the first fair opportunity. Such a one occurred in the following case :—In the month of March, 1809, I was requested to visit Miss E. Y. ætat. 3. She had been feverish and ill for some days ; she had great thirst, and occasional vomiting ; tongue foul, skin dry, pulse very quick, eyes rather suffused, with an aversion to light, and an unwillingness to be moved ; bowels moderate ; she was ordered to have leeches to the temples, and take a powder with antimony and calomel every three hours. On the following day her stomach was very irritable ; the medicines were frequently rejected, with a good deal of bilious matter ; by adding a drop or two of tinctura opii to each powder, they were retained on the stomach, and determined to the bowels. Some of the evacuations had that dark green spinach look, termed by some, hydrocephalic stools. The powders were continued at proper intervals ; the skin remained obstinately harsh and dry ; therefore the bowels were acted upon to prevent congestion. Saline mixture, tamarind tea, barley water, &c. &c. were given as occasion required. The fever having gone on in this train for near a fortnight, she was in the evening suddenly attacked with convulsions ; the eyes were distorted, the limbs quivering, and the whole appearance such as to threaten instant dissolution. The head was shaved, leeches applied, and afterwards a large blister : an aperient powder with jalap and calomel

calomel was also administered. The united effect of these means appeared for the time to check further effusion; the head was dressed with savine ointment to keep up the discharge. Having proceeded thus for about a week, there appeared no convalescence, the eyes were still distorted, and she was becoming comatose; I was, therefore, apprehensive of further effusion in the head, which would have undoubtedly terminated the existence of my patient; the sutures of the head had never been closed, and they now appeared more open; under these circumstances I communicated my fears to the parents, at the same time mentioning the case in Doctor Cheyne's treatise, saying, I wished to try the effect of exciting, by art, the same discharge, which nature had pointed out in curing that patient. They readily came into my views, to fulfil which, she was folded in a wrapping gown, and in the arms of her nurse, conveyed in a carriage to the bath house, which was at some distance; she was put into the vapour bath in the arms of her servant, and remained totally immersed in a vapour (impregnated with rosemary) at 102 deg. for twenty minutes; during the time she was in the bath, she was quiet, and appeared inclined to sleep; though her body was well moistened by the condensed vapour, yet it did not appear that she had perspired much; the whole surface of the body was red, and the superficial vessels turgid; she returned home in the same manner she came. During the night she had some perspiration in the palms of the hands, and the skin, in general, had a more soft and pleasant feel, she passed a better night, and appeared evidently relieved; this encouraged us to proceed; the bath was repeated the following day, when it was carried up to 105 deg. and continued longer; this time she evidently perspired in the bath, after which she passed a good night; her head was much relieved; on the following morning she appeared more lively, and played a little with a doll, which was what she had not done before during her illness. From the first application of the bath she was evidently benefited, and from the second I date her perfect convalescence; she continued to use the bath every third day for some time; she also took some tonics, these with attention to her bowels, and afterwards the alternate use of the cold shower bath, with the vapour bath, restored her to perfect health.

OBSERVATIONS.

Although in the commencement of this case it had not all the characteristic symptoms of hydrocephalus, yet, as the disease advanced, there was every reason to suppose effusion had

had taken place on the brain; the convulsions, the distortion of the eyes, and the unclosed head, with the coma, all induced me to form this opinion; the treatment of the case had been pretty nearly the same as it would have been, had I in the first instance regarded it as hydrocephalus; plentiful bleeding, and blistering the head, with continued doses of calomel and antimony, which very sufficiently acted upon the bowels. Unavailing as these means were to excite absorption, I should not have been induced to have added a warm bath; fearful that the increased circulation would have determined more blood to the head; but the case already quoted from Dr. Cheyne, and knowing that sweating of the head and neck could be excited by a vapour bath more certainly, than by any other known means, induced me to administer it in this case, the result of which I am relating. Doctor C. W. Quin mentions, in his treatise on the dropsy of the brain, two cases in which nature relieved herself by great and continued discharges of perspiration from the head; one continued for some years. Most of my medical readers are aware of the inefficiency in severe cases of the usual means, viz. bleeding, purging, blistering, mercury, diuretics, and cold applications to the head. I have, therefore, much pleasure in performing the duty of recommending to their notice the effects of vapour when applied to the head, in such a manner as to produce sweating, in cases threatening effusion.

Comparative Analysis of Gum Resins: by Mr. HENRY BRACONNOT, Professor of Natural History, &c.

[Nicholson's Jour.]

Analysis of Gamboge.

Sect. I. IF gamboge be exposed to the flame of a candle, it swells up, and burns like a resin. Heated in a capsule it emits a peculiar smell, softens, and is decomposed before it melts.

Fifty gram. [772 grs.] exposed to distillation produced,

1st, a brown water, containing empyreumatic acetic acid:

2d, a small quantity of a light oil:

3d, afterward came over in considerable quantity another oil, heavy, thick, and brown.

In the retort remained a light coal, weighing 8 gram. [123.5 grs.]. It was incinerated with difficulty, and left 5 decig. [7.7 grs.] of ashes, which yielded 2 cent. [0.3 of a gr.] of potash in part sulphated, 4 cent. [0.6 of a gr.] of phosphate

phate of lime, 6 cent. [0·9 of a gr.] of carbonate of lime, and 3 dec. [4·6 grs] of quartz sand, containing a little charcoal, and some traces of oxide of iron. No ammonia was found in the liquid products.

Sect. II. Twenty gram. [309 grs] were treated with hot alcohol and filtered. What remained on the filter, after being well washed with alcohol, was a grayish substance, that dried with difficulty, and was then brittle. In this state it weighed exactly 4 gram. [61·7 grs]; had a faint taste, or was nearly insipid; and dissolved entirely in water, except a decig. [1·5 gr.] of impurities. The solution reddened litmus. Evaporated to dryness it left a transparent, friable residuum, resembling the high coloured gum of the plum-tree, burning like it with little flame, and leaving a considerable quantity of a compact coal, in which was some phosphate of lime.

The alcoholic solution was red. Evaporated to dryness it afforded 16 gram. [247 grs] of resin. This was transparent, red, without any perceptible taste, and pretty decidedly electric by friction. When powdered it emitted a peculiar smell, and assumed a bright yellow colour.

On pouring water into a saturated solution of this resin in alcohol, there is a sensible evolution of heat, and a uniform, yellowish, milky liquid is produced; while most other resins are precipitated from alcohol in clots.

Sect. III. Solution of potash acts very quickly on the resin of gamboge, particularly if heated. The result is a red liquid of an oily appearance, in which the properties of the potash are neutralized. On evaporating this compound almost to dryness, it crystallizes like the solution of aloes.

The soap or saponule of this resin is of a deep red approaching to black, and feels greasy between the fingers. When dried it is friable, and resembles a resin. It has the taste of rancid fat, leaving a slight sensation of acrimony at the root of the tongue. It is easily soluble in water, without rendering it turbid. Acids precipitate this solution in such abundance, that the whole becomes a thick coagulum of a fine yellow colour. Lime-water throws down from it a fine orange colour precipitate. Earthy salts and most solutions of the white metals likewise produce yellow precipitates in it. It precipitates sulphate of iron brown, and nitrate of copper green.

Sect. IV. Ten gram. [154·4 grs] of the resin of gamboge were put into a retort with 80 parts of strong nitric acid of the shops. As soon as the retort felt the heat of the fire, red vapours arose, the intensity of which soon disappeared. The first product was returned into the retort, and the operation

(No. 146.)

T t

continued,

continued, till the matter was dissolved, and the solution reduced to the consistence of a sirup*. On cooling a mass of lamellar crystals was formed, enveloped in a viscid matter. The whole being diluted with a quantity of water, a sediment was deposited, which, when well washed and dried, weighed 1.3 gram. [20 grs].

This matter is of a yellowish colour, and bitter taste. It is partly soluble in boiling water. On cooling the solution grows turbid, and lets fall a portion. The filtered solution is of a reddish yellow, froths when shaken, reddens infusion of litmus, is rendered of a deeper colour by the addition of an alkali, and forms a slight precipitate after some time with sulphate of iron.

On burning coals this substance does not melt so easily as the resin, diffuses a fragrant smell, and leaves a great deal of coal.

It combines very well with potash and spirit of wine, forming with them transparent red solutions.

Nitric acid, heated gently with it, dissolves it, without occasioning any sensible alteration. Water produces a copious white coagulum in the solution.

From these properties I think I may fairly consider this substance as a particular species of soluble factitious resinomer, combined with a yellowish resiniform substance insoluble in water.

The acid liquor and waters of elutriation were boiled down, to drive off any nitric acid that might remain; and the residuum was diluted with water, in which a small quantity of potash was dissolved, which separated 4 dec. [6 grs] of the yellow resiniform substance. The liquor being again boiled down, then treated with alcohol, and filtered, left 1 gram. [15.4 grs] of very white superoxalate of potash. The alcoholic solution produced on evaporation 3 gram. [46.3 grs] of bitter matter, soluble in water, and containing malic acid.

Sett. V. I diluted some of the resin of gamboge in fine powder with water; and passed into it a stream of oximuriatic acid gas, to try its effect on the colour; and in fact it destroyed its fine yellow. The milky liquor being boiled down, then diluted with water, and filtered, left on the filter a sub-

* The product of this distillation, being thoroughly saturated with chalk, and distilled anew, yielded a slightly acid liquor; of a very pungent smell, and bitter to the taste. Alkalis gave it a light yellow tinge. On adding sulphate of iron to this mixture a precipitate was formed, which was completely soluble in acids; so that there was no prussic acid in this liquid, but I am not fully acquainted with its nature.

stance, which was washed with boiling water, till what came off would no longer redden litmus. The following were its properties.

It is pulverulent, of a pale yellow colour, and without any perceptible taste. It crackles between the teeth like an insoluble salt, and boiling water will not dissolve it. It is very little fusible, and emits no smell, till it begins to be decomposed; but if it be set on fire, or thrown on burning coals, it emits pungent fumes of muriatic acid.

Weak acids separate nothing perceptible from it; but with concentrated acids charcoal and muriatic acid are produced.

Combined with potash the compound has a pleasant soapy smell, and nitrate of silver throws down from its solution a precipitate partly soluble in nitric acid.

I distilled 6 gram. [92·6 grs] of this substance in a small retort, which was heated to redness. The product was collected in a few decigr. [about $\frac{1}{3}$ of an oz. measure each] of water, which, being examined toward the end of the distillation, was very sour, and had the smell of muriatic acid. To this water I added nitrate of silver, which produced a copious curdy precipitate of muriate of silver. This precipitate weighed 5·4 gr. [83·4 grs], which would contain 1·35 gram. [20·84 grs] of muriatic acid, according to the proportions given by Bergman of 25 acid to 75 oxide.*

In the retort were left 2·1 gram. [32·4 grs] of a tumid coal.

Hence it follows, that 100 parts of this acidiferous resinous substance were composed of

Dry muriatic acid	22·5
Charcoal	35
Oxygen, hydrogen, and carbon	42·5
	100

Sect. VI. Thus it appears, that gamboge is a true gum-resin, since we find in it a peculiar resin very well marked, and a gum resembling that of many of our fruit trees.

* This certainly estimates the acid too high. From 19 to 19·5 per cent of acid is the most that can be allowed, according to the experiments of several of the most eminent modern chemists.

Analysis of Euphorbium.

Sect. 1. The Dutch have their euphorbium from Malabar, where it flows from the *euphorbia antiquorum*; that used in England is from the *euphorbia canariensis*,* which furnishes the euphorbium used in France, as Mr. Braconnot had an opportunity of satisfying himself, by finding several branches of the tree among the specimens he examined.

Sect. II. Euphorbium, when exposed to a gentle heat, softens easily, and loses a twentieth of its weight in moisture. I boiled 4 gram. [61·8 grs] in 100 gram. [1544 grs] of distilled water. The filtered liquor left an insoluble substance, which, when dried, weighed 3 gram. [46·3 grs]. What passed through was of an amber colour, and had a bitter taste with a slight degree of acrimony.

This solution reddened infusion of litmus. Oxalate of potash threw down from it a pretty copious precipitate of oxalate of lime. Nitrate of lead formed in it a white precipitate entirely soluble in distilled vinegar. Lime-water rendered it turbid, and occasioned a yellow precipitate, which vinegar dissolved.

Sect. III. A. I boiled 20 gram. [308·8 grs] of euphorbium in 90 gram. [1389·6 grs] of alcohol at 36° [spec. grav. 0·837], which was sufficient to dissolve all the parts capable of solution. This solution filtered at a boiling heat left a substance on the filter, which, after being well washed with alcohol and dried, weighed 6·4 gram. [98·8 grs].

B. Having mixed together the alcoholic solutions, which had grown turbid on cooling, and let them stand at rest for two days, a considerable quantity of white, granular, and somewhat gelatinous substance was deposited, which, being washed with alcohol and dried, weighed 4·7 gram. [72·5 grs]. It still retained some alcohol, which being driven off by heat, only 3·4 gram. [52·5 grs] remained. This substance was semitransparent, capable of being indented by a hard body, softened readily between the fingers, was almost wholly volatilized on a red-hot iron, and comported itself like beeswax, which it resembles in smell when melted or burned. This wax of euphorium retained a slight degree of acrimony, no doubt because it had not been sufficiently washed with alcohol. I made a taper of it, which burned with a very clear flame.

* According to our college, who have readmitted it into their last Pharmacopœia, from the *euphorbia officinarum*.

C. The 6.4 gram. [98.8 grs] insoluble in alcohol (*A*) were heated to the boiling point in 100 gram. [1544 grs] of distilled water. The filtered liquor left behind little bits of wood and thorns, which when dried weighed 2.7 dec. [4.17 grs].

D. The aqueous solution (*C*), being evaporated, formed a varnish on the surface of the glass. On evaporating to dryness a brittle substance was obtained, which separated in micaceous scales, did not attract moisture, and weighed 4.1 gram. [63.3 grs], which I perceived at once to be malate of lime.* In fact, on heating this substance with diluted sulphuric acid, I obtained, 1st, very white sulphate of lime, which, after being washed and dried, weighed 1.6 gram. [24.7 grs]: 2dly, an acid, which alcohol dissolved, and from which it separated 5 dec. [7 grs] of sulphate of lime. The solution, being evaporated, produced 2 gram. [30.83 grs] of malic acid, retaining a little sulphuric acid, which was separated by barytes.

Malate of lime therefore appears to exist in tolerable quantity in the milky juice of the euphorbias; and it was this salt, which the older chemists mistook for a gum in the euphorbium of the shops, and which Mr. Laudet has confounded with extract.

E. The alcoholic solution (*B*), being evaporated to dryness, left a residuum weighing 8.3 gram. [128 grs]. This was treated with cold alcohol, which dissolved the resinous parts, and farther separated 4 dec. [6.2 grs] of wax.

F. This solution being evaporated afresh, a resin was obtained, that attracted moisture from the air in a small degree. This was owing to the presence of malate of potash, which I obtained by heating the resin with distilled water. When well dried it weighed 4 dec. [6.2 grs].

G. The resin of euphorbium has a reddish transparency, and extreme acrimony, whence it may be considered as a violent poison. It becomes electric by friction. Alkalis have no sensible action on it. Sulphuric acid dissolves it cold. Treated with nitric acid at a heat of 20° [77° F.] it softens, grows yellow, and begins to decompose. By increasing the heat, a complete solution is obtained, which, when evaporated, yielded a great deal of yellowish resiniform matter, a soluble resinoamer substance, and some traces of oxalic acid.

* I have already made known, that the ricinus, which is of the family of euphorbias, contains malic acid, neutralizing a large quantity of potash and lime.

326 *Pearson's Observations and Experiments on Pus.*

Sect. IV. From these experiments it follows, that 100 parts of euphorbium are composed of

Water	.	.	.	5
Wax	.	.	.	19
Woody matter	.	.	.	13.5
Malate of lime	.	.	.	20.5
Resin	.	.	.	37
Loss	.	.	.	3
				100

Observations and Experiments on Pus. By GEORGE
PEARSON, M. D. F. R. S.

(Phil. Trans. Part II. 1810.)

CHEMICAL writers vary in their statements of the properties of pus ; and they consider that a further investigation is requisite for the purposes of science. Physicians confess that, in numerous cases, they cannot form a satisfactory judgment of the nature of diseases, on account of not being able to determine what is, and what is not purulent matter ; likewise probably, on account of the existence of different kinds, or varieties, at least, of this substance, afforded by different disorders.

I beg leave, therefore, to submit to this learned Society, my own observations, experiments, and reasoning on this animal matter.

SECTION I. *Simple and obvious Properties.*

The different kinds of fluid, commonly considered to be pus, may be distinguished by the following titles :

- I. The cream-like and equally consistent.
- II. The curdy and unequal in consistence.
- III. The serous and thin kind.
- IV. The thick, viscid or slimy.

1. A pint of the first sort was taken out of the pericardium, after a fatal inflammation of the heart, in St. George's Hospital, and obligingly sent to me by my colleague, Dr. E. N. Bancroft.

The colour was yellowish—the smell was fleshy when warmed—it was smooth and unctuous to the touch.

2. The specific gravity of two different portions, was as 1630 and 1633, that of distilled water being 1580 ; each substance

stance being of the same temperature. Serum of the blood of different patients was found at the same time to be 1626, 1627, and 1630. Accordingly, the distilled water being 1000, the pus is 1031, and 1033, and the serum is 1029, and 1031.

3. After twelve hours repose, about two ounces by measure of a limpid fluid having appeared on the top, it was decanted from off the opaque purulent fluid; which was become thinner in the upper part of the vessel containing it, and thicker in the lower than before.

4. On further repose, it did not become offensive so soon as a portion of the same pus mixed with a little blood, nor as serum alone.

5. This pus neither indicated acidity nor alkalescency to the usual tests, viz. turnsole paper, tincture of red cabbage, Brazil-wood paper, and turmeric paper. I have, in other instances sometimes, observed acidity to be indicated by turnsole paper; but in none alkalescency, so long as the matter remained without fœtor.

6. Being examined under the microscope, when duly diluted with distilled water, innumerable spherical particles were seen, which did not appear altered in figure, nor diminished in number by extreme dilution; that is, they did not appear to have been dissolved.

II. A pint of pus of the second kind, viz. *curdy*, was afforded by a psoas abscess.

The colour was brown. It felt knotty. On pouring from one vessel to another, the curdy masses were manifest, and of various sizes, from that of a pin's head to a hazel nut. It was more viscid than the former, and of a little greater specific gravity. On standing, a limpid fluid appeared upon the top, as in the first kind, but in smaller quantity. Globules were seen with the microscope, but also a number of irregularly figured larger masses. Putrefaction took place sooner than in the former kind. In other properties, this pus was similar to the first kind.

III. *Serous thin pus.* It was produced by a fatal inflammation of the peritoneal coat, without ulcer, and taken out of the cavity of the abdomen. A good deal of serum was also effused, of which the pus was a deposit. It was not much thicker than milk. To the feeling it was not at all unctuous. The smell was slightly offensive. On standing twenty-four hours a sediment appeared, occupying only one half the full vessel, under a whey-like liquid. Putrefaction took place sooner than in either of the two former kinds. The specific gravity was the same as that of the first sort.

In

328 *Pearson's Observations and Experiments on Pus.*

In other properties it was similar to the cream-like pus above distinguished.

IV. A pint of the *viscid pus* was obtained from an abscess among the muscles of the thigh. If I had not had entire confidence in Mr. Brodie's accuracy, who was so obliging as to attend to my request, on this and many other like occasions, I should have supposed, that this was expectorated matter, it so exactly resembled in its simple properties, the *ropy kind*, described in a paper on expectorated matter. Phil Trans. 1809, P. II. p. 317.

The appearance was not quite uniform, there being semi-transparent masses in small proportion, mixed with the perfectly opaque white matter. It was almost inodorous. To the touch it was quite smooth. The specific gravity was nearly that of the second kind of pus.

On standing 24 hours, about one ounce measure of limpid fluid rose to the top of the whole mass. Putrefaction did not take place so soon as in expectorated matter of the same consistence.

The examination by the microscope manifested innumerable spherical particles among leafy masses, and numerous particles of irregular forms.

The simple properties were otherwise similar to those of the other sorts of pus, above distinguished.

Many other differences of purulent matter are universally recognized ; but they are either varieties of the four kinds already named, or the differences depend upon the obvious mixture with adventitious substances ; such as the red part of the blood, coagulated lymph, serum, putrefied matter, fibrous and membranous masses, calculi, &c. : therefore, I deem it useless to describe them.

SECT. II. *Agency of Caloric.*

1. The above kinds of pus coagulated like serum of blood, into a firm, uniform, soft solid, at the temperature of 165°. completely.; but partially at 160° of FAHRENHEIT'S thermometer.

2. The decanted limpid fluid from pus, Sect. I.—I. II. III. IV. coagulated completely into a firm uniform mass, like serum of blood, at 165°, but it became opaque and thickened at 160°. By pressure on the firm curd thus produced, a watery liquid was separated, which on due evaporation did not give a jelly, but was coagulable like the decanted liquid just mentioned.

The thick opaque matter, after decanting the limpid fluid, coagulated as before said, into a firm mass at 165°.

3. Each

3. Each of the above four kinds of pus being evaporated to dryness, left in no case less than one tenth of its original weight, nor more than one sixth ; but most frequently one seventh, to one eighth of brittle matter. The smallest proportion of residue was left by the third, or serous kind ; the largest, by the 2d or curdy. These residues generally became rather soft, especially those of the third, or the serous kind, after exposure to the air.

4. The opaque part of pus after separating the limpid fluid afforded on evaporation about $\frac{1}{3}$ to $\frac{1}{30}$ more of brittle residue, than an equal weight of the pus itself ; and it remained hard on exposure to the air. The limpid fluid evaporated to dryness, yielded about one tenth of brittle residue ; which grew moist, and sometimes deliquesced, on exposure to the air.

5. The brittle residues above mentioned (3), being exposed to fire in platina crucibles, flamed for some time, emitting a very offensive, pungent, empyreumatic smell ; the unflammable residue being kept in a state of ignition for a longer period, what remained at length was fused readily from the *serous*, viz. the third kind of pus ; but in the cases of the other exsiccated residues of the 1st, 2d, and 4th kinds of pus, they barely were melted, or only became soft and claggy. The fused residues from the *serous pus* amounted to $\frac{1}{30}$ to $\frac{1}{3}$ of the exsiccated pus ; and to $\frac{1}{230}$ to $\frac{1}{300}$ of the original purulent matter. Those from the second kind, the *curdy*, amounted to $\frac{1}{30}$ to $\frac{1}{60}$ of the dried matter, and to $\frac{1}{330}$ to $\frac{1}{400}$ of the pus itself. The fused masses from the 1st and 4th kinds of purulent matter, afforded intermediate quantities of melted matter between those just mentioned.

6. The fused residues (5), being treated in the manner described in a former paper, Phil. Trans. 1809. P. II. p. 326—329, I found they consisted chiefly of muriate of soda, phosphate of lime, and potash ; with strong indications of carbonate of lime, and a sulphate ; besides traces of phosphate of magnesia, oxide of iron, and vitrifiable matter, probably silica. On a reasonable calculation, it appeared, that in the *serous kind* of pus, the muriate of soda amounts to from one and a half, to two per 1000 ; the phosphate of lime to one, to one and a half per 1000 ; the potash to one half, to three fourths of a part in this quantity ; and the other matters together, to half a part in 1000. In the *curdy matter*, the second kind, the muriate of soda amounts to three fourths of a part, to one in a 1000 ; the phosphate of lime to one ; the potash to less than one half ; and the other matters united, to half a part in a 1000. The first kind of pus, the *cream-like*, and the fourth, the *viscid*, afforded from the melted re-

sidue, the same substances as the *serous* kind, excepting a somewhat smaller portion of muriate of soda, and potash.

7. The brittle residues of evaporated pus, after decanting the limpid fluid (4), being treated with fire as above related, the remaining matters were melted with more difficulty, and less completely, and contained a smaller proportion of muriate of soda and potash than the original pus.

8. The decanted limpid fluids (4), being evaporated to dryness, these residues were exposed to fire. They were melted, and then afforded a larger proportion of muriate of soda and of potash, than the pus itself; but with the same proportion of the other saline and earthy substances.

SECT. III. *Agency of Water.*

1. After decanting the limpid fluid from off half a pint of the four kinds of pus as above related, (Sect. I.) three ounces measure of distilled water were mixed with each of them. After 48 hours repose, a limpid fluid of nearly the quantity of two ounces by measure, was seen forming an upper stratum to the pus. It was decanted for examination.

(a) On exposure to fire it became turbid like milk, as soon as the temperature was elevated to 165° , but did not become thicker at a greater elevation.

(b) On evaporation to dryness, the residue amounted to about one fifteenth of the weight of the liquid from the *serous* pus, and to one twentieth from the three other kinds; in place of about one tenth, as from the first decanted liquid, (Sect. I. 4); and as from serum of blood. The residuary matters were of the same kind as those above described, Sect. II. 2—6.

(c) Three ounces measure of distilled water having been again mixed with each of the four kinds of pus, and in 48 hours, two ounces measure of decanted limpid fluid from each, having been evaporated to dryness, residues of the same kind, in the same proportions, and in nearly the same quantities as before, were obtained (b). These decanted fluids became nearly as turbid as the former, on raising their temperature to 165° .

(d) Distilled water was added a third time in the quantity of eight ounces by measure, to each of the four parcels of pus under examination, and after 48 hours repose, six ounces of limpid fluid were poured off from each of them. At the temperature of 165° , the decanted fluids became turbid; that of the *serous* pus more so than the others. On evaporation to dryness, a much smaller quantity of residue was obtained than

than before, *viz.* one sixtieth from the serous pus, and one seventieth from the others; and it consisted of the same kind of substances as above described; but the muriate of soda and potash were in smaller proportion than before.

(e) A fourth time distilled water in the quantity of a pint, was mixed with the present four parcels of pus, and after standing 48 hours, three fourths of a pint of clear colourless liquid was poured off from each of them. It became slightly turbid and whitish on boiling. On evaporation, each parcel afforded about $\frac{1}{90}$ of the fluid employed. The residues now consisted of animal matter, with a much smaller proportion than before, of muriate of soda, phosphate of lime, and potash—nothing else could now be traced.

(f) Distilled water in the quantity of a pint, was once more mixed with the four sorts of purulent matter undergoing inquiry. After 48 hours, a pint of liquid was decanted from off each of them; but being slightly turbid, they were left to stand 24 hours. By this time a sediment was deposited from each of the liquors; but being still, though very slightly, turbid, they were filtrated through suitable paper. They were then transparent. The transparent filtrated liquors had their transparency disturbed by a boiling temperature. They became also slightly milky, with nitrate of silver, but scarcely so with infusion of gall nut. On evaporation to the quantity of an ounce from each pint, the residuary liquids appeared slightly globular. These on evaporation to dryness, yielded not more than one part of animal matter, from each 500 of the transparent filtrated liquids.

(g) On standing three or four days in a cold room, the parcels of pus, after the ablutions just related (*a—f*), exhibited a whey coloured liquor at the top, of which about $\frac{1}{4}$ of a pint was poured off from them. More turbid liquor was also separated from the washed pus, by pouring it upon a porous cotton cloth strainer, which left purulent matter of the consistence of starch mucilage, amounting to but one half the original weight.

(h) The pus freed from coagulable limpid liquid by repeated ablutions (*a—h*) was white as snow—equal in consistence—perfectly smooth—the 4th kind was less viscid than before, but the others were more so—no smell—not at all disposed to putrefy—on elevating its temperature to 165° and higher, it did not coagulate into one mass, nor into clots, or large masses of curd, but a watery fluid separated from a fine soft somewhat curd-like opaque fluid; which did not become more curdy, on even boiling—it did not appear that above a grain of this part, or state of pus, dissolved in 1000 waters—was highly globular under the microscope, and remained so,

although coagulated by nitrate of silver; by infusion of gall nut; by alcohol; and super-sulphate of alumina—with muriate of ammonia, nitrate of potash, and other neutral salts, and with carbonate of potash, it produced a viscid semi-transparent mass like expectorated half transparent matter—exposed to fire in a platina crucible, it was inflamed, but did not emit an offensive smell, and after continuing the ignition, the residue was a particle of half fused matter, not amounting to $\frac{1}{3000}$ of the pus after ablution, nor above $\frac{1}{500}$ of the same matter exsiccated; it consisted of phosphate of lime and vitrified matter—no ammonia was perceivable, on mixing lime with this washed pus; nor muriatic acid on adding sulphuric acid.

2. (a) A tea spoonful of the *cream-like pus*, being agitated in half a pint of distilled water, produced a milky fluid, with a number of small curdy particles suspended, but very few leafy or fibrous pieces or clots.

(b) The *serous pus* being treated as just mentioned (a), the same appearances ensued.

(c) The *curdy pus* being agitated in the same manner in water, a number of clots, leafy, and fibrous masses, were seen suspended among fine small curdy particles in a pearly liquid.

(d) The *viscid pus* being treated as just said, it required long continued, and violent agitation, to diffuse it through the water, and then the appearances were as last described.

3. Pus of any kind, after boiling in twenty times its quantity of water, was quite as globular under the microscope as previously. With a smaller proportion of water, the mixture became very turbid, sometimes clots were formed in a pearl liquid, in which a fine sediment took place, which appeared much more globular than the clots or curdy masses.

4. In general, water in which pus has been agitated, remains somewhat milky, with an abundant close white sediment; but after two, or three, or more ablutions, the water becomes clear on standing, and the sediment more curdy.

SECT. IV. *Agency of Alcohol of Wine.*

The different kinds of exsiccated pus exposed to the agency of this menstruum, and treated as described in a former paper, *Phil. Trans.* 1809, P. II. p. 329, the results were similar, except in the proportion of products.

1. These exsiccated substances afforded to this menstruum a smaller proportion of potash, but as much animal oxide and muriate of soda, as mucous sputum.

2. The undissolved matter left after repeated digestions in this

this menstruum, afforded the same substances, but in smaller proportions, as mucous sputum.

3. Equal bulks of fresh pus, and rectified spirit of wine, afford a much thicker and more milky liquor, with a closer sediment, than expectorated mucous matter.

SECT. V. *Agency of acetous Acid.*

The purulent matters mixed with this acid became curdy, and rendered it milky; but on standing, a close white sediment appeared, the liquid above being clear, except in the case of the viscid pus, which exhibited leafy and fibrous masses, as hath been described with mucous sputum.

By repeated digestion of the different kinds of pus in this menstruum, I obtained the same results, except the proportions of acetite of potash, and muriate of soda being smaller, as related in a former paper on mucous expectorated matter. Phil. Trans. 1809, P. II. p. 336.

SECT. VI.—*Some Experiments with different Objects, especially to distinguish Pus and Mucus.*

1. In the agency of sulphuric, nitric, and muriatic acids, in sufficient quantity to dissolve and decompose the substances under inquiry, I could perceive no important difference between them. The purulent matters indeed required a much greater proportion to completely dissolve them, than the transparent sputum. Also the more opaque and dense the sputum, the greater the resistance to dissolution. Sulphuric acid produced black liquids like those containing charcoal, smelling strongly of muriatic acid, but on dilution with water, they became clear. No precipitation occurred on dilution with water, and on saturation with the fixed alkalies, but a trifling sediment appeared, which re-dissolved on the addition of the above acids.

2. The mineral acids diluted, or added in small proportion, and the vegetable acids, coagulate variously pus and mucous fluids. Some become merely milky fluids, others curdy fluids, others afford fibrous and leafy masses in a transparent liquor, and others give an uniform thick mass of curd. On standing the deposits are accordingly of various forms, and the liquors above of various appearances, but I could discover no constant characteristic property of the substances by these experiments, as some writers have asserted.

3. The solid fixed alkalies, or lime, mixed with expectorated mucus, occasion a stronger smell of ammonia than with pus; or with muco-purulent sputum. Some use may be perhaps

perhaps made of this easy experiment to judge of the nature of varieties of the fluids in question, particularly as far as depends on the proportion of ammonia : for sometimes it cannot be perceived by the smell on mixing alkalies, but can by muriatic acid giving white vapours. Concentrated liquid alkalies, added to both pus and mucus, dissolve them to produce clear liquids, except small curdy parts and motes. These curdy parts and motes resist dissolution also for some time even in nitric acid, and seem to be self-coagulated lymph. They are in much greater proportion in pus than mucus. The addition of acids to these alkaline dissolutions occasions precipitations, but no differences, or not with sufficient uniformity to afford criteria, were observed according to the observations of other Experimenters.

4. Concentrated aqueous solutions of various neutral salts, viz. muriate of ammonia ; nitrate of potash ; muriate of soda ; sulphate of soda, &c. being mixed in due quantity with pus of the kinds under examination, produce viscosity, like ropy expectorated matter, thickening like jelly, and less opacity. These changes have, in the case of muriate of ammonia, been called coagulation by Mr. HUNTER ; but by agitation in cold water the matters are diffused, and on standing, the pus is precipitated in its original state. I call these effects of the neutral salts inspissation, seemingly occasioned by their attracting water from the pus ; for no such change is produced if either the purulent matter, or solution of salts be diluted ; nor is it produced if the pus be previously coagulated by caloric ; also the inspissated pus is coagulated by caloric as usual. No such inspissation is produced by these salts in mucous sputum, nor in muco-purulent sputum, so that undoubtedly it is a criterion as discovered by Mr. HUNTER in the case of muriate of ammonia, and with other neutral salts, as now manifested.

4. I endeavoured to find some easy tests for distinguishing pus from mucus ; but I did not succeed with the tanning principle ; gallic acid ; super sulphate of alumina ; nitrate of silver, and other metallic salts ; and as already said, various acids. They all produced precipitation of these animal matters, but not with observable characteristic differences.

5. To observe the state in which the matter of pus is secreted, I procured the assistance of Mr. MAYNARD, the present house-surgeon of St. George's hospital, and Mr. GEORGE EWBANK, who had been on several occasions essentially serviceable in my enquiries. Square pieces of gold beater's skin were applied to various sore legs after carefully removing the matter already secreted. In five to ten minutes the square pieces being removed, were found wet with a limpid

limpid fluid. In this state they were inspected by the microscope, by which numerous globules were seen. In ten minutes further the liquid was no longer limpid but opaque like pus, in which the usual spherical particles were seen with the microscope as just mentioned.

Supposing objections might be offered on account of the alteration of texture of the skin employed, square pieces of glass were also applied. The results were the same in both trials. The two gentlemen above named, as well as Dr. Richard Harrison, and other pupils, who happened to be present, all concurred in the observation that the limpid matter became opaque, and that while limpid it was, like pus, full of spherical particles.

SECT. VII. *Conclusions.*

The statement of the properties of pus in the foregoing inquiry I hope will be found to be true; and I submit to the judgment of others whether or no the following inferences are legitimately established.

1. That this fluid essentially consists of three distinct substances, viz. 1. An animal oxide, which, among other properties, is distinguished by its being white, opaque, smooth, of the form of fine curdy particles in water; not dissoluble in less than 1000 cold waters; not coagulable into one mass like serum of blood by caloric, alcohol, &c.; only rendered more curdy by water of 160° to 170°; but readily diffusible.—2. A limpid fluid resembling serum of the blood in its impregnations and in its coagulability by caloric, alcohol &c.; in which the opaque oxide is diffusible but not dissoluble, and which is specifically lighter than that oxide.—3. Innumerable spherical particles visible only by the microscope in this opaque oxide, and in small number in the limpid fluid; not coagulable by any temperature to which hitherto exposed, and not destructible by many things which combine or destroy the opaque oxide; and these globules are specifically heavier than water*.

2. That the *visible* curdy masses, as well as the fibrous or leafy parts, almost always contained in smaller or larger quantities in pus, may be considered as self-coagulated lymph, which in its fluid state is secreted without having the state of aggregation produced in it like that of the *essential* opaque oxide of pus.—SECT VII. 1.

* My obligingly attentive pupils, Mr. BURTON, and Mr. STANSFELD, house-surgeons of the Lock hospital, collected for me a sufficient quantity of gonorrheal matter to determine that it consisted of the three ingredients here stated.

3. That

3. That the reddish, the blackish, and the dark brown colour of pus depends upon the red part of the blood effused or secreted from the same vessels, or from contiguous ones which secrete pus.

4. That on some occasions the clotty and irregular figured masses found in the pus may depend upon disorganization or breach of the contiguous solid parts.

5. That whenever pus is foetid to the smell, a portion of it is in a state of putrefactive fermentation, which may be removed by ablutions with water.

6. That there are certain adventitious matters liable to be contained in pus not hitherto rendered palpable to the senses, but known by their effects in exciting contagious diseases; such as small-pox, syphilis, &c. These matters are produced by a specific action in the secretory organs of pus, by such matters themselves either contained in the circulating blood, or on the secreting surface.

7. That the *essential* substances of which pus consists, as well as some of the adventitious ones (Sect. VII. 1, 2, 3, 6), are separated from the blood by a peculiar organization belonging, or attached to the blood-vessels: which organs of separation or secretion are not only excited to the action which produces pus in diseased states, but they are evidently influenced by the states of other distant organs of the animal œconomy; hence many varieties in the properties of the purulent matter.

8. That the varieties of purulent matter relate to differences of *quantity*—the proportion of the essential substances (1)—and the adventitious parts (2, 3, 4, 5, 6,). The *cream-like* consisting of almost purely the opaque oxide and limpid liquid (I. 1, 2). The *curdy* containing a large proportion of coagulated lymph, or broken down solids. The *serous* abounding in limpid fluid. The *viscid* depending upon the coagulation, and perhaps, inspissation, by union of neutral salts with the opaque oxide.

9. That as the essential parts are secreted in a limpid state, but presently become opaque, owing to a large proportion spontaneously coagulating, and thus becoming the opaque oxide, mixed with the serous liquid, and innumerable spherical particles (Sect. VII. I. 1, 2, 3), it seems reasonable to infer that these matters are the self-coagulated lymph of the blood and serum, separated by the secretory organs; which act of secretion determines the subsequent state of aggregation of pus, and the globules are at the same time formed analogously to their formation by other secretory organs. How far they are those of the blood altered by secretion may be determined hereafter. It is a collateral proof of this inference that

that very thick pus affords one sixth to one seventh of exsiccated brittle residue, which, as I have found, is nearly the same proportion afforded on the exsiccation of the buffy coat of inflamed blood; while very thin pus affords on exsiccation one eighth to one eleventh of brittle residue, which is the proportion to be expected from a mixture of serum of blood and self-coagulated lymph, as I have ascertained.

10. That the constant impregnating saline and earthy ingredients of pus are dissolved in the serous fluid, and are all separable along with the serum, by ablutions with water, from the opaque oxide (1), except a portion of the phosphate of lime. These impregnations are the same as those of serum of blood, and of expectorated mucous matter, *viz.* muriate of soda; potash neutralized by animal matter or a destructible acid: phosphate of lime; ammonia neutralized probably by phosphoric acid; with a sulphate and traces of some other matters mentioned in my former paper. The proportion of these impregnating substances is as the proportion of limpid or serous coagulable fluid, and of course inversely as the proportion of the opaque oxide of pus; but it varies in different cases in given proportions of this oxide, and the limpid fluid. In general, if not always, a given quantity of pus contains a smaller proportion of saline matters than an equal given quantity of expectorated mucous matter, but a given quantity of the limpid coagulable fluid contains a greater proportion of saline matters than an equal given quantity of serum of blood. Hence the thicker the pus the less irritation to the sore which secretes it, and commonly the less the inflammatory or other action of the secreting surface. In different cases, however, the proportion of impregnating saline substances to one another is liable to vary, especially that of phosphate of lime: hence, though rarely, calculi occur of this substance in the cavity of the abscess*. Hence too the exsiccated pus is liable to become soft and moist, from the proportion of neutralized potash being greater than usual; and even deliquescence sometimes occurs of the exsiccated limpid fluid.

12. That the same organs, according to their different states,

* On examining the lungs of a patient who died of pulmonary consumption, concretions were found in a large vomica from the size of a mustard seed to a pepper corn, which Dr. E. N. BANCROFT reserved for my enquiry. I found they consisted chiefly of phosphate of lime with an unusually small proportion of animal matter. In another patient of Dr. NEVINSON, matter was coughed up, consisting chiefly of phosphate of lime and animal matter; nearly one of the former to three of the latter.

secrete from the blood merely water impregnated with the saline substances of the serum of blood ; also this fluid containing various proportions of coagulable matter like that of serum of blood ; and serous fluid with self-coagulable lymph, which affords curdy masses : likewise this serous fluid, together with this matter which coagulates of itself after secretion, highly impregnated with invisible small particles, in such a state of aggregation, as to constitute the thick opaque fluid called pus—which states of the secretory organs are generally attended with inflammatory action, but frequently also without any symptoms of such action.

13. That besides the consistence of pus depending upon the proportion of serous limpid liquid, and opaque matter, it also probably depends upon the mode and state of coagulation of the matter which affords this opaque part ; analogously to the different states of consistence of the coagulated blood itself, according to the different conditions of the animal œconomy.

According to the above inferences, I trust, a distinct and definite notion of the substance to be considered as pus is exhibited ; and I do not comment on the different results of experiments and conclusions of other writers, because future observers only can determine the truth. What is and what is not pus will now readily be ascertained by a few easy experiments ; by the obvious properties ; and by the consideration of the source of the matter in question : provided, however, that it be unmixed with certain other matters by which disguise is produced. As already observed, it is in pulmonic diseases that the ambiguity occurs ; and physicians lay very considerable stress upon the nature of expectorated matter in their practice and reasoning ; I shall therefore endeavour to elucidate the subject by remarks on the puriform matter expectorated in different cases.

1. An abscess occasioned by acute inflammation not only of a pleurisy, and peripneumony, but of other diseases which have not the symptoms of any one which has received a designation. Here there ought to be no doubt ; for the matter which is coughed up suddenly and abundantly on the bursting of the abscess is evidently pus with little mucus. Such matter consists of the essential ingredients of pus, (Sect. VII. 1,) with generally adventitious substances, (Sect. VII. 2, 3, 4,) viz. coagulated lymph, membranous or fibrous parts, and a small portion of the red part of blood.

2. Purulent expectoration from the rupture of abscesses, or vomicæ of suppurated tubercles. In such cases there has been a chronical cough with viscid sputum, commonly in persons of an advanced age. After this long continued disease,

ease, and abundant expectoration of quite a different kind from the former suddenly comes on; by which the patient often dies very speedily; sometimes immediately, being seemingly choaked. This kind of matter evidently consists chiefly of the essential ingredients of pus (Sect. VII. 1,) with not only the adventitious substances, viz. clots of self-coagulated lymph, and sometimes the red part of blood, but also masses, which are apparently the broken down solid parts, the cellular membrane, the vessels, and substance of the tubercles, in a disorganized state. The sufferer often says, such matter tastes sweet. The mucus is here in too small a proportion, and not intimately mixed, to occasion disguise.

3. In the bronchitis, or inflammatory affection of the air-tubes, the membrane remaining entire, attending various diseases, e. g. the measles, a fever with a cold, various continued fevers, an expectoration of thin cream-like matter occurs, at first gradually, but at last in great quantities, continuing for a week or more. Although mucus is usually coughed up with this puriform substance, the two things generally remain in distinctly large masses. With little skill, the opaque or puriform fluid may be collected separately from the mucous matter. It will be found to consist almost purely of the three essential constituents of pus (Sect. VII. 1,) there being seldom any adventitious substances.

4. Muco-purulent, or commixed expectorated matter. This kind is perhaps of the most frequent occurrence. It is that which many physicians know not how to designate; some consider it to be pus, and others to be mucous matter. This contrariety of opinion arises from the want of definite notions of pus and mucus. Hence the parties are not able to perceive that in this kind of sputum, exist many of the properties of pus, and also of mucus. I have described it in my former paper on expectorated matter, Phil. Trans. 1809, P. II. p. 317, under the denomination of *opaque ropy matter*, the third kind. I feel no degradation in finding it necessary to confess, that a better acquaintance with the properties of pus has taught me that I was in an error, in considering this kind of expectorated matter to differ from other sorts, merely in the proportion, and not in the kinds of constituent parts. It now appears, that the sputum in question possesses such properties as might be predicted to exist, from the known properties of pus and mucus separately, in case these two substances should be intimately commixed. Accordingly, the opacity; the straw colour; the greater density than mucus; the great globularity under the microscope;

the greater proportion of residue on evaporation to dryness, than from mucus; the milky liquid on heating this matter; the milkiness on agitation in cold water; are properties of pus. But the great viscosity, yet not increased by neutral salts; the less opacity than pus; the less globularity than pus; the smaller proportion of exsiccated residue than from pus; the moisture, or greater moisture on the exposure of the brittle residue to air, than from that of pus; the more difficult diffusibility through cold water, and less degree of milkiness than from pus; the great proportion of leafy or fibrous masses on agitation in a very large quantity of cold water; the speedy putrescency; are properties of mucus. The mode of coagulation by caloric at 160° and upwards, is such as might be expected from the commixture, viz. in large masses of curd in a milky liquid, instead of into one uniform mass like pus, or into small curdy masses in a very large proportion of whey-coloured liquid, like mucous sputum. Thick pus affords on evaporation to brittleness, $\frac{1}{7}$ or $\frac{1}{8}$ residue; and transparent sputum of the consistence of jelly, gives about $\frac{1}{18}$ or $\frac{1}{20}$ of such residue; but this opaque matter under inquiry, affords $\frac{1}{10}$ to $\frac{1}{15}$ of brittle residue, according to the proportion of the two substances. I could not separate the supposed pus and mucus from one another, to exhibit them distinctly by water, or by any other means, on account, as I conceive, of the intimate diffusion through one another, and their mutual cohesion. But on evaporating the milky water, produced by agitating the sputum in it, or by letting it stand to collect the sediment, little else beside a mere congeries of globules seen under the microscope, was thus obtained. For the same reason, on standing, a serous liquid like that of pus (Sect. VII. 1,) does not separate, or only partially, from the opaque part, so as to render it possible by ablution, to collect this coagulable liquid like that of pus: and the greater proportion of water, belonging to the mucus, occasions the coagulation by caloric, to afford only a milky liquid, instead of an uniform mass of curd.

This kind of sputum, consistently with the phenomena, must be produced by secretion from the bronchial membrane in its entire state, and not by ulceration or abscess. For it is secreted in many cases, at the rate of a pint or more in each 24 hours, for weeks and months successively, and for 20 or more successive winters. Also many persons recover their good health after this secretion, and it is the usual termination favourably of pneumonia, bronchitis, &c. It is produced by any disease of great irritation of the lungs; as I have found from ossification of the bronchial or pulmonary arteries;

ries; from calculi; from broken wind, or rupture of air cells, &c.*

It is secreted also in consequence of irritation of the bronchial membrane by tubercles, vomicae, water in the cavities of the chest, &c. The same kind of matter is secreted from the nose on the decline of a common severe coryza in many cases. It appears then, that this kind of matter is a symptom of the most fatal, as well as harmless diseases—it is a symptom in one case, of the progress of disease to death, and in another, of the termination in health, by being seemingly a critical discharge. Perhaps, if these facts had been observed and considered, numerous mistakes in prognostics would have been avoided, and better practice have been employed; because the nature of diseases would have been rightly understood. From this representation, it is plain, that a just opinion cannot be given merely from the examination of the sputum, without considering the disease by which it is produced, or of which it is a symptom.

The proportion must also be considered of the pus and mucus in sputum; it may be estimated, by attending to the properties of each above stated.

Such a compound as the present, scarcely is produced in any other part, but in the bronchial, and mucous membrane of the nose, because of the abundant secretion of mucus from these membranes. And when it is conceived, that both pus and mucus are secreted in a limpid state, from the same or at least contiguous organs, where they first intimately commix, and then become inspissated; it will appear reasonable, that they cannot be readily, or at all completely separated again from one another. There is indeed, in these cases, no necessity for the admission of the secretion of the limpid fluid of pus of abscesses (Sect. VII. 1); for it appears to me not unjust to consider mucus to be nothing more than the serum of blood, altered in its composition and proportion of water, so as to produce a viscid texture. The secretory organs of the mucous membrane, by virtue of their peculiar power, separate from the blood, in health, the mucus as above said, with some globules, and also a small proportion of the self-coagulable lymph; which appears, on agitating mucus in a large proportion of cold water, in the form of leafy and fibrous masses†. The same secretory organs, it is easily conceivable,

* I believe this state of the lungs to have been first discovered in broken-winded horses, by Mr. COLMAN.

† Serum of blood appears always to contain self-coagulated lymph, which is deposited on standing; and this appearance led GABER, PRINGLE, and CULLEN, into the erroneous opinion, of this deposit being pus itself.

may in a diseased state be excited to separate also self-coagulable matter from the blood, with more globules, in such a state as to become pus. Hence, such a commixture of the two substances must correspond to the opaque, viscid, expectorated sputum of which I am writing.

If I thought farther reasoning proper, it would be manifest, that all the phenomena, both in health and disease, belonging to the various kinds of sputum, consist with the theory above delivered.

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS

IN THE

DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY,

Stock's Life of Beddoes.

(Concluded from p. 264.)

IN 1799, Dr. Beddoes published "Contributions to Medical and Physical Knowledge, collected principally from the West of England." This volume contained Mr. Davy's original and valuable essays on light and heat. This work was speedily followed by an "Essay on the Causes, early Signs, and Prevention of Consumption, for the use of families." We forbear accompanying Dr. Stock in his copious analysis of this popular and well known treatise; and also refer those of our readers, who are interested in the effects of gaseous fluids in different diseases, to the volume before us, a considerable portion of which is devoted to that subject.

About this time Dr. B. met with another able assistant to his pursuit in Mr. King, a gentleman who to an accurate acquaintance with anatomy,

"United an insatiable ardour for physiological researches, a hand habituated to the arts of design, and a clearness of comprehension and promptness of mechanical ingenuity, which enabled him to devise a mode of executing the experiments which the doctor suggested. Nor was this a trifling task. His mind was incessantly teeming with new speculations, the accuracy of which he was eager to decide by such a test; and in cases where the means of effecting this were not at once present to his imagination, the prompt resources of Mr. King seldom failed to supply them." P. 181.

Dr. Beddoes now meditated a physiological work upon an
extensive

extensive scale, experiments were performed, and drawings were prepared, but the completion of the undertaking was delayed, till "the night closed upon the workman and his work."

Amongst the lighter labours of the Doctor this year, may be enumerated his proposal for subscriptions for rational toys.

"It appears, however, that it was never so extensively patronized, as to constitute an object of sufficient interest to the manufacturer, to establish a toy-shop upon this improved plan."

In the year 1801, Dr. Beddoes published a miscellaneous volume "on the Medical and domestic Management of the Consumptive, on the Powers of Digitalis, and on the Cure of Scrophula." In this volume, the author has adduced decided proofs of the advantages resulting from steadily maintaining an uniform temperature.

"The means which were made use of to secure this uniformity were various; one consisted in placing the patient in an apartment with cows. The heat and exhalation of these animals soon raised the temperature of the apartment to a genial point; at which it was steadily maintained, without much difficulty, by the occasional assistance of a stove."—P. 185.

This scheme encountered much opposition, and was generally treated with ridicule. In some instances, however, it seems to have been highly beneficial. The case of Mrs. Finch, a daughter of Dr. Priestley, is very striking. That lady, "though apparently in almost the last stage of consumption, and exhausted by sleepless nights, and almost incessant coughing, found every symptom alleviated on the second night after entering the cow-house, and enjoyed a tranquil sleep, to which she had been for some months a stranger." The second division of the volume is occupied with the effects of digitalis in consumption.

A short time after this work appeared, Dr. Beddoes, whose pen was seldom at rest, commenced a series of Essays on popular medicine. These appeared under the title of *Hygeia*, and were published in monthly numbers. Dr. Stock occupies nearly a hundred pages with an analysis of their contents, for which we again refer to the "Memoirs." This part of the work which we found somewhat tedious, is followed by some interesting extracts from the Doctor's correspondence: of which, however, we can only insert a very few specimens. To a young lady who, we presume, laboured under some untoward circumstances, he thus addressed himself:—

"I feel, my dear ———, what discouragement you have to thwart you; and am very far from presuming, that if I were in the same situation,

ation, I could bear up under them. It all depends very much upon the power of the mind, to force itself from the present scene, and fix itself on prospects at some distance. A girl whose spirits are broken in early life, has suffered one of the greatest misfortunes. Cheerfulness and beauty set one another off; but gaiety is the charm more to be depended on for giving pleasure to those continually about you, and with regard to yourself there cannot be a question. And I believe gaiety once lost, is one of the most difficult of all things to recover. I have often witnessed the conversion of gaiety into gloom; I do not know that I ever saw the return of the former in all its original freshness and glow. How far it is possible for you to save yourself from this mental palsy, I can scarcely judge, but those who fall into it can hardly be retrieved by the most prosperous circumstances. The sure way of avoiding it, is to prevent the imagination from resting on the particulars of an odious situation. You have, I believe, as cheerful a mind as almost any of our French prisoners; you have not the prospect of a longer captivity; and you know that they have successfully relieved themselves from the horrors of their situation by the most simple of all expedients. By a knife and a bit of ivory, and often by a few straws and threads of silk, they were able to set damp, darkness, filth, short allowance, and I know not what besides, at defiance. Without doubt, had they made these nuisances the frequent subject of their thoughts and conversation, they would have been wretched in confinement, and moped or mad for life. Whether I could follow it or not, is another question; but the rule I should wish to observe in disagreeable circumstances, would be to forbid my senses to dwell upon them; and above all things, not to make them the subject of meditation, condolence, or complaint."—P. 285.

From the ease and rapidity with which Dr. B. commonly wrote, we did not expect the following confession.

"About the time I was obliged to begin the essays on health, I felt low and averse to the task I had imposed on myself. I thought I could not execute it at all. It had this striking difficulty;—that every body else had failed. I went to work *doggedly* and *dissatisfiedly*. I wrote a few lines, then took up a book, and, with a strong sense of guilt put off my labour till next day. However, by some imperceptible change, I am come to like it excessively, and look forward with delight to the hour when I am to return to it."

Yet the obligation of furnishing them by a certain time was felt by him pretty severely, as would appear from a subsequent letter, in which he says, "I am quite a slave to these Essays. The necessity of finishing each by a certain day, lies sometimes like a stone on my heart."

Doctor Joseph Frank, of Vienna, who visited this country in 1803, thus describes an interview which he had with Dr. Beddoes, at Clifton:—

"On entering his house, I gave the servant my introductory letters, that his master might be somewhat prepared, and not taken by surprise. After waiting about half a quarter of an hour, Doctor Beddoes appeared with several books under his arm. The first words that he addressed

to me were, "Which Dr. Frank are you? for there are a great many of you." Before I could answer him, he laid before me, in a row, several books, all written by Franks, constantly asking as he turned them over, "Is that you? Is that you? The first that met my eye was a *Materia Medica*, by Solomon Frank; I protested against this being mine. Then followed some of the works which I had written in elucidation of the Brunonian system. Having now recognized me, Brown became the first topic of our conversation. We were soon agreed upon what was worthy of praise and what of censure in that system. The conversation shortly after turned upon foreign medical literature; when I soon found that Dr. Beddoes reads German as well as he does English; and is intimately acquainted with our best authors. Among all the theories applied at present to the practice of medicine, that of Reill pleases him best. Dr. Beddoes, in his conversation, which grew every moment more interesting, shewed the same fire and animation that are observable in his writings. On this occasion, as well as at subsequent interviews, he constantly insisted upon what he had asserted in his works, with regard to the utility of various gasses and the digitalis purpurea in phthisis. He proposes to add to his former publications upon this subject.—The inspiration of the nitrous oxyd of ammonia, he says, has been beneficial in cases of paralysis. He suggested the idea of employing hydro-carbonate in strangulated hernia, with a view to throw the patient into syncope; and of attempting the reduction of the intestine, while he remained in that state. The muriate of lime is, in his opinion, superior to all other remedies in scrophulous diseases. Angina pectoris does not always exist where the coronary arteries are ossified. Puriform mucus may, in regard to its chemical composition, not essentially differ from pus. The mineral water of the hot wells near Bristol, really, now and then, cures diabetes." P. 301.

In the year 1806, after having determined upon removing to London, Dr. Beddoes was seized with severe illness. "Its more prominent features answered, with a degree of exactness not often met with in actual practice, to the nosological character of hydrops pericardii; with these, were complicated certain symptoms which marked an irregularity in the functions of the liver." The Doctor, however, was very unwilling to admit the existence of hydropic symptoms, and long combated the opinions of his attending physicians, till the complaint suddenly increased to an alarming degree, when "he immediately appeared to contemplate his situation in a desponding and almost hopeless light."

"It was now proposed to him to submit to the application of a blister of boiling water to his chest; a remedy which had been employed the year before, with signal success, in a case which he had attended with the author of this memoir, and which, although administered under circumstances almost hopeless, appeared to have been the means of preserving a most valuable life. Although he did not absolutely refuse, he begged a suspension of the proposed application till the following
(No. 146.)

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visit. When his medical friends next saw him, he put into their hands a written paper. He had previously been accustomed to minute down brief memoranda of his symptoms, in order to spare himself the effort of speaking, which had for some time been painful. The present paper, however, was of a different kind; it bore the evident impression of that despondence with which he reviewed his present situation. It remarked, that, in his apprehension, there existed only a very distant analogy between his case and that in which the blister of hot water had been applied*; and as he could not anticipate from it any beneficial result, he supplicated to be spared unnecessary suffering. By the time that they had perused the paper, he desired them, with an air of calmness, to witness the execution of a will, which he had hastily drawn up with his own hands. They complied with his request, and then addressed him in a style of hope and confidence; and at length, although he evidently appeared to consider their assurances as a *pious fraud*, he submitted to the application of the remedy. The effect was considerable: it was some time before the injured surface separated; and it appeared to be attended with the most beneficial consequences. A progressive amendment in his symptoms took place, which terminated in a gradual, but at length, perfect recovery. The slowness of his convalescence, however, so far abated his activity and depressed his exertions, that the immediate execution of his intended departure for the metropolis was suspended." P. 345—6.

After this he published "the Manual of Health;"—"A Treatise on Fever connected with Inflammation;"—"A Letter to Sir Joseph Banks on the prevailing Discontents, Abuses, and Imperfections in Medicine;" and a small Treatise, entitled, "Good Advice for the Husbandman in Harvest, and for all those who labour hard in hot births; as also for others who will take it in warm weather."

Towards the close of 1808, Dr. Beddoes experienced a renewal of indisposition; many of the symptoms resembled those of the former attack; and he sunk under them on the 24th of December.

The body was examined twenty-seven hours after death; but the operation was obliged to be hastily conducted, and the head was not opened. We transcribe the following particulars.

"Though Dr. Beddoes had lost a considerable portion of fat during his last illness, there remained a more than common quantity between

* This was a violent pleuritic seizure, attended with very alarming symptoms. The blister was applied in the following manner. A napkin, well heated, in order that the water might be retained as nearly as possible at the boiling point, was rolled up and forced into a pint cup, which it completely filled, leaving a convex surface rising about half an inch above the top. Boiling water was then poured on the napkin till it was thoroughly wetted. It was then hastily inverted and held for exactly thirty seconds to the patient's side. The spot where the cup was to be applied was marked, and the extent of the injury limited, by folds of linen laid on the side, covered with oiled silk, and leaving a small circular space. These precautions, however, appeared afterwards to be unnecessary.

the skin and muscles ; his stature was short, but the whole of the trunk remarkably capacious. The removal of the sternum was attended with some difficulty, in consequence of the morbid state of the pericardium, which was greatly enlarged, thickened, and to a great extent firmly connected with the costal pleura of the left side. The right lung was of an extraordinary magnitude ; it was very soft, but free from any perceptible morbid changes in its structure ; its surface, in several places, adhered slightly to the costal pleura, and in this side of the thorax there was a trifling quantity of coagulable lymph. The left cavity was chiefly occupied by the diseased pericardium ; the left lung was almost entirely obliterated ; the only remains that could be discovered of it consisted in a small, hard, and irregular substance, in which it was difficult to trace a vestige of its former organization. What remained of the costal pleura in this cavity was thickened, and a few ounces of a turbid fluid were contained in it. When the pericardium was opened, it appeared to have been nearly filled with a similar fluid, somewhat tinged with cruor. The inner surface of this membrane was not discoloured, when the coagulated lymph which adhered to it was scraped off. The heart was of a proper size, very flacid in its muscular as well as its membranous parts ; no ossifications could be discovered in any part of it ; but the coronary arteries near their origins seemed to be somewhat thickened. The foramen ovale was perfectly open, and the left pulmonary veins and arteries were wholly obliterated. The diaphragm, except where it was connected with the pericardium, was healthy. The liver which adhered slightly to the abdominal muscles, was rather small, of a florid colour over the whole convex, and of a deep purple over the concave part of its surface ; when divided in several parts no deviation from a healthy state was observed in its texture. The lobulus spigelii was very large and of a florid colour. The ductus hepaticus and communis presented one single tube of the same diameter in its whole length, and somewhat wider than usual. The gall bladder and its duct were so completely disorganized by some very early change, that the impervious remains of the latter could scarcely be traced to a small bunch of a thick and corrugated membrane in the situation of the cyst. This substance was divided, and in its centre was found a very small empty cavity of an irregular form. The stomach was very large and considerably inflamed from the cardia towards the middle ; but the other portion, on the side of the pylorus, was quite healthy. The pancreas was perfect ; the spleen very large and full of blood. The kidneys were both above the common size, particularly the right, both perfect in their structure and free from any morbid appearance. The rest of the abdominal viscera appeared healthy." P. 413.

We conclude this article with a spirited character of Dr. B. which appeared in the *Edinburgh Medical and Surgical Journal*.

" The reputation of Doctor Beddoes, as a physician, has not yet attained so high a rank as it deserves. There is an ardour of talents, an animating earnestness, a stimulant exaggeration in his writings, well adapted to arouse the torpor and to provoke the attention of medical readers. He had the mind of a poet, and a painter, and displayed the

powers of his imagination in vivid representations of facts and theories. He was a pioneer in the road to discovery. He was full of enterprize, and free from prejudice, and, above all, he shewed an ardour for improvements, a disinterested sincerity, a love of truth, which shunned neither trouble nor reproach. It is to be regretted, that he suffered himself to be carried away with expectations of benefit which he thought would arise from every new hypothesis, and every untried remedy. Some of his wildest sallies were made in search of means for preventing disorder of the lungs; but although his learning has done much in making known the destructive ravages of that malady, his efforts in proposing a method of treatment has not yet been attended with the happiest success. There is a sobriety in the English people, which leads them to receive every new proposal with caution, and if it be found not to answer all that is said of it, they are apt to reject it altogether, and view future attempts with more steadiness and distrust. Dr. Beddoes possessed *satis eloquentiæ sapientiæ parum*, for the times in which he lived. Those high views, and that habitual appeal to the classical minds of philosophers which he uniformly displayed, have not obtained such sanction as they ought; his zeal has been mistaken for presumption, but perhaps some future age will affix to it the juster character of energy and truth. He was a man of great learning, and understood perfectly the Greek, Latin, French, Italian, Spanish, and German languages. His temper was admirable, and he was highly respectable in all the relations of private life."

Considerations respecting the expediency of establishing an hospital for Officers on Foreign Service; suggested by the Writer's experience during the late occupation of Walcheren. By A. B. FAULKNER, Fellow of the London College of Physicians; Physician to his Majesty's Forces; and Physician in ordinary to H. R. H. the Duke of Sussex. 8vo. pp. 16. Murray.

DR. FAULKNER was one of the physicians employed on the memorable Walcheren expedition, and consequently had ample experience of the miseries which visited the better half of our army on that pestilential shore. In the Preface to this pamphlet, he suggests the propriety of ministers communicating to the medical board, the destination of any expedition which they may deem fit to send out. The neglect of this precaution has been fatally evidenced in almost every large equipment of troops which has left this country; and, most especially so, in the late occupation of Walcheren. On this subject Dr. Faulkner might have expatiated in stronger terms. He simply remarks, that had the Medical Board known the expedition was destined to Walcheren, a greater number of medical officers would have been furnished, and various means might have been devised to mitigate

gate the severity, if not to limit the extent, of the diseases which raged among our gallant troops.

The object of the present publication is to recommend the institution of a hospital for officers, when on foreign service. The advantage of such an establishment was strongly impressed on Dr. Faulkner, from the scenes of distress and fatality which he was compelled to witness during his short residence at Walcheren. The want of it was severely felt by both the patients and the medical staff in that disastrous campaign, where

“ ————— Despair
Tended the sick, busiest from couch to couch,
And over them triumphant death his dart
Shook, nor delay'd to strike.”

The officers were quartered in billets at such a distance from the general hospital, that they were deprived of prompt medical assistance, and care of every kind, which was necessary for their condition.

“ The time of a medical officer was wasted in long and circuitous visits to his patients; it was therefore for the most part impossible to prescribe for them in proper time; and medicines could not be prepared and brought from the general hospital when they were most necessary.”

The attention of the physician was required, early in the day, at the general hospital, and it was often very late before he could see the officers for the first time: so that before their medicines could be prepared, the time for the evening visit had arrived.

During the absence of their servants for the purpose of procuring medicines from the general hospital, great inconvenience and distress were often felt from the want of proper attendance.

“ The constant and laborious attention required in cases of extreme urgency, often unfitted the servants for their duty. They were frequently under the necessity of watching night and day without relief—a task to which no constitution could be long competent; they were, therefore, sometimes taken ill, and sent to the hospital, leaving their masters altogether destitute of assistance.” P. 3.

The cases which Dr. F. relates in support of his argument, are truly deplorable; and amply demonstrate the necessity of establishing the institution which he recommends.

The only objections which have been urged against it, are, “ 1st. That such a species of accommodation would not accord with the feelings and habits of British officers: 2dly. That the establishment would be too expensive.”

For the first of these there is no foundation; Officers of every rank in the service, have unanimously expressed their approbation

approbation of a plan, which they must regard as highly conducive to their comfort, and their safety. Many of them, indeed, have offered to subscribe from their own purses towards its formation. To object to it on account of expense, is neither politic, nor consistent with the British character. That, which, it is proved, will conduce to the convenience and the health of our officers, can hardly be deemed an unnecessary expence, and ultimately must be economical, by more speedily restoring them to the service. A similar institution has long existed in the French army; and an opportunity for trying the experiments at home, occurred on the return of Sir John Moore's army from Spain, when the sick officers were accommodated in a ward of Haslar hospital. On that occasion, they "expressed an unqualified approbation of the treatment and accommodation of every kind which they received."

Dr. Faulkner has offered the sketch of a plan for a hospital, in which the officers may have all the convenience of a separate apartment, without the indelicacy of being exposed to the view of each other; and without an interruption to the free *circulation of the air*, by means of *screens*, which are intended partly to surround every bed.

The only objection which occurs to us, is that in cases where the sufferer is severely wounded, complete repose, and seclusion from all noise and disturbance must often be requisite: but how can this be attained in a large open ward, where, although the beds may be concealed by screens, the groans and exclamations of the sufferers must pervade the whole extent of the chamber?

Ramsden on the Diseases of the Testicle.

(Continued from P. 277.)

It is generally understood, and we yet believe with truth, that the fluid found in the *tunica vaginalis testis*, when in a healthy quantity, is deposited there for the purpose of lubrication. Mr. Ramsden thinks that the exhalents have another, and more important office: and though he admits that lubrication of the cavity does thus take place, he contends, with hypothetical refinement, that these vessels serve as a waste pipe to the accidental or occasional distentions of the testicle.

"An important office of the exhalent vessels of the tunica albuginea appears to me to consist in the readiness of relief which they afford, through the means of effusion, to the testicle, whenever it is distended, or disturbed, either from natural causes or from disease. I farther consider the cavity of the tunica vaginalis to be peculiarly constructed as a
receptacle

receptacle* into which the excretory vessels may instantly empty themselves at all times when such sudden or immediate relief is required ; so that notwithstanding the absorbent vessels may be provided with powers to meet such emergencies, yet the effusion being in many instances sudden and more rapid than the absorption, an undue proportion of fluid will, for a short period at least, occasionally remain in the sacculus without being noticed.

“ Without such means of self protection, it seems to me probable that an organ so delicately constructed as the testicle would, at an early period of life, be endangered by the influence of venereal passions, or destroyed by other causes of accidental excitement. And if these provisions really exist, they will not only explain many phenomena which occur in the sudden variations of the quantity of fluid within the tunica vaginalis ; but as they evince the extreme sensibilities of the testicle, will afford farther proof of its liability to become deranged by such a slight and subtle source of irritation, as I have before stated to be frequently concealed within the urethra.”

The first division of this second part of the volume, as we would call it, treats of

The acute Hydrocele.

This disease is described as consisting of a sudden effusion of watery fluid into the tunica vaginalis testis, attended with pain.

“ For the most part it occurs in persons of nervous and irritable habits, generally when they are placed under circumstances of venereal excitement, and never but in such as have stricture, or whose urethra is in some degree in an unhealthy state.”

It may seem fastidious to doubt what the author means by “ venereal excitement ;” but as it is essential to have the language of science unequivocal, and perfectly perspicuous, we make the remark. The adjective venereal, has an extensive application. Venereal excitement possibly conveys an idea of a different kind to what the author intended ; even the word excitement is at times so used as not to give a distinct meaning. When the latent irritation is the result of preternatural action, or of excitement, (p. 41) has this defect.

It is more satisfactory to select what is practically useful. The description and treatment of the complaint comes under this denomination.

* Other organs, which are liable to be suddenly overcharged with blood, and distressed by distension under passion or great exertion of the body, probably possess a similar provision. I do not think it unreasonable to suppose, for instance, that the cavity of the pericardium and the ventricles of the brain, even in their healthy state, are occasionally receiving effusions for the temporary relief of their respective organs, when those organs are placed under circumstances above described.

"The commencement of the acute Hydrocele is marked by severe suffering in one of the testicles (I have never seen both glands affected), darting with great violence along the spermatic chord, and extending to the back and loins. The scrotum, without becoming inflamed, is soon distended to a considerable size; the pulse is quickened, and sometimes irregular; but the tongue seldom becomes dry or furred: neither is the skin heated, as in common inflammatory attacks.

"In bulk and outward appearance, and so far as the part is painful on being handled, this complaint very much resembles hernia humoralis, from which, however, it is in fact very different, and on account of requiring another mode of treatment, ought to be carefully distinguished.

"In the acute hydrocele the testicle is not enlarged or diseased, but being in a very irritable state, becomes extremely painful when any pressure is made upon the already distended tunica vaginalis. In the hernia humoralis the bulk of the tumor consists of an inflammatory enlargement of the compages of the gland itself.

"Acute hydrocele, if the tumor be not too painful to bear such a test, will necessarily be characterized by elasticity and fluctuation, and generally by transparency. In hernia humoralis the tumor will be firm, possess a considerable degree of resistance, and always be impervious to light.

"I have in some instances made the experiment of pouring cold water upon the acute hydrocele, but as cold constricts the scrotum, and thereby produces upon the testicle an effect similar to pressure, such a proceeding has greatly aggravated every symptom.

"Bleeding from the arm, which might be suggested as a proper and useful measure in hernia humoralis, is in acute hydrocele unnecessary, and in the habits in which the latter most commonly occurs does mischief.

"The principle of practice should comprehend those means which are best calculated to allay general irritability, and particularly to produce local relaxation, since the pressure of the effused fluid against the irritable and tender testicle is the chief cause of the distressing pain, with which this complaint is always accompanied.

"The treatment I have found most beneficial is, to apply leeches (proportional in number to the violence of the symptoms) to the scrotum, and when they have fallen off, to direct the patient to sit in the warm hip bath for a proper time; a brisk purgative may then be given, and after its full operation, a free dose of laudanum combined with some sudorific medicine. In cases in which the pain is peculiarly distressing, I have found it necessary to give the anodyne, without waiting the effect of a cathartic, and in some few instances to direct the farther use of laudanum in an enema.

"On the patient's getting from the warm bath into his bed, the whole of the distended scrotum should be enveloped in a large warm bread and water poultice, and should be kept carefully suspended.

"By such means I have never failed within twelve hours, and frequently in less time, to remove all the painful symptoms; and when they subside the patient has only a common transparent hydrocele, which

which is generally within a short though uncertain period spontaneously absorbed.

"I have before remarked that this complaint is dependant on stricture, or on some more latent unhealthy state of urethra; it will therefore always be necessary when the excitement has subsided to direct the attention to the treatment of the urethra by the bougie, as the only means of securing the patient against a recurrence of similar distressing symptoms, whenever he may accidentally be again exposed to causes of excitement.

"Acute hydrocele constitutes one of those cases dependant on an unhealthy state of the urethra, in which an early introduction of the bougie will be injudicious. A reasonable time (perhaps two or three weeks) should be allowed to afford an opportunity for the urethra to recover a more quiescent state, and for the fluid to be absorbed before the bougie be used: but in case the hydrocele has not disappeared at the expiration of such period, it may be suspected that the existing mischief in the urethra has become permanently active, and continues to excite effusion, and the bougie should, then, be resorted to as the probable means of completing the cure of the hydrocele. In those cases in which the fluid is absorbed within the above period the application of the bougie will be adviseable as a proper precaution, and the only security against a relapse."

The next section is of great importance, and describes several complex forms of disease in the testicle and tunica vaginalis, under the general term,

Spurious Hydrocele.

"Morbid enlargements of the testicle are frequently accompanied with collections of watery fluid within the tunica vaginalis, and thus constitute a very extensive class of diseases. These mixed cases have been much too generally considered under the term hydrosarcocele, a name which solely belongs to an incurable affection of the gland; and by the indiscriminate use of which a testicle has doubtless been subjected to extirpation, when under another denomination it would have been deliberated upon, and perhaps eventually recovered. The morbid enlargement of a testicle, accompanied with watery fluid within its tunica vaginalis, may be sclerocele, varicocele, sarcocele, scirrhus, venereal, as it has been called, or scrofulous; and though some of these states may by an intelligent surgeon be recognized through the body of the fluid, or immediately upon the tunica vaginalis having been drained of its water, yet the characters of the disease of the gland are sometimes too much confounded to make it prudent for the surgeon to attempt to designate such disease until it has been subjected to certain tests of surgical treatment."

The object of this section is to shew, and of great importance it is, that many cases of enlarged testicle complicated with fluid effusion into the tunica vaginalis are curable, notwithstanding the received opinion that the diseased gland

(No. 146.) Z z under

under these circumstances should be removed ; but we must allow Mr. Ramsden to speak for himself.

“ When a testicle, after the evacuation of the fluid from a supposed true hydrocele, is discovered to be in any way or to any extent enlarged and hardened, whether the spermatic chord does or does not partake of the induration, instead of proceeding to the excision of the part, as has been hitherto too frequently done, it would be proper to have recourse to the bougie for the purpose of ascertaining how far the affection of the gland may be dependant upon an unhealthy state of the urethra ; and if any unhealthy state of the urethra be discovered, it is incumbent upon the surgeon to wait the result of the judicious treatment of that membrane before he pronounces the disease of the testicle to be incurable.

“ The introduction of the bougie should be also resorted to in those cases of spurious hydrocele in which the enlargement of the testicle can be recognised by examination through the fluid in the tunica vaginalis, even before the evacuation of the fluid. From my own experience I can state, that when this practice has been adopted, the necessity of evacuating the water has in many instances been superseded, and under the simple treatment of the urethra by the bougie the testicle has not only been restored to its healthy state, but the undue accumulation of water has been removed by the natural powers from the tunica vaginalis.*

Six cases annexed to this section explain the author's opinions, and illustrate his practice.

The last division of this work treats of the

Chronic or true Hydrocele of the Tunica Vaginalis Testis.

In this section, which is more elaborate than either of the preceding, the author inquires into the causes of the true hydrocele, and examines the operations employed for its cure. The same idea that excited states of the urethra, are a frequent cause of disease in the testicle and its tunic, is extended to the chronic hydrocele.

“ As I have in the preceding pages endeavoured to demonstrate that the acute and the spurious hydrocele are dependant on excitement within the urethra, I shall now offer a few observations in support of an opinion that the chronic or true hydrocele is produced by a similar cause under further modifications.

“ We have already seen that the testicle will become hardened and enlarged, and that the sacculus of the tunica vaginalis will be distended with watery fluid in consequence of various degrees of excitement within the urethra, from the irritable and acutely painful stricture, down to that concealed, subtle, and local derangement of the mem-

* In some very few instances the fluid has remained after the reduction of the enlarged gland by the treatment of the urethra ; but when this has been the case the simple tapping of the tunica vaginalis has, so far as my experience goes, always proved sufficient to the radical cure of such remaining hydrocele.
brane

brane which is totally free from pain, until it is pressed upon by the bougie, and which may exist for years without the patient being conscious of its presence.

"It cannot therefore be unreasonable to suppose, that an habitual susceptibility of the whole membrane of the urethra may, in some instances, be induced by general or local causes, and although it create no conscious sensation to the patient, may have the power of gently provoking the excretory vessels of the testicle somewhat beyond their natural action, and thus by destroying the balance of fluid, in course of time establish that undue accumulation which characterizes the chronic or true hydrocele.

"I am induced to offer this opinion from a variety of facts which have presented themselves to my observation, and which lead me to suspect that in almost every case of true hydrocele, the urethra will be found either to have been exposed at some previous time to excitement or inflammation, or to be in a present state of increased sensation, from constitutional irritability, from the membranous fence, or from some other of the several general or local causes to which I have in the preceding pages referred the derangement of this membrane.

"The prevalence of hydrocele in the East and West Indies, instead of being attributable to the relaxation of the climate, may more reasonably be referred to the constant excitement to which the urethra is exposed from the habits of the table; since it is well known that in those hot countries every individual indulges in high seasoned dishes, and in the most stimulating description of diet.

"The frequency of the hydrocele being present with varicocele may also be satisfactorily explained, by referring to that state of continual excitement which is kept up by the distension and weight of the loaded vessels. In the more advanced states of varicocele nothing is more common than an habitual gleet or weeping from the urethra, which is occasioned by the dragging of the varicose vessels; and it certainly appears not difficult to suppose that such excitement in the urethra, when once established, may in its turn re-act upon the testicle, and produce a case of hydro-varicocele."

Though Mr. Ramsden is strongly impressed with his favourite hypothesis, he candidly acknowledges, that "in cases which present themselves under all the appearances of true hydrocele, in which the urethra is less obviously deranged, that an attempt to cure the complaint by the use of the bougie, will lead to no other result than an unnecessary waste of time."

The radical cure of hydrocele has been attempted, and indeed, often effected by various means; as by cauterization, incision, excision, caustic, tent, cannula, seton, discutients, and injection. All these Mr. Ramsden rejects, except the last, upon which he says,

"I consider what is termed the radical cure by injection, the only method which ought to be practised in this disease: because it is not attended by those severities and risks which attach to all other modes, and is generally so satisfactory in its final result. Its superiority is in-

deed in every point of view so conspicuous, that I have long ranked it as one of the most perfect surgical operations we are in the habit of performing."

Though a decided preference is given to the treatment of hydrocele by *injection*, the principle upon which it has been adopted is rejected. The obliteration of the cavity of the *tunica vaginalis testis*, which has been considered as a *sine qua non* in the radical cure, our author contends is neither essential to that cure, nor does it always or frequently happen, unless the curative process has been carried to unnecessary severity.

"The effect of throwing injection into the tunica vaginalis is of two kinds. If a very strong stimulating injection be used and retained within the cavity for an unreasonable length of time; it occasions a painful enlargement of the testicle, and places the patient under all the distressing symptoms of the hernia humoralis.

"If, on the other hand, an injection be used of more moderate strength, be retained but a short space of time, and special care be taken to prevent the cannula of the trocar from rubbing against the testicle; it produces a slight inflammatory excitement of the excretory vessels without any enlargement of the gland itself, and places the patient under symptoms very much resembling those I have stated to be present in acute hydrocele.

"In the former instance, where the inflammation is so severe as to occasion the hernia humoralis, the surface of the gland and the surface of the tunica vaginalis are in contact with each other, and frequently become adherent.

"In the latter instance, where the injection produces an effect nearly similar to acute hydrocele (which is the only effect a judicious operator should aim at), and the surface of the gland and the surface of the sacculus are carried away from each other by the immediate effusion, and any adhesion between them is mechanically impossible."

The fact of the surface of the gland and the surface of the sacculus being kept apart by an intermediate effusion, is considered to be ascertained by a transparency of the tumour existing during the whole process of cure.

For the support of the opinion that the cure of hydrocele, when effected by discutients, does not arise from the application exciting an increased action of the absorbents, but from a suppression of the "excretory vessels," we must refer to the work itself; as well as for a detail of the process of cure by injection: and be content with observing that the principle of this cure rests on exciting a moderate degree of inflammatory action.

The cases of aneurysm, with which the volume concludes, are, a case of axillary aneurysm, in which the subclavian artery was tied behind the clavicle. Case of aneurysm of the femoral artery, for which the artery was tied immediately below

low Poupart's ligament. Case of popliteal aneurysm. Case of aneurysm of the femoral artery between the ham and the centre of the thigh.

ART. I. *Observations on two distinct Varieties of Ophthalmia, prevalent in the Army.* By HENRY WALKER, M. D. Assistant Surgeon, 2d Batt. 71st Regt. *The Edinburgh Medical and Surgical Journal.* No. 25, 8vo. Edin. 1811.

THE disease of which Dr. Walker here treats, prevailed to a great extent in the 71st Regiment. From the 22d of April to the 24th of June, 114 persons were admitted into the hospital with it, out of 600 men and boys of which the battalion consisted.

This malady is stated to have attacked in two forms or varieties, modified by circumstances, which are not pointed out. An attempt to distinguish these varieties by the terms acute and chronic, he asserts, would only mislead. The first variety is thus described.

“ In the place where the redness is originally discovered, the disease first gains its height, and the vessels of the tunica conjunctiva, by their minuteness and number, give to the eye something of the appearance called *chemosis*, (*chymosis*,) though that state has not yet taken place; for, at this time, on pressing the eyeball with the finger, the eyelid being interposed, and removing it quickly, the whole surface becomes white, and, for the first time, the vessels of the sclerotic coat are seen increased in size, carrying red blood, and running in straight lines towards the cornea. On removing the pressure, these are first filled, and present a purple rather than red tint, immediately afterwards; those of the conjunctiva more tortuous and large, are longer of filling, and become of a deep red. Soon after the first appearance of the symptoms now detailed, purulency commences, constituting, according to those who have described this disease, its second stage, at which time the eye puts on an appearance which I have not seen described, nor have I ever remarked it in the more violent forms of inflammation, to which the organ is liable from external injury. In different points, under the conjunctiva, covering the eyeball, small patches of a scarlet hue appear of different sizes and irregular figures, which no pressure can remove, and which, I apprehend, are formed by extravasated blood; these, by a very gradual increase, unite, and thus chemosis is formed. This state of the eye gives to the countenance of one affected with it a very striking appearance, but I am far from wishing it to be understood, that this account of the early appearance of chemosis, is drawn out with the desire of its forming a pathognomonic feature; certainly, the most prominent symptom is the very early and copious effusion of a purulent-like fluid, though this can with difficulty be admitted as characteristic of the complaint, since it is by no means uncommon in the more severe attacks of inflammation of the eye, from great violence done to that organ, as in the operation of couching and extracting.”

In this variety of ophthalmia, it has been observed that exposure of the eye to light, is not productive of much uneasiness. This Dr. Walker considers to be a fact of high importance as affording ground for a diagnosis: but if he intends to explain how it happens that the eye in this disease bears the stimulus of light, his description is deficient in perspicuity.

In every case of this variety of ophthalmia, it was observed that,

“The sclerotic coat had an increased vascularity, a fact which has been overlooked from the symptoms having been drawn out at an advanced period of the disease.”

Copious bleeding, repeated as often as the pain required, was attended with the happiest effects. In every case where this treatment was adopted, the patients escaped derangement of vision.

“The second variety of attack commences in the whole surface of the convex conjunctiva; in the course of a very few hours, that membrane becomes loaded with enlarged vessels, running tortuously towards the cornea, which in a little time may be seen affected, to the extent of a line in its whole circumference, with a slight elevated vascular border; the eyelids, of a red colour in the place occupied by the conjunctiva, feel stiff and uneasy; exposure of the affected organ to light gives considerable irritation; but it seldom happens that pain warns the patient of his complaint; lachrymation, but no purulent discharge takes place; and chemosis is never present, nor can the vessels of the deeper seated membranes be discovered affected, as in the former variety. If the disease be permitted to go on, and, as I have noticed, still more if venesection be employed, it presents day after day the same appearance; the eyelids become thickened, and slightly everted; and the cornea begins to suffer, either from the encroachment of the border affecting its circumference, already described, or from the deposition of matter between its laminae, and consequent ulceration, hypopion, and staphyloma, generally pretty near to the place corresponding to the pupil.

In the first variety copious bleeding from the system afforded the surest relief; in this, so far from curing, it tended to weaken the vessels of the conjunctiva, and render the disorder more obstinate. Scarifying the vessels of the tunica conjunctiva, and dropping immediately afterwards on the eye-ball a stimulating material, is recommended. Dissatisfied in every method, our author endeavoured to make the eye, affected with this variety, assume the inflammatory action of purulent ophthalmia, and then applied the usual remedy venesection. This practice is said to have proved successful, not a single enlarged vessel remaining at the end of a fortnight.

ART. 2. *An Essay on Staphyloma pellucidum conicum.* By ROBERT LYALL, Surgeon, Paisley.

Mr. Lyall considers the first notice of this disease to have occurred in Leveille's French translation of Scarpa's work on Diseases of the Eye. It has since been slightly noticed by Dr. Edmonstone, and more distinctly by Mr. Wardrop, who describes the disease at some length in Essays on the morbid Anatomy of the human Eye.

The *Staphyloma pellucidum conicum*, is here considered as being nothing more than an alteration in the form and size of the cornea, in consequence of an increased quantity of aqueous humour being contained in the anterior chamber of the eye; and the same causes are assigned for this increase of fluid, as those which give rise to dropsies in general. This complaint is characterized by the conical form of the cornea, its peculiar lucidness, and the derangement of vision. It is considered as incurable by Mr. Lyall; but attempts were made to relieve it, by puncturing the cornea, and by the application of astringent collyria. The confused state of vision may be partially corrected by the employment of concave glasses; the power of those employed has been from No. 4, to 20, 16. Four cases of the disease are given.

ART. 3. *Case of Tetanus successfully treated.* By Mr. GRIMSTONE, Surgeon, Royal Navy.

This case of Tetanus arose from a pistol-ball passing through the palm of the hand, and fracturing the middle metacarpal bone. The cure is attributed to the combined effects of ardent spirit and opium.

ART. 4. *Brief Outline of a Plan for diminishing the Prevalence and fatal Tendency of Hooping-cough.* By H. EDMONSTONE, Surgeon.

Mr. Edmonstone forms his plan for diminishing the prevalence and severity of Hooping-cough upon certain peculiarities of action to which the contagion of that disease is known to be subjected.

“ One of the best established and most remarkable of these peculiarities in the history of hooping-cough, is, that the severity and danger attending the disease, are in the inverse ratio of the age of the patient; or, in other words, the younger the patient, the greater is the hazard to which health and life are exposed. In proportion as the constitution acquires vigour and stability, the danger becomes comparatively trifling; and after the age of puberty ceases almost entirely, together with the susceptibility

susceptibility of the disease. Another circumstance, with regard to the operation of the contagious principle, particularly deserving of attention, is, that hooping-cough is observed to be much milder in warm than in cold climates; and it would seem to be in conformity to this law, that the disease is found to be more severe in this country during autumn and winter, than during spring and summer. It is not necessary here to enter into any discussion respecting the causes of these differences, in the degrees of danger and severity, arising from age, climate, or season. It is sufficient that experience has established the fact of their uniform occurrence. The two important practical rules which result immediately from them, and to which I am, on the present occasion, particularly anxious to direct the attention of the public, are the following :

I.—*To use every precaution to guard against the hooping-cough, during the very early stages of life.*

II.—*To avoid its attack during the unfavourable season of the year.*

To ensure a selection of the favourable period with respect to age and atmospheric temperature, it is proposed that every one having the disease shall wear such a distinguishing mark as will enable those who are liable to take it, to keep beyond the sphere of contagion.

ART. 5. *Inquiry into the Exactness of some Statements made by Messrs. Nagle and Wilson, Naval Surgeons, respecting their extraordinary Success in the Treatment of the Yellow Fever.* By a Naval Surgeon.

In the second volume of Dr. Currie's Medical Reports, Mr. Nagle gives an account of the employment of cold affusion in a fever that occurred on board the Ganges, in the West-Indies. One hundred and twenty cases of this disease, denominated Yellow Fever by Mr. Nagle, and of which, under this treatment, only two persons died. Mr. Wilson, Surgeon of the Hussar, gives (Trotter's Medicina Nautica) a relation of a still more successful employment of cold affusion in a fever, also called Yellow Fever, on board that vessel : for of eighty-three cases none were fatal.

The object of this naval surgeon's inquiry is to point out the probability of these gentlemen having mistaken the disease.

(To be continued.)

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

ROYAL SOCIETY.—Jan. 31. A paper by Mr. Home was read on the nonconducting powers of the thoracic duct and the spleen from the stomach to the bladder. Mr. H. related a number of experiments made with ligatures, or by removing the spleen and keeping a ligature on the thoracic duct, in which state rhubarb was taken into the stomach of the animal, and was detected in the urine; whence he inferred, contrary to some opinions he formerly published, that those two organs are not necessary to the secretion of urine.

Feb. 7. Mr. Smithson's paper on zeolite was read. This ingenious mineralogist having received some specimens of this mineral from M. Haüy himself, and labelled by his own hand, he deemed it a favourable opportunity of ascertaining if there were any chemical difference between the mesotype of the French crystallographer, and zeolite or the natrolith of Klaproth, as he had previously discovered the existence of soda in all the specimens of zeolite which are found in these kingdoms, as well as those in Germany. M. Vauquelin analysed several specimens of zeolite without discovering any traces of soda; but Mr. Smithson discovered alkali even in the mesotype sent him by M. Haüy, and in every other specimen of zeolite in his possession. From this circumstance he is inclined to prefer the original name of zeolite, as given to this mineral by its discoverer Cronsted, in preference to that of mesotype given it by Haüy; and considers the distinction between mesotype and natrolith as unsupported by chemical analysis.

Feb. 14. A long paper on the effects of vegetable poisons on animals by Mr. Brodie was read. The author has pursued his researches for a considerable time, and detailed to the society the result of his experiments on rabbits, cats, and dogs, with alcohol, oil of bitter almonds, extract of aconite, tobacco, &c. These vegetable substances thrown into the stomachs of dogs, cats, rabbits, &c. instantly killed them by acting on the nervous system, and producing a compression of the brain: thrown into the rectum, the same effects were produced. The pulsation and heat of the heart, after administering these poisons, were maintained for a considerable time by means of artificial respiration, except with tobacco, which instantly destroyed the powers of the heart, and arrested the pulsations. One drop of the empyreumatic oil of tobacco let fall on the tongue of a cat killed her, but did not destroy the pulsation so instantaneously. Mr. Brodie made a great number of experiments with the vegetable poison used by the American Indians to poison their arrows, and with nearly similar results.

On Thursday, the 21st of February, a paper was read by H. Davy, Esq. LL.D. Sec. R.S. on a gaseous combination of oxymuriatic gas and oxygen.

Mr. Davy procured this extraordinary body by acting on hyperoxymuriate of potash by diluted muriatic acid. Mr. Davy stated, that it explodes by the application of a heat equal to that of the human body; and that though the oxygen and oxymuriatic gas expand in separating from each other, yet heat and light are produced. The metals which burn readily in oxymuriatic gas do not act upon this body till it is decomposed. He described a number of properties of this compound, all of which he considered as strengthening his opinion of the undecomposed nature of oxymuriatic gas; and as particularly opposed to the idea of its containing oxygen. Mr. Davy proposed the name zuthine or zuthic gas for this body from its colour, which is bright yellow; but he stated that he should be content to adopt any other name which might be considered as more appropriate. *Phil. Mag.*

ROYAL SOCIETY OF EDINBURGH.—On the 7th of January, Sir George Mackenzie continued his account of the mineralogy of Iceland, and described some very curious geological facts. On the 21st he concluded his mineralogical detail, with an interesting description of Mount Hecla, and other volcanic districts. In this paper Sir George made some remarks which tended to place obsidian and pumice in a conspicuous point of view, as relating to the different theories of the earth, and clearly proved their origin to be igneous; a position which has hitherto been denied by Werner and his pupils.

On the 4th of February, Dr. Brewster read an ingenious paper on the longitude of the comet of 1770. Sir George Mackenzie described some remarkable hot springs in Iceland. To one of these he gave the name of the *alternating Geyser*, as it spouted from two distinct orifices evidently connected within, but only from one at a time, whose operations alternated with those of the other intervals of time.

On the 18th, Professor Playfair read part of a biographical sketch of the late John Robison, I.L.D. and Professor of Natural Philosophy in the University of Edinburgh.—Mr. Allan communicated a letter from Dr. Henry, of Manchester, describing the position of some singular masses of a substance apparently composed of wax and rosin, which had been laid bare by a late overflow of the river Mersey, a little below Stockport, about three feet under the soil,—and supposed to be the refuse of some manufactory, of which no other vestige or recollection now remains. *Phil. Mag.*

FRENCH NATIONAL INSTITUTE.—Abstract of the Report of the National Institute at Paris for the year 1810.

Messrs. Gay-Lussac and Thenard have directed their attention to compare the relative powers and energies of different Galvanic piles. They have discovered that the force of the pile is not increased in proportion to the number of plates. To produce a double effect, the number of plates must be increased eight times. In general, it was found that the quantity of gas the piles will produce,

duce, is nearly in proportion to the cube root of the number of plates employed.—Amongst the discoveries to which the Galvanic pile has given rise, there are few more interesting to general chemistry than the transformation of the alkalies into combustible substances of metallic splendour.

This transformation, first discovered by Mr. Davy, was afterwards doubted by Messrs. Lussac and Thenard. In their former report they were disposed to consider potassium and sodium as combinations of the alkalies with hydrogen, and to class them amongst the compound substances called hydrurets: subsequent experiments have led them to incline to the opinion of Mr. Davy, and to regard potassium and sodium as simple metallic substances.

M. Berthollet has communicated a process for making the muriate of mercury, called *mercurius dulcis* or calomel, by passing oxygenated muriatic gas through mercury; it combines rapidly with the metal, and forms with it the muriate of mercury; and as this metallic salt has a perfect analogy with other mercurial salts produced by other acids, and mercury at the minimum of oxidation, he concludes that the mercury, in forming this combination, has been reduced to an oxide by the oxygen of the acid, and not by that of the water.

M. Guyton has directed his attention to the mode of giving a permanent red colour to glass, by means of copper, which by accident he first discovered might be done. M. Sage has also taken a part in these experiments, with the intent to colour glass red by means of copper and the phosphate of lime, or with bones; and he has shown crystals of glass, from the bottom of the pots used to melt glass in the bottle-manufacture at Seves, which had some resemblance to hexaëdral prisms. It is well known that simple means have been discovered to extract soda from common salt. France formerly imported this article, so necessary to the arts: an inconvenience attended the mode of preparing it, from the quantity of acid gas which escaped, and was highly injurious. Amongst the different means of preventing this inconvenience which have been attempted, that of M. Pelletan the younger is deserving of notice. It consists in making the muriatic gas pass through long horizontal tubes partly filled with calcareous earth, which absorbs the gas, forming with it the muriate of lime. The experiments of M. Sage on plumbago (black lead) show that this substance does not contain any iron, but consists of a coaly matter mixed with one-tenth part of clay. The fossil carbon of St. Symphorien, near Lyons, approaches nearer to this substance than any other known mineral.

M. Deyeux has presented to the class of agriculture a loaf of sugar made from the red beet (*betterave*), which had all the whiteness and flavour of the sugar from the cane. He has announced that this substance may be made in great quantities by the proprietors, who have devoted to this attempt 400 acres of ground. Should it succeed on the great scale, it will change the relations of the two worlds.

MEDICAL SOCIETY OF LONDON.—This Society held its Anniversary Meeting on the 8th of March.

The customary ORATION was given by *Mr. Blair*; its subject, the *Origin*, nature, progress, and diffusion of SYPHILIS.

Mr. Blair assumed that *lues venerea* was not brought from America to Europe—that it was not known to the ancient medical writers, or noticed by any one before 1493—and, therefore, that it was generated in Europe about that period.

We apprehend this to be a correct statement of the data on which the oration was founded; and we have no fear of being contradicted when we assert, that the orator manifested great powers of research, a respectable portion of erudition, and considerable ingenuity in the employment of his materials.

Mr. Blair's opinion of the non-existence of *lues venerea* in the new World, was founded on a close examination of the early Spanish historians, who had been quoted by Friend, Astruc, and Gintanner, to prove the American origin; so that Mr. Blair did not adopt his opinion, in opposition to them, without first weighing the whole evidence. The total silence of medical authors respecting this disease, prior to the end of the 15th century, was his chief motive for concluding that Syphilis was unknown to remoter ages; and although Hensler, Sanchez, Gruner, Sprengell, &c. &c. have attempted to throw light on the appearance of this disease in Europe, Mr. Blair did not acquiesce in the sentiments of any of those learned authors. He likewise combated the ideas of several English writers and others, to whom we owe certain hypotheses on the generation and first production of *lues venerea*; especially the notions of Sydenham, Harvey, Lettsom, and Howard,—who suppose the disease to have arisen from a combination or modification of two other affections, or from the conversion of leprosy or yaws into Syphilis. These suppositions were rejected on historical grounds, or for want of sufficient evidence.

Toward the conclusion of this spirited, and what the painters call finished sketch, Mr. Blair dwelled particularly upon a fortuitous concurrence of incidents, as remarkable, as they were important in the affairs of men. The discovery of America, the wars that desolated the fairest provinces of Europe, and a pestilence which spread with wasting destruction over Spain, Germany, Italy, and France, marked the close of the 15th century. It appeared to us, that Mr. Blair looked to this awful and dire epidemic, perhaps, in conjunction with the aggravation of all human calamity by war, for the *origin of Syphilis*.

The source of this disease has been sought by philosophers, historians, and physicians, with little success; and if the importation of *lues* from America be denied, its origin is yet left in utter darkness. Though the opinion of Mr. Blair may not be original, we expect he will illuminate the obscurity in which the question of the origin of Syphilis has hitherto remained; and therefore we hope he will accede to the REQUEST OF THE SOCIETY, and publish his Oration; with a fair statement of his evidence, and a full reference to his authorities.

Officers for the ensuing Year.

President . . . George Pinckard, M. D.

Vice-

Vice Presidents . . .	{ James Hamilton, M. D. Richard Temple, M. D. Ludford Harvey, Esq. John Abernethy, Esq.
Librarian . . .	H. Clutterbuck, M. D.
Secretaries . . .	{ George Birkbeck, M. D. John Mason Gord, Esq.
Secretary for Foreign Correspondence	{ Charles Taylor, M. D.
Treasurer . . .	Sayer Walker, M. D.
Registrar . . .	A B. Turnbull, Esq.

Hospitals for the Small-Pox and Inoculation, St. Pancras.

ANNIVERSARY, THURSDAY, the 14th March, 1811.

The House Committee avail themselves of the present return of their Annual Meeting, for recalling the public attention to the great Utility of this Establishment, exemplified by its beneficial effects during the past year.

They desire to remind a liberal Public of the importance of an Institution devoted to the relief of persons under circumstances peculiarly distressing to themselves—often dangerous—and always inconvenient to their relatives and others:—an Institution by which the treatment of a most malignant disease has been much improved, and the means of its communication in a great degree lessened—an Institution, to the close investigation and faithful reports of which *Vaccination* is in a great degree indebted for its general reception with the Public.

Into the House appropriated for the reception of poor patients afflicted with the casual Small-Pox, 149 have been received:—some of them unfortunately became victims to the extreme malignity of their cases; but by far the greater part have been restored to their respective families and occupations. Into the House for Inoculation, 127 Patients have been admitted, all of whom have recovered:—and, in order to secure Infants thereby, (even before they can be removed from their mothers), thirteen of the latter have, at their own desire, been admitted, with their offspring, on payment for their own board.

In addition to these, the benefit of Vaccination has been given to 1,720 Out-patients.

Thus have these Hospitals afforded relief to One thousand Nine Hundred and Ninety-six poor persons in the year 1810; and from the period of their first establishment in the year 1746, to the present time, they have protected and relieved no less than 96,329 poor of this metropolis and its neighbourhood, without fee or expense.

Hence it is obvious that this Institution has greatly alleviated the affliction of the casual Small-Pox; that it has, with scrupulous observance, met the recent orders of the Governors, in limiting the Inoculation of the Small-Pox within its own walls---while it has given, and is daily giving, with alacrity, the benefits of Vaccination to all who apply
for

for it; thus fulfilling the original Plan of the Establishment, happily expanded by the early adoption of that Discovery which, under the blessing of Divine Providence, may be hailed as one of the mercies vouchsafed to the present race, and as the harbinger of that more fortunate period when the dread of casual Small-Pox shall cease by the universal adoption of Vaccination.

Until that wished-for period, which every humane mind hails with cheering anticipation, when the object of the Governors, in common with the benevolent part of the public, shall be so far accomplished, it becomes almost superfluous to urge the obvious necessity of a Small-Pox Hospital, as a place of refuge for Patients seized with the casual Small-Pox; and for preventing that direful disease from spreading by contagion.

Those who see most of the Poor will be sensible of their want of prudence in matters of the highest importance to their health and lives. The industrious mechanic, whilst anxiously procuring daily support for his children, is too often inattentive to repeated admonitions, and even frightful examples, which should teach him the hourly danger to which they are exposed; at the age when their industry is most required, they arrive at the metropolis, obnoxious to this dreadful malady, and too often are irrecoverably lost, before they or their friends are aware of their danger. The hardy peasant is in still greater danger, in proportion to the strength of his frame; but most of all the Defenders of our Country, and others who, after breathing the pure air of the ocean, arrive at the infected lodging-houses on the banks of the Thames, or in the neighbourhood of the Docks; many of such persons might have been entirely lost, had not this Institution received and rescued them from imminent danger.

It is with heartfelt satisfaction that the Committee can assure the Public, that the mortality from Small-Pox has been evidently less, during the ten years which have elapsed since the introduction of Vaccination, than in any equal number of years, in succession, for a preceding century; and comparing the one with the other, and reflecting that the victims to the Small-Pox are chiefly, if not entirely among the Poor, the Committee are fearful that many lives are lost for want of timely application to this Hospital, through ignorance of its establishment, or other causes. And although the annual income arising from its funds is inadequate to its present expenditure, yet neither are their exertions lessened nor their industry in the discharge of their duty relaxed. They therefore scruple not to request the diligent co-operation of every well-disposed individual, in giving publicity and encouragement to this Institution—to the necessity of its continuance—and consequently to its support.

A Donation of 31l. 10s. constitutes a Governor for Life; and 5l. 5s. an annual Governor: and any other Benefactions, or Legacies, are gratefully acknowledged.

By the Committee, 6th February, 1811.

A. HIGHMORE, Secretary,
Solicitor, 33, Ely-Place.

SMALL POX AND INOCULATION HOSPITALS, PANCRAS.—Report given at the Anniversary Meeting of the Governors of this Charity, the 14th day of March, 1811.

From Jan. 21, 1799, to Dec. 31, 1801. During	Inoculated		Vaccinated		Total	Of whom died
	In Patients	Out Patients	In Patients	Out Patients		
1802	49	239	1580	5912	7492	none
1803	33	230	337	3790	4415	none
1805	67	231	144	2658	3065	none
1805	300	2338	89	2551	2988	Two Inoculated Out Patients.
1806	320	2245	50	2046	4784	Two ditto Out Patients
1807	348	4246	22	945	3532	Five ditto Out Patients.
1808	—	—	44	1577	6215	One ditto Out Patient, and
to 5th May to 31st Dec. 1809 1810	—	—	—	—	—	also one ditto by Dropsy
	264	1032	6	1246	2548	in the Head.
	136	—	—	1515	1651	none
	127	—	—	1720	1847	none
	1644	10611	2272	23,960	38,487	

The Register of these Hospitals shews, that out of one thousand six hundred and forty-four In-Patients inoculated during nine years, terminating the 31st of December last, none had died; and that out of ten thousand six hundred and eleven Out-Patients inoculated between the 1st of January, 1802, and the 5th of May, 1808, (when the practice was discontinued by order of the Governors) ten deaths have been ascertained; whilst the mortality of those who receive the disease casually is calculated in the proportion of one in six.

Dr. Clough, Physician, and Man-midwife to the St. Mary-le-bone General Dispensary, &c. will, on Monday morning, the 8th of April, at half-past ten, commence his Spring Course of Lectures on the Theory and Practice of Midwifery, including the Diseases of Women and Infants, as connected with it, at his Lecture Room, 68, Berners Street, Oxford Street. The Evening Lectures are continued as usual, Tuesdays, Thursdays, and Saturdays, at Seven.

Dr. Clough embraces this opportunity of expressing his high gratification to those numerous Students who have honored his school, for their regular and uniform attention; at the same time to announce his intention of establishing, shortly, an Obstetrical Conversation every fortnight during the Winter, to which they only can be admitted. And by way of emulation and forwarding their views, he purposes presenting annually, toward the conclusion of the season for anatomical pursuits, to the authors of the best paper, or dissertation on a subject relative to the science, a SILVER MEDAL for which also they only can be candidates. Rules and regulations, Prospectus, and Syllabus of the Course may be had as above, and of the Medical Booksellers.

Dr. REID's next Course of Lectures on the Theory and Practice of Medicine, will commence on Wednesday, the 1st of May, at nine o'clock in the morning, at his house, Grenville-street, Brunswick-square.

Mr. SINGER will commence his Lectures on the Chemical Agencies of Electricity, on Thursday, the 11th of April. The Voltaic Apparatus constructed for the Illustration of these Lectures, exposes upwards of 14,000 square inches of zinc surface.

Dr. Hutton's Dictionary of Mathematics and Philosophy is ready for the press, and may be expected to be delivered to the public with all his own improvements, made from the late discoveries in those sciences, for the collecting of which he has assiduously employed himself ever since the time of the first publication of that valuable work.

The first volume of the Transactions of the Geological Society, in 4to. with many plates, is in the press, and will be ready for publication in the month of May next.

Mr. Parkinson has announced the publication of the third and concluding volume of Organic Remains of a former World. Containing the fossil remains of echine, shells, insects, crustaceæ, fishes, amphibæ, quadrupeds, &c.; with twenty-three coloured plates. It will be published in the middle of June.

The London Dispensary, on which Mr. Anthony Todd Thomson has been for some time at work, is now almost ready for publication.

cation. It will contain the botanical descriptions of the vegetable substances of the *Materia Medica*; and several other important improvements.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

-An Essay on some of the Stages of the Operation of Cutting for the Stone; illustrated with an Engraving. By C. B. Trye, F.R.S. Callow.

The Anatomy of the Human Body, containing the Anatomy of the Bones, Muscles, Joints, Heart, and Arteries. By John Bell; and that of the Brain and Nerves, the Organs of the Senses, and Viscera; by Charles Bell. Third Edition, in 3 vols. 8vo. Longman and Co.

Outlines of a Course of Lectures on Chemistry, applied to the Arts and Manufactures; delivered in the Theatre of the Surry Institution. By F. Accum. 12mo. Kearsley.

An Account of Diseases in an Eastern District of London, from Feb. 20, to March 20, 1811.

ACUTE DISEASES.			
Perepneumonia Notha	5	Hydrops pectoris	3
Pleuritis	2	Hæmorrhoids	2
Ephemera	1	Hemiplegia	1
Cynanche tonsillaris	2	Scrophula	4
Rheumatismus acutus	7	Rheumatismus acutus	24
CHRONIC DISEASES.		PUERPERAL DISEASES.	
Tussis	20	Menorrhagia lochealis	5
Dyspnœa	12	Dolores post Partum	7
Tussis cum Dyspnœa	15	Dysuria	3
Phthisis pulmonalis	5	Enterodynia	4
Amenorrhœa	7	INFANTILE DISEASES.	
Menorrhagia	5	Convulsio	3
Leucorrhœa	10	Erysipelas infantile	4
Enterodynia	4	Tabes Mesenterica	5
Obstipatio	3	Aphthæ	4
Dysenteria	4		

The great similarity in the general state of the diseases which have lately occurred, leaves little or no room for remarks on the subject. Diseases of the chest and rheumatism still engage a considerable

siderable portion of medical attention, but amongst these no circumstances have arisen, nor have any particular symptoms occurred worthy of any particular remark or attention.

BOTANICAL REPORT.

SINCE our last Report two numbers of the BOTANICAL MAGAZINE have appeared, the contents of which we shall proceed to enumerate, and occasionally to comment upon.

Alöe foliolosa. Under this article Mr. Ker has given a new generic character of the genus *ALÖE*; the principal additional character in which appears to us to be its having winged seeds. This species is nearly allied to *A. spiralis*, from which, and from the cushion-aloes, it differs remarkably in habit from the lengthening of the caudex, still closely covered with the foliage.

Alöe recurva, *venosa* of Lamarek, and *Alöe mirabilis*, both belong to that division of the genus which bear a bilabiate corolla with the laciniae rolled back.

Alöe verens. This is one of Mr. Haworth's species which is not taken up in the Hortus Kewensis, and was not before mentioned by any author: it has long scarlet reflexed flowers.

Alöe margaritifera, *γ. minima*. *Minor* has been before published under the name, however, of *media*.

Alöe arachnoides, *β. pumila*; the *atrovirens* of Decandolle.

Alöe mitraformis, *β. brevifolia*. This plant is considered as a distinct species by Haworth, but the *brevifolia* of the new edition of the Hortus Kewensis and of Decandolle is a different plant; the *prolifera* of Haworth. Mr. Ker has remarked that the synonym quoted from Decandolle in the Hortus Kewensis belongs to *α*, and not to *β*, to which it is there erroneously referred. We are glad to see that this ingenious botanist continues to illustrate this difficult genus, the more particularly, as, from the succulent nature of these plants, very little satisfaction can be obtained from consulting different herbariums in regulating the synonyms. It is especially satisfactory too, that so many of the drawings are made from Mr. Haworth's collection, because this gentleman's monograph of this genus in the 7th volume of the Linnæan Transactions being the most complete of any we have, these figures serve to identify his species with certainty, as being taken from the same plants as he has described; and thus give an additional value to his work.

Strumaria crispa, the *Amaryllis trispa* of Jaquin and other authors. This article contains a new generic character, and an enumeration of what Mr. Ker considers as a species belonging to this species.

In Dr. Sims's department we find

Hibiscus surattensis, a beautiful and singular annual, of which we have not before any coloured figure, perhaps indeed no figure at all, for it is rather doubtful whether the other figures may not all belong to a different species. It is a pity that the flowers are expanded for so short a time.

Diosma pulchella. This beautiful little shrub well merits its name, and, as *Diosma* is become so extensive a genus, we can but wish that Bergius's division at first adopted by Linnæus and afterwards given up, had been retained, and the name of *Hartogia* applied to all such as had three capsules, without regard to the separation of the sexes.

Justicia nervosa. The *Eranthemum pulchellum* of our gardens, where it has long been known as a very ornamental inhabitant of the stove, producing its fine violet-blue flowers through the greater part of the year. Dr. Sims remarks, that, as this plant was referred to *Justicia* with the trivial name of *pulchella* by Ker before the publication of Vahl's work, and the *Hortus Kewensis* to that of Vahl, who evidently was not aware of its being the *Eranthemum pulchellum*. Linnæus took up the genus *Eranthemum* from an imperfect specimen, not improbably of this very plant, in Herman's herbarium. Notwithstanding these reasons, however, Dr. Sims has continued Vahl's name, because it was adopted in the *Hortus Kewensis*, which he considers as being likely to become the standard for names of plants cultivated in our gardens. This is also the *Ruellia varians* of Ventenat's *Hortus Celsii*.

Nymphæa nitida. This is considered as a new species of Water-lily, having a near affinity with *N. odorata*, but not, like that, hardy enough to bear our winters, when planted in an open pond, but requiring the treatment of a tropical production. Its native country seems to be unknown.

Nymphæa rubra (var. β .) *rosea*. Native of the East Indies, and a very magnificent plant.

Lotus australis. Not unlike in habit to our *Lotus corniculatus*, but producing delicate crimson flowers.

Cnicus spinosissimus. By the help of the Linnæan herbarium, Dr. Smith has confirmed to Dr. Sims the truth of Haller's assertion, that Gmelin's Siberian plant is different from this, although Widenow, and most other botanists, continue to quote the *Flora Sibirica* in the synonymy of this species.

English Botany, for the two last months, contains

Chenopodium botryodes. This is considered by Dr. Smith as a new species, first pointed out to him by the accurate Mr. Wigg, growing near Yarmouth. We should be inclined to think it may be a variety of *Ch. rubrum* for any thing Dr. Smith has told us here.

Ulmus glabra. We have often been puzzled to make out our elms in our walks. It appears that there are more species than we were aware of, and that they have not generally been understood. Mr. Forster, who has paid so much attention to English botany, is of opinion, that Dr. Smith's *Ulmus campestris*, t. 1886, is the *Ulmus minor folio angusto scabro* of Goodyer and Ray, and very little known out of Norfolk. And that his *suberosa*, t. 2161, is *Ulmus vulgarissima folio lato scabro* of those writers.

Meum athamanticum. Native of Scotland and the northern parts of England and Wales. There seems to have been much difficulty in determining to what genus to refer this plant. Linnæus in the *Species Plantarum* called it *Athamanta Meum*, in his *Systema Vegetab.*

getab. he removed it to *Æthusa*. Jacquin restored the old name, which has been since generally followed.

Potamogeton gramineum; about which there appears to have been some difficulty, as Lightfoot mistook the plant altogether.

Lychnis alpina, first discovered in this island by Mr. Geo. Don, on rocks near the summit of Clova mountains, in Angusshire.

Euphorbia Lathyris. Although we suspect that this plant owes its origin to our gardens, being found chiefly in the neighbourhood of towns, yet it establishes itself so perfectly in many places, that it may have as good a right to be considered as belonging to the English Flora as some others.

Centaurea Isnardi, from the island of Jersey. There is a species of *Centaurea* which appears to us to be distinct from *nigra*, though probably confounded with it, so common that we have found it among the straw in hackney-coaches. It has no blackness about it; has generally a nearly undivided stem; leaves very narrow, and terminating in a sort of petiolus; what is this?

Asplenium viride. *Trichomanes ramosum* of Linnæus and other authors is a variety of this.

Asplenium alternifolium, a sort of intermediate species between *septentrionale* and *Ruta muraria*; discovered in the south of Scotland by Mr. Dixon. It has been long known in Germany. We suspect it may be more frequent than is supposed in our island, as we recollect to have found specimens, which we were at a loss to determine whether to refer them to *septentrionale* or *Ruta muraria*.

Our country readers will be pleased to hear that the second volume of the *Hortus Kewensis* is printed, and will speedily be published. The continued publication of this useful and scientific work is not likely to be retarded by the death of Mr. Dryander.

NATURALIST'S MONTHLY REPORT.

FEBRUARY.

Thawing Month.

The rivers swell,
Of bonds impatient, sudden from the hills,
O'er rocks, and woods, in broad brown cataracts,
A thousand snow-fed torrents shoot at once.

DURING the whole of the present month the weather has been extremely changeable; and on eighteen of the twenty-eight days, there has been rain, viz. on the 1st, 2d, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 15th, and from the 21st to the 28th, inclusive. On the 15th, the rain was very heavy, and continued so, almost without intermission, through the whole day.—There was a frost in the night of the 16th, but it only continued until the following morning.

On

On the 1st the wind was south-west; in the afternoon of the 2d, south-east; on the 3d and 4th south-west; 5th and 6th, south-east; 7th and 8th, south-west; 9th, easterly; from the 10th to the 14th, westerly; on the 15th, east; 16th, northerly; 17th, 18th, 19th, southerly; 20th, north-west; 21st, south-south-west; 22d, and 23d, south-west; 24th, South-east, and south; 25th, 26th, and 27th, west; and on the 28th, south-west. We had strong gales on the 1st, 3d, 8th, and 26th, but particularly on the 8th.

February 3. There was a peculiarly high tide, without any apparent cause; but in the course of the day a heavy gale blowing from the south-west accounted for it.

Garden Peas begin to appear out of the ground.

February 4. A species of *Podura* or Spring-tail is come out of its place of concealment, and runs about in the day time upon old mossy walls. These insects, like all others of the same tribe, have a kind of elastic tail, which is folded under the body, and by means of which they are enabled to leap to very considerable distances. This power is evidently given to them for the purpose of aiding their escape from enemies. It is a singular circumstance that one species of these insects, (viz. *Podura aquatica* of Linneus) is found usually on the surface of the water, on which it leaps with nearly as much agility as the others do on hard substances.

February 4. The Lark and Redbreast sing. On sunny and sheltered banks, vegetation has begun. The leaves of several plants have shot out of the ground in the course of the last seven or eight days.

February 5. There are now a great number of lambs on the commons, and in pastures.

From this day to the 14th, the weather was in every respect so unfavourable, that I was scarcely able to walk out in the fields during the whole interval. I had, however, an opportunity of remarking that the leaf-buds of the gooseberry and lilac were becoming green.

February 14. The Larch and Yew are both in flower.

Hitherto there has only been one salmon caught in our rivers during the present month.

I observed a dark coloured butterfly this day, but it was at such a distance that I could not discover the species. It was doubtless either *Papilio Io*, or *urtica*.

The flowers of *Laurustinus* die and drop off. Coltsfoot (*Tussilago farfara*) and Ivy-leaved Speedwell (*veronica hederifolia*) are both in flower.

February 16. Rooks are beginning to pair.

The catkins of two or three species of willows appear; and the leaves of Cuckoo pint (*arum maculatum*) spring from the ground.

February 17th. Bees of different kinds are busily employed apparently in collecting the pollen from the catkins of the willows. Small insects are flying about in every direction.

The Blackbird and Thrush sing.

The season is not a forward one. The late severe frosts, and the succession of wet weather since, have tended very considerably to check the progress of vegetation.

February

February 20th. In sheltered gardens Hyacinths and Mezerion are in flower.

February 26th. Rooks are employed in forming their nests; and Partridges begin to pair.

The buds of trees begin to swell. Daffodils are in flower.

February 27th. Water Crow-foot (*Ranunculus aquatilis*) is cut for the purpose of feeding cattle.

Hampshire.

BRITISH ORNITHOLOGY.

THE third number of this interesting publication contains *Larus Carus*, the common Gull, a spirited drawing. Mr. Graves has abstained from giving any other specific characters than the length, breadth, and weight, as these birds vary so much in plumage; there wants a series of correct figures, such as this work seems likely to produce, to illustrate the subject; we suggest the propriety of giving figures of each species at the different periods of their age when likely to mislead the unscientific enquirer. *Anas Nigra*, the Scoter; of this species we do not recollect a good figure in any preceding author, the principal distinguishing character is the protuberance at the base of the bill, which is here very accurately defined; we learn that they are supposed to breed in the Calf of Man, and that further information on this head will be given at a future period. *Motacilla Troglodytes*, common Wren; this lively little animal is admirably depicted; we regret the figure is so small, and would recommend the author in future to give the figures on a larger scale, more particularly as he constantly gives the length, breadth, and weight, which will do away any false idea of size. *Fringilla Carduelis*, the goldfinch, a pretty good figure, we think on the whole, the bird is rather clumsy; the description is interesting. *Picus viridis*, the green Woodpecker; the draftsman has been very happy in delineating this picturesque bird, as its modes of support and manner of feeding are well expressed, the history is particularly interesting. *Anas Boschas*, the wild Duck; this figure is equal to any given, and forms a more correct portrait of this most elegant species than any former work contains, the descriptive part is good and the history entertaining; upon the whole we consider this superior to the former numbers.

METEOROLOGICAL TABLE.

From Feb. 26, to March 27.

D	Therm.			Barom.	Hygrom.		Weather and Wind.
					dry	damp	
26	47	53	47	29 ² — ³ — ⁴		38 20 —	F ... F ... — .. W ... S...
27	45	49	44	— ⁵ — ⁶ — ⁷	5 1	20 — —	F ... — ... — ... W ...
28	47	51	50	29 ⁷ — ⁵ — ⁴		20 36 35	C ... R ... — .. SW ...
1	44	45	42	— ⁶ — ⁷ —	10 3	22 — —	F ... R ... F ... — ... W ...
2	45	51	49	— ⁸ — —		20 10 —	C ... F ... C ... W ...
3	49	53	46	— ⁷ — ⁸ 30	19 10	30 — —	C ... F ... — ... W ...
4	49	54	49	30 — 29 ⁹	15 —	23 — 9	C ... F ... — .. W ...
5	48	53	52	29 ⁷ — ⁵ — ³		15 3 9	C ... F ... C ... R ... S ..
6	45	49	50	29 ⁴ — ⁶ — ⁴	22 —	9 — 25	F ... R ... R ... W ...
7	51	—	50	— ⁴ — ³ —		31 25 30	C ... R ... — .. SW ... W ..
8	49	46	43	— ³ — ⁴ — ⁷		30 — 25	C ... R ... — .. SW ... NW ..
9	39	45	43	30 ² — ³ — ⁴	20 19	15 — —	F ... — ... — ... NW ... N ..
10	43	51	46	— ⁴ — —	4 11	— — 1	F ... — ... — ... W ..
11	45	52	50	— ⁴ — ³ —		5 1 5	F ... — ... F ... W ..
12	49	52	49	— ⁴ — ³ —		10 2 6	C ... F ... C ... F ... NE ..
13	45	50	46	— ³ — ² —	10 —	6 — 1	C ... F ... — ... NE ..
14	44	49	45	— ² — — ³	15 6	2 — —	C ... F ... — ... E ...
15	46	48	44	— ³ — —	5 22 13		F ... — ... — E ...
16	41	52	45	— ² — —	11 —	7 27	F ... — ... — SE ... S.E..
17	41	54	—	— ¹ — —		41 5 —	F ... — ... E ..
18	—	54	52	— ¹ — —	6 — —	15 —	F ... — E ..
19	51	54	49	— ¹ — ² — ¹	6 24 20		C ... F ... — E ..
20	52	53	52	— ² 30 —	10 9 4		C ... — ... W ...
21	51	52	53	— — — ¹	5 —	7 — 5	C ... — R. in night .. W...
22	51	52	45	— ¹ — ² — ³	— 9	10 2 —	C ... — NE ... N ..
23	43	51	42	— ⁴ — —	7 25 20		F ... — E ... SE ..
24	44	53	47	— ³ — ² —	10 30 19		F ... — SE ..
25	44	54	46	— ² — ¹ 30	10 36 29		C ... F ... — SE ..
26	44	55	47	— — — ¹	14 30 25		F ... — E ..
27	43	53	45	— ³ — —	20 38 40		F ... — E ..

From the 1st to the 27th of March, a series of fair and dry weather has occurred. To the 8th, indeed, the days were cloudy, and a little rain fell in that interval. On the evening of the 8th, the wind came round to the N. and from thence to the E. where it has since continued, accompanied with a cloudless sky, except on the 20th and 21st, when changing to the W. those two days were cloudy, and a small quantity of rain fell in the night of the 21st. The diminished humidity in the atmosphere is marked by the employment of the dry column in the hygrometer.

The whole of March may be considered as having been remarkably temperate and genial; possessing but little of its general boisterous character: and presenting appearances very different from those described by the poet, as characterizing this month, when

“ ——— Winter oft at eve resumes the breeze,

“ Chills the pale morn, and bids the driving sleets

“ Deform the day delightless.”

Having, in an unusual manner, been free from the “ tyrannous breathings of
the

the north," pneumonic complaints have, according to our observation, been less frequent, and less severe, than is common at this season.

Princes-Street, Cavendish-Square.

NOTICES TO CORRESPONDENTS.

A mistake respecting the insertion of the Engravings, which occurred in the preceding month, our Readers will find corrected in this Journal. The Engraving illustrative of the "Case of morbid Enlargement of the Clitoris," which should have accompanied that Case, was overlooked, and that of Eagland's Truss inserted in its place.

We acknowledge Communications from Dr. Clough, Professor of Midwifery; Apothecarius; Mr. Andrews, of Madeira, by Dr. Adams, with Drawings; Mr. Barlow, of Blackburne, &c. &c.

The heavy expence of postage compels us, though unwillingly, to request our Correspondents will frank their letters.

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THE
Medical and Physical Journal.

VOL. XXV.]

MAY, 1811.

[NO. 147.]

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For the Medical and Physical Journal.

On Stramonium.

WHEN the multitude are running after a new remedy, or an old one newly revived, experienced men are apt to say, "let them alone, they will soon be undeceived." Admitting the justice of the observation, I should not have written the following account of Stramonium; but having been induced, by the very general talk about its properties, to direct my attention to this subject, I collected some particulars respecting it, which I thought might not be uninteresting to the readers of this Journal. Before, however, I state the results of my inquiry, it may not be altogether useless to glance at the mode in which this remedy has recently been introduced to public notice. The first account of it which I have met with, is in the Monthly Magazine for June 1810, by a writer who signs himself VERAX. He describes himself to be what is termed a *bon-vivant*, and would appear to be possessed of Dr. Trotter's *nervous temperament*; he gives a pleasant account of his way of life, and details the symptoms of his asthmatic complaint in an easy popular style, a style which the writers of *familiar* treatises on medicine might envy. Being checked in his luxurious indulgence, by spasmodic asthma, he found it necessary to consult "the most eminent physicians of the metropolis;" none of whom, however, afforded him "any thing more than a transient and tantalizing relief." At this juncture, he acquaints us—"An amiable friend and most respectable surgeon at Hackney, first persuaded me to smoke the divine Stramonium, to which I owe altogether my present freedom from pain, and renewed capacity of enjoyment. It is the root only, and lower part of the stem of this plant, which seem to possess its anti-asthmatic virtue: these should be cut into small pieces, and put into a common tobacco-pipe, and the smoke must be swallowed,

(No. 147.) 3 C

lowed, together with the saliva produced by the smoke ; after which the sufferer will, in a few minutes, be relieved from all the convulsive heavings, and probably drop into a comfortable sleep, from which he will awake refreshed ; and, in general, perfectly recovered : at least, this is the invariable effect produced upon myself."

It is to be regretted that the name of the medical gentleman who recommended this *divine* remedy, is withheld from the public. Though the practice is known in the East Indies, I have in vain searched for authorities for smoking Stramonium in this country ; at present, the honour of introducing it rests between VERAX, and the author of a pamphlet which appeared precisely at the time, when the curiosity of asthmatics was sufficiently awakened by the accounts that had been inserted in the Monthly Magazine : they were thirsty, and a good Samaritan pointed to the well. The title of this pamphlet is, "A familiar Treatise on Asthma, Difficulty of Breathing, Wheezing, Winter Cough, and Consumption of the Lungs ; containing, with other Information, explicit Directions for the Use of the Stramonium Herb, by Fisher, Surgeon, formerly an asthmatic Invalid." Manna could hardly have proved more grateful to the hungry Israelites, than this Treatise to the wheezing Asthmatics. The author's motive also was charitable ; I shall quote it as being worthy of imitation. "The sole object the author had in this publication, was to communicate that information to those who suffered by affections of the lungs, which at one period of his life he required himself. The work having gone through two heavy editions in the short space of a month, is a proof how much such patients stood in need of advice ; and the disappointment they, as well as himself, had experienced in their applications to a certain class of *regular* practitioners, whose end is attained, if they succeed in amusing the mind of their patients to enrich themselves."—(Pref. to 3d edit.)

But this gentleman's philanthropy is even surpassed by his modesty ; he will not permit a patient, overflowing with gratitude, personally to express his thanks :—"The author understanding that several applications have been made to the publisher and printer of the work for his address, begs to observe, that he has omitted it in consequence of having no interested view in bringing his name before the public."—(Pref. iv.) His cover, indeed, is so impenetrable, that neither gentlemen nor poachers have yet discovered his form. But,

"A quoi sert cette mine modeste,
Et ce sage dehors, que dement tout le reste ?"

Instead

“ O curas hominum ! O quantum est in rebus inane !

"And hew the block off, and get out the man,"

Datura Stramonium; common Thorn-Apple.

CLASS 5.1. Pentandria Monogynia. *Lin. Gen. Plant.*
Nat. order of *Luridæ*.—Solaneæ Juss.

3 C 2

Antñers

Anthers oblong, compressed obtuse, of a brownish yellow colour.

PISTILLUM. *Germ* ovate; *Style* white, filiform, straight; *Stigma* thickish obtuse, two-plaited.

PERICARP. *Capsule* somewhat ovate, two-celled, four-valved, seated on the base of the calyx. *Receptacles* convex, large, dotted, affixed to the dissepiment.

SEEDS numerous, kidney-form.

The smoothness as well as the prickly roughness of the capsule in this genus varies.

ESSENTIAL CHARACTER.

Cor. funnel-form, plaited. *Cal.* tubular, angular, deciduous. *Caps.* four-valved.

Of this genus eight species are enumerated in Martyn's edition of Miller's dictionary.* The *Datura Stramonium* is

* Spec. 2. *DATURA FEROX*, *rough Thorn-Apple*. Syn. *Stramonium ferox*. *S. longioribus aculeis*. This is annual, and a native of China; was cultivated by Miller in 1731. Hort. Kew.

Spec. 3. *DATURA TATULA*, *blue Thorn-Apple*. Syn. *Stramonium majus purpureum*. Stem purplish with white dots; corolla pale blue. Cultivated by Ray, 1686, in his garden at Cambridge. Annual.

Spec. 4. *DATURA FASTUOSA*, *purple Thorn Apple*. Syn. *Stramonium fæt. pomo spinoso rotundo, semine pallido*. This is an elegant plant, rising with a polished purple stalk, four feet high. The flowers are of a beautiful purple on their outside, and a satiny white within; have large swelling tubes, which spread very broad at the top, their brims having ten angles, each ending in a long slender point. The corolla is sometimes single, at others two or three flowers stand within another: the corolla is also found double, having from four to five petals within each other of equal length. The odour of the flower is agreeable at first, but if long smelt to becomes unpleasant, and is said to be *narcotic*. It is used in the East in asthmatic complaints, and is smoked through a pipe. It is a native of Egypt and the East Indies: was cultivated by Miller in 1731. Hort. Kew. Annual.

Spec. 5. *DATURA METEL*, *hairy Thorn-Apple*. Syn. *Stramonium pomo spin. not. longo fl.*. A native of Asia, Africa, and the Canary Islands. Cultivated by Miller, in 1759. This also is smoked like the preceding species.

Spec. 6. *DATURA ARBOREA*, *Tree Thorn-Apple*. Syn. *Stramonoides*. This rises with a woody stalk to twelve or fourteen feet; produces numerous white and beautiful flowers, some of which are striped on the outside with pale yellow. Native of South America; and

characterized by *Pericarps thorny, erect, ovate, leaves ovate, smooth*. The *Stem* is seldom more than two feet high, but in some soils rises to six feet. It divides into several strong irregular branches; they are hollow and covered with a fine down. *Leaves* from the forking of the stem and branches, single, scarcely six inches long, petioled, pointed, deep green on the upper surface, paler beneath and on the edges, with strong ribs or nerves, unequally sinuated and toothed about the edge, extending farther down the petiole on one side than on the other. *Petioles* round, downy, shorter than the leaves, above faintly channelled. *Flowers* single from the axils, on short peduncles, upright. *Calyx* pale green; is composed of one leaf, tubular, pentangular, and divided at the brim into five teeth. *Corolla* white, monopetalous, funnel-shaped, plicated, cut at the margin into five teeth, and furnished with a long cylindrical greenish tube: the five filaments are tapering, about the length of the calyx, adhering to the tube, and supplied with oblong flat antheræ, of a brownish yellow colour: the germen is oblong, and placed above the insertion of the corolla: the style is filiform, equal in length to the filaments, and terminated by a thick blunt stigma: the capsule is large, oval, fleshy, beset with spines, divided into cells, and four valves, which contain numerous kidney-shaped seeds of a blackish hue. At night the leaves, particularly the upper ones, rise up and inclose the flowers, which appear from July to September.

and one of the greatest ornaments to the gardens in Chili, where the inhabitants propagate it with great care. When the flowers are fully blown, they make a fine appearance, and a single tree will perfume the air of a large garden. Introduced by Mr. Thouin in 1783, but had been before cultivated in the Chelsea garden, and by Lord Petre, from seeds sent over by Dr. Houston. Perennial.

Spec. 7. *DATURA LÆVIS*, smooth capsuled Thorn-Apple. Syn. *Datura inermis*. Leaves resemble those of the *D. Stramonium*. Native of Africa. Introduced in 1780, by M. Thouin. Annual.

Spec. 8. *DATURA INNOXIA*. Syn. *Stramonium fol. hyoscyami*, fl. toto candido, fr. propendente rotundo, spinis innoxiiis ornato. Indigenous in la Vera Cruz. Annual.*

The 2d, 4th, and 5th species may be raised by sowing the seed on a gentle hot-bed in the spring, transplanting them into the fresh ground the latter end of May. The 6th and 7th require to be kept in a stove. The 8th, in a favourable season, will rise in the spring from scattered seeds; and, if the summer prove warm, will flower, and even perfect its seed.

* Rumpf. mentions a species with flower double, fruit round, pendulous: it occasions profound sleep, and is given with advantage in dysentery.

Gerarde (1597) informs us that "this plant is rare and strange in England ; it was brought in seed from Constantinople by the Right Hon. Lord Edward Zouch." Miller says it was probably introduced from Italy or Spain ; Martyn thinks we have strong proofs of its being a native of America ; for in the earth brought with plants from various parts of that country, the thorn-apple constantly springs up. In confirmation of this opinion Kalm states in his travels into North-America, "The *Datura Stramonium* grows in great quantities in all the villages ; its height is different according to the soil it is in : for, in a rich soil, it grows eight or ten feet high ; but, in hard and poor ground, it will seldom come up to six inches. This *Datura*, together with the *Phytolacca*, or American Nightshade, grow here in those places near the gardens, houses, and roads, which in Sweden are covered with nettles and goosefoot, which European plants are very scarce in America ; but the *Datura* and *Phytolacca* are the worst weeds here, nobody knowing any particular use of them."

It has now become very common in this country, few gardens or dunghills being without it ; Mr. Ray and Mr. Hudson have even placed it amongst British plants, at the same time they regard it as a doubtful native. It flowers in July. It affects the tongue with a sense of bitterness, and the smell is somewhat similar to that of the poppy. Formerly, indeed, it was supposed that by merely smelling the plant, a person would be intoxicated, "*Si tantum olfeceris Stramonium, ebrietatem fecit.*" Storck, however, who has devoted much attention to this subject, has refuted the assertion. He gathered the plant in the fields before breakfast, *summo mane jejuno ventriculo* ; he rubbed the leaves and stem between his fingers, and frequently smelled them without experiencing their inebriating quality : his words are, "*Fricui folia caulemque digitis fortiter, et frequenter olfeci, percepi quidem gravem et ingratum nauseosumque odorem, verum nil temulenti, nil inebriantis adverti.*" Neither did he feel any ill effects whilst expressing the juice from the fresh leaves, or in sleeping with closed windows in the same chamber, after the operation was finished : though on waking in the morning he was affected with an obtuse pain in the head ; but was in every other respect calm, and fit for business, and on breakfasting the pain left him. He evaporated eight pounds of the juice to the consistence of an extract, and neither he nor his assistant felt any inconvenience. He swallowed a small portion of the extract, and remained unaffected by it, although all the authors whom he consulted, both modern and ancient, affirmed that it produced delirium, insanity, convulsions ;

vulsions : “ *Stramonium turbare mentem, adferre insaniam, delere ideas et memoriam, producere convulsiones.*”

Bergius states that the smell of the recent herb is powerfully narcotic, and that whilst describing the plant and chewing the leaves, he was affected with that kind of intoxication which follows smoking tobacco.* Haller ranks it amongst the worst of the narcotic plants.†

There can be no question respecting the narcotic properties of this herb, when taken in sufficient quantity ; they appear to have been known to the Chinese and the Indians, at an early period. Soon after the institution of the Royal Society, a series of inquiries was drawn up for the learned men of the East to solve. Amongst some that were curious and some that were ridiculous, it was asked, ‘ Whether the Indians can so prepare that stupifying herb *Datura*, that they make it lie several days, months, years, according as they will have it, in a man’s body, without doing him any hurt, and at the end kill him, without missing half an hour’s time ?’ ‡ The reply returned by Sir Philberto Vernatti, resident in Batavia, was, that the “ China men in this place have formerly used *Datura* as a fermentation, to a sort of drink much beloved by the soldiers and mariners, called *suykerbier*, which makes them raging mad, § so that it is forbidden strictly under the penalty of a great pain, to make use of the same.” It was again asked, ‘ Whether those that be stupified by the juice of this herb *Datura*, are recovered by moistening the soles of their feet in fair water ?’ The answer was, “ No ; for I have seen divers soldiers and mariners fall into the rivers and ditches, being stupified by their drink aforesaid, who were rather worse when they were taken out than better.”

Haller states that it causes delirium, mania, convulsions, paralysis, cold sweats, vehement thirst, tremors. A man

* “ *Odor recentis herbæ narcoticus, adeo fortis et afficiens, ut, eum plantam describerem, ex odore narcotico, et ex eo quod masticaveram folii, frustum, temulentus quasi evaserim, haud secus ac si intuetus fumum tabaci hausissem. Materia Med. tom. i. 121.*

† “ *Ex deterioribus plantis narcoticus est. Somnum facit adeo profundum, ut impune pudicitia puellæ violari possit, quæ hoc toxicum sumserit.*” (Hist. Stirp. Indigen. Helvet.)

‡ Spratt’s Hist. Royal Soc.

§ The delirium produced by *Stramonium* was very agreeable to the Indians. Kæmfer, as quoted by Paller, observes, “ *Deliria facit apud Indos grata equidem, reformata hactenus planta virosæ efficacia. Nam omnino Stramonium est Indorum Datura, confirmantibus Missionariis Danicis.*”

who took a decoction of the fruit was sad, speechless ; he lost the use of his limbs, and at length became furiously mad. These effects, however, depend upon the dose. A small quantity occasions a pleasant kind of delirium which disposes a person to be very good natured, and willingly part with his property. Cunning knaves have availed themselves of this quality with great success. Garzia D'all'Horto in his history of Oriental aromatic simples used in medicine, mentions that the *Datura* grows in Malabar, and that when rogues design to rob a person, they mix some of the flowers with his food ; those who partake of it lose their senses, are seized with violent laughter, and readily suffer themselves to be pillaged. This state continues about twenty-four hours. The means recommended by this author for recovering such unfortunate victims, are emetics, purgatives, clysters, friction, and bleeding from the foot.*

The following extract from Sauvages describes some very similar effects from the seeds of the *Stramonium* infused in wine, and given to travellers by a gang of robbers ; the chief of whom confessed, that before he had ascertained the proper dose, several persons died from the violent effects of the poison. “ *Nuper Monspelii plures nefarii capti sunt, qui viatores expoliaverant propinato vino, in quo semina daturæ Stramonii contrita et infusa fuerant; fassus est autem eorum dux plures ab eo veneno interemptos esse, cum veram veneni dosim ignorabat, atque ea dosis nimia lethargum inducebat; dosis vero minor tantummodo paraphrosynem minime lethalem in bene multis, quorum aliquot ipse interrogavi, creaverat.*” *Nosolog. Method. Pars. II. p. 330.* Various stories of this sort are related by different writers, both ancient and modern. A provincial paper, even very recently, detailed a

* “ *Quando i ladri voglion rubbare alcuno, mettono di quei fiori ne i cibi, e glie li danno a mangiare ; percioche tutti coloro che ne mangiano perdono il cervello, e vengono in grandissime risa, et in gran liberalita ; concendendo di propria volonta, che ogni uno loro rubbi. Suole tale alienatione di mente durare per spatium de ventiquattro hore. La prima cosa, che si de far per curarli, si de provocare il vomito, perche buttino quanto hanno nello stomaco insieme col cibo ; dosso si deono evacuare, e far con cristeri gagliarde diversione, e cosi ancora con forti, e gagliarde fregaggioni alle gambe poco piu sopra del piede, e tal' hora anco trar loro sangue dalla vena del piede. Con questa sorte di remedii giamai alcuno di miei amalati si mori ; ma tutti gratia al Signore, sono in termine di ventiquattro hore guariti.*” *Dell' Historia dei Simplici Aromat, &c. &c. (Venetia, MDLXXXIX.)*

successful instance of this kind of roguery, and the practice was common in France a few years since. It is not very improbable that ale-brewers are acquainted with the pleasant properties of this herb, as a small dose occasions an agreeable degree of intoxication, which soon goes off without occasioning any bad consequences.

The Turks at an early period appreciated the effects of Stramonium on the brain. According to Velschius, the terms *Dotter*, *Datura*, *Tatula*, are corruptions of the Turkish *Taltan*, or *Tsaltan*, *Tatalat*, or *Tsatsalat*. Lindelstolpe mentions that the Turkish women who were unfaithful were accustomed to give it their husbands, who, in consequence, were stupified, and their intellects became disordered, whilst their wives enjoyed the embraces of their favourites without restraint. Faber, in his very curious and learned work on Strychnomania, even makes the luckless husbands witness their shame, and laugh at the joke.*

(To be continued.)

* As this treatise is very rare, an extract from the author's account of *Datura* will probably interest many readers.

“Celebre autem est maleficium apud Indos, quando nimirum sive fœminæ maritis imposituræ zelotypis, decoctum *Daturæ* illis propinant, quo fit, ut apertis oculis consortium nequitiam et turpitudinem propriam inspicientes, mente tamen turbati, cachinno tantum se ipsos deludant, ac subsannatum morsus probent, cum

Certant ingenio quisnam solertius instet
Aut vota lusum vertat in contrarium.
Dum modo commonstrant ficum prædulcibus uvis
Compressa qualem pollice efformat manus
Aut miseri frontem pulsan resonante talitro
Unaque tractos capitis evellunt pilos.

Quo etiam modo servi nequam heris pocula solent infuere, ac palantium expilare thesauros, cujusmodi historiæ ludicræ pænes authores leguntur citatos.

Hujusmodi sine dubio fuerunt potiones illæ, quibus tres nebulones Augustæ Vindel. utebantur, ad inducendum hominibus vesaniam somnumque, securius post modum omnem substantiam eorum asportantes, quibus anno 1429, condignum præmium, furca, contigit.”

To the Editors of the Medical and Physical Journal.

Remarks on the Practice in Cases of Twins.

GENTLEMEN,

I HAVE read the case of twins communicated by your Correspondent, Mr. Jones, (page 311) with much interest, and think it valuable, inasmuch as it proves, that under some circumstances the second of twin children may be safely left in the womb for an unusual length of time after the birth of the first. But I cannot admit, that this case at all supports the doctrine of superfetation; nor can I agree with him in the opinion which he wishes to draw from it, "that it would be more prudent, *if no unfavourable symptoms occur*, to leave the expulsion of the second child to nature, rather than to interfere according to the present practice."

Considered simply as a matter of prudence, I conceive, that it is generally right, not to allow the second child to be retained (unless under such unavoidable circumstances as your correspondent mentions) for many hours after the birth of the first. If it were to become an established maxim, that the accoucheur was not to interfere, when the second child is retained in the uterus, *unless unfavourable symptoms should arise*, it is to be apprehended, that his interference would sometimes be delayed, till it would be impossible to interfere with effect, should any alarming symptoms come on.

I know a gentleman in the practice of Midwifery, who among his first patients met with a case of twins. The first child having been born about an hour, he began to think that it would be necessary to accelerate the birth of the second child by art: but being unwilling to trust to his own judgment, he requested the advice of a senior practitioner. The senior gave a very decided opinion, that no assistance was necessary, and that time should be allowed for nature to expel the child. Hour after hour passed away, in waiting for the spontaneous action of the uterus, with much impatience on the part of the patient and her friends, and much anxiety on the part of the young practitioner, till the opportunity of delivering by art was gone by. On the third or fourth day after the birth of the first child, a violent hæmorrhage from the uterus took place, which could by no means be restrained, and the poor woman very soon expired, after having excluded the second child in a lifeless state. This case alone sufficiently proves the danger of leaving the management of twin cases entirely to nature, and this is not the only one attended with fatal consequences from similar delay, which I am acquainted with.

There

There is much analogy between the cases of the second of twin children retained in the uterus, and the retention of the placenta; in either case it may be sometimes safe, but it may not be always prudent, to trust to nature. The late Dr. William Hunter, at one period of his practice, always left the placenta to be expelled by the efforts of the uterus, and he taught his pupils, that it was a *diabolical* operation to introduce the hand into the uterus for the purpose of separating the placenta. His authority had great weight with other practitioners of midwifery, and it became customary to leave the placenta, not only many hours, but even many days, till at length it was expelled naturally. For some time no unfavourable case occurred; all the women in whom the placenta was left to nature did well, and the Doctor was thought to have introduced a great improvement of the art of midwifery. At last however the scene changed, several women died, some with the placenta still adhering to the uterus, and others only lived to expel the placenta in a state of the most dreadful putrefaction: so that Dr. Hunter was compelled to abandon his doctrine, and to admit the necessity of the interference of art in the management of the retained placenta. Since this period, the treatment of these cases has been conducted upon more rational principles, and perhaps admits now of very little improvement.

I have no hesitation in saying, that in the management of twin cases, we ought to be guided by similar principles. It is well to know that our interference may not always be necessary, but our judgment will probably determine us not to let slip a favourable opportunity of relieving our patient from her apprehensions, and preserving her from the chance of danger, by finishing the delivery while we have it in our power.

OBSTETRICUS.

April 8, 1811.

To the Editors of the Medical and Physical Journal.

Case of Embryulcia.

GENTLEMEN,

AS the recording of cases has not been much attended to since the time of Smellie's publication, the history of particular occurrences in the art of midwifery, comparatively with those in the other branches of medical science being few in number, and as it is indisputable that the publication of select cases tends to add to our stock of knowledge, I have transmitted to you the following instance of the operation of *embryulcia*; and I request, if

you approve of it, to see it inserted in your extensively circulated Journal.

The process of natural labour is, generally speaking, uniform; but at the same time, we well know, is always attended with pain, and oftentimes with danger. After the operation of embryulcia has been performed, in many cases of very difficult parturition, labour is also frequently retarded, and not without considerable danger to the patient, by reason of the extreme deformity of the pelvis, or disproportion of its cavity to the volume of the cranium, or the wrong position of its base; from which latter circumstance it cannot readily be extracted in the long diameter of the superior aperture of the pelvis, by the blunt hook or crotchet after this operation. Perplexing as these cases are thus rendered, this operation is still preferable to the cæsarean section, where the child is not sacrificed for the preservation of the mother, but where the mother is, in fact, devoted to the child: or even to that of the section of the symphysis pubis, where both mother and child are involved in the same impending danger.

Mary Osborne, the wife of a butcher, No. 6, Phoenix-street, near the Seven Dials, about twenty-four years of age, in her second pregnancy, was admitted as a lying-in patient at the St. Mary-le-bone General Dispensary, in November last; the child of which she was delivered in the former case was born dead, though large, without the use of instruments, and she had passed a tolerable good share of health since that period to the time of her delivery in the present case. She was taken in labour on Tuesday morning the 19th of February, with the usual symptoms accompanying its accession, and was attended by one of the midwives belonging to the charity, during the course of that day; the child still remaining very high up, and finding it impossible to deliver her, she sent for me on Wednesday morning following at nine. Being unable to attend by reason of the indisposition of part of my family, and having been up many preceding nights, I requested my superintending pupil, Mr. Andrews, a gentleman of very promising abilities, to attend for me. He remained with her the whole of that day and night, without any prospect of success. On the morning following, the 21st, he returned much about the same hour, and requested me to accompany him with instruments, observing, it was impossible the delivery could be otherwise accomplished, as the cranium was very large, and resting on the superior aperture of the pelvis, in the short diameter. Accordingly I went, and passing my examination, I made the following deductions on the state of the case: that as the cranium was very large, and completely ossified at the sutures and fontanelles, and resting as it did with the occiput on the base of the sacrum and face over the pubis; a considerable

considerable angle being formed at the base, not admitting more than two fingers, or about two inches distance from sacrum to pubis; an adventitious tumour also lining nearly one half of the vagina, which as it happened did not impede either the progress, or any of my future operations in the completion of the labour, I considered it of little importance, but from the above circumstance, and the poor woman having been for some time in very strong convulsions, which still continuing, I determined on the propriety of the operation in the first instance, rather than submit her to the long sufferance of a tedious and difficult case, to the risk of life. I formed my aperture at that part of the cranium, near the posterior fontanelle, on the left parietal bone, which I penetrated with considerable difficulty beyond the knobs of the instrument, on the opening of which I was obliged to get assistance, the consolidation of the bones being so great. I formed another aperture near the pubis with the same difficulty, and after several hours labour, and the contents evacuated, I extracted about four pieces of parietal and frontal bones, but could not fix the crotchet in the great foramen, or, in short, in any part, to get it in the proper direction of the long diameter of the pelvis. Ultimately, about three o'clock in the afternoon, I got three fingers of my right hand introduced laterally between pubis and sacrum, and through the integuments of the cranium up to its base, the middle one of which I passed into the foramen magnum occipitalis, and the other two along the clenoid processes of the ethmoid bone, and giving it a turn, succeeded in placing it in the right direction. Having yet a difficulty to overcome in getting the base of the cranium edge ways, and not being able to fix the crotchet on the internal part, I obtained possession of a portion of the integuments, and fixing the integuments on the external part of the occipital bone, passed it through the superior aperture, and after much exertion through the external orifice. I had nearly the same trouble in getting the shoulders through in the right direction, they were so very large. So far the labour was completed. Had the labour continued much longer, I must inevitably have lost my patient. The placenta was brought away easily in the usual manner, in about half an hour. A few days afterwards she was seized with peritoneal inflammation, which soon subsided by proper treatment, and is now perfectly recovered from the parturient state.

I am, Gentlemen,

Your humble Servant,

H. G. CLOUGH, M. D.

Berners-street, March 15, 1811.

To the Editors of the Medical and Physical Journal.

Case of Small-Pox subsequent to Vaccination.

GENTLEMEN,

BY inserting the following Case of Small-pox subsequent to Vaccination, in your periodical Journal, you will oblige

Your obedient Servant,

JAMES BARLOW.

About eight years ago I inoculated with the same lancet, at the same time, two children belonging to Mr. T——, of Blackburn, Lancashire, with vaccine fluid taken from a subject on the seventh day after vaccination; the disease was communicated in both instances, and went through its usual course regularly and satisfactorily, leaving two distinct scars in both the arms of each child, which are visible at the present time.

After an interval of seven years from the time of vaccination, the above-mentioned children were exposed to the contagion arising from a person labouring under the confluent Small-pox, and soon after, the subject of this case was attacked with fever and sickness, and at the usual time after seizure, an eruption appeared all over the body, which unquestionably terminated in the Small-pox. The pustules were pretty numerous and distinct, and gradually filled with matter, which dried away in eight or ten days from the time of their appearance, leaving bluish marks on the cuticle. During the progress of the eruption, the child, at my request, was visited by Mr. Coultate, a practitioner in the town, who fully concurred with me in opinion respecting the identity of the disease.

It is far from my intention, by relating this case of small-pox subsequent to vaccination, to invalidate the latter disease, for it is the only instance of failure which I have witnessed; nevertheless, it may not be altogether improper to remark, that the advocates for cow-pox appear to me to have carried their prejudices against inoculation too far, as is evident from the perusal of the works of most authors who have written on vaccination that they have drawn their conclusions in favour of the utility of cow-pox over small-pox inoculation with too much precipitation, almost leaving small-pox inoculation out of the question. Reflecting on this circumstance, I am led to believe that if the faculty had encouraged both modes of inoculation agreeably to the inclination of the parents, a much greater number of children would

would have undergone inoculation since the promulgation of the new disease by Dr. Jenner; consequently fewer individuals would have been exposed to the ravages of the casual small-pox than what appears from consulting the records of medical history as connected with vaccination; hence will appear the advantage of recommending both vaccination and inoculation, and thereby secure a greater number of children from one of the greatest evils to which the human race are so unavoidably exposed. Probably most advocates for vaccination have had in view the total extirpation of small-pox; such a plan, however extensively pursued in this country, promises but little towards producing the desired effect; and were it even possible to banish the disease from this island, we are still liable to be assailed anew from the continent with which we have free intercourse, from which will result the impossibility of totally rooting out this morbid disease from this country, unless a similar plan were at the same time attempted in every part of the known world; and it is to be doubted whether such a scheme, though successful for a period, would prove eventually permanent. I am aware that the sentiment I am about to advance, regarding the non-contagious effects of small-pox inoculation, will meet with an adverse opinion from the advocates for vaccination; nevertheless I am actuated to hazard this idea from motives of utility, and a conviction in my own mind, that infection, arising from small-pox inoculation, is a very rare occurrence; for in most instances where small-pox has been propagated from one individual to another, I have been able to trace its source to have arisen from that disease, and never from inoculation, unless the disease assumed the confluent character.

I remain, Gentlemen,
Your obedient Servant,
JAMES BARLOW.

No. 3, Little George-Street, Minorics.

To the Editors of the Medical and Physical Journal.

On the Division of Medical Practice.

GENTLEMEN,

THE observations of your Correspondent CENSOR, on the Contraction, or what he somewhat quaintly terms "the growing stricture" of the practice of the physician in London, appear to me, though I am not prepared to follow him in all his conclusions, to be peculiarly deserving of consideration at the present time,

time, when such unceasing efforts are made to disparage the talents, and to vilify the characters of the most eminent medical practitioners. With the view of counteracting the impression which has been made in certain quarters, I had already committed to paper some remarks on the same subject; and as I am anxious to see the question fully and fairly discussed, I shall feel obliged if you will afford me the opportunity of communicating them through the medium of your Journal.

Nothing can be more absurd than the outcry which has been raised against the higher orders of the profession by a set of weak and inconsiderate men, who, coveting the fee of the physician, would bring back the ancient order of things, when medical practice was yet undivided—not being able to foresee, that such a change would have the inevitable effect of annulling this mode of payment altogether. Μιμείται που και Φαρμαχοπωλης ιατρον is an old complaint; but till 'Squire Jeremiah Jenkins* arose to illumine the world, I know not that any one has had the boldness to recommend, that "*the ridiculous title of Physician should be abolished*," and supreme authority conferred upon the practising apothecary. Unfortunately, however, in his excess of zeal for the cause which he espouses, this champion of the pestle and mortar has been betrayed into certain inconsistencies, which completely frustrate all the vehemence of the attack. After, for example, asserting, that "*the apothecary of this country is qualified by education to attend at the bed-side of the sick*," and being in general better acquainted with pharmacy than the physicians of the English Universities, and not less versed in anatomy, physiology, and pathology, is often the most successful practitioner," he somehow or other admits, that "*not one half the apothecaries of London have a proper education*," and although not able to discriminate one disease from another, yet his [*i. e.* one half of the London apothecaries'] whole time is devoted to visiting patients, while the composition of the medicine is left to a careless young man, who is as ignorant of drugs as his master is of diseases, and who in the absence of his master will employ the errand-boy to compound the medicines.—More lives," he continues, "are sacrificed by the carelessness

* See a pamphlet entitled "*Observations on the present State of the Profession and Trade of Medicine, as practised by Physicians, Surgeons, Apothecaries, Chemists, Druggists, and Quacks, in the Metropolis, and throughout the country of Great Britain. By JEREMIAH JENKINS, ESQ. late Practitioner in Medicine.*" This name, there is every reason to believe, is fictitious; and the pamphlet itself is merely a reprint of papers inserted in a periodical Journal called "The Medical Spectator."

of assistants, and *ignorance of apothecaries*, than are even prolonged by medicine, much more restored to health." But he very soon forgets this confession ; for, a few pages further on, we find him observing, that " as experience makes the physician, in this respect many apothecaries *have a decided advantage over the graduates of Oxford and Cambridge,*" and that " every gentleman that enters the profession as an apothecary, should look forward to the highest honours in medicine." Notwithstanding these extraordinary merits, Jeremiah Jenkins assures his readers, that " in the present state of medicine, the apothecaries of London are really not so well paid as *the common porters* ; and it is hard indeed, if, after ten or twenty years laborious practice, he (*i. e.* the apothecaries of London) is not allowed to participate in the honours : but, as I happen not to be acquainted with any members of the worshipful company of porters, who ride about in their chariots, and indulge in all the luxuries of life, I am disposed to question the accuracy of this statement. I am not even without my suspicions that the whole performance is designed as a satire upon apothecaries ; and in this idea I have been almost confirmed by a passage, in which the author suggests a very singular and novel expedient for alleviating the hardships he so pathetically laments. " Indeed," observes 'Squire Jenkins, " if the physician was a liberal man, he would DIVIDE THE FEE WITH THE APOTHECARY ; and were the writer an apothecary in London, he would not call in a physician, if he really did not stand in need of his assistance, *unless he would agree to allow a moiety of the fee.*"

To the surgical tribe this exquisite writer is much more complaisant. " The surgeon of the present day," he remarks, " is a friend to real science, and, generally speaking, not a slavish follower of the opinions of his teacher, but in all cases dares to think for himself. The surgeons of the London hospitals and the provincial infirmaries, are men of sound judgment, accurate reasoning, and acute observation : and *when the practice of physic is united to surgery, we may expect that medicine will make some progress to improvement.*" And, in another place, he states his conviction, that, " if the surgeons who do not practise pharmacy were to prescribe draughts, pills, and bolusses, they would be more frequently called in by the apothecary than they are ; and *his opinion is, that were they more consulted, we should hear less of organic diseases and their consequences.*"

On these vague and unsubstantiated assertions I should think it superfluous to offer any comment, were it not that they lead to some considerations on which I am anxious to
(No. 147.) 3 E enlarge.

enlarge. Without entering into a discussion of the comparative qualifications of the surgeon and physician, I may be permitted to state my belief, that the advantages which result from the separation of the two branches of the art are great and important; and this opinion receives confirmation, if I mistake not, from every part of their history. As long as the physician continued to officiate in a double capacity, the improvement of surgical science was extremely slow: the moment that surgery became a distinct pursuit, and an honourable employment, it advanced with great rapidity. To what, for instance, are we to ascribe the superior eminence and skill for which the French surgeons were so deservedly celebrated, but to the early establishment of the College of St. Côme, which placed them on a level with the Medical Faculty, and gave to their art a dignity and an importance to which it had been till then a stranger? To what are we to refer the accelerated progress of surgery in this country, during the last century, but to its rescue from the disgraceful connection in which it had been held with a low mechanical trade? In those countries, on the other hand, where this emancipation has taken place only in an imperfect degree, as in Holland and Germany, the surgical art has not, till within these very few years, been cultivated with any degree of success; and that now, perhaps, more from the incitement of surrounding examples, than from a native spirit of improvement.

“The surgeons of the London hospitals and the provincial infirmaries,” however, “are men of sound judgment, accurate reasoning, and acute observation.” Undoubtedly they are so; and they will admit, that I am pleading their cause when I maintain, that it is chiefly owing to this fortunate subdivision of practice that they have arrived at their present high professional skill. Would a Bromfield, a Pott, or a Hunter, ever have so far outshone their cotemporaries, if they had not opened, as it were, for themselves, a new and isolated career. What branch of surgery, or what province of medicine, would have been improved by their labours, if they had pursued a different course; and, if, in the eagerness of emolument, they had endeavoured to grasp the whole compass of medical learning?—But, “if *surgeons* were more consulted, we should hear less of *organic* diseases.” Contemptible insinuation, the effusion of ignorance and malice!—as if *physicians* were forward in inventing disorders which have no real existence; and as if every day’s experience did not furnish fresh proofs that the pathology of the viscera is unhappily but too little understood. The authors
of

of such slanders, however, cultivate no pathology, no morbid anatomy ; physiological science is far removed from them : their chief study is detraction ; and their distinguishing qualities are impudence and presumptuousness.

In attempting to fix the line of demarkation between physic and surgery, I shall probably expose myself to the imputation of being actuated by interested motives : but I feel that I am only supporting the common rights of my brethren, and know, that I shall be seconded by every liberal and enlightened surgeon in making a stand against the factious and turbulent designs of those medicasters, who, in the sordid spirit of gain, would sacrifice all that is great and dignified in the art. I have heard surgeons themselves complain, that their province was not sufficiently circumscribed, or that its boundaries were too often transgressed ; I have even heard some of them acknowledge, that they had no prescriptive right to the treatment of certain classes of diseases which custom has now generally assigned to them : and yet, if the physician is caught tripping, a thousand tongues are ready to decry his rapaciousness. Shall the surgeon, then, be permitted quietly to invade the possessions, and to seize upon whatever share he may covet, of the rightful inheritance of the physician ? Far be it from me to deprive him of any description of practice, which he may have made his particular study, and in which he may have acquired merited fame ; but I repeat, that it is for the mutual interest of the two departments that their limits, being once determined, should be strictly adhered to. If the surgeons will evade the law, let the physicians have equal justice ; and if the former will insist on prescribing for hysterics and nervous fever, let the latter resume their authority over syphilis and scrofula. A very slight degree of reflection is sufficient to shew, that medicine presents such an extensive field for exertion, that to cultivate it with equal success in all its various parts is beyond the reach of any individual, however great his genius, however vast his powers. Accordingly, as soon as any one is observed to have paid particular attention to this or that class of complaints, or to have studied only with more than common care the structure and morbid alterations of a single organ of the body, he is sure to obtain a run of employment in that department, to the exclusion of all other practitioners whatever. At the time that Mr. Hunter was at the height of his fame, would any one have submitted their eyes to be couched by him in preference to Baron Wenzel : and at the present day, what man in his senses would confide the repairs of his teeth or his nails to the most experienced

general operator, while a dentist or corn-cutter were at hand?

In short, that division of medical practice which has now generally obtained throughout the greater part of Europe, has always appeared to me to be sanctioned by obvious expediency, and to conduce to the advantage not only of the art itself, but of all who become the objects of its care. Like the division of labour, which, in the mechanical arts, facilitates and expedites so highly the operations of industry, it enables the physician, the surgeon, and the pharmacist, to become each more expert in his respective province, and to furnish society with more skilful workmanship, than could be performed, if the three branches of the trade were, as formerly, united. The increasing labour and expensiveness of medical study, the general progress of civilization required such a division; and they are the enemies of every thing that is scientific and respectable in the profession, who would wish to see it done away.

I am, Gentlemen,

A PHYSICIAN.

London, April 12.

For the Medical and Physical Journal.

Singular Case of Carditis.

WE are indebted to ANDREW BAIRD, M. D. Inspector of Naval Hospitals, &c. &c. &c. for this extraordinary Case. It is to be regretted that the history of the symptoms and progress of the disease extends only to four days previous to the death of the patient.

EDITOR.

(CASE.)

MR. —, late Gunner of the ship Neptune, was admitted into the Royal Hospital of Plymouth, as a physician's patient, on the 23d of January, in the present year. He complained of loss of strength, cough accompanied with some expectoration, slight pain of the breast, difficulty of respiration in the recumbent position; tongue white, thirst urgent, skin hot and dry; pulse small, quick and hard; bowels open. The gentleman under whose care he had been previous to admission into the hospital, furnished no other history of the case than the following. He found the patient with symptoms of fever, violent head-ach, nausea, and frequent rigors: the only medicine given to him was an emetic.

When

When received into the hospital he was bled largely, and the bowels freely evacuated, by which the pain in the breast and difficulty of respiration were in some degree moderated; in other respects he continued nearly in the same state until the morning of the 27th, when he suddenly expired.

(*Inspectio Cadaveris.*)

On raising the sternum the pericardium was found adhering in many places, and considerably distended. In the cavity of the thorax there was a considerable quantity of dark watery blood, in which no coagulum could be discovered; and on puncturing the pericardium, about half an ounce of fluid of the same appearance issued out. An attempt was made to discover an opening in the pericardium communicating with the chest, through which this fluid might have passed, but without effect.

The dissection had proceeded thus far, when the relations of the deceased demanding the body for interment, the heart and pericardium were suddenly removed, and delivered to Mr. Hammick, senior Surgeon of the hospital, who proceeding with the inspection, states, that the pericardium (which was very thin, but in many parts of its surface loaded with fat,) bore evident marks of inflammation, it being crowded with small vessels, more particularly on its anterior part, where it had almost the appearance of mortification. The heart itself was much enlarged, was entirely enveloped in layers of dark coagulable lymph, thrown out in the form of a net-work, and was connected, by slight adhesions, to different parts of the inner surface of the pericardium. On removing the coagulable lymph, the surface of the heart, together with the large vessels, appeared excessively inflamed. About two inches and an half from the apex of the heart there was a small ulcerated spot of a brownish colour, the size of a sixpence, but superficial, and half an inch below this spot was observed a pin, which was found, upon further examination, embedded in the muscular parietes of the heart itself. This pin was of a common size, but without a head. It lay in an ulcerated groove, with the point inwards, and the end of the shaft, which was a little bent, projecting about a line beyond the external surface. It had entered the heart on the anterior surface of the obtuse margin, about two inches above the apex, opposite to the *septum cordis*, from whence it passed in an oblique direction upwards and to the right side, its point lying just within the cavity of the right ventricle.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ON the 15th September, 1809, whilst on a voyage to St. Helena, in lat. $00^{\circ} 16'$ S. long. $5^{\circ} 47'$ W. a large albicore was caught, and as we had been in the habit of eating the larger rapacious fish of the northern hemisphere with impunity, nobody had the smallest suspicion of danger, more especially when so far from land, and it was eaten the first day without evincing any poisonous effect. On the 16th several of the midshipmen dined on it, I visited them about half an hour after, and found Mr. Crowe, a young gentleman of a full plethoric habit, *ætat.* 17, complaining of severe pain and giddiness in the head, drowsiness, violent pain and uneasiness at the pit of the stomach; great heat; much thirst; itchiness and difficulty in voiding his urine; his head was much swelled; his eyes were prominent and greatly inflamed; his face was much flushed; the belly was tumid, and a florid eruption extended itself over the neck, breast, belly, and extremities; the tongue was swelled and tremulous, and a burning sensation was felt all over it; the pulse was full, strong, and greatly accelerated.

An emetic was immediately given, together with plenty of diluents; a vast quantity of green bilious matter was vomited along with fish and other contents of the stomach, which was attended with immediate relief; a large dose of *ol. ricin.* was administered after the operation of the emetic, and an anodyne was taken in the evening; he was convalesced next morning and returned to duty in a few days. Several of the other gentlemen were affected in a similar manner, but none so severely; the same mode of treatment was adopted with success.

During our stay at St. Helena I had an opportunity of witnessing the same effects from eating the fish at that Island, more particularly the mackarel, which were caught in great abundance; almost all the officers, and a number of the seamen were poisoned by them; but it is a singular fact, that they were in no instance poisonous when eaten on the day they were taken, and were invariably so if kept during the night! the symptoms were the same as Mr. Crowe's, modified in proportion to the quantity used. I in no instance perceived the pungent heat and contraction of the *æsophagus*, which Dr. Chisholm mentions as distinguishing symptoms of the disease (see his ingenious remarks, *Edinburgh Medical and Surgical Journal*, vol. 4.) and which I have observed in the West Indies, but the heat of the mouth and tongue was excessive.

Copper is generally supposed to be the basis of fish poison; there were no banks near the place where the albicore was taken, and the nearest land (St. Matheo) was distant about one hundred and thirty miles; I should imagine, that if copper was so minutely diffused throughout the fish as to produce such violent effects, the exposure to the night air would not have added to its virulence; the same objection might be made to its dependance on the stomach or gall bladder. Dr. Chisholm observes, that "a gentleman of Antigua used to escape with impunity, by extracting the gall bladder without diffusing its contents over the abdomen." (Edin. Medical and Surgical Journal, vol. 4.) A number of smaller fishes were found in the stomach of the albicore, some of them half digested; it was cut up in junks shortly after being taken, therefore it is not likely or probable that the contents of the stomach or gall bladder could have been diffused over so large a fish*, and all parts were alike poisonous; even the mode of cooking made no alteration in its effects; but supposing the contents of either had been diffused over most parts of the fish, would its acrimony have been so much increased by one night's exposure?

The fishermen at St. Helena impute the poisonous quality of the fish to the influence of the moon, but I should suppose this opinion must have originated from their taking a greater number by moonlight than at any other time, and consequently are more likely to be kept longer than when less plentiful; the same opinion prevails amongst the fisherman at Bermuda.

I am inclined to believe that there is a certain poisonous principle inherent in all kinds of fish, and that its acrimony is increased more or less by the qualities of the substance upon which fish feed; by exposure to the air; and by disease and other casualties; and I find this opinion more firmly impressed on my mind, when I consider that even on our own shores, weak and irritable habits are often greatly disordered by eating what are commonly esteemed the most wholesome fish; however, I shall leave it to those particularly versed in physiological disquisition, to determine whether this deleterious property is dependant on the loss of oxygen, the absorption of azote, or upon the presence or absence of some other principle.

D. QUARRIER, Surgeon.
Princess Charlotte.

*H. M. Ship Princess Charlotte,
Hamoaze, Oct. 25, 1810.*

* It was five feet eight inches long, and three feet ten inches in circumference, and weighed one hundred and seventy-six pounds.

To the Editors of the Medical and Physical Journal.

(With an Engraving.)

GENTLEMEN,

I HAVE taken this opportunity of communicating the following case to you, and shall be glad to have your remarks on it, and also those of such other practitioners as may have met with similar cases.

The disease comes near to that which is called the Barbadoes leg, but differs from it in some essential points.

As the history of the case alone would be imperfect, I have accompanied it with drawings, which I hope will furnish every satisfactory particular relative to it.

Gentlemen,

Yours,

M. ANDREWS, M.D.*

Madeira, June 1, 1810.

Manoel Francisco, a native of the Western Islands, 24 years of age, gave me the following history of his complaint:

He says, he is informed by his parents, that from his infancy he has had a thickening of the prepuce, and a peculiar enlargement of the scrotum which ulcerated and discharged a thin ichorous fluid; he had also a fistulous opening immediately behind the glans penis through the prepuce, by which a considerable proportion of urine passed every time he made water, but without pain.

From his infancy also, he has been subject to attacks of erysipelatous inflammation, confined to the right limb; they were so far to be considered periodical, as coming on generally when the moon was at the full, but not regularly at those periods.

These attacks commenced at the right hip, and extended down the leg to the toes; at those periods he experienced pain in the limb, particularly at the knee joint, accompanied a slight degree of fever but no swelling: they seldom lasted longer than three or four days.

About six years since, the scrotum inflamed, and suppu-

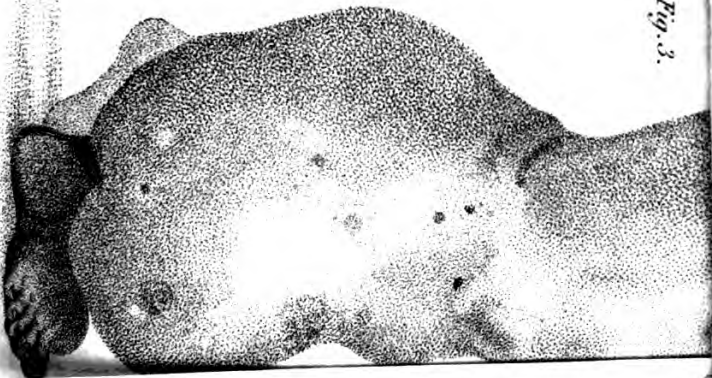
* The Editors are obliged to Dr. Adams for the communication of this history of an uncommon enlargement of the lower extremity. As Dr. Adams is particularly versant in this disease, they hope to have a further elucidation of it from his pen.

rated,

Fig. 2.



Fig. 3.



...ation of it from his pen.

rated,

rated, the abscess opened in three places, and discharged a considerable quantity of pus; these openings were healed by local applications in about four months; but the thickening of the scrotum and prepuce increased, and the latter became covered with small warty excrescences, from which occasionally oozed a thin transparent fluid.

From the time the openings in the scrotum were healed, the swelling of the limb first took place, beginning at the foot, and extending itself upwards to the hip; from which period he has been free from pain in the limb.

The great increase of size has been within the last year; several small points of ulceration began in different parts of the leg, but soon terminated in a dry scurf, not however of a furfuraceous kind.

The man's health is exceeding good, his features regular and rather handsome than otherwise, has the usual quantity of hair on the pubes, is able to bend the knee or ankle joints with perfect ease, and, excepting the additional exertion necessary to draw so extraordinary a weight, walks apparently with little inconvenience. He has for several years been at sea, and is able to go to the mast head, and discharge his duty, with as much alacrity as any other seaman.

He assured me that his parents have always been very healthy.

The spermatic chord on the left side appears to be perfect, and the testicle, though smaller than usually met with in adults, is to be distinctly felt; on the right side, the chord only is distinguishable, but not the testicle, and appears to the feel, more like a loose skein of cotton between the finger and thumb.

On questioning him relative to his desires for the female sex, he assured me that he never has felt any, nor does it appear probable that he could complete the act, as, from the thickened and elongated state of the prepuce, the glans penis cannot be discovered. The circumstances worthy of remark in this case are, that the skin of the leg does not give the appearance of disease; if you except the few spots that ulcerated, every other part appears like a distended healthy skin, and has none of the characteristic marks of the elephantiasis or Barbadoes leg. There is no enlargement of the inguinal glands or any appearance of tumour in the thigh, and from the time the limb began to increase in size, he has been perfectly free from pain in it.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING once presented myself to your notice as the friend of a gradual, mild, and practicable reformation of medical abuses, in answer to the unfounded objections which I had heard in company, and met with in reading various periodical works, I fancy myself called upon to defend the consistency and propriety of my former remarks; I shall therefore reply in few words to the rather uncourteous attack of your correspondent A. H. in the February number. My object being to obtain what I deem reasonable to all parties, in the first instance, and to provide for effectual correction by slower means, I shall endeavour to conduct myself with a temper and moderation befitting the occasion, and that distrust of myself which is due to a complex and involved question. Various hasty and crude objections having been made both to the *language and matter* of the bill, by different writers, I endeavoured to obviate *verbal criticism*, by stating that the bill was drawn out by a Barrister of leading eminence. For the *instructions* of course he cannot be answerable; these were given to him by others, and I distinctly noticed both parts of the argument in the following terms. "Should any person remain sceptical after this explanation, he will, I think, do well to state his difficulties, and have the sanction of some legal practitioner, before he ventures hastily and inconsiderately to oppose and condemn clauses, which have been framed by a Barrister of the first eminence in this department of the law, and have been unequivocally approved by some of the most respectable physicians, surgeons, apothecaries, and accoucheurs of the present age."

First.—As to the registry, we are gravely told by A. H. that it is provided that "all physicians, surgeons, &c. shall enter their names in one grand register, for which they shall pay a certain sum, and place their names upon the doors of their respective dwellings." Now my knowledge of the bill enables me to assert, that the present generation will not be called upon for a single sous; they are to be merely registered. Indeed, the term "*to enter*"* into the profession im-

* See Dr. Harrison's address to the Lincolnshire Ben. Med. Soc. 111.

plies no more. It is true that their successors, *i. e.* such as *shall not have entered* their names on the first register, will have to pay twenty pounds to be employed for medical purposes mentioned in the bill itself. The clause is not retrospective.

Secondly.—“The powers of all existing corporations shall be confirmed.” Now, really Gentlemen, I had always conceived one excellency of the bill to consist in its studiously passing over all disputed points. As far as my limited judgment enables me to decide, the distressing misunderstandings in the profession relate wholly to the bye-laws, and these are left unnoticed. To me it does not appear that the stability of the colleges will be either improved or weakened, in the first instance, by the bill itself. The Licentiates of the College of Physicians may prefer their claims with as much *force* and *cogency*, after, as before the passing of the Bill, as may the commonalty of surgeons and independent apothecaries, for the severe treatment received from their respective corporations. The surgeons and apothecaries excluded from all participation in the honors and emoluments of their respective bodies, will therefore possess a similar feeling to the physicians, and may be expected to unite their joint endeavours for the same laudable purpose. In proportion, therefore, as the list of licensed physicians, surgeons, and apothecaries, is extended in the counties and boroughs, their joint interest will be proportionally increased in the legislature; while that of the Fellows of the Royal College of Physicians, of the Examiners in the College of Surgeons, and Rulers in the Apothecaries Company, will obtain no new political strength. I firmly believe the privileged members of the corporate bodies have *anticipated* this difficulty among others, and are therefore determined to oppose themselves to every scheme of medical reform. However mild the present Bill may appear to A. H. it is objected to for its *oppressive tendency* by the colleges, and so violently, that I am given to understand, the legislative friends of the Bill have been led to *hesitate* about ushering the measure into parliament until the storm is dispersed. How it will end, for the present, is at this moment extremely doubtful. Should the colleges acquiesce, I conceive the plan will be carried into effect this session, otherwise it must be deferred to a more favourable period, when the public, and the independent faculty, shall have been induced to take a more lively concern in the improvement of medical science and practice. If the *great body of the faculty chuse to come forward in defence of their injured rights*, their united efforts will be irresistible. The Fellows of the College of Physicians, and Courts of Examiners,

and of Assistants in the College of Surgeons amount only to about 70 persons, while the remaining practitioners in England and Wales are estimated at 15,000. A contention between the two parties must, as it ought, be unfavourable to the former.

Thirdly, "That the magistrates at the quarter-sessions shall be authorized to license every ignorant pretender to medical skill who thinks fit to apply." Here, too, I am at issue with your correspondent. According to my conception of the Bill, the magistrates are only empowered to license *such as are really in practice* when the act shall be obtained, and in the way "in which they shall have formerly acted."* They cannot accept or sanction future candidates. Their authority being limited and confined to the present establishment, empirical practice must terminate with this generation. Whatever sentiments we may entertain of the matter, it cannot be denied that irregular pretenders have so many friends in the higher orders of society, that no bill would be passed by the legislature the object of which went to an immediate extinction of quacks. All that can be safely attempted is to secure the suppression of notorious offenders, and provide for the termination of the remainder with their natural lives, or at the will of the magisterial bench. Suppose the magistrate to disallow only nine in ten at their first meeting, much good will immediately result to the faculty as well as to the society at large from the diminution, because a greater number of the sick must thereafter apply to the regular fraternity, and their disorders being, I trust, better understood, would be more skilfully treated.

Fourthly, "The sale of stamped medicines shall be countenanced and legalized *in omnia secula seculorum*. Here again your correspondent and I entertain very different opinions. In my judgment the Bill neither affords additional "countenance, nor legalizes the sale of stamped medicines." They are left in statu quo. They are at present sanctioned by the legislature, and the bill merely declares that it does not "extend to prevent or hinder any person or persons from selling any drugs or medicines on the sale of which any stamp duty is by law imposed, in like manner as they might have heretofore done." It would be folly in these times to try to oppose the stream of popular prejudice, and therefore the contest is prudently avoided. The gentlemen of the Law deemed it necessary to insert the clause in question, to shew that no interference was intended with the present law relative to quack medicines, and of course their advice was admitted. Having briefly noticed, and I trust fully defended the Bill

* See Dr. Harrison's Address, p. 110.

from the four objections stated above, I have to observe that to my knowledge *it did include other clauses*, which on the recommendation of parliamentary advisers, were omitted in the printed sketch. It was by them judged most prudent to avoid whatever might *irritate the corporate bodies*, from a belief that with their approbation the bill would experience *no difficulties* in its progress through parliament. Notwithstanding this courtesy shewn to the colleges, it is proved by their obstinacy that no friendly communication can subsist between them and the partisans of the Bill. They will have no connection with *alieni homines* as they are pleased to call the friends of reform. The framers of the bill had to consider and provide for three distinct parties, whose prejudices, passions, and interests, unhappily for mankind, are openly opposed to each other, viz. the public, the corporate bodies, and independent practitioners. In some few points they have similar feelings, and may therefore be expected to unite their cordial exertions. To catch and act upon general views has always been a primary consideration with the active partisans; for they well knew that by dividing the force they should weaken the efforts, and probably frustrate the whole plan. Under this impression they limited their endeavour to *the gradual amendment of medical men, by filling up vacancies as they occur in the regular establishment* with confidential and respectable practitioners. Such is the cardinal hinge, the fundamental object of all their deliberations, and to which the machinery of the bill is made subservient. This, it is true, is slow, gradual, and to the consideration offers a distant mode of obtaining the end. It does not, therefore, accord with the zeal and impatience of sanguine tempers. With them every thing is to be attempted immediately and at once. Nothing must be left for others to achieve. Were the whole attainable and within grasp, I should indeed blame the associated faculty for substituting a timid policy to a bold enterprize. Under existing difficulties, without a *medical representative in parliament*, we must rely wholly on the justice and obvious tendency of our complaints. Nothing involved, nothing doubtful, nothing concealed, should be hazarded. By attempting too much we shall lose all: by carrying on the proceedings with deliberation, we may ultimately obtain every thing. Nor is the end so remote as many suppose. The present generation will soon pass away, and a new one be substituted. Suppose the medical establishment of England and Wales to be 15,000, under the various denominations of Physicians, Surgeons, Apothecaries, and Venders of Drugs. The aggregate lives may, I conceive, be individually worth about seven years' purchase. According to this estimate 2000 new practitioners

ners will be admitted the first year. Every succeeding year will increase the number. These having been regularly trained and fitted for their momentous duties will act towards their seniors and employers with greater propriety, than we now experience from each other. They will not be led to practise the low arts of the half informed and half instructed, who are the assassins of professional respectability, and of every thing commendable in the art. If persons can at pleasure call themselves Physicians, Surgeons, Apothecaries, and Druggists, without undergoing a competent measure of study, and without possessing a diploma or indentures of apprenticeship, surely some check is wanted to stop the supply of these dangerous fellow labourers. That such things can and are daily committed, no observer will venture to deny. Arrest this torrent *for five years only*, and I dare hazard an opinion, that the face of things will in that short time be much mended. Lord Kenyon's Bill, as it is called, has not, I think, operated more than ten years, and its effects upon the legal profession are strikingly obvious. The Attornies are already become a different race of men, though many of them commenced their career as humbly as any in medicine, viz. in the two-fold capacity of apprentice and stable-boy, or house-servant. The increased respectability of the young attorney is communicated to the senior members, and general professional character is daily improving, equally to the benefit of the Law and the Clients. Such would, I doubt not, be the pleasing result by securing a better education and preliminary examinations as provided in the bill. Let these improvements be suffered to operate till circumstances will admit of an additional bill. This again may be followed by others. Thus, by zealous co-operation and vigorous exertions, a full and complete reformation may at length be obtained. Such is the prudent, and as it appears to me, the only safe way of proceeding, in a complicated undertaking where so many interests require to be reconciled, and in an *assembly too, where we have no professional brother to defend our cause.*

H. R.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING favoured my former communications with a place in your useful Journal, I have only to request your insertion of the following.

Feeling

Feeling extremely obliged to SENEX for his information on Scarlatina, as well as his candid remarks on my paper, I should be wanting in gratitude did I not immediately comply with his request.

“ It would greatly assist us in estimating the value of Mr. Hamilton’s paper on Scarlatina, to be informed whether he has met with any fatal instances from the immediate effects of the disease ; or whether the cases he has given us should be regarded as comprising a summary of his whole experience on that head, and as warranting a conclusion, that his practice has been attended with universal success ?”

To this I answer, that during the prevalence of the disease here (about a year and half) no fatal instance occurred under my immediate care, in which the practice alluded to was early and rigidly pursued. While I announce this success, I ingenuously confess that in two or three instances the disease terminated fatally, in all of which, being either prevented by prejudice, or called too late, the above treatment was not adopted.

No fatal instance even of the remote consequences, enumerated by your correspondent SENEX, occurred to me, where the antiphlogistic regimen had been strictly followed.

I am also much obliged to T. F. R. for his observation on the same subject, and request he will give venesection a fair trial the first opportunity, when I have little doubt of his complete conviction of its success.

I speak thus warmly in favour of phlebotomy, having met with no instance in which its effects seemed the least injurious, but on the contrary, highly beneficial even at an advanced period of the disease.

I remain, Gentlemen,

With great respect,

Your’s, &c.

W. HAMILTON.

Ipswich, April 2, 1811.

For the Medical and Physical Journal.

Account of the Hospitals at Berne, in Switzerland.

(Du Journal Général de Médecine, &c.)

THERE are in Berne two hospitals, one of which is appropriated to the sick, and the other to the infirm and aged. These are handsome buildings, finely situated, and appear to be well conducted.

The hospital for diseases has been built about forty years, and is formed on the plan of those in England. It contains several

several airy wards of different sizes, and is capable of receiving 100 patients. The bedsteads are of wood, and without curtains.

Patients in this hospital are divided into two classes. One comprehends all those cases which are under the immediate management of the physician; the other takes the cases in surgery. Each class has its appropriate ward. There is also a ward set apart for children; a circumstance of much importance, on account of the frequency of strumous affections. Several attendants (*infirmières*) are attached to each ward; and a man and his wife sometimes undertake the care of the men's ward, where the most severe chirurgical cases are placed. It is common in Switzerland for men to become nurses (*garde-malades*); and even in several towns they get their living by undertaking this employment in private families.

Two surgeons and a physician are attached to this hospital. The surgeons have the appointment for life, but the physicians, of which there are four, attend alternately each three months. They receive from the government an annual salary of 1200 francs. There has lately been added to this establishment hot and cold baths, and a small ward for unusually severe cases, and particularly for epileptics, and cases of insanity so recent as to afford hopes of cure.

The *Hôpital de la Ville* is upon a much larger scale than the preceding: it is a fine building, has a court before it planted with trees and flowers, and is divided into several quarters. Two wards are set apart for the reception of sick servants belonging to families both of the town and country; and others are appropriated to the reception of beggars, &c. who receive board and lodging for one night. The aged and infirm occupy other parts of this hospital, and there is a range of apartments, let at a small price to poor citizens capable of going out to work, but who likewise receive assistance from this public charity. The magistrates and physicians visit daily, and the whole establishment is kept in excellent order.

At half a league from the town there are three other hospitals, under the care of the same physicians, but whose interior administration belongs to the canton. These are old and inconvenient, and are inferior in every respect to the preceding establishments. They are considered as hospitals of ease to the others; one receives the insane patients, the other the syphilitic, and the third is appropriated to epileptics, cancerous, and incurable cases of scrofula, &c.

The first of these contained in August, 1805, sixty incurable lunatics, each in a separate apartment: almost the whole of these had the hair and eyes black, and were melancholy.

Observations on Luminous Animals. By J. MACARTNEY, Esq.

(Phil. Trans. Part II. 1810.)

THE property which certain animals possess of emitting light is so curious and interesting, that it has attracted the attention of naturalists in all ages. It was particularly noticed by Aristotle and Pliny amongst the ancients, and the publications of the different learned societies in Europe contain numerous memoirs upon the subject. Notwithstanding the degree of regard bestowed upon the history of luminous animals, it is still very imperfect; the power of producing light appears to have been attributed to several creatures which do not possess it; some species which enjoy it in an eminent degree, have been imperfectly described or entirely unobserved; the organs which afford the light in certain animals have not been examined by dissection; and lastly, the explanations that have been given of the phænomena of animal light, are unsatisfactory, and in some instances palpably erroneous.

As this subject forms an interesting part of the history of organized beings, I have for some years availed myself of such opportunities as occurred for its investigation. Having communicated the result of some of my researches to the Right Honourable Sir Joseph Banks, he immediately offered me his assistance with that liberality, which so eminently distinguishes him as a real lover of science. I am indebted to him for an inspection of the valuable journal he kept during his voyage with Captain Cook; for permission to copy the original drawings in his possession, of those luminous animals discovered in both the voyages of Cook; and for some notes upon the luminous appearance of the sea, that were presented to him by Captain Horsburg, whose accuracy of observation is already known to this learned Society.

In the following paper, I shall first examine the grounds on which the property of shewing light has been ascribed to certain animals, that either do not possess it, or in which its existence is questionable. I shall next give an account of some luminous species, of which some have been inaccurately described, and others quite unknown. I shall endeavour to explain from my own observations, and the information communicated to me by others, many of the circumstances attending the luminous appearance of the sea. I shall then

(No. 147.)

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describe

describe the organs employed for the production of light in certain species; and lastly, I shall review the opinions which have been entertained respecting the nature and origin of animal light, and relate the experiments I have made for the purpose of elucidating this part of the subject.

The property of emitting light has been reported to belong to several fishes, more particularly the mackarel, the moon-fish (*tetraodon mola*,) the dorado, mullet, sprat, &c.

Mr. Bajon observed during the migration of the dorados, &c. that their bodies were covered with luminous points. These however proved upon examination to be minute spherical particles that adhered to the surface of these fishes; and, he adds, appeared to be precisely the same sort of points that illuminated the whole of the sea at the time. They were therefore in all probability the minute kind of medusa, which I shall have occasion to describe hereafter.

Godcheu de Riville states, in a paper sent to the Academy of Sciences at Paris, that on opening the scomber pelamis while alive, he found in different parts of its body an oil which gave out much light: but it should be observed, that Riville had a particular theory to support, for which this fact was very convenient, and that other parts of his memoir bear marks of inaccuracy. It may be added, that if the oil of fishes were usually luminous, which Riville supposed, it would be almost universally known, instead of resting on a solitary observation.

As far as I am able to determine from what I have seen, the faculty of exhibiting light during life does not belong to the class of fishes. It appears probable, that some fishes may have acquired the character of being luminous, from evolving light soon after death.

Some species of *lepas*, *murex*, and *chama*, and some starfish have been said to possess the power of shining; and the assertion has been repeated by one writer after another, but without quoting any authority.

Brugueire upon one occasion saw, as he supposed, common earth worms in a luminous state; all the hedges were filled with them; he remarked that the light resided principally in the posterior part of the body.*

Flaugergues pretended to have seen earth worms luminous in three instances; it was at each time in October; the body shone at every part, but most brilliantly at the genital organs.†

* Journal d'Histoire Naturelle, Tom. II.

† Journal de Physique, Tom. XVI.

Notwithstanding this concurrence of testimony, it is next to impossible, that animals so frequently before our eyes as the common earth worm, should be endowed with so remarkable a property, without every person having observed it. If they only enjoyed it during the season for copulation, still it could not have escaped notice, as these creatures are usually found joined together in the most frequented paths, and in the garden walks.

In different systems of natural history, the property of shining is attributed to the cancer pulex. The authorities for this opinion are Hablitzl, and Thules and Bernard. The former observed upon one occasion, a cable that was drawn up from the sea exhibit light, which upon closer inspection was perceived to be covered by these insects.* Thules and Bernard reported that they met with a number of this species of cancer on the borders of a river, entirely luminous.† I am nevertheless disposed to question the luminous property of the cancer pulex, as I have often had the animal in my possession, and never perceived it to emit any light.

The account given by Linneus of the scolopendra phosphorea, is so improbable and inconsistent, that one might be led to doubt this insect's existence, particularly as it does not appear to have been ever seen, except by Ekeberg, the Captain of an East Indiaman, from whom Linneus learnt its history.

I now proceed to the description of those luminous animals that have been discovered by the Right Honourable Sir Joseph Banks, Captain Horsburg, and myself.

On the passage from Madeira to Rio de Janeiro, the sea was observed by Sir Joseph Banks to be unusually luminous, flashing in many parts like lightning. He directed some of the water to be hauled up, in which he discovered two kinds of animals that occasioned the phenomenon; the one, a crustaceous insect which he called the cancer fulgens; the other, a large species of medusa, to which he gave the name of pellucens.

The cancer fulgens bears some resemblance to the common shrimp; it is however considerably less; the legs are furnished with numerous setæ. The light of this animal, which is very brilliant, appears to issue from every part of the body.

The medusa pellucens measures about six inches across the crown or umbella; this part is marked by a number of opaque

* Hablitzl ap. Pall. n. Nord. Beytr. 4, p. 396.

† Journal de Physique, Tome XXVIII.

lines, that pass off from the center to the circumference. The edge of the umbrella is divided into lobules, which succeed each other, one large and two small ones alternately. From within the margin of the umbrella, there are suspended a number of long cord-shaped tentacula. The central part of the animal is opaque, and furnished with four thick irregularly shaped processes, which hang down in the midst of the tentacula.

This zoophyte is the most splendid of the luminous inhabitants of the ocean. The flashes of light emitted during its contractions, are so vivid as to affect the sight of the spectator.

In the notes communicated to Sir Joseph Banks by Captain Horsburg, he remarks that the luminous state of the sea between the tropics, is generally accompanied with the appearance of a great number of marine animals of various kinds upon the surface of the water: to many of which he does not, however, attribute the property of shining. At other times, when the water which gave out light was examined, it appeared only to contain small particles of a dusky straw colour, which dissolved with the slightest touch of the finger. He likewise observes, that in Bombay, during the hot weather of May and June, he has frequently seen the edges of the sea much illuminated by minute sparkling points.

At sun-rise on April 12, 1798, in the Arabian sea, he perceived several luminous spots in the water, which conceiving to be animals, he went in the boat and caught one. It proved to be an insect somewhat resembling in appearance the wood louse, and was about one third of an inch in length. When viewed with the microscope, it seemed to be formed by sections of a thin crustaceous substance. During the time that any fluid remained in the animal, it shone brilliantly like the fire fly.

In the month of June in the same year, he picked up another luminous insect on a sandy beach, which was also covered with a thin shell, but it was a different shape, and a larger size than the animal taken in the Arabian sea.

By comparing the above description with an elegant pen and ink drawing which was made by Captain Horsburg, and accompanied his paper, I have no doubt that both these insects were monocoli; the first evidently belongs to the genus *limulus* of Muller; I shall therefore beg leave to distinguish it by the name of *limulus noctilucus*.

My pursuits, and the state of my health, having frequently led me to the coast, I have had many opportunities of making observations upon the animals which illuminate our

own seas. Of these I have discovered three species: one of which is a berce not hitherto described by authors; another agrees so nearly with the medusa hemispherica, that I conceive it to be the same, or at least a variety of that species; the third is a minute species of medusa, which I believe to be the luminous animal, so frequently seen by navigators, although it has never been distinctly examined or scribed.

I first met with these animals in the month of October 1804, at Herne Bay, a small watering place upon the northern coast of Kent. Having observed the sea to be extremely luminous for several nights, I had a considerable quantity of the water taken up. When perfectly at rest, no light was emitted, but on the slightest agitation of the vessel in which the water was contained, a brilliant scintillation was perceived, particularly towards the surface; and when the vessel was suddenly struck, a flash of light issued from the top of the water, in consequence of so many points shining at the same moment. When any of these sparkling points were removed from the water, they no longer yielded any light. They were so transparent, that in the air they appeared like globules of water. They were more minute than the head of the smallest pin. Upon the slightest touch they broke and vanished from the sight. Having strained a quantity of the luminous water, a great number of these transparent corpuscles were obtained upon the cloth, and the water which had been strained did not afterwards exhibit the least light. I then put some sea water that had been rendered particularly clear, by repeated filtrations, into a large glass, and having floated in it a fine cloth, on which I had previously collected a number of luminous points, several of them were liberated, and became distinctly visible in their natural element, by placing the glass before a piece of dark coloured paper. They were observed to have a tendency to come to the surface of the water, and after the glass was set by for some time, they were found congregated together, and when thus collected in a body, they had a dusky straw colour, although individually they were so transparent as to be perfectly invisible, except under particular circumstances. Their substance was indeed so extremely tender and delicate, that they did not become opaque in distilled vinegar or alcohol, until immersed in these liquors for a considerable time.

On examining these minute globules with the microscope, I found that they were not quite perfect spheres, but had an irregular depression on one side, which was formed of an opaque substance, that projected a little way inwards, producing

ducing such an appearance as would arise from tying the neck of a round bag, and turning it into the body.

The motions of these creatures in the water were slow and graceful, and not accompanied by any visible contraction of their bodies. After death they always subsided to the bottom of the vessel.

From the sparkling light afforded by this species, I shall distinguish it by the name of *medusa scintillans*.

The night following that, on which I discovered the preceding animal, I caught the two other luminous species. One of these I shall call the *beroe fulgens*.

This most elegant creature is of a colour changing between purple, violet, and pale blue; the body is truncated before, and pointed behind; but the form is difficult to assign, as it is varied by partial contractions, at the animal's pleasure. I have represented the two extremes of form that I have seen this creature assume: the first is somewhat that of a cucumber, which as being the one it takes when at rest, should perhaps be considered as its proper shape: the other resembles a pear, and is the figure it has in the most contracted state. The body is hollow, or forms internally an infundibular cavity, which has a wide opening before, and appears also to have a small aperture, posteriorly through which it discharges its excrement. The posterior two-thirds of the body are ornamented with eight longitudinal ciliated ribs, the processes of which are kept in such a rapid rotatory motion, while the animal is swimming, that they appear like the continual passage of a fluid along the ribs. The ciliated ribs have been described by Professor Mitchell, as arteries, in a luminous *beroe*, which I suspect was no other than the species I am now giving an account of.

When the *beroe fulgens* swam gently near the surface of the water, its whole body became occasionally illuminated in a slight degree; during its contractions, a stronger light issued from the ribs, and when a sudden shock was communicated to the water, in which several of these animals were placed, a vivid flash was thrown out. If the body were broken, the fragments continued luminous for some seconds, and being rubbed on the hand, left a light like that of phosphorus: this however, as well as every other mode of emitting light, ceased after the death of the animal.

The hemispherical species that I discovered, had a very faint purple colour. The largest that I found measured about three quarters of an inch in diameter. The margin of the umbella was undivided, and surrounded internally by a row of pale brown spots, and numerous small twisted tentacula: four opaque lines crossed in an arched manner from
the

the circumference, towards the center of the animal; an opaque irregular shaped process hung down from the middle of the umbella: when this part was examined with a lens of high powers, I discovered that it was inclosed in a sheath in which it moved, and that the extremity of the process was divided into four tentacula, covered with little cups or suckers, like those on the tentacula of the cuttle-fish.

This species of medusa bears a striking resemblance to the figures of the medusa hemispherica, published by Gronovius and Muller; indeed it differs as little from these figures, as they do from each other. Its luminous property, however, was not observed by these naturalists, which is the more extraordinary, as Muller examined it at night, and says it is so transparent, that it can only be seen with the light of a lamp. If it should be still considered as a distinct species, or as a variety of the hemispherica, I would propose to call it the medusa lucida.

In this species, the central part, and the spot round the margin, are commonly seen to shine on lifting the animal out of the water into the air, presenting the appearance of an illuminated wheel, and when it is exposed to the usual percussion of the water, the transparent parts of its body are alone luminous.

In the month of September, 1805, I again visited Herne Bay, and frequently had opportunities of witnessing the luminous appearance of the sea. I caught many of the hemispherical and minute species of medusa, but not one of the *beroe fulgens*. I observed that these luminous animals always retreated from the surface of the water, as soon as the moon rose. I found also, that exposure to the day-light took away their property of shining, which was revived by placing them for some time in a dark situation.

In that season I had two opportunities of seeing an extended illumination of the sea, produced by the above animals. The first night I saw this singular phenomenon, was extremely dark; many of the medusa scintillans, and medusa hemispherica had been observed at low water, but on the return of the tide, they had suddenly disappeared. On looking towards the sea, I was astonished to perceive a flash of light of about six yards broad extend from the shore, for apparently the distance of a mile and a half along the surface of the water. The second time that I saw this sort of light proceed from the sea, it did not take the same form, but was diffused over the surface of the waves next the shore, and was so strong, that I could for the moment distinctly see my servant, who stood at a little distance from me: he also perceived it, and called out to me at the same instant. On both
these

these occasions the flash was visible for about four or five seconds, and although I watched for a considerable time, I did not see it repeated.

A diffused luminous appearance of the sea, in some respects different from what I have seen, has been described by several navigators.

Godeheu de Riville saw the sea assume the appearance of a plain of snow on the coast of Malabar.*

Captain Horsburgh, in the notes he gave to Sir Joseph Banks, says, there is a peculiar phenomenon sometimes seen within a few degrees distance of the coast of Malabar, during the rainy monsoon, which he had an opportunity of observing. At midnight the weather was cloudy, and the sea was particularly dark, when suddenly it changed to a white flaming colour all around. This bore no resemblance to the sparkling or glowing appearance he had observed on other occasions in seas near the equator, but was a regular white colour, like milk, and did not continue more than ten minutes. A similar phenomenon, he says, is frequently seen in the Banda sea, and is very alarming to those who have never perceived or heard of such an appearance before.

This singular phenomenon appears to be explained by some observations communicated to me by Mr. Langstaff, a surgeon in the city, who formerly made several voyages. In going from New Holland to China, about half an hour after sunset, every person on board was astonished by a milky appearance of the sea: the ship seemed to be surrounded by ice covered with snow. Some of the company supposed they were in soundings, and that coral bottom gave this curious reflection, but on sounding with 70 fathoms of line no bottom was met with. A bucket of water being hauled up, Mr. Langstaff examined it in the dark, and discovered a great number of globular bodies, each about the size of a pin's head, linked together. The chains thus formed did not exceed three inches in length, and emitted a pale phosphoric light. By introducing his hand into the water, Mr. Langstaff raised upon it several chains of the luminous globules, which were separated by opening the fingers, but readily re-united on being brought again into contact, like globules of quicksilver. The globules, he says, were so transparent, that they could not be perceived when the hand was taken into the light.

This extraordinary appearance of the sea was visible for

* Mem. Etrang. de l'Acad. des Sc. Tom. 3.

two nights. As soon as the moon exerted her influence, the sea changed to its natural dark colour, and exhibited distinct glittering points, as at other times. The phenomenon, he says, had never been witnessed before by any of the company on board, although some of the crew had been two or three times round the globe.

I consider this account of Mr. Langstaff very interesting and important, as it proves that the diffused light of the sea is produced by an assemblage of minute medusæ on the surface of the water.

In June, 1806, I found the sea at Margate more richly stored with the small luminous medusæ, than I have ever seen it. A bucket of the water being set by for some time, the animals sought the surface, and kept up a continual sparkling, which must have been occasioned by the motions of individuals, as the water was perfectly at rest. A small quantity of the luminous water was put into a glass jar, and on standing some time, the medusæ collected at the top of the jar, and formed a gelatinous mass, one inch and a half thick, and of a reddish or mud colour, leaving the water underneath perfectly clear.

In order to ascertain if these animals would materially alter their size, or assume the figure of any other known species of medusa, I kept them alive for twenty-five days, by carefully changing the water in which they were placed; during which time, although they appeared as vigorous as when first taken, their form was not in the slightest degree altered, and their size but little increased. By this experiment I was confirmed in the opinion of their being a distinct species, as the young actinæ and medusæ exhibit the form of the parent in a much shorter period than the above.

In September 1806, I took at Sandgate a number of the *beroe fulgens*, but no other species: they were of various dimensions, from the full size down to that of the medusa *scintillans*: they could however be clearly distinguished from the latter species, by their figure.

Since that time, I have frequently met with the medusa *scintillans* on different parts of the coast of Sussex, at Tenby, and at Milford-haven. I have likewise seen this species in the bays of Dublin and Carlingford in Ireland.

In the month of April, last year, I caught a number of the *beroe fulgens* in the sea at Hastings; they were of various sizes, from about the half of an inch in length, to the bulk of the head of a large pin. I found many of them adhering together in the sea; some of the larger sort were covered with small ones, which fell off when the animals were

handled, and by a person unaccustomed to observe these creatures, would have been taken for a phosphoric substance. On putting a number of them into a glass, containing clear sea water, they still shewed a disposition to congregate upon the surface. I observed that when they adhered together, they shewed no contractile motion in any part of their body, which explains the cause of the pale or white colour of the diffused light of the ocean. The flashes of light which I saw come from the sea at Herne bay, were probably produced by a sudden and general effort of the medusæ to separate from each other, and descend in the water.

The medusa scintillans almost constantly exists in the different branches of Milford-haven that are called pills. I have sometimes found these animals collected in such vast numbers in those situations, that they bore a considerable proportion to the volume of the water in which they were contained; thus, from a gallon of sea water in a luminous state, I have strained above a pint of these medusæ. I have found the sea under such circumstances to yield me more support in swimming, and the water to taste more disagreeably than usual; probably the difference of density, that has been remarked at different times in the water of the sea, may be referred to this cause.

All my own observations lead me to conclude, that the medusa scintillans is the most frequent source of the light of the sea around this country, and by comparing the accounts of others with each other, and with what I have myself seen, I am persuaded that it is so likewise in other parts of the world. Many observers appear to have mistaken this species for the nereis noctiluca, which was very natural, as they were prepossessed with the idea of the frequent existence of the one, and had no knowledge of the other. Some navigators have actually described this species of medusa, without being aware of its nature. Mr. Bajon, during his voyage from France to Cayenne, collected many luminous points in the sea, which, he says, when examined by a lens, were found to be minute spheres. They disappeared in the air. Doctor Le Roy, in sailing from Naples to France, observed the sparkling appearance of the sea, which is usually produced by the medusa scintillans. By filtering the water, he separated luminous particles from it, which he preserved in spirits of wine: they were, he says, like the head of a pin, and did not at all resemble the nereis noctiluca, described by Vianelli; their colour approached a yellow brown, and their substance was extremely tender, and fragile. Notwithstanding this striking resemblance to the medusa scintillans, Le Roy, in consequence of a preconceived theory, did not suppose

pose what he saw were animals, but particles of an oily or bituminous nature.*

The minute globules seen by Mr. Langstaff in the Indian ocean were, I think, in all probability, the scintillating species of medusa; and on my shewing him some of these animals I have preserved in spirits, he entertained the same opinion.

Professor Mitchell, of New York, found the luminous appearance on the coast of America to be occasioned by minute animals, that from his description, plainly belonged to this species of medusa, notwithstanding which, he supposed them to be a number of the *nereis noctiluca*.†

The luminous animalcule, discovered by Forster off the Cape of Good Hope, in his voyage round the world, bears so strong a resemblance to the medusa scintillans, that I am much disposed to believe them the same. He describes his animalcule as being a little gelatinous globule, less than the head of a pin; transparent, but a little brownish in its colour; and of so soft a texture, that it was destroyed by the slightest touch. On being highly magnified, he perceived on one side a depression, in which there was a tube that passed into the body, and communicated with four or five intestinal sacs. The pencil drawings he made on the spot are in the possession of Sir Joseph Banks. By comparing these with the representations of the medusa scintillans, and some of this species rendered visible, by being a long time preserved in spirits, which I have laid before this learned Society, it will be found, that the only difference between Forster's animalcule, and the medusa scintillans, is in the appearance of the opaque parts, shewn by the microscope.

Many writers have ascribed the light of the sea to other causes than luminous animals. Martin supposed it to be occasioned by putrefaction: Silberschlag believed it to be phosphoric: Professor J. Mayer conjectured, that the surface of the sea imbibed light, which it afterwards discharged. Bajon and Gentil thought the light of the sea was electric, because it was excited by friction. Forster conceived that it was sometimes electric, sometimes caused from putrefaction, and at others by the presence of living animals. Fougereux de Bondarcy believed that it came sometimes from electric fires, but more frequently from the putrefaction of marine animals and plants.

* Observ. sur un lumiere produite par l'Eau de la mer. Mem. Etrang. des Sc.

† Phil. Mag. Vol. X. p. 20.

I shall not trespass on the time of the Society, to refute the above speculations; their authors have left them unsupported by either arguments or experiments, and they are inconsistent with all ascertained facts upon this subject.

The remarkable property of emitting light during life, is only met with amongst animals of the four last classes of modern naturalists, viz. MOLLUSCA, INSECTS, WORMS, and ZOOPHYTES.

The mollusca and worms contain each but a single luminous species; the *pholas dactylus* in the one, and the *nercis noctiluca* in the other.

Some species yield light, in the eight following genera of insects; *elater*, *lampyris*, *fulgora*, *pausus*, *scolopendra*, *cancer*, *lynceus*,* and *limulus*. The luminous species of the genera *lampyris*, and *fulgora*, are more numerous than is generally supposed, if we may judge from the appearance of luminous organs to be seen in dried specimens.

Amongst zoophytes we find that the genera *medusa*, *beroe*,† and *pennatula*, contain species which afford light. •

The only animals which appear to possess a distinct organization for the production of light, are the luminous species of *lampyris*, *elater*, *fulgora*, and *pausus*.

The light of the *lampyrides* is known to proceed from some of the last rings of the abdomen, which when not illuminated, are of a pale yellow colour. Upon the internal surface of these rings, there is spread a layer of a peculiar soft yellow substance, which has been compared to paste, but by examination with a lens, I found it to be organized like the common interstitial substance of the insect's body, except that it is of a closer texture, and a paler yellow colour. This substance does not entirely cover the inner surface of the rings, being more or less deficient along their edges, where it presents an irregular waving outline. I have observed in the glow worm, that it is absorbed, and its place supplied by common interstitial substance, after the season for giving light is past.

The segments of the abdomen, behind which this peculiar substance is situated, are thin and transparent, in order to expose the internal illumination.

* The animal discovered by Riville off the coast of Malabar in 1754, is certainly a testaceous insect, and appears to belong to the genus *lynceus* of Muller.

† The luminous zoophyte for which Peron has lately instituted the new genus *pyrosoma*, appears to me to be a *beroe*, and only worthy of a specific distinction.

The number of luminous rings varies in different species of lampyris, and as it would seem at different periods in the same individual.

Besides the luminous substance above described, I have discovered in the common glow worm, on the inner side of the last abdominal ring, two bodies, which to the naked eye appear more minute than the head of the smallest pin. They are lodged in two slight depressions, formed in the shell of the ring, which is at these points particularly transparent. On examining these bodies under the microscope, I found that they were sacs containing a soft yellow substance, of a more close and homogeneous texture, than that which lines the inner surface of the rings. The membrane forming the sacs, appeared to be of two layers, each of which is composed by a transparent silvery fibre, in the same manner as the internal membrane of the respiratory tubes of insects, except that in this case, the fibre passes in a spiral, instead of a circular direction. This membrane, although so delicately constructed, is so elastic as to preserve its form, after the sac is ruptured, and the contents discharged.

The light that proceeds from these sacs, is less under the controul of the insect, than that of the luminous substance spread on the rings: it is rarely ever entirely extinguished in the season that the glow worm gives light, even during the day; and when all the other rings are dark, these sacs often shine brightly.

The circumstance of there being points, which give a more permanent light than the other parts of the luminous rings of the abdomen, has been noticed before by the Comte G. de Razoumowski. He states the number of these luminous points to vary from 2 to 5.*

I must however remark, that I never saw more than two of these luminous points, which were always upon the last ring of the body, and that the figures which accompany the memoir of the Comte de Razoumowsky, bear scarcely any resemblance to the insect they are intended to represent, from which we may fairly suspect him of inaccuracy in other particulars.

As far as my observation has extended, the small sacs of luminous substances are not found in any species of lampyris, except the glow worm of this country. Thunburg mentions that the lampyris japonica has two vesicles on the tail, which afford light.

The organs for the production of light in the genus elater, are situated in the corcelet; these likewise consist of a pecu-

* Mem. de la Soc. de Lausanne, Tom. ii.

liar yellow substance, placed behind transparent parts of the shell, which suffer the natural colour of this substance to be seen through them in the day, and when illuminated, give passage to the light.

On dissecting the organs of light in the elater noctilucus, I found that there is a soft yellow substance, of an oval figure, lodged in the concavity of the yellow spots of the corcelet, which parts are particularly thin and transparent in this species. This substance is so remarkably close in its structure, that at first view it appears like an inorganic mass, but with a lens, it is readily perceived to be composed of a great number of very minute parts or lobules closely pressed together. Around these oval masses, the interstitial substance of the corcelet is arranged in a radiated manner, and the portion of the shell that immediately covers the irradiated substance, is in a certain degree transparent, but less so than that which lies over the oval masses; it is therefore probable, that the interstitial substance in this situation may be endowed with the property of shining. A fasciculus of the muscles of the corcelet arises in the interior of the oval masses of the luminous substance, but not apparently with any design, as it contributes, with the adjacent fasciculi, to move the anterior feet.

In the elater ignitus, the masses of luminous substance are extremely irregular in their figure: they are situated nearly at the posterior angles of the corcelet, and are more loose in their texture than the oval masses of the noctilucus, resembling rather in composition, the interstitial substance which surrounds these masses in that species. The shell of the corcelet is somewhat thinner, and more transparent along both sides of the margin, than at other places, but it is not, as in the noctilucus, elevated, and peculiarly clear and thin immediately, over the seat of the luminous organ; consequently, the light emitted by the elater ignitus cannot be very brilliant.

I have not been able to procure any specimen of the elater phosphorea, but from the accounts of naturalists, it appears to resemble in every respect the elater noctilucus; indeed I have great doubts of the phosphorea being a distinct species.

I have had an opportunity of examining, preserved in a moist way, two species of fulgora, the candelaria and laternaria. The light in this genus has been observed to issue from the remarkable proboscis on the fore part of the head. This part has always been described by authors as hollow or empty, which I have found to be perfectly correct; and what is more extraordinary, that the cavity communicates freely

with

with the external air, by means of a chink or narrow aperture, placed on each side of the root of the proboscis. This projection is covered internally by a membrane, between which and the horny part or shell, there appears to be interposed a pale reddish coloured soft substance, that is arranged in the candelaria in broad lines or stripes; but it is so thin, that I could not distinctly examine its structure, or absolutely determine, whether it should be considered as a substance intended to furnish the light of these insects, or the pigment upon which the colour of the proboscis depends.

The globes of the antennæ constitute the organs of light in the *pansus spherocerus*. Dr. Afzelius, who discovered the luminous property in this species, compares them to lanterns spreading a dim phosphoric light.* The rarity of the insect put it out of my power to examine its structure, but from the form and situation of its organs of light, it is most probable they are constructed like those of the *fulgoræ*.

It has been conjectured by Carradori and others, that the *lampyrides* were enabled to moderate or extinguish their light, by retracting the luminous substance under a membrane; but neither in them, or any of the other luminous insects, have I found an apparatus of this sort. The substance furnishing the light, is uniformly applied to corresponding transparent parts of the shell of the insect from whence it is not moved; indeed a membrane, if it did exist, would have but little effect in obscuring the light, and never could serve to extinguish it. The regulation of the kind and degree of the luminous appearance does not depend upon any visible mechanism, but like the production of the light itself, is accomplished by some inscrutable change in the luminous matter, which in some animals is a simple operation of organic life, and in others is subject to the will.

It is worthy of remark, that in all the dissections I have made of luminous insects, I did not find that the organs of light were better, or differently supplied with either nerves or air tubes, than the other parts of the body. The power of emitting light likewise exists in many creatures which want nerves, a circumstance strongly marking a difference between animal light, and animal electricity.

With the exception of the animals above mentioned, the exhibition of light depends upon the presence of a fluid matter.

In the *pholas dactylus*, the luminous fluid is particularly evident, and in vast quantity; it is recorded by Pliny, that this fluid is like liquid phosphorus, and renders every object

* Lin. Trans. Vol. IV.

luminous with which it comes into contact. Reaumur also found that it was diffusible in water, or any other fluid in which the animal might be immersed.*

The shining of the *scolopendra electrica*, I have always observed to be accompanied by the appearance of an effusion of a luminous fluid upon the surface of the animal, more particularly about the head, which may be received upon the hand, or other bodies brought into contact with the insect at the moment, and these exhibit a phosphoric light for a few seconds afterwards. This fluid, however, I never could discover in the form of moisture, even upon the clearest glass, although examined immediately with the most scrupulous attention by a lens: it must therefore be extremely attenuated.

The same appearance has been observed during the illumination of the *neréis noctiluca* by Fongeroux de Bondaroy.†

The animal discovered by Riville shed a blue liquor, which illuminated the water for a distance of two or three lines.‡

Spallanzani relates, that the medusa which he examined communicated the property of shining to water, milk, and other fluids, on being rubbed or squeezed in them.§

The luminous fluid is in some instances confined to particular parts of the body, and in others is diffused throughout the whole substance of the animal.

In the *scolopendra electrica*, it appears to reside immediately under the integuments. In the *lynceus* discovered by Riville, it is contained in the ovary. If I may judge from my own observations, every part of the body of the medusa is furnished with this fluid, as there is no part I have not seen illuminated under different circumstances; but Spallanzani affirms that it is only found in the large tentacula, the edges of the umbella, and the purse or central mass; which he proved, he says, by detaching these parts successively, when they shone vividly, while the rest of the body neither gave light or communicated any luminous appearance to water.||

Spallanzani discovered a mucous luminous fluid in the plumule of the *pennatula phosphorea*.¶

(To be continued.)

* Mem. de l'Acad. des. Sc. 1712.

† Mem. de l'Acad. des Sc. 1767.

‡ Mem. Etrang de l'Acad. des Sc. Tom. iii.

§ Spallanzani's Travels in the Two Sicilies, Vol. iv.

|| Memoria sopra le meduse fosforiche. Mem. della Soc. Ital. Tomo vii.

¶ Mem. della Soc. Ital. Tomo ii.

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS

IN THE

DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL
PHILOSOPHY,

Observations on the Natural History, Climate, and Diseases of Madeira, during a period of eighteen years. By William Gourlay, M.D. Fellow of the Royal College of Physicians, Edinburgh; and Physician to the Factory at Madeira. 8vo. pp. 158. Callow, 1811.

FROM the opportunities for observation and practice which the author's long residence in Madeira has procured him, we anticipated copious and valuable information respecting an island of which we hear much and know little. When chagrined with want of success, and wearied with the progressive increase of all the patients' symptoms, we propose a voyage to Madeira as a last hope, although we are no further acquainted with the country, than having some confused notion that the climate is mild.

The first part of this volume treats of the discovery, situation, aspect, and soil of the island; of its vegetable and animal productions; and of the constitution, customs, and manners of the inhabitants.

“Madeira is situated in 32 degrees, 37 minutes, 30 seconds, north latitude, and in 17 deg. 5 min. longitude, west of Greenwich, about 80 leagues N. by E. from Teneriffe, 120 leagues from Cape Cantin, on the coast of Africa, nearly 100 leagues from the Isle of Terno, and about 17 leagues S. W. from Porto Santo. It is about 120 miles in circumference, its greatest length from E. to W. being 45 miles, its greatest breadth from S. to N. 15 miles, and its least breadth 8½ miles. It is formed of lofty mountains, of hills, and fruitful vallies, and in figure makes an oblong irregular quadrangle. Its capital is Funchal, which is situated on the south side of the island at the bottom of a spacious valley, open to the sea, and surrounded by lofty mountains having all the appearance of an amphitheatre, gradually ascending to a great height. Its mountains and hills generally rise with a slow ascent, the highest points of land being about 8250 feet, or one mile and a half, above the level of the sea. The situation of Madeira, in some places, presents a most picturesque and enchanting appearance, while in others, huge perpendicular rocks, lofty precipices, prominent ridges, deep excavations, and chasms, innumerable cascades liberally supplied with rivulets, beautiful vallies, deep gullies and ravines, containing immense torrents

rents of water, afford a highly varied, sublime, and no less alarming picture of nature." P. 5—6.

This island was formerly extremely fertile, and though the soil has been exhausted by a succession of crops for nearly four hundred years, without much assistance from culture, it still nourishes a variety of vegetable productions; all sorts of tropical, as well as European fruits, will flourish on this favoured spot, and every kind of grape grows there.

Cattle, poultry, fish, &c. are very plentiful; and various species of small birds are seen. We wish that Dr. Gourlay had enabled us to detail more particulars of the natural history of Madeira; his information on this head is very scanty, although many rich and curious productions of nature are to be met with in the island.

His account of the inhabitants is interesting.

"The natives of Madeira, particularly the peasantry, (he observes) are distinguished by an olive or tawny colour of skin, and a swarthy complexion; nor is it improbable that they are of a Mulatto or Moorish origin. Indeed only a few of the first families at all resemble in complexion the fair inhabitants of northern Europe, and these are unequivocally of Portuguese extraction. The people of Madeira are, in general, athletic, well made, active, and of a middle stature. Those of the lower class, or the country people, are sober, inoffensive, economical, and capable of enduring much hard labour; in the prosecution of which they are often reduced to great emaciation of body, and debility of constitution, and thus a premature old age is brought on. The higher classes, on the contrary, are inclined to corpulence, and at the same time more disposed to indolence, attended with a moroseness of temper, and disposition to melancholy: though sober in respect to drinking, they are apt too often to indulge in eating to excess; from this circumstance, joined to the sedentary life they lead, they become subject to a variety of chronic disorders, and also early arrive at a premature old age; nor is it to be concealed that of late years the use of spirituous liquors has become common here among all ranks, which has opened a new field for the production of a long train of maladies." P. 27—28.

The women marry early, are very prolific, and soon lose the charms of youth. Their habits are adverse to health, leading very sedentary lives, seldom going out but to church, and performing many religious exercises. The younger branches of the first families are immured within convents, from which, after taking the veil, they never issue.

The climate of Madeira forms the subject of the second part of this work, and extracts from a Meteorological Register, kept during a period of sixteen years, are inserted. The temperature appears to be pretty uniform, the hottest months being rendered pleasant by a succession of land and sea breezes. The following table from Kirwan's "Temperature

ture of different latitudes," presents the average temperature of every month in the year.

"Madeira, Funchal, lat $32^{\circ} 37'$, long. 17° , mean height of the thermometer for every month, taken from an average of four years observations.

Jan.	64,18.	July,	73,45.
Feb.	64, 3.	August,	75,02.
March,	65, 8.	Sept.	75,76.
April,	65, 5.	October,	72, 5.
May,	66,53.	Nov.	69,08.
June,	69,74.	Dec.	65.

The following is the average temperature of Madeira, compared with that of London, for the whole year, as well as during the coldest and warmest months, which are January and July. Taking the average temperature of London at 1000, the heat of Madeira is 1319. In January 0559, July 1128."

The third part treats of the diseases of Madeira; these the author arranges under the heads endemic and epidemic.

The first division comprehends various affections of the skin, complaints of the chest, rheumatism, colic, tetanus, dropsy, &c. Dr. Gourlay begins with describing elephantiasis, or Arabian leprosy, which is very common among the lower classes of people in Madeira. The disease is hereditary, and may be communicated from one person to another, although it does not appear to be of a very contagious nature.

"It generally shews itself by tubercles upon the face and upper extremities, and sometimes upon the trunk of the body and penis. Ill-conditioned ulcers of the legs also take place, in some instances, attended with acute pain; large indolent glandular tumours occupy the upper and anterior part of the thigh. The fingers become contracted, and the feet hard and swelled. The fingers also, and toes, are occasionally destroyed by ulceration; the same disposition to irregular tumours and ulceration attacks the throat.

"In those affected by the disease, previous to the age of puberty, the usual signs that mark this period of life do not appear. The beard, the usual sign of virility, is wanting; the hair is deficient on the pubis and scrotum, as well as on the axilla and breast. No desire prevails for the venereal passion: the voice preserves its puerile tone, and does not acquire the real strength and masculine expression. Even the testicles, not called upon for the exercise of their functions, gradually waste." P. 68—9.

Young females affected with this disease experience no increase or fulness of the breasts, no growth of the external parts of generation, no appearance of the menses, have no hair on the pubis or axilla, and feel no disposition to venery.

"Even where the disease makes its first attack, at a much later period, the marks of sexual maturity, which are already established, gradually

dually disappear, and are attended with impotence or very impaired powers of generation.

These circumstances denote that the elephantiasis of Madeira differs from the same complaint in other countries: for almost every writer on the subject has described the unhappy victims of this disease, raging with insatiable irresistible desire for venery; *rabiosa inest libido*. In support of the contagious nature of this disease, Dr. Gourlay states, that

“About thirty years ago, in the village Ponta de Sol, fourteen miles distant from Funchal, the capital of the island, (Madeira) it raged with all the violence of an infectious malady, passing from one family to another, and threatening to extend its ravages into the neighbouring country, till the governor took this (the) prudent and wise step of separating the healthy from the diseased, and preventing their interference with each other.” 72.

Some cases also under the author's immediate notice are cited in favour of this opinion. Where it affects people who have previously been healthy, the mode of attack resembles that which distinguishes contagious diseases. “It is ushered in with rigors and other symptoms of pyrexia, while at the same time there is no evidence of the presence of any other existing morbid cause.” We have hitherto regarded this disorder as an incurable one, Dr. Gourlay however has occasionally succeeded in affording relief. In the incipient state, he has in a few instances suspended the progress of the disease by the use of calomel. In other cases he found great benefit follow the internal administration of the *lacerta (agilis)* or common lizard.

“As a medicine, this reptile acts as a powerful stimulant on the living solid, opening the several excretions, and producing large evacuations, particularly by the skin and urine, which are at the same time not attended with any debilitating effect. By this mode of operation, it will be found to have the certain influence of arresting the progress of the worst symptoms of elephantiasis, if not the whole, and in many cases to have surprisingly restored parts, which for years had been morbidly enlarged, to their natural size, and even sensibility; though for that period they had continued in a torpid state. Its operation also seems to vary somewhat in different cases; at times the different secretions seem increased by it all at once, viz. the perspiration, urine, and saliva; at other times, merely an increase of saliva takes place.” P. 74.

Diarrhœa sometimes followed the use of this remedy, and it occasionally produced vertigo. Some successful cases are subjoined from which we are convinced that this reptile possesses considerable efficacy in the cure of elephantiasis: It has also been administered with advantage, in herpes, chronic rheumatism, dropsy, and scrofula.

As most of the diseases in Madeira are similar to those of this country, we shall confine our extracts to such as present unusual appearances,

appearances, or have some peculiar claim on our attention. Dr. Gourlay mentions an inveterate species of psora, termed by the natives, ouçao. It is well described by Dr. Adams in his work on morbid poisons. This affection usually attacks children at an early age, and is evidently occasioned by small animalcules piercing the skin. They possess the power of leaping like fleas; are somewhat larger than cheese mites, and belong to the genus *acarus* (*siro exulcerans*). Linn.

"The first appearance of the disease is in the form of a pellucid watery vesicle, attended with intolerable itching, and which, on being rubbed, breaks and discharges a thin watery fluid. A crust or scab is afterwards formed; from under which there is again emitted an acid ichorous matter. This matter corrodes the neighbouring parts, and tends to extend the disease, which is further assisted by the ova of the original infectious animalcules, and the locomotive power they are ascertained to possess."

The cure is most frequently performed by means of extraction with a pin or needle; but the complaint is easily removed by the application of mercurial and sulphur ointments.

"From a similar cause of animalcular irritation is derived another cutaneous malady, known by the name of alfora, from the small winged insect which occasions it. This insect is about the size of the one described, as producing the itch, and the affection it entails is most troublesome during harvest, and immediately after it." P. 85.

From cutaneous affections, our author proceeds to diseases of the chest, which in spite of its boasted salubrity are common in Madeira; the natives even are often affected with pulmonary consumption.

"Persons of all ages, and of both sexes, fall victims to it; nay, whole families have at times been suddenly swept away by it.

"The species of the disease that produces the ravages here, is that connected with scrofula, a disorder equally common here as in the colder regions of Europe: it uniformly at first assumes the appearance of a mild catarrh, but afterwards, when the real pulmonary symptoms commence, they prove more violent and rapid in their progress, than in the phthisis of northern climates."

An idea prevails in Madeira that this disease is of a contagious nature, and on that account the inhabitants of Funchal will hardly under any circumstances receive a phthisical patient into their houses.

The proper period for consumptive persons to leave England is the month of October, the fittest season in Madeira being from November to the beginning of June. In the treatment of phthisis, Dr. Gourlay experienced the most success from a cautious administration of digitalis. In the incipient stages, he generally effected a perfect cure; in the more advanced stages
great

great relief, and in some instances even complete restoration to health, by the use of this remedy.

In the second division, epidemics, the author classes those diseases which arise from a specific contagion. Fever is frequent in the island, and it usually assumes the typhoid character. Dr. G. attributes the fatality of this complaint to bad practice, and especially to bleeding. This is often the case in the country; but in towns, under regular practitioners, the termination is generally favourable.

In 1806, scarlatina was epidemic the first time in Madeira, and attended with a great fatality.

"The characteristic symptoms which marked its attack, were inflammation of the tonsils, and mucous membrane of the fauces, attended with extensive and repeated sloughing of these parts; eruption of the skin, varied in its appearance, form and extent, in different cases, and great debility of the whole of the functions. The affection of the throat, however, was by no means a constant symptom, and the attack was as frequently without it as with it.

"At its commencement, so contagious was the nature of this epidemic to appearance, as to be considered as the epidemic or contagious catarrh combined with quinsy, and in other cases, as measles; and indeed from the very variable mode of its attack, though its nature soon ceased to be in the least doubtful to an experienced practitioner, still it could not fail, from its incipient appearance, to deceive one who looked only to the regular and usual form of scarlatina. In many cases, for three or four days, delirium was the only symptom of the disease, attended with anxiety of the precordia, dyspnoea, palpitation of the heart, cough, bilious vomitings, cedematous swellings of different parts of the body, and, in proportion to the violence of these symptoms, suspension also of sense and motion. In other instances, the malady was ushered in by violent hæmorrhage from the nose and mouth, attended with a quick feeble pulse, and occasionally frequent fits of syncope." P. 111. 112.

It chiefly affected children: we would willingly transcribe this author's very minute account of the symptoms, in the enumeration of which, he has evinced great accuracy of observation; but we have already rendered this article long. The treatment pursued seems to have been judicious, and we were gratified to find that in the cases where cold affusion was freely administered, considerable relief was afforded.

In the autumn, dysentery generally prevails, and is highly contagious. Small-pox was formerly very destructive in this island, but the practice of inoculation has now checked the mortality; and vaccination promises to be successful in further diminishing it. Dr. Gourlay states, that he has not failed in a single instance in producing the disease, and that none of his patients, though afterwards subjected to the contagion of small-pox, have been affected by it.

Measles are frequent among the children in Madeira; the inflammatory

inflammatory stage is very short, and soon succeeded by a degree of typhoid debility, from which the chief danger arises. The submaxillary glands often swell and prove troublesome. Hooping-cough is epidemic, and the paroxysms are so violent as frequently to terminate in apoplexy. Emetics administered in the commencement of the complaint produce the most benefit.

An appendix contains a short account of the mineral waters in the Portuguese Island of St. Miguel.

Upon the whole we have been gratified by the perusal of this little volume; should a second edition be called for, we hope the author will endeavour to make the department allotted to the natural history of the island more complete. We cannot avoid also remarking, that besides a full page of errata enumerated, various other errors, both of the press and of the editor, have escaped correction.

Remarks on the Nomenclature of the New London Pharmacopœia. Read before the Liverpool Medical Society. By JOHN BOSTOCK, M. D. &c. Liverpool, 1810. 8vo. pp. 48.

No experiment, perhaps, was ever made more fatal to the high pretensions of corporate bodies in the republic of learning than the late attempts to reform the Pharmacopœias of the three British Colleges of medicine, and justifies the observation with which the author of the pamphlet now under our consideration concludes his preface, that "A royal charter, or an act of parliament, may bestow honours and emoluments, but they are unable to confer knowledge and learning." The failure of these attempts is the more to be regretted, as had they been conducted with liberality, and a real desire for the advancement of science, with which it might have been naturally expected, a priori, these dignified bodies would have regarded the subject, there can be little doubt that medical science, and consequently the community in general, would have drawn the most important benefits from the change. If we may be allowed to judge from the character of the production, we have little hesitation in saying, that a degrading jealousy of each other appears to have influenced all the Colleges; and instead of coalescing to form their Pharmacopœias on a uniform plan, a circumstance the most desirable for the improvement of medical practice throughout the empire, the London College, in particular, appears to have studiously avoided every thing which might have assimilated its Pharmacopœia with those of the Edinburgh and Dublin Colleges, from a truly laudable apprehension, no doubt, of being regarded as copyists.

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The plan of reforming pharmaceutical language, by employing that of natural history and chemistry, originated with the Edinburgh College. We cannot, certainly, say what would have been the effect, had a communication of the plan been made by that body to the two other colleges, prior to its final adoption; but had it even been rejected by them, the projectors of the reform would have had the pleasing satisfaction of reflecting, that the evils which are now likely to result from the want of uniformity in the three British Pharmacopœias, were in no degree attributable to them. Of the three colleges, however, the London is certainly the most reprehensible, inasmuch as past experience when disregarded must magnify the errors of those who ought to have profited by it: for its production, were we now to go into a comparative criticism of its merits, is more objectionable in the structure of its language, and less scientific in every respect, than either the Edinburgh or the Dublin volumes. But as that is not our present object, we shall now confine ourselves to the examination of the production, the opening of which gave rise to these preliminary reflections.

Doctor Bostock commences by observing, that in his former "*Remarks on Pharmaceutical Nomenclature*,"* he "attempted to shew, that the advantage to be gained by this assimilation of terms to the language of natural history and chemistry, was more imaginary than real, while the evils to be apprehended from the change, were numerous and considerable." An opinion, in which this second attempt at reform has only tended to confirm him. We must allow his conclusion, although we deny his premises; for although we are clearly of opinion that the assimilation of the language of medical prescription with that of natural history and chemistry is not only attainable to the extent required for practice, but would be highly beneficial; yet, we must admit that the production of the London College has in no degree tended to prove this point. It appears to us that our author has taken too confined a view of the subject, and after minutely examining all the parts in detail, has not reviewed it as a whole by which he might have been led to allow the practicability of the attempt: for it can scarcely be denied, that it would be wrong to condemn the whole of an edifice as bad, because some of the pillars are injudiciously arranged, and some false orders introduced. Even with all its errors we consider the language of the present London Pharmacopœia superior to that of its precursor, the *Nomenclature of*

* Published by Longman and Co. 1807.

which was yet undoubtedly more correct than that of the edition which it followed. Indeed, it is probable that the same arguments now employed against any alteration of pharmaceutical language, have been applied to all the changes that have taken place since the publication of the first London Pharmacopœia; and had they been successfully used, we should now be using such terms as *argentum vivum*, *aquila alba*, *vitriolum cœruleum*, *oleum antimonii corrosivum*, *mercurius vitæ*, *sal ephalybis*, *terra foliata tartari*, *arcantum duplicatum*, *naphtha vitrioli*; and many others equally barbarous, considering the present advanced stage of science. As an aid to memory, the adoption of the language of modern chemistry, to express the chemical preparations used as remedies, is of itself of much importance; and its want of permanency cannot now be fairly adduced as an argument against it; for the language of pharmacy has at certain distances of time, not very far apart from each other, been varied, and approximating to that assimilation with chemical nomenclature, which has at length been endeavoured, however unsuccessfully, to be accomplished. Nor can we fairly presume to say, that "it will produce little change in the great bulk of medical prescriptions;" as this observation can apply only to old practitioners, who are unacquainted with the new language of chemistry; the change, imperfect as it is, being more congenial to the habits of speech, and the mode of writing of the younger practitioners, and consequently very likely to be readily adopted by them. It is against the ignorance, illiberality, and carelessness of the reformers, not the propriety of the reform, that criticism can successfully aim her shafts, and in this we have every inclination to bear ample testimony to the discrimination and ingenuity with which Dr. Bostock has pointed them.

One of the strongest objections against the introduction of scientific terms, we must admit, is its failure in "producing uniformity in the language of medicine;" and our author has brought forward ample proof of this in the following passage:

"The fact is, that out of between 220 and 230 articles of the *Materia Medica*, the greatest part of which are the same in both;" (the London and the Edinburgh Pharmacopœias) "there are but 27 to which exactly the same denomination is applied by the two Colleges. Of these 20 retain the names which they had in the former edition of the Pharmacopœia, and one, *carbo ligni*, is now for the first time introduced into the *Materia Medica*: so that it is but to six articles that the supposed advantage of uniformity, as a consequence of the introduction of scientific terms, can be attached." (Page 4.)

The Doctor has successfully and properly exposed the futile defence set up by the College, through its agent Dr. Powell, for the adoption of the changes introduced; and were no better reasons to be found, this product of its genius and learning would justly deserve to be neglected; as indeed it would soon of itself naturally fall to the ground, like a soap-bubble blown for the gratification and whim of infantile fancy. But it is fortunate that this defence is unnecessary for the support of the general system, which we are of opinion has sufficient to recommend it, notwithstanding the badness of the execution of some of its parts.

The vague term *abietis resina*, is justly objected to as a word which "means any resinous substance obtained from the spruce fir;" and as being therefore "indeterminate, inaccurate, and only imperfectly scientific:" while *thus*, the former name "was short and distinct, accurately defined and generally understood, sanctioned by use, and conveying no false idea of the nature of the substance." (P. 8.) *Acaciæ gummi* is also with propriety objected to as a substitute for the well-known term of gum Arabic; first, on account of the uncertainty of the botanical arrangement which has styled the genus in which the plant that is supposed to yield it is now placed: secondly, from the reason there is for supposing that it is the produce of several species: and lastly, with most justice, in our opinion, on account of "the gross, and even dangerous error, of using the generic term alone."

"In the present instance," adds the Doctor, as an illustration of his remark, "the genus *Acacia*, as constituted by Willdenow, contains no less than 102 species, to each of which the generic term equally applies; so that, were we not previously informed by some other means, what was the article referred to, there is nothing in the name which could enable us to ascertain which of the 102 plants was the one in question." (P. 12.)

A list of sixty-nine articles of the *Materia Medica* are subjoined in a note, one third of which is clearly liable to the same objection; an error which is the more unpardonable, as some of the members of the Royal College, and we believe one if not two of these were in the Committee for altering the *Pharmacopœia*, lay claim, and not without valid pretensions, to a high rank in botanical science.

It would be impossible for us to follow the Doctor in each of his remarks, without inserting the whole of the pamphlet into our review; we shall, therefore, notice those only which are remarkable, or to the propriety of which we must object; and point out the omissions, which, notwithstanding the minuteness of the criticism, have escaped our author's observation. Although the names, *acutum*, *ærugo*, *cerussa*,
and

and such like, are not objected to as improper, inasmuch as they are sanctioned by use ; and the components of the substances they are meant to express are either so multifarious, or so insufficiently ascertained, that they could not be named so as to express their composition correctly, or without a long periphrasis, according to modern Nomenclature ; yet they are objected to on account of their want of uniformity with the more scientific appellations, and their deviation from the principles on which the College attempted the change. This objection, however, has more plausibility than justice ; and does not so much attach to the framers of the Pharmacopœia, as to the insufficiency of modern chemical Nomenclature ; of which, however, all that can be said only shews that it is not yet brought to a state of absolute perfection. No objections could have been justly advanced against the language of the Pharmacopœia, had it in all the instances of error erred only in this degree ; and we should not condemn the whole of a structure because some of its parts are imperfect. The transposition of the specific names of the salts, as *ammoniacæ murias*, instead of *urias ammoniacæ*, &c. &c. is justly objected to, as shewing that instead of promoting uniformity, “ the framers of the new Nomenclature have seemed rather to seek for opportunities of differing from their contemporaries.” (P. 16.) The same force, however, cannot be allowed to the objection which our author states against the retention of the old name for gum ammoniac ; for although Wildenow does not doubt that this substance is obtained from the heracleum *gummiferum*, a plant which he raised from seeds found in the gum ammoniac of the shops, yet he has not succeeded in obtaining any gum-resin from the plants he reared ; and the little reliance which can be put on the unscientific description, and engraving, of the plant named *ferhaale*, from which the Barbary ammoniacum is obtained, given by Mr. Jackson in his History of Morocco, would not authorize the College in adopting the opinion of even so respectable a naturalist as Wildenow, till the identity of the plants be more accurately established. The very puerile alterations in the orthography of the words columba and gambogia, which are now spelt calumba and cambogia, are justly ridiculed ; but our author is wrong in objecting to the part of the capsicum plant which is used, being styled bacca, and stating, that “ it is not the berry, but the capsule that is employed in medicine.” If this passage means to imply that the fruit of the capsicum is improperly styled a berry, the College may urge the authority of Gærtner, the highest on this subject, who styles it, in his description, “ *Bacca cava, multiformis* :” but even if it

means, as we suppose to be the case, that the outside of the berry or the covering part only of the fruit being used, the word berry, which designates the whole of the fruit, should not be employed, the term *capsule* would not be correct in this case, as it properly signifies a particular kind of fruit. The truth is, the part medically employed is the *pericarp*, and hence it should have stood in the *Pharmacopœia capsici annui pericarpium*. We cannot defend the College for the adoption of the term *cetaceum*, instead of *spermaceti*; but it may, perhaps, be allowed the new name does not convey an erroneous idea of the substance, which was the case with the old term, although sanctioned by long usage.

Doctor Bostock points out as deserving of particular notice, the frequent alteration which the names of the three kinds of cinchona have experienced; and properly observes that the use of the specific names of the plants, instead of the old titles of the barks, "are a mere exercise of the memory, while the old ones could scarcely be either mistaken or forgotten." The objection to this mode of naming the bark is, in our opinion, not pushed sufficiently far; for there seems to be a misunderstanding between Zea, on whose authority the change is made, and the College, at least if we can refer to the translation of Dr. Powell, its accredited translator. In the translation, the yellow bark of the shops is regarded as the heart-leaved cinchona bark, *cinchonæ cordifolia cortex*, whereas Zea states the *cordifolia* to be the species which yields the quina amarilla of the Spaniards, which is the common pale or officinal bark; while the *cancifolia*, which Doctor Powell regards as yielding the pale bark, yields, according to Zea, the quina naranjada of the Spaniards, the calisaga of commerce, which is the yellow or orange bark of the shops. The improper application of general terms to imply particular substances, as *cornua*, to express the horns of the stag; *ovum*, the hen's egg; *sebum*, mutton suet; and *testæ*, oyster shells; is very properly condemned. The objection to *saccharum*, which is used to express the sugar prepared from the *arundo saccharifera*, because it "is the name of a class of vegetable products," is completely hypercritical; and the same may be said of our author's objection to the term, *camphor*. An unintentional mistake occurs in stating the impropriety of the appellation *lytta*. After stating the change made by the Edinburgh College in discarding the title *cantharis*, and adopting that of *meloe vesicatorius*; "this," says the Doctor, "however, from the change of system, or from new discoveries in natural history, is destined to give way to the still more novel appellation of *lytta yesicatoria*; of which, although there are twenty-nine species,

species, and the specific name here has been improperly added, for *lytta vesicatoria* is but one species; and had it so stood in the Pharmacopœia instead of the simple generic term, *lytta*, there could have been no reasonable objection made to the change, nor would the name have been as it now is, "imperfect and indeterminate." We cannot allow that the same objections which are correctly stated to the chemical synonymes of verdigris, and white lead, apply to litharge. In our opinion the name *plumbi oxydum semivitreum*, adopted by the College, is perfectly correct; for the small portion of carbonic acid it contains cannot be regarded as sufficiently essential to constitute it a subcarbonate. The number of instances, however, in which the name adopted by the college is completely at variance with the synonyme in the opposite column is very remarkable; our author has properly pointed out all of these; and in particular considers "the change of the old word borax to boras-sodæ, is highly censurable, as not only being an incorrect expression, which seems to have been designedly adopted, but as properly belonging to a different substance." P. 21. In this and similar instances it is almost impossible to conceive the motives of the College; for the synonyme is generally a severe criticism on the name of the substance: thus, in the present case, in the first column of the list of *Materia Medica* is placed "*Sodæ Boras*," while opposite, in the second column, we find the proper name of the salt, "*subboras sodæ*." We think there is some reason for the retention of the term *spiritus rectificatus*, to which Dr. Bostock objects, the term *alcohol* being employed to designate a purer spirit, of a much less specific gravity; and as there is still a weaker spirit than the common rectified spirit in use, the adjunct *dilutus* would not have been sufficient to have pointed out the distinction between these; while by the terms used by the College, the three degrees of strength are fully specified. As gum arabic has been rejected, the term *tragacantha* can scarcely be admitted as a proper appellation for the gum of the *astragalus vera*; and therefore, our author's objection to it is perfectly valid.

The remarks on the second part of the Pharmacopœia are equally just as those we have already noticed; and many of them expose a degree of neglect, for it cannot be termed ignorance, of the College, which is extremely culpable. But as we before observed, were we to follow the Doctor step by step, we should be obliged to embody the whole of the pamphlet in our critique; we shall, therefore, only enumerate those titles, which are considered as objectionable. *Ammoniac carbonas*, *liquor ammoniac carbonatis*, *soda tartarizata*, *sulphuretum*

sulphuretum antimonii præcipitatum, antimonium tartarizatum, pulvis antimonialis, argenti nitras? This preparation Dr. Bostock regards as a subnitrate, and, therefore, affirms that it should have been named *subnitras argenti*: but his opinion in this instance may be questioned, for the silver as held in solution in the nitric acid, in the preparation of the London College, is evidently an oxynitrate; it is also in the same state in the salt obtained by evaporating the solution; and, although, by the subsequent melting a part of the acid be expelled, yet, it is very probable that the product is not reduced to the state of a subnitrate. *Liquor arsenicalis, cuprum ammoniatum, ferrum ammoniatum, ferri carbonas, ferrum tartarizatum, liquor ferri alkalini, tinctura ferri muriati, vinum ferri, hydrargyri oxymurias, hydrargyri submurias, hydrargyrus cum creta, hydrargyri oxydum cinereum, hydrargyrus præcipitatus albus, liquor aluminis compositus, decoctum aloes compositum, infusum catechu, infusum sennæ, tinctura camphoræ composita, extractum colocynthidis compositum, mistura ferri composita.* Notwithstanding the extent of the above list, added to the objectionable names pointed out by Doctor Bostock in the first part, there are still others which he has overlooked, and which we shall therefore now mention. The part of the bulbous plants employed is invariably denominated *radix* instead of *bulbus*; the fruit of *momordica elaterium* is improperly termed *pomum*, instead of *pepo*; to *acidum aceticum*, the word *dilutum* should have been added, as it is meant to imply distilled vinegar; *magnesiae carbonas* should be *subcarbonas magnesiæ*; *decoctum cydoniæ* should have been *decoctum cydoniæ seminum*; and *decoctum lichenis* should have added to it the specific appellation of the plant *islandicus*, the lichen *rocella* being now admitted as an article of the *Materia Medica* by the Dublin College. Doctor Bostock objects to the term *oxydum antimonii*, not so much on account of the name, but on account of its being improperly given as a synonyme of *antimonium calcinatum, antimonium vitrificatum*, and *crocus antimonii*: from our experiments we have no hesitation in saying that, if the preparation which is perfectly useless be allowed to remain, it should be named *submurias antimonii*.

Upon the whole, although we do not agree with our ingenious author in deprecating the principle of the change of Nomenclature altogether, yet, we cannot withhold from him the tribute of applause for his acumen, and the propriety of his remarks on the execution of the production of the London College. We regret most deeply the circumstances which have produced these errors; particularly at the present

sent moment ; for, when the cry against irregulars is sounded so loudly over the island, we should at least expect to find, if not infallibility, a degree of correctness and knowledge commensurate with the high pretension of the regularly initiated, the *perhonorifici mystagogi* of the Warwick Lane Temple.

Edinburgh Med. and Surg. Jour.

(Concluded from Page 360.)

ART. VI. *Description of a very singular and complicated Case of Malconformation of the Genital Organs, Rectum, &c.* By T. CONQUEST, Surgeon.

“ THE whole body of the child was emaciated, and great deficiency of vigour was perceptible ; the lower extremities were considerably distorted, the feet being turned completely inwards. On the second and third lumbar vertebræ, there was a *spina-bifida* of the size of a common orange.

“ The *umbilicus* was lower than usual, and on the right side ; it did not appear to perforate the *linea alba* in its natural place, but came out nearer the rectus muscle ; there was a considerable elevation, both on the upper and lower part of its perforation.

“ The *anus*, in its natural situation, was imperforate, nor was any appearance of the termination of the rectum perceptible, when exertions were made, by urging or voiding the urine. About midway between the *umbilicus* and *symphysis pubis*, the rectum protruded about three inches from the abdomen, and was covered by the common integuments, which were regularly continued on from the abdomen, and reflected over its whole length. The peristaltic motion was constantly going on, and the meconium were (was) voided through it. It was much thicker than the rectum of an adult, supposing it to have the addition of a cuticular covering. It appeared to be surrounded with a strong muscle, which, when the internal or villous coat suffered the least attrition, contracted with an unusual degree of force, amounting to a temporary obliteration of the canal. The sphincter was perfect at its termination, where it was for a small distance inverted. The inversion of its lower part rendered the internal coat so distinct, as to admit of being minutely examined. The villous coat was extremely red, vascular, and tinged with blood of a florid hue. It was so extremely sensible, that when slightly irritated with a probe, a determination of blood took place to the part, and the peristaltic action increased almost to an erection ; it was studded with innumerable and very large glands, which secreted a large quantity of mucus.

“ The genital organs presented an appearance equally singular with that of the parts already described. Their structure was so complicated, it was almost impossible to form any correct opinion of the

the sex; neither predominated, and there appeared an admixture of both. That which would at first sight have been pronounced to be a scrotum, was considerably larger than one of the common size. It extended above the pubis, and was smooth on its surface, without the least appearance of raphe, nor was any perinæum to be distinguished. Nothing which bore the least resemblance to testis could be discovered, the scrotum or tumour was filled with cellular substance, of a spongy texture. On the most minute examination, it evidently was not an adhesion of the opposite sides of the labiæ. On the upper part of this tumour was a small prominence, perforated with a fissure, so small as to render the introduction of a probe impracticable: this was the orifice of the urethra, and bore a near resemblance to the meatus urinarius; it had no appearance of prepuce, and was not in any respect similar to the penis. The urethra could be traced through the soft cellular substance, with which the tumour was filled as far as the symphysis pubis; it was unusually hard and felt like a curved probe. There was a constant involuntary discharge of urine, which exuded from the fissure *guttatim*, except on any violent exertion of the child, when it flowed in an excessively fine stream or jet. In cases which have been described in some respects similar to this, a separation of the bones of the pubis has been mentioned; but in this case there was no such appearance."

ART. VII. *Sketch of a Plan for improving the Medical Department of the Navy.*

EARNEST as we have always been in recommending an assiduous attention to the collecting of facts, which we have considered as materials hereafter to be used in the construction of a true system of medicine, and as the foundation of a practice that may, possibly, at some future period, overcome diseases now intractable; we cannot but give our approbation to the comprehensive views of this anonymous writer. At the same time we must observe, that they require a too constant attention ever to be generally executed, except under the direct command of the government.

After some preliminary observations following a very appropriate motto from Horace,

"Tu, dum tua navis in alto est,
Hoc age."

"Hoc opus, hoc studium parvi properemus et ampli,
Si patriæ volumus, si nobis vivere cari."

The writer proceeds to state the outline of his plan.

"I would have him (the naval surgeon) consider the body of men, of which he is the medical superintendant, as the subject of an experiment placed within the influence of all external bodies. I would have him mark the changes which these reciprocally undergo, endeavouring, with

with unceasing attention, to ascertain the causes of the different changes that arise on this subject of experiment, and to explain the mode of action of which these are the result. When the effects are *disease*, he is to note its whole phenomena, still remarking, in a particular manner, its relation with external bodies, and the effects of these on the subject in this altered condition. In other words, I would have the surgeon to pay particular attention to the whole ship's company, as well in health as in disease, observing and marking their mode of living, as to food, drink, clothing, exercise, &c.; their different conditions and habits, and the effects of these on health and disease; particularly noting the state of the weather, and endeavouring to ascertain its influence. When disease occurs, he is to pay great attention to every case, so as not merely to benefit his patient as much as possible by the best practice, but to instruct himself from every additional sample of disease.

"All this is a matter of the easiest attainment, and may be very well accomplished in the following manner: In a journal, kept for the purpose, the surgeon is to commence by inserting a list of the ship's company, as divided into the different classes of seamen and marines, subdivided into fore-castle men, top men, after-guard, &c.; in short, into as many divisions as different occupations may be supposed to give rise to difference in health. After every name (as obtained from particular inspection, observation, and enquiry) the man's appearance or temperament, habits, character, nature of employment, years at sea, former condition of life, previous state of health, &c. are to be marked; particular attention being paid to every thing which may be supposed to influence health.

"In another part of the journal he is daily to note the state of the weather, as ascertained from general observation, and from instruments. In addition to the account of the state of the atmosphere, the particular state of things, as shewn locally between decks, &c. as with regard to moisture, air, &c. is to be mentioned. Then are to be marked the nature of the duty carried on, and the diet and drink of the ship's company for the day. When any uncommon or very particular duty is carried on by a small number, such as wooding, watering, &c. the names of the men employed are to be marked in the daily reports, and the particular nature of the duty to which they have been subjected, detailed. Then the sick-list is to be reviewed, and the number and names of the men and diseases admitted and discharged are to be marked. At convenient times, the general character of the prevailing diseases is to be inserted, referring for a detail of the particular cases to another journal. *This other journal* is to contain a detail of every case of disease which is entered on the list: not a cursory enumeration of the most prominent symptoms, as caught from the first glance at the patient, but a regular and leisurely account of all the *complaints* of the patient, *the present state* of the *usual criteria* of disease, the *medicines taken*, and their *evident effects*; in short, a true and full history of the disease, from which may be learned the actual state of the patient's system, and a portable opinion formed of the effects

(No. 147.) 3 L of

of the remedies employed. This account is to be taken at stated times (once or twice a day) and fully given at each time.

“ The plan now proposed, carried on privately, would doubtless contribute greatly to individual as well as to general improvement ; but it would be far from producing all the great effects to be expected from it, were the perfection of it left to the volition of individuals, or to observations formed from partial reports. To accomplish the end in view, it would be necessary that surgeons should be obliged, by their instructions, to transmit the two journals above mentioned, at stated times, to the board, or to some persons appointed for the purpose. The duty of these would be to collate the immense body of evidence, to condense the general facts, and, in short, to reduce to a manageable volume, the whole of the facts and observations contained in the journals, either drawing from these the general results, or leaving this to the discretion of the reader. This might be published annually, or at any convenient times, and would be drawn up in whatever form might appear most advantageous for purposes of general improvement. The gentlemen, whom the nature of their situation points out as best qualified for this task of arrangement, are the physicians of the different fleets. They being on the spot where the observations were made, and having probably visited every ship, have on many accounts advantages which none others can possess. Each physician would collect the reports of his own station ; and thus we would have annual reports of the Channel, North Sea, Mediterranean, West India, and East India stations. Reducing the magnitude of the undertaking, we would expect the reports to be more correct ; at the same time we would have a better opportunity of comparing the effects of the different climates.

“ The advantages resulting from a faithful and persevering prosecution of this simple plan, it is evident, would be great. Let us suppose that a suite of remarks and observations on the above plan was carried on for a few years, say ten only, by seven hundred surgeons, in vessels of every class, in all variety of circumstances, in every climate of the globe ; that these remarks and observations were compared and collated by some person capable of the undertaking, in the manner it has been proposed. Need I waste time in stating, what must appear at first view to every one, the valuable acquisition such a work would be to medicine in general, and to nautical medicine in particular ? But leaving such bounded views, when we consider the effects of this plan, faithfully pursued for centuries, amended by the progressive increase of improvement, and enriched by the discoveries of so many years, we are surprised at the immense views of improvement that open on us, and cannot help regretting the inactivity of man, and blaming the indolence and carelessness of our predecessors, who have left a work of such mighty import for the *speculation only* of the present day.”

ART. VIII. *Account of two Cases of Gonorrhœa, attended with unusually severe Symptoms, relieved by the employment of Calomel and Opium in combination.* By Mr. LANGSTAFF, Surgeon.

IN the first of these cases, the inflammatory symptoms, the distention of the penis, and the suppression of urine, were most alarming. Many methods were had recourse to, with temporary relief only: at length a combination of opium and calomel, in equal parts, was given in the quantity of two grains of each, night and morning, with the most evident benefit. Opium by itself did not relieve the disease, but when combined with calomel, its effect was quick and decided. The other case of suppression of urine, relieved by opium and calomel, is given from Dr. James Curry. The effect said to be produced by this combination of two active substances, is of sufficient importance to excite the attention of the faculty.

ART. IX. *Remarks on Sore Nipples.* ANON.

THIS writer proposes a prophylactic for this distressing complaint. The shield and teat so commonly used in and about London, is the means he recommends to secure the mother. The shield may be had at the instrument makers, either in silver or ivory. The artificial nipple is the teat of a fresh slain heifer. This is prepared by carefully scooping out the inside, so as to leave the teat about the thickness of Morocco leather. The operator should be particularly careful that he does not make the smallest puncture in the skin of the sides of the teat; for if this happens it will not be air tight, and of course useless. The teat thus prepared, after being well washed in water, must be kept in spirit, till an hour or two before using, when it must again be laid in cold water to take away all taste of alcohol. Being wiped perfectly dry, it is to be sewn closely and firmly at the edge of the row of holes in the shield, and need not be removed from the shield until it becomes bad from use. The whole apparatus must be carefully washed after suckling, and kept constantly in cold water; or if the weather be hot, in spirit and water, with the precaution, in the latter case, of rinsing well before using.

ART. X. *An additional Account of the lithontriptic Power of the muriatic Acid, with an Analysis of the calculous Matter discharged in one Case, during its Use; also an Account of the lithontriptic Power of the nitrous Acid, with an Analysis of the calculous Matter discharged in a Case during its Employment.* By PETER COPLAND, Little-Bytham, near Stamford.

THE attention of Mr. Copland to the lithontriptic properties of the muriatic acid, was first excited by cases of its successful employment, related in the fifth and sixth volumes of the Memoirs of the Medical Society of London.

The cases here detailed afford sufficient evidence to induce a farther trial of the muriatic and nitrous acids in calculus. In the first, thirty drops of the muriatic acid were taken in water three times a day; the dose was gradually increased to fifty drops, and continued till two ounces were taken, when the complaint was removed. The patient was directed to collect daily, in one vessel, all the urine which could be obtained in twenty-four hours. The clear urine was then poured off, and the sediment collected upon a paper filtre. The sediment thus collected amounted to 104 grains, of a buff coloured impalpable powder.

One hundred grains of this powder subjected to chemical analysis, was found to contain

	Grains.
Uric acid	72
Ammonia	18
Carbonate of lime	3
Phosphate of lime	5
Loss	2
	100

In the other case, (that of Sir Simon Kelly, of Colsterworth, Lincolnshire) forty drops of the diluted nitrous acid were taken in water every two hours, till a sediment appeared in the urine; and afterwards continued four times a day, while necessary. Twenty-seven ounces of the diluted acid were used. A sediment soon appeared, and by persevering with the medicine from November 12, 1805, to April 20, 1806, 600 grains of a light thick coloured powder were collected; in which, toward the conclusion, a few fragments of calculus

calculus were found, partially decomposed. One hundred grains of this sediment, subjected to analysis, gave

	Grains.
Uric acid	80
Ammonia	11
Carbonate of lime	2
Phosphate of lime	1
Loss	6
	100

During the treatment of these cases opium was occasionally given to mitigate pain ; costiveness was prevented by mild laxatives ; and when the stomach was oppressed by the frequent doses of the acid, it was relieved by taking any convenient spirit diluted with water. It appears, from this gentleman's observations, that the *nitrous acid* possesses greater lithontriptic powers than the *muriatic* : and that in many cases of *lithiasis*, it always procured a discharge of sediment with the urine ; and a due perseverance in its use was followed by a removal of the symptoms.

ART. XI. *An Account of the Larvæ of two Species of Insects discharged from the human Body.* By T. BATEMAN, M. D. F. L. S.

As a record of facts, on a subject of considerable interest in the sciences of medicine and natural history, Dr. Bateman's paper may be considered as valuable. Whoever adds one unequivocal truth to a department in science, abounding with, at least, doubtful histories, may be considered as the benefactor of mankind.

Without having recourse to the animalcular hypothesis to account for fever, &c. it cannot be denied but painful, and even fatal cases, have arisen from the existence of the *larvæ* of insects in different parts of the human body.

In the first case related, the *larva* of the common black beetle (*tenebrio molitor*. *Lin.*) was discharged from the bowels : in the second, the *larva* of the common house-fly (*musca domestica minor*. *De Geer*), was thrown up from the stomach by vomiting.

Dr. Bateman accompanies his details with a general view of the subject, as found in the records of natural history and medicine, and with observations on mistakes which have often misled the physician.

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ART. XII. *Case of Fungus Hæmatodes.* By JOHN HENRY WISHART, Surgeon.

THIS disease occurred in a child three years old. When Mr. Wishart first saw the patient there was a tumour as large as the fist, situated on the right side of the head, surrounding the ear, and extending from the zygomatic process downward on the anterior side of the neck. This tumour was soft and inelastic; the integuments covering the part anterior to the external ear, were of a whiter colour than natural, but immediately behind the under part of the ear they had ulcerated, and a small fungus was observed to protrude, discharging a thin foetid sanies, frequently mixed with blood, and occasionally a slight hemorrhage occurred. A brownish substance protruded from the meatus externus, resembling in colour the surface of the ulcerated part.

From the 10th of August, the time when Mr. Wishart first saw the case, the swelling increased rapidly; a livid spot ulcerated three weeks after its appearance, a fungus grew up from this spot, which frequently sloughed off, but was quickly regenerated, and discharged a large quantity of foetid bloody matter, and frequently hemorrhage to the extent of an ounce or two occurred. The symptoms became daily more severe, accompanied with pain, which increased with them until the 22d of September, when the child died, exactly fifteen weeks and four days after the appearance of the disease.

The tumour was examined after death. It very much resembled the engraving of Mr. Astley Cooper's case in Mr. Wardrop's work on *Fungus Hæmatodes*; was as large as the child's head, and weighed forty ounces. It was a fungous mass, soft and friable, had a most offensive smell; and a slice of it compared with a slice of the brain, was in appearance so similar, as hardly to be distinguished from it. An aperture was observed in the squamous portion of the temporal bone, through which a small part of the tumour had passed inward, and formed a depression on the middle lobe of the brain, about half an inch in depth. This portion of the tumour was the size of a small egg, of a round shape, connected with the external tumour by a narrow neck, and did not adhere to the brain. The dura mater was destroyed at the part where the depression was formed; in other respects the brain was sound.

It is remarkable that the patient's general health was but slightly deranged; for during the progress of the disease, till within

within a few days of his death, he slept well, had no thirst, heard distinctly, and even more acutely, it was believed, on the diseased side; vision was unaffected till the four last days of his life; he was never observed to be comatose, and could move the upper and lower extremities frequently.

ART. XIII. *Case of præternatural Anus, found in a Portion of Ilium protruded at the Umbilicus.* By J. PEAKE, Surgeon.

A CHILD was born with a portion of ilium protruding at the umbilicus, in which was an external opening. Through this passed some meconium, as it did also by the natural anus. The child lived two days.

ART. XIV. *Appearance upon Dissection of two Dogs, which were killed while labouring under Rabies.* By THE SAME.

No fact relative to the nature or cause of *rabies canina* should pass unnoticed. Upon this principle it is, that we insert the appearances discovered by Mr. Peake, on the dissection of those dogs. It is to be wished that we had undertaken his examination unbiassed by the opinion that the disease is seated in the mucous membrane of the œsophagus and stomach.

Upon opening the stomach of the first dog, it was found to be nearly empty; containing only a small quantity of short oat straw, some grit, and a portion of gastric juice. The mucous membrane was inflamed at different parts, both in the stomach and œsophagus. The intestinal canal was nearly empty, and of its natural appearance.

The stomach of the second dog was found much distended with pieces of straw and hair, and some grit or earth. Its mucous membrane appeared slightly red and inflamed generally; but at the extremity, near the pylorus, was a greenish spot about the size of a shilling, with a narrow line of the same colour, extending upward; the result, as it appeared to Mr. Peake, of preceding inflammation. The œsophagus was of its natural colour.

Cursory Remarks on Corpulence. By a Member of the Royal College of Surgeons. 8vo. London. 1810. pp. 44.

THAT *Obesity* is ever an actual disease, if we are not prepared to deny, we cannot fully admit. When it exists to a certain degree, though it may hardly be called a morbid state

state of the system, yet it may oppress some organs so much, and blunt their functions so effectually as to render life burthensome, if it be not destructive to vitality. Whether in the strictness of language a natural action of the system, and which is peculiarly energetic in the most healthy state, can be considered as a disease, might be disputed, even though nosologists have given it a place in their systems under the generic term *Polysarcia*. Be this as it may, physicians have not been inattentive to its progress, and have stated with great precision, some instances of the excessive increase of adipose substance. In the Transactions of the London College of Physicians, the case of Thomas Wood, a miller, of Billericay, in the county of Essex, affords a remarkable instance of the inconvenience of corpulency, of a train of morbid effects apparently connected with it, and of as remarkable a relief from alarming symptoms, by persevering in a most abstemious regimen. In his 40th year, Wood began to grow very fat. In his 44th year he became disturbed in his sleep, complained of heart-burn, of frequent sickness, pains in his bowels, head-ach, and vertigo. He was sometimes costive, and at other times in the opposite extreme; had almost a constant thirst, great lowness of spirits, violent rheumatism, and frequent attacks of gout. He had likewise two epileptic fits. But the symptom which appeared to him to be the most formidable, was a sense of suffocation, which often came upon him, particularly after meals. Whether these are the symptoms that arise out of a sudden accumulation of fat, we cannot determine; but certain it is Wood was relieved from them all by a course of rigid abstinence. He relinquished animal food, eat nothing but pudding made with flour and water, drank no kind of fluid. Under this spare diet his complaints vanished, his size was reduced, and he became cheerful and alert.

The third volume of the Medical Observations gives an interesting case of a man who died from an enormous increase of internal *adeps* without its existence being manifested by any great degree of external corpulence. The symptoms were singularly anomalous, and the inspection of the body ascertained that a large mass of fat filled the upper part of the breast; that in the abdomen there was an amazing collection of adipose substance, not only in the omentum, but in the mesentery and mesocolon, where not a vestige appeared of blood-vessels, glands, &c. which all were buried in a prodigious heap of fat. This fat had nowhere formed a preternatural tumour, or changed its consistence or colour, but was accumulated in an unusual quantity wherever it is naturally

rally lodged more or less in subjects well constituted ; it only appeared a little less solid, and with a tinge somewhat yellower than in its natural condition. In the lower cavity this mass compressed the stomach, and hindered the action of the lungs ; and in the posterior mediastinum it surrounded the œsophagus from the pharynx to its passage out of the breast, variously affecting deglutition. The bed of adeps under the upper part of the sternum was so considerable, that this alone would have been sufficient to obstruct many of the functions of that cavity. The fifth volume of the work last cited, contains some interesting particulars respecting diseases that seem to arise out of an extraordinary obesity. Among these its tendency to produce angina pectoris deserves particular notice. In 1727, Dr. Thomas Short published a pamphlet on Corpulency ; and about 1760, Dr. Malcolm Flemyng, a physician of some notoriety, and an author of repute, both as a theorist and a practical writer, published a Discourse on the Nature, Cause, and Cure of Corpulency, and against which he considers soap to be a sovereign remedy.

The little pamphlet before us, which is written with a degree of neatness, though a mere compilation, details the opinion of various authors on the treatment of this state of the system. Cœlius Aurelianus recommends abstinence and exercise, reading aloud, friction on the skin with sand, and sweating in the *sudatorium*. Zacutus Lusitanus employed leeches and scarifications ; Fernelius diuretics. Borelli advises chewing tobacco, and Etmuller taking vinegar of squills. Dr. Darwin believes salt eaten in considerable quantity, or salted meat, to be more efficacious than soap. Dr. Beddoes asserts the cure of obesity is effected by the abstraction of oxygen from the constitution. But the surest way is that which was pursued by Wood : abstinence and exercise reduced the Essex miller to a moderate size. It is a curious coincidence, that the fattest man before the time of Lambert, in this country of fat men, should have lived in Essex. Bright, of Walden, weighed thirty-two stone ; but Lambert is said to have exceeded this enormous weight by twenty stone.

What diet is most likely to produce corpulence, is a question of some importance. M. Lorry (*Memoires de l'Academie de Medicine*, where he gives an account of diseases supposed to be produced by corpulence) considers the abundant use of succulent vegetable aliment to certainly produce this state of the system ; and the following case, with which we shall conclude these observations, goes strongly to establish this point.

“ A man of about forty years of age hired himself as a labourer
(No. 147.) 3 M in

in one of the most considerable ale-breweries in the city : at this time he was a personable man ; stout, active, and not fatter than a moderate sized man in high health should be. His chief occupation was to superintend the working of the new beer, and occasionally to sit up at night to watch the wort, an employment not requiring either activity or labour ; of course at these times he had an opportunity of tasting the liquor, of which it appears, he always availed himself ; besides this, he had constant access to the new beer. Thus leading a quiet inactive life, he began to increase in bulk, and continued to enlarge, until, in a very short time, he became of such an unwieldy size, as to be unable to move about, and was too big to pass up the brewhouse staircase : if by any accident he fell down, he was unable to get up again without help. The integuments of his face hung down to the shoulders and breast : the fat was not confined to any particular part, but diffused over the whole of his body, arms, legs, &c. making his appearance such as to attract the attention of all who saw him. He left this service to go into the country, being a burthen to himself, and totally useless to his employers. About two years afterwards he called upon his old masters in a very different shape to that above described, being reduced in size nearly half, and weighing little more than ten stone. The account that he gave of himself was, that as soon as he had quitted the brewhouse he went into Bedfordshire, where having soon spent the money he had earned, and being unable to work, he was brought into such a state of poverty, as to be scarcely able to obtain the sustenance of life, often being a whole day without food ; he drank very little, and that was generally water. By this mode of living he began to diminish in size, so as to be able to walk about with tolerable ease. He then engaged himself to a farmer, with whom he staid a considerable time, and in the latter part of his service, was able to go through very hard labour, sometimes being in the field ploughing and following various agricultural concerns, for a whole day, with no other food than a small pittance of bread and cheese. This was the history he gave of the means by which this extraordinary change was brought about. He added his health had never been so good as it then was."

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

ROYAL SOCIETY.—March 1st and 7th.—A paper by Mr. Knight was read, detailing experiments on the manner in which plants shoot forth their radicles. In a former paper Mr K. had proved that gravitation was the chief cause of the descent of the roots of plants ; in the present he meant to illustrate by his experiments, how certain plants extend their roots towards water, and others in a direction from water, without sensation or animal sensibility, as erroneously supposed

posed by some vegetable physiologists. His experiments established this position sufficiently on mechanical principles, in consequence of the natural inclination to, or aversion from, humidity, according to the particular nature of the plant. He also proved that carrots and parsnips sown in a poor gravelly soil, under which was placed a rich loam, passed through the former, and extended their radicles into the rich loam eighteen inches below the surface.

March 14.—A long and learned paper, by Mr. Baily, was read on the eclipse of the sun predicted by Thales, as recorded by Herodotus. The author entered minutely into the historical and chronological data which support his opinion, and concluded that the eclipse alluded to was an annular one, which occurred in the year 610 before Christ.

WERNERIAN NATURAL HISTORY SOCIETY.—At the meeting of the Wernerian Natural History Society at Edinburgh, on the 12th of January last, Professor Jameson read the first part of a series of observations on the geognostic relations of the rocks of the island of Arran. In this memoir he described particularly the granite, gneiss, mica-slate, and clay-slate formations, and also the red sandstone, and porphyry-slate, which occur so abundantly in that island. When describing the *granite*, he stated as a conjecture, that quartz might prove to be an older formation than granite, because the oldest granite contains much quartz, but little mica; and less feldspar than the newer varieties. He pointed out several observations to be made with the view of verifying or refuting this conjecture. In his description of *gneiss* he alluded to the veins of granitic gneiss which traverse it, and which, when the gneiss and granite are in contact, have been represented as veins of granite shooting from the subjacent into the superincumbent rocks. The *red sandstone* the professor appeared inclined to refer to the first or old red sandstone of Werner. When describing its stratification and structure he pointed out the appearances that ought to be attended to, in endeavouring to ascertain the dip and direction of the strata, and cautioned observers against confounding the structure of individual beds with the direction and dip of the strata. The numerous fissures that traverse the sandstone of Arran, and which exhibit every variety of magnitude, direction and dip, afforded apt illustrations of Werner's theory of veins. The *porphyry-slate* the professor described as appearing in the form of overlying conical or irregular tabular-shaped masses, resting on the red sandstone; also in veins traversing granite, sandstone, greenstone, and other rocks. He gave a description of some tabular masses of this rock, accompanied by pitchstone and claystone, contained between strata of sandstone, and which might be confounded with beds, but which he was inclined to consider merely as lateral branches of veins, or as slightly inclined veins.

At the meeting, on the 2d of February, Professor Jameson read the continuation of his mineralogical observations on Arran. He

first detailed the geognostic relations of the *flatz greenstone* of that island. From this account it appeared to occur in overlying masses resting on sandstone, in beds, in sandstone, and in veins that traverse sandstone and other rocks. He then described the various kinds of *pitchstone* that occur in Arran, and seemed to think that one of the varieties might constitute a distinct subspecies of the *pitchstone* species. The account of its geognostic relations afforded a detail of many curious geognostic appearances; in particular the structure of its veins, and the nature of the interposed tabular masses, having many of the characters of beds, yet appearing to be either nearly horizontal veins, or lateral branches of common veins. The *claystone* of Arran, which was next described, appeared to occur in overlying masses, along with porphyry-slate, and also in veins along with *pitchstone* and porphyry-slate. It would seem that *wacke* and *basalt* are not very frequent or abundant rocks in Arran; but when they are observed, they present the usual appearances and geognostic relations.

From the observations in these two memoirs it appears, that this island contains no *transition* rocks; but is principally composed of *primitive* and *flatz* rocks. The *alluvial* rocks that occur in the valleys present the usual characters of the rocks of this class.

It affords us considerable pleasure to be able to announce the progressive improvement of Medical Science in France. The numerous Societies instituted in that extensive empire, seem to be emulous of the high reputation which has long distinguished many of the professors of medicine, surgery, and chemistry, in this country: the armies abroad, the great hospitals at home, the facility granted to the dissection of dead bodies, and the inspection of patients who die, in whatever rank of life, contribute to increase practical knowledge, in which the French practitioners were formerly extremely deficient. From a recent arrival of various Journals, we find that the spirit of emulation is strongly excited by the proposal of prizes, some of which we subjoin, and as some of our learned readers may be inclined to contend for them, we insert the words of the questions in the original language.

The class of mathematical and physical sciences of the Institute of France offers a gold medal, value 3000 francs, for the following subject—"Donner la theorie mathematique des lois de la propagation de la chaleur, et comparer les resultats de cette theorie avec l'experience." The memoirs must be sent free of expence by the 1st of October, 1811, addressed to the Secretary of the Institute, each bearing a motto or device, which must be repeated with the name of the author in a sealed note attached to the memoir. The result will be published the first Monday in January 1812.

La Société de Médecine de Lyon has proposed the following question for the subject of the prize (value 300 francs) to be decreed at the public sitting, 1812. "Quelle est l'influence que les maladies organiques des viscères du bas-ventre peuvent exercer sur les viscères de la tête et de la poitrine, soit dans l'exercice de leurs fonctions, soit dans la production de leurs maladies; et quels dangers peuvent résulter, dans la

la pratique de la médecine, de l'ignorance et de l'oubli de cette influence?"

The candidates must observe the usual academic forms respecting concealing their names, &c.

The memoirs to be written in French or Latin, and addressed, (free of expence) before the 1st of January, 1812, to M. Franchet, Secrétaire général de la Société de Médecine de Lyon, place neuve des Carmes, No. 29.

La Société de Médecine-pratique de Montpellier, has proposed the following prize questions to be adjudged at their public meeting in May 1811.

1. "Quelles sont les maladies chroniques qui passent pour dépendre particulièrement de l'état du cerveau? Peut-on tirer, des ouvertures des cadavres de ceux qui ont succombé à quelques unes de ces maladies, des inductions propres à en constater l'étiologie; et, dans tous les cas, quelles sont les règles générales ou particulières de traitement dont ces maladies peuvent être susceptibles?"

2. Quelles sont les maladies chroniques, dont les grands systèmes (le vasculaire-sanguin, le vasculaire et le glanduleux-lymphatique, le cellulaire et exhalant, le nerveux et l'osseux) de l'économie animale, sont le siège? Quel est le degré de similitude ou de dissemblance que leurs phénomènes peuvent faire établir entre eux; et quelles sont les règles générales de traitement qui doivent leur être appliquées d'après l'observation?"

The prizes will consist each of a gold medal, value 300 francs.

La Société d'Agriculture de Paris has proposed the following Prize subjects to be determined at the public sitting, July 15, 1811.

1. Pour la Culture du Pommier et du Poirier à Cidre, dans les cantons où elle n'est pas introduite: 1 prix, 1500 fr. 2 prix, 1000 fr.

2. Abolition des Jachères. Médailles d'or.

3. Introduction d'Engrais dont l'usage est inconnu: Médailles d'or.

4. Observations pratiques de Médecine-Vétérinaire. Idem.

5. Traductions d'ouvrages sur l'agriculture, qui offrent des observations neuves et des pratiques utiles: Idem.

Prize subjects for 1812.

Moyens de prévenir la Gîte dans les Chevaux: prix 400 fr.

Fabrication de Fromages étrangers: 1 prix 2000 fr. 2 prix 1000 fr.

Extraction d'une substance colorante bleue des végétaux cultivés en France: 1 prix 2000 fr.; 2 prix 1000 fr.

Multiplication des Abeilles: 1 prix 800 fr. 2 prix 400 fr.

Prize subject for 1813.

Machines hydrauliques, appropriées aux usages de l'agriculture: 1 prix 3000 fr.; 2 prix 2000 fr.; 3 prix 1000 fr.

La Société d'Agriculture du Département de la Seine, impressed with the great importance of veterinary science, has solicited communications from veterinarians, on practical subjects connected with their profession. It invites them to perfect the knowledge of the diseases of animals, by carefully dissecting the bodies of those which die

die. To promote these desirable views, the Society proposes to distribute annually gold medals, or a sum of money to the amount of 1,200 francs, to those veterinarians who shall furnish the best memoirs, which will be received till the 1st of February each year; they must be signed with the authors' names. The Society also proposed the following subject for a prize of a gold medal, or money, value 1000 francs, to be adjudged at the public meeting in 1811. "To determine by a course of observations, the most frequent causes of blindness in horses, and to indicate the best means of remedying it."

La Société Académique de Médecine, proposes the following question for the subject of a prize, to be decreed at the ordinary meeting, the second Tuesday in September, 1811. "Quels sont les signes qui indiquent ou contr'indiquent la saigné, soit dans les fièvres intermittentes, soit dans les fièvres continues, désignées sous les noms de putrides ou adynamiques, malignes ou ataxiques?" The author who determines this question in a satisfactory manner, will receive a gold medal valued at 300 francs. The memoirs to be written in French or in Latin, and forwarded free of expense, by the 1st of July, to M. Lévillé, Secretary to the Society, rue Neuve-des-Petits-Champs, No. 52.

La Société de Médecine de Besançon, considering that information is yet wanting on the anatomy, physiology, and pathology of the skin, has offered for the subject of a prize essay, to be adjudged at its public meeting in September, 1811, "l'histoire anatomique, physiologique, sympathique, et pathologique de la peau."

Plumbi acetat has been given with success in epilepsy, in doses of four and five grains in the day.

The muriate of manganese and the phosphate of manganese produce the same effect as the oxide of iron, and may be given in the same doses.

The phosphate of copper, and the phosphate of silver have been used as purgatives; which effect they produce in doses of a single grain; they have been found excellent hydragogues.

Mercury, given so as to induce ptyalism, continues to be practiced with great success in phthisis in various parts of America.—

Medical Museum, Philadelphia.

M. Vitalis, Secretary of the Academy of Sciences, Literature, and Arts, of Rouen, and Professor of Chemistry in the same city, having, in the course of his operations, formed a combination of phosphoric acid and potass, both very pure, and having obtained by suitable evaporation of the liquor, a salt perfectly crystallized, thought that the chemists, who have all announced the incristallizability (incristallisabilité) of the phosphate of potass, were deceived.

Not wishing to trust to his own experiment alone in controverting what had been asserted on the subject, by the most able chemists,

mists, M. Vitalis sent a small quantity of the salt to M. Vauquelin, that he might submit it to experiments. The result of his researches is as follows :

1. The salt is very white, crystallized in prisms, with four equal sides terminated by pyramids with four faces corresponding to the sides of the prism.
2. It is very acid to the taste, and strongly reddens the colour of turnsol : it is not alterable by the air.
3. It precipitates abundantly lime-water in white flakes.
4. Caustic potass does not disengage ammoniac.
5. It precipitates copiously the solution of muriate of platina.
6. It does not give out phosphorus by heat, but it melts in a clear glass which crystallizes, and becomes opaque upon cooling.
7. Thus melted, it does not dissolve in water so readily as before.
8. A portion of this salt having been saturated by potass, and submitted to a spontaneous evaporation, did not crystallize; but was reduced to a kind of viscid fluid like a solution of gum.

From these experiments it clearly follows, that the salt in question is an acid phosphate of potass (phosphate acide de potasse); that thus the opinions of chemists upon the properties of common phosphate of potass, are not affected by the peculiar qualities of this salt; finally, that M. Vitalis has enriched chemistry with a new species of salt which ought to hold a place in the already numerous class of those bodies.—*Annales de Chimie.*

METEORIC STONE IN INDIA.—The following extract of a letter from Futty Ghur, in the East Indies, dated 21st July last, presents us with an account of a curious phænomenon which has become frequent in Europe and America of late years: "A large ball of fire fell from the clouds, it burnt five villages, destroyed the crops, and some men and women. The ball is still to be seen; it is as hard as a stone. This happened near Shahabad, across the Ganges about thirty miles northward from this place. I have heard nothing further about this, but a vague report."

On the decomposition of fulminating powders of mercury and silver by charcoal.

(Journal Général de Médecine, &c.)

Experiments upon living animals had caused the fulminating powders of mercury and silver to be ranked with the most active poisons. M. Pagot Laforet, to whom we owe the knowledge of two of these powders, the fulminating powder of silver and mercury detonating white, and the fulminating powder of silver and mercury detonating grey, has ascertained that very small doses are sufficient to kill in less than half an hour, cats, dogs, hares, and other animals which he had submitted to his experiments. Continuing his remarks concerning these powders, he has found that if we mix pulverized and wet charcoal with the powders that the charcoal at-

tracts

tracts their oxygen, and decomposes them, so that they cease to detonate, and they lose their corrosive action; and only yield a metallic taste to the tongue.

M. P. Laforet has endeavoured to make an application of this discovery to the treatment of cases of poisoning by them; he gave to a cat a sufficient dose to occasion death, and as soon as the symptoms of their having taken effect appeared, he made it swallow a great quantity of the powder of charcoal mixed with water in the consistence of thick milk, so as to effect the decomposition of the powders in the stomach. His expectations were not frustrated; he remarked that the symptoms of poisoning ceased immediately, and that the cat suffered no injury from the fulminating powder. He intends to continue his experiments.

Vaccination in Glasgow.

The following statement contains perhaps one of the most decisive proofs of the utility of vaccination which has been submitted to the public. The first column contains the year. The second the number who have died of the small-pox in the city. The third the whole number of deaths in the city. The fourth the number of deaths in the city and suburbs.

First.	Second.	Third	Fourth.
1792	403	1508	1912
1793	134	1356	2190
1794	278	1365	2445
1795	132	987	1700
1796	265	1327	2297
1797	184	961	1813
1798	231	1125	2064
1799	179	1025	2181
1800	224	1279	2499
1801	159	985	2096
1802	107	825	1928
1803	91	1158	2438
1804	123	1011	2224
1805	21	968	2389
1806	15	939	2280
1807	48	1002	2463
1808	14	1446	3265
1809	54	—	2368
1810	23	1121	2367

There are perhaps few towns of the same magnitude where the beneficial effects of vaccination have been more distinctly experienced. None of those jarring opinions, which have disgraced other parts of the kingdom, are known in Glasgow. The profession universally recommend the practice, and the people almost as universally receive it. The few deaths by small-pox, which have occurred, within these last six years, have been exclusively among recent incomers, and the poorest and most wretched of the Highlanders and Irish. It appears from the records of the Vaccine Institution, that, previous to January 1811, upwards of *fourteen thousand five hundred* have been inoculated *gratis*.—*Edin. Jour.*

Letter from the National Vaccine Board to the Governors of the Finsbury Dispensary, London, on the bad effects of the practice of inoculating for the Small-Pox, at that Charity.

Leicester Square, Oct. 25, 1810.

SIR,—As the Finsbury Dispensary was instituted from the purest motives of charity and benevolence, it is conceived, that you and the other governors will approve of a communication, intimating, that the practice of the dispensary in one point is producing effects the reverse of your intention.

It is scarcely requisite to inform you that parliament, after fully examining into the merits of the discovery of vaccination, were convinced of the important benefits that would result from its general adoption; and parliament, in consequence, have authorised Government to form a National Vaccine Establishment, in order to extend vaccination to all parts of the empire.

This establishment is placed under the controul of the president and censors, and the master and governors of the royal colleges of physicians and surgeons of London; who, from experience, and authentic information, are fully persuaded of the wisdom of the practice of vaccination, and of the futility of those objections which have been urged against it. They observe, however, with regret, that although vaccination has spread not only through the British empire, but also among foreign nations, with the most beneficial consequences, yet from prejudices artfully kept up, small-pox inoculation is still prevalent among the poor of this metropolis.

About two years ago, the governors of the small-pox hospital took this business into consideration, and, from a conviction of the great mortality which was caused by propagating a contagious and fatal disease, they prohibited their medical officers from inoculating the small-pox, or distributing small-pox matter.

A decrease of deaths from the small-pox was the immediate consequence: but unhappily this fatal malady again rages through the town, and destroys, within the bills of mortality alone, about thirty persons every week.

Upon investigating the sources of this direful pestilence, I have learnt, that besides the pernicious activity of certain private practitioners, the inoculation of small-pox is extensively carried on at the Finsbury dispensary; above a thousand persons having been inoculated there last year, and matter having been distributed for the inoculation of others to an unknown extent.

You are earnestly requested to reflect upon the consequences of thus diffusing among the crowded lanes, courts, and alleys of this populous city, a baneful infection which proves fatal to multitudes, and strikes many with total blindness.

These indisputable facts made an irresistible impression upon the minds of the governors of the small-pox hospital; and as they knew that the inoculation of the small-pox was disapproved of by the most eminent of the medical profession, they were little affected by

the misrepresentations of the prejudiced, or by the sophistry of a few who are interested in the propagation of small-pox.

It is to be presumed that when the governors of the Finsbury dispensary deliberate upon this subject, they will decide with equal prudence and humanity. For they are at present, though no doubt unintentionally, opposing a most benevolent measure of parliament; and sanctioning a practice most fatally injurious to the community.

I have the honour to be, &c.

JAMES MOORE, Director.

Report of the Surgeons of the Vaccine Institution of Edinburgh, 1810.

In reporting to the managers of the Vaccine Institution the state of vaccination for 1810, the surgeons have the satisfaction to mention, that nothing has occurred which can in any degree diminish their belief of the perfect efficacy of the cow-pox, as a preventive of the small-pox.

Since last report, 583 have been vaccinated, making in all 11,108, from the commencement of the practice at the institution.

The Surgeons have, since last report, inoculated with the small pox a great many children, who have been vaccinated eight, nine, and ten years ago—all of whom have been found to resist the infection.

In no instance have they seen any bad effects which could be attributed to vaccination; and, upon the whole, the experience of another year serves to confirm them in their former opinion, that the practice of vaccination is deserving of the highest degree of confidence from the public.

Signed by WM. FARQUHARSON.

JAMES BRYCE.

ALEXR. GILLISPIE.

JOHN ABERCROMBIE.

Edinburgh, Jan. 21, 1811.

Letter on Vaccination in Ceylon, from Thomas Christie, Esq. Med. Sup. Gen. to the Editor of the Ceylon Government Gazette.

SIR,—I beg leave to subjoin, for more general information, an abstract of the number of patients vaccinated in the different districts in Ceylon, during 1809, amounting to 25,697, which added to 103,035, the number vaccinated in former years, makes a total of 128,732 persons who have been officially reported to me, by the respective superintendants and vaccinators, as having regularly passed through the vaccine disease, since its first introduction into this island in 1802, besides a few others inoculated by individuals, not belonging to the vaccination establishment.

Agreeable to the best information I have been able to obtain, the small-pox has not existed in any part of this island, since February 1808, till October last, when the disease was brought to Jaffnapatnam by a country boat from Quilon on the Malabar coast. The contagion

contagion spread to a few individuals who had not been vaccinated in the Pettah of Jaffnapatnam, and, by means of a civil prisoner, was introduced into the jail at that place, but its progress there was immediately arrested, by the removal of the infected persons, and the indiscriminate vaccination of all the other prisoners.

By a late report from Mr. Stutzer, Superintendant of vaccination at Jaffnapatnam, it appears that there were only six individuals ill of the small-pox in that district, and it has found its way to no other part of the island, except Putlam, where a coolie from Jaffna was taken ill with small-pox in December last, but has since recovered without communicating the disorder to any person.

The vaccine disease has now been so extensively diffused throughout this island, that while the inoculations continue so numerous as at present, we can have no reason to apprehend that the contagion of small-pox will ever spread epidemically in any part of the British possessions in Ceylon; and its occasional appearance here has the good effect of proving the preservative efficacy of the vaccine, and of rousing the natives from their apathy on the subject, as exemplified at Jaffnapatnam, where 1830 people have been inoculated during the two last months, and amongst them several Bramins, men and women, who had hitherto declined submitting to the operation.

I shall only add, that with a view of proving the permanency of the preservative efficacy of cow-pox, and the continuance of the purity of the virus in this island, Mr. Stutzer has at my request, in November and December last, inoculated with small-pox matter, several patients who had passed through the vaccine disease in 1804, and 1809, all of whom have resisted the contagion.—I have the honour to be, &c.

Colombo, 24th January 1810.

THEATRE OF ANATOMY.—Lectures on Anatomy, Physiology, Pathology, and Surgery, by MR. JOHN TAUNTON, Member of the Royal College of Surgeons of London, Surgeon to the City and Finsbury Dispensaries, City Truss Society, &c.

In this Course of Lectures it is proposed to take a comprehensive view of the structure and economy of the living body, and to consider the causes, symptoms, nature, and treatment of surgical diseases, with the mode of performing the different surgical operations; forming a complete course of anatomical and physiological instruction for the medical or surgical student, the artist, the professional or private gentleman.

An ample field for professional edification will be afforded by the opportunity which pupils may have of attending the clinical and other practice of both the City and Finsbury Dispensaries.

The Summer course will commence on Saturday, May 25th, 1811, at eight o'clock in the evening *precisely*, and be continued every Tuesday, Thursday, and Saturday, at the same hour.

Particulars may be had, on applying to Mr. Taunton, Greville Street, Hatton Garden.

MEDICAL THEATRE, GUY'S HOSPITAL.—Dr. Thornton will deliver his Introductory Lecture on Medical Botany, on Wednesday, May 1, at five o'clock in the evening.

Mr. Stevenson will commence his Course of Lectures on the Eye and Ear, on Monday the 20th May, at seven o'clock in the evening, at his house, Great Russel-street.

Dr. Adams's next Course of Lectures on the Institutes and Practice of Medicine, will commence at the latter end of May, or beginning of June.

The Editor of the Monthly Magazine has announced his design to publish early in May, all the Communications in a separate pamphlet which have been made to him by various persons relative to the uses of Stramonium in Asthma. The collection will contain other papers besides those published; a description of the plant, and a coloured engraving.

Darwin's Zoonomia has recently been translated into French by J. F. Kluiskens, and published in five volumes, 8vo.

A French edition of the Medico-Chirurgical Transactions is nearly ready for publication at Paris, where the character of the work ranks very high.

The Rev. John Rudd, F. L. S. and President of the new Literary and Philosophical Society of Preston, has in considerable forwardness, a Botanist's Guide through Lancashire, in which all the Plants, indigenous to the County, will be enumerated, and their habitats accurately given.

Mr. Benjamin Travers, demonstrator of Anatomy at Guy's Hospital, has in the Press, an Inquiry concerning injuries to the intestinal canal, illustrating the treatment of wounds penetrating into that canal, and of strangulated Hernia.

Dr. Nott, of Bristol, is printing a Posological Companion to the London Pharmacopœia.

Dr. Underwood has in the Press, a new Edition, making the 6th, with considerable additions, of his Treatise on the Diseases of Children.

Dr. Adams is preparing a Syllabus of his Lectures, for the assistance of those hearers to whom the doctrines of Mr. Hunter are less known, or who are unaccustomed to apply them to medicine.

Professor Boyer is preparing an extensive work on Surgery.

M. Deschamp is preparing for the press a work on Aneurism.

M. Pelletan

M. Pelletan, surgeon of the Hospice d'Humanité at Paris, has in the Press two volumes of Clinical Cases and Observations, illustrated by numerous Engravings.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

A Letter to the Physicians and Surgeons of St. George's Hospital, on Mr. Davy's simple Galvanic Circles, considered as a Topical Assistant Branch of Medicine in the correction of disordered living action; founded upon the Theories of Dr. Garnet and Mr. Davy, and confirmed by practical experience, by Matthew Yatman, esq. 8vo. Callow.

Hortus Kewensis, or a Catalogue of the Plants cultivated in the Royal Botanic Garden at Kew. By the late William Aiton, vol. 2, 8vo. Longman and Co.

The Return to Nature, or difference of the Vegetable Regimen, with some account of an Experiment made during the last three or four years in the Author's family. By John Frank Newton, esq. Part I. 8vo. Cadell.

NATURALIST'S MONTHLY REPORT.

MARCH.

Love's pleasing ferment gently now begins
To warm the flowing blood.

No weather could possibly have been more acceptable at this season of the year, than that which we have experienced during the course of the present month. The crops are all looking well. Nor have we yet had any of those furious gales which are usually expected about this time. There were strong gales from west-north-west on the 3d, and from west-south-west on the 6th, 7th, and 8th, and these were the only boisterous days we have had. The wind was westerly or north-west from the 1st to the 5th, in the afternoon of which day it was south. On the 6th, 7th, and 8th, it was west-south-west; on the 9th, north-east, and afterwards west. On the 12th it was easterly, and so continued till the 18th, when it veered round to west. On the 22d it was north; and from the following day to the end of the month easterly.

There was rain on the 1st, 5th, 6th, 7th, 8th, and 22d, but during all the remainder of the month the weather was dry.

March 5th. Rooks have begun to build their nests; and Daffodils are in flower.

The capsules of several species of moss now adorn the banks of hedges and ditches, and the tops of old walls.

March

March 7th. The marsh marygold (*caltha palustris*) is in flower, and give to all the wet meadows a golden hue.

March 8th. Several kinds of insects crawl out of their hybernacula in old buildings, particularly spiders, millepedes, and a species of the glowbeetle, or darkling, (*tenebrio mortisagus* of Linnæus, *blaps mortisaga*, of Marsham).

March 10th. The vernal whitlow-grass (*draba verna*) and purple dead nettle (*lamium purpureum*) are in flower.

March 11th. Some of the smaller kinds of ants are busily employed in opening their holes, and clearing their nests. On attentively observing them, they are seen to bring out grains of sand or other small objects which incommode them in their habitation, and to deposit them at a little distance on the exterior of their holes.

March 12th. A caterpillar was this day seen crawling upon the road. Several dark-coloured butterflies were flitting about the fields.

March 14th. The farina of the male yew tree is blown off by the wind in great quantity.

The plumage of all the small birds is now in the very height of its beauty. Bird-catchers technically call the plumage, at this season, their "wedding garments."

The flowers of some of the willows begin to fade.

March 18th. The leaves of the lilac and weeping-willow appear. Primroses and violets are in flower.

March 20th. Water lizards are seen in abundance in two or three of the shallow and gravelly ponds of this neighbourhood. But I have not yet remarked that they have begun to spawn.

March 21. The roads, which, only a few days ago, had pools of water standing in almost every hollow, are now quite dry and dusty.

March 24. The leaf-buds of the mulberry tree appear nearly ready to burst, but it is probable that these trees will not be in leaf for several days. The leaves of the bramble, woodbine and elder, have been out some time.

March 26th. A species of wood-bug, which I think is *cimex bacarum*, was this day brought to me.

The scentless violet (*viola canina*) and common stitchwort (*stellaria holostea*) are in flower.

March 28th. This was a peculiarly hot day for the season. Insects of numerous kinds were in active employment. Bees were flying about such plants as were in flower; sand wasps (*ammophila vulgaris*) about sandy banks; and *opatrum sabulosum*, several species of *curculio*, and small *carabi*, crawling about among the stunted vegetation of the road sides.

March 30th. Lapwings fly screaming over the wet meadows.

March 31st. The easterly winds which have prevailed for the last nine days of the month have been extremely seasonable. They have tended considerably to check vegetation, which, during the preceding warm weather, was making too rapid a progress for this early part of the year. I have not yet remarked that any of the standard fruit trees are in flower.

Hampshire.

METEOROLOGICAL TABLE.

From March 28, to April 26.

D	Therm.			Barom.	Hygrom.		Atmospherical Variations.
					dry	damp	
28	41	53	48	30 ⁴	—	— ⁸	35 52 33 E .. F ...
29	46	55	47	—	—	— ⁴	26 41 48 E .. SE .. F ...
30	43	55	51	— ³	— ²	— ¹	27 45 35 SE .. C ... W .. F ... N ..
31	49	—	46	— ¹	—	—	25 — — E .. C ... R ..
1	49	53	46	30	29 ⁹	—	26 33 24 SE .. C ... F ...
2	47	58	53	— ³	—	—	19 29 16 S .. SW .. F .. C .. F ...
3	49	58	56	— ⁹	—	30	11 30 28 W .. NW .. F ... — ...
4	52	60	52	—	—	— ¹	23 30 29 E .. SE .. F ... — ..
5	47	51	45	— ¹	30	—	22 30 25 E .. C ... F ..
6	40	59	49	29 ⁸	— ⁷	— ⁵	20 35 — W .. C ... F ... R ... in n.
7	43	49	39	—	—	—	22 — — — 15 8 NW .. R .. Snow .. F ...
8	38	44	39	—	—	—	12 6 10 E .. C ... F .. Snow .. F ...
9	37	48	41	— ⁶	— ⁷	—	— 22 21 7 — — NE ... F ... — ... — ...
10	37	49	48	— ⁸	—	—	10 20 — — — 2 N .. W .. F ... R .. F ..
11	43	49	44	— ⁹	—	30 ¹	— — — 2 14 10 — E .. R .. F ... —
12	49	—	47	—	—	30	— 10 — 14 — 5 SW .. F .. C .. F .. R ..
13	49	59	55	29 ⁹	—	30	2 — — — 2 5 SW .. R .. C .. F ..
14	56	62	57	— ¹	—	—	— 6 — 10 — 5 W .. F .. C .. — ..
15	55	62	56	—	—	30	10 — 10 SW .. C ... F ... R .. in n.
16	55	57	52	29 ⁹	— ⁸	—	6 — 10 SW .. C ... R ... — ...
17	48	57	55	— ²	—	— ³	— 20 40 6 — — W .. F .. — ... — ...
18	55	57	48	— ⁸	— ⁶	— ⁴	8 40 — E ... SW .. W .. C .. F ...
19	48	55	50	— ²	—	— ³	47 — 45 E .. SW .. F ... R ... F ...
20	52	56	54	— ⁹	— ⁴	— ³	47 45 48 S .. F .. R ... — ... — .. in n.
21	58	61	56	— ⁴	— ⁵	— ⁶	60 27 30 SW .. F ... — ...
22	55	65	60	— ⁶	—	— ⁵	42 35 40 SE .. C .. R .. F ...
23	60	70	63	— ⁵	— ⁷	—	44 25 35 E .. R .. F .. F ... —
24	59	68	65	— ⁷	— ⁸	—	40 37 32 SW .. E .. F ... —
25	60	64	58	— ⁷	—	—	35 22 35 E .. F .. C ..
26	57	64	55	— ⁷	— ⁶	—	38 25 27 E .. R .. F ...

22. Lightning in the evening, from the West.

23. Lightning in the evening, from the South. On these days the heat oppressive, and the atmosphere highly electric.

Quantity of Rain from March 28 to April 26, at an elevation of 36 feet about the surface of Cavendish-Square, $\frac{3}{4}$ of an inch and $\frac{5}{100}$.

From the 23d of March to the 6th of April, the atmosphere was remarkably dry; from the 7th to the 17th of April, fluctuating between humidity and dryness; and from that day to the 26th, the hygrometer points a high rate of humidity.

Princes-Street, Cavendish-Square.

NOTICES TO CORRESPONDENTS.

Communications from the following gentlemen were received too late for publication this month :

Charles Batham, M. D. Messrs. W. H. Leadbeater, J. Ring, A. Fogo, G. Nasse Hill, J. Smith, Apothecarius, an Essex Practitioner, S. L. and T.

We have been informed that the Practitioner of Hackney, mentioned in the Monthly Magazine, and alluded to in the account of Stramonium in this Number of our Journal, as having the merit of introducing the practice of smoking that plant in cases of asthma, is Mr. Toulmin.

The notice of Mr. Dumbell's Liverpool Lint, of which we have heard a good character, was mislaid, and did not arrive in time for insertion.

THE
Medical and Physical Journal.

VOL. XXV.]

JUNE, 1811.

[NO. 148.]

Printed for R. PHILLIPS, by E. Hemsted, Great New Street, Fetter Lane, London.

To the Editors of the Medical and Physical Journal.

Theory of Sensation.

GENTLEMEN,

AS Sensation is one of the most striking characteristics of animal life ; and as painful or uneasy sensation forms a prominent feature in almost all diseases : so a knowledge of the real state of the living power and organ upon which it acts, under impressions that cause sensation, cannot fail to be highly interesting both in a medical and philosophical point of view.

In the following discussion an explanation of these has been attempted, which from the manner in which the enquiry has been conducted, will, it is hoped, not be found liable to any very material objections, care having been taken to avoid all hypotheses, and to advance nothing which is not either founded on universally received data, or supported by proofs derived from the unvariable phenomena of life.

Before offering a new explanation of the cause of Sensation, it may be proper to notice the opinions which have been already advanced. I shall do this as briefly as possible.

The only Theories of Sensation that I am acquainted with are the following. First, That it is caused by impressions made on the extremities of nerves, and communicated through them to the sensorium commune ; and secondly, that it is truly an action of the sensorial power upon the fibres of the delicate vessels in which the nerves terminate, and that this action resembles muscular contraction.

Of the first of these opinions little requires to be said ; it professes to teach us nothing of the state of the organ or part at which sensation is felt, under impressions ; and seems to imply that the nerves are not endowed with vitality as well as the sensorium commune, a doctrine that is not proved, and certainly not altogether consonant to facts. The second opi-

(No. 148.)

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nion,

nion, that of Dr. Darwin, is more determinate ; he has stated his doctrine clearly and explicitly, and has endeavoured to prove it by reference to facts. I do not know the general opinion of his Theory of Sensation ; but if I am not mistaken, it is defective in this circumstance, that it does not inform us by what means the stimulus of light or other cause of Sensation induces the sensorial power to act on the fibres of the organ. This action of the vital power causing contraction of these fibres, certainly implies that previous thereto it had received some intelligence of the presence of the stimulus, and if so, it is quite superfluous to suppose contraction of fibres to be necessary to Sensation, since the Sensation must be already communicated before the action can take place.

In all philosophical investigations it ought never to be forgotten, not only that we are to admit no more causes of things than such as are both true and sufficient to explain the appearance, but that assigned causes, if true, ought always to produce the same effects in similar circumstances. Hence if a fibrous action, resembling the contraction of muscles, be in any instance not only a cause of Sensation but the Sensation itself, then I say that muscular contraction *ought in every instance to be felt* ; otherwise the Theory is imperfect. But the contraction of muscles is in general not attended with Sensation in the fibres acting. In speaking we have no Sensation in the muscles which move the tongue. By attending to it we know, indeed, that our tongue moves, but that knowledge is derived from the Sensation produced in those parts of the mouth which the tongue touches, or in the tongue itself at those parts of it where contact with the teeth, gums, or palate takes place, and not in the fibres of the muscles that move that organ. When I *will* to lift my hand off this table I know that it moves obedient to volition, because I am informed of the motion by my sense of sight, or by my hand or arm touching some other part of my body, &c. ; but I have no sensation in the muscles which acted in performing that intention of the will, and could not have known that these muscles did move if I had not been previously informed of the fact, or received conviction of it at the time, by applying my other hand and feeling a motion there. The same is equally true of all other muscles subject to the power of volition. The cause of any apparent deviations from this rule will, I trust, be explained to the entire satisfaction of the reader hereafter. With regard to the involuntary muscles, it must be obvious to every observer that the same want of Sensation obtains during their motions or actions. For in common cases we have no Sensation from the action on the heart and arteries, of the muscles of respiration, of the intestinal

tinal canal, or from the motion of the lacteal and lymphatic systems ; all of which perform their various functions without sensation in the power acting, or fibre acted upon.

From these facts I conclude that muscular contraction, although it may be in many, as it evidently is in some instances, an exciting cause, is not in one instance the sole cause of Sensation ; and that some condition of the vital power and organic fibre, different from muscular contraction, must be present when Sensation is excited. What that condition is we will now endeavour to point out and demonstrate by the phenomena of Sensation.

In order to convey at once to the mind of my readers a clear idea of my views, I shall begin by stating what has appeared to me, after an attentive review of the phenomena of Sensation in health, and as far as my opportunities have permitted me, in diseases, to be the fundamental principle of Sensation ; and then mention the phenomena in proof of that principle, which may be expressed as follows :

Sensation is felt when an action attempted by the vital power is in any degree interrupted or obstructed : or in other words, when an action performed is less than the power exerted.

Proofs from the Phenomena.

FIRST GENERAL PHENOMENON.

When habitual or stimulated actions are interrupted by the abstraction or defect of those matters which are necessary to their continuance, a sensation is felt in the part where the interruption is ; the efforts of the vital power to perform these actions continuing to be exerted.

FIRST INSTANCE,

A greater or less quantity of disengaged caloric* is essentially necessary to most, if not all, the actions of the living body. When more or less of that quantity is abstracted, it follows that a greater or less degree of interruption to the actions previously going on in the part from which it is taken must ensue. But when caloric is abstracted in unusual quan-

* I shall always use this word when the matter of heat is meant, to distinguish it from heat which I shall employ to express the Sensation only which caloric excites.

tity, an immediate Sensation of cold is felt. Hence it is evident this Sensation must be attended with interrupted action, and that the interruption is really the cause of the Sensation appears for the following reasons :

1st. When the actions interrupted are restored by the re-application of caloric, the Sensation of cold instantly ceases.

2d. When new actions (to which the abstraction of caloric is a stimulus) are successfully performed by the same power, and the former actions are discontinued, the Sensation ceases although the abstraction of caloric continues.

Thus, when a person enters the cold bath, he feels a very powerful Sensation of cold, and the temperature of his body falls. Commonly in a very short time the Sensation diminishes greatly, or goes entirely off, always as I have found by experiment before the temperature of the body arrives at the natural standard, but not till a progressive rise is indicated by the thermometer. In experiments of this kind, care ought always to be taken to distinguish between the Sensation of cold and the shivering which is sometimes a consequence of it : for in my experiments I have always found that the Sensation of cold was diminished by the shivering, and that when the shivering ceased before the temperature of the body had arrived at, or was rapidly ascending to the natural standard, the cold Sensation recurred with the effect of inducing a return of shivering. In general the temperature of the body rises gradually to the natural standard, which is a proof that the actions by which caloric is evolved are greater in the centre of the body at least, although the surface and extremities feel colder to another person—for the abstraction of caloric continuing greater than common, it must require an increased evolution of caloric to support the temperature. But since the actions of the surface to which caloric is necessary cannot be performed so easily while the greater abstraction continues, it is probable that the Sensation of cold ceasing or diminishing on the surface of the body is owing to the lesser exertions of the vital power on the surface, and greater in the centre or other parts of the system. A fact noticed by Dr. Currie (whose beautiful experiments related in the Medical Reports are well known) and which I myself have experienced, makes this amount almost to certainty : namely, that after the Sensation of cold had gone greatly or entirely off; and the temperature of the body was increasing ; if the Sensation returned, a new fall of temperature speedily took place. This seems to show that the power which performed the actions on the surface that were interrupted by the abstraction of caloric on entering the bath, had really been employed in new actions in other parts of the system, while the sensation of cold was
not

not felt; and that an unsuccessful attempt to renew the interrupted actions produced the return of the coldness and diminished action where it was formerly increased, attended with a consequent fall of temperature.

3d. When the abstraction of caloric continues without any symptom of the interrupted action being restored, or the stimulated action successfully performed, the Sensation of cold is permanent.

Sometimes it happens that after going into the cold bath the temperature does not rise to the natural standard, but always keeps below: in these cases the cold Sensation continues. Sometimes librations of the temperature are observed keeping pace with the decrease and increase of the coldness. It may be said that the rise of temperature is the cause of the diminution of the coldness, and not the latter the cause of the former. To this I answer, not if the Sensation decreases before any sensible rise of temperature can be perceived—as I have found by experiment it does.

When the hands are exposed to a cold moist wind, they in general soon become somewhat swelled, and acquire a red or purple colour—symptoms which denote that the actions of the vessels of the part whether habitual or stimulated are retarded, a natural consequence of the greater accumulation of the fluids propelled into it by the circulation, as that accumulation is a natural consequence of the decreased action which the abstraction of caloric produced. Hence the Sensation of cold becomes more and more painful as the fluids accumulate and increase the resistance to the action of vessels. But increased resistance to action is interruption in degree. Therefore the general fact is proved as far as regards the abstraction or defect of caloric.

SECOND INSTANCE.

An occasional supply of food is as necessary to the unremitting continuation of the digestive actions of the stomach and lacteals, as a certain quantity of free caloric is to the vital actions in general. When the usual quantity of food has been taken into the stomach, it is certain this gives employment for a time at least to the whole powers of digestion. But in course of time this food is either absorbed by the lacteal vessels there, or carried forward into the small intestines, the stomach being again left empty, and the actions of the digestive powers of course interrupted—as certainly interrupted as the action of the heart and arteries would be if they were deprived of blood. Under this state of interrupted action of the organs of digestion, a Sensation of hunger is felt, evidently arising

arising from that interruption, because it soon ceases after a new supply of food is taken into the stomach which permits them to return to unconstrained action free of sensation.

But sometimes the sensation of hunger goes off, if the supply of food has been withheld beyond the usual time. May not this depend on the same cause that produces a cessation of the coldness in the bath, although the abstraction of caloric continues the same, namely, an increase of action in other parts of the system? May not the action of the absorbents be increased in this case, and the living solids themselves be sometimes absorbed? Under privation of food with loss of appetite, is not there a more sudden loss of flesh and strength, than under similar privation when the appetite continues? It is extremely difficult to determine these questions in a manner that does not admit of some doubt. The following facts, however, the correctness of which may be depended on, seem to answer the last of these questions in the affirmative.

A person, with whom I am well acquainted, resolved to abstain entirely from food as long as he could, without any material inconvenience. He was in good health at the commencement of his abstinence. He became hungry at the usual time, but the hunger soon went off and did not return; but he was seized with head-ach, chilliness, great languor over his whole body and quick pulse. These symptoms were so much aggravated, and he became so feverish, that he thought it prudent, after persevering in his abstinence for four and twenty hours, to take a little food, although he had no appetite for it; and it is worthy of remark, that very soon after taking food, the headach ceased, the other symptoms abated, and in a few hours he felt himself perfectly recruited.

The same person at another time limited himself to the following diet. To breakfast he took about one ounce and an half of bread and one cup of tea. To dinner about the same quantity of bread, and one ounce of animal food; and in the evening as much bread with a cup of cold water. He persevered in this diet for three days, at the end of which he returned to his usual mode of eating. During these three days his appetite continued almost without intermission, the Sensation in his stomach becoming more painful every day. The food he took had very little effect in abating the hunger, which returned as keen as ever in less than a quarter of an hour after eating. The painful craving Sensation at his stomach was particularly troublesome after lying down in bed, and prevented sleep the greater part of the night. All this time he had neither headach, nor other uneasy sensation (that at his stomach excepted), his pulse seldom rose above
64 beats

64 beats in a minute, and, what is remarkable, he felt no perceptible diminution of his strength.

THIRD INSTANCE.

The circumstances attending the Sensation of thirst, seem to show that it arises from the interruption of the action of those vessels and glands which pour out and exhale the bland mucus which moistens the cavity of the mouth, fauces, stomach, &c. because thirst is felt when there is a total interruption to these actions known by dryness of the mouth, throat, &c. or when the mucus secreted is too viscid, which cannot but interrupt these actions in a greater or less degree. In either case the want of that fluidity which is necessary to these actions being duly performed, is the exciting cause of the Sensation, and the proximate cause (if I may be allowed the term) is interrupted action from that defect. The following circumstances are farther proofs, that thirst arises from the action of these vessels and glands being interrupted by defect of due fluidity. 1st. It often happens in cases of great thirst, that swallowing liquids has little or no effect in removing the sensation; the cause of which is easily understood, when it is considered that the fluids which are necessary to exhalent action must be derived from the circulation; of course a draught of water, unless it is immediately absorbed, and produces a determination of the fluids to these vessels, can have no immediate effect in removing the thirst. 2d. Dr. Currie particularly remarked that the cold affusion in fever was generally followed by a complete extinction of thirst; which agrees with what would be expected to result from it, if interrupted action of the exhalents were the true cause; for it is obvious that as the pabulum to these actions must be derived from the circulation, so nothing is better calculated or more likely to restore that, than determining the fluids copiously from the external to the internal parts. 3d. This is still further confirmed by what I have frequently observed in cases of fever attended with urgent thirst, which yielded to no kind of drink. Namely, that when a cathartic given operated with the effect of bringing off liquid evacuations, the thirst abated. But that the removal of the thirst was owing to the cathartic producing a greater determination of the fluids to the internal part, with a consequent renewal of the actions of the exhalent vessels, is obvious from this circumstance, that the sensation almost always went off before the medicine had produced any sensible evacuation. 4th. An emetic when it operates obviously produces an increased determination of the fluids to the internal parts, particularly the stomach

stomach and mouth. But an emetic diminishes thirst, as appears from the great aversion which patients under the action of an emetic have to all kinds of drink. 5th. To a person that is thirsty nothing in general is more grateful than acid drinks, a small quantity of which often quenches thirst more effectually than a large quantity of water singly. But acids are well known to produce a greater flow of saliva, &c. and I suspect it is only in so far as they determine the fluids to the salival and mucous glands, and permit the interrupted actions to be renewed that they remove the sensation of thirst. 6th. Whatever greatly diminishes the quantity of the fluids in general, or much increases their viscosity, commonly causes a sensation of thirst; such as too copious evacuations of any kind, or an extreme evolution of caloric.

From these facts we may surely safely conclude that thirst arises from the actions of the exhalent vessels and glands of the mouth, fauces, stomach, &c. being interrupted by defect of the fluidity these actions require.

FOURTH INSTANCE.

The habitual use of spirituous liquors, opium, tobacco, and other narcotic substances of the like kind, undoubtedly establishes certain actions, which require these substances to support them, in the same manner, I suppose, as food is required for the support of the digestive actions. A person who has accustomed himself to the use of snuff experiences an uneasy sensation when it is not applied as usual; and this Sensation goes instantly off when the snuff is applied, and again returns when the effect of this application is worn off. The same is true of all other acquired habitual actions.

REMARKS.

Each of the Sensations belonging to this general phenomenon is peculiar to the exciting cause. Thus the abstraction of caloric is always attended with a Sensation of cold: the privation of food with hunger, the defect of fluidity with thirst, &c. but all of them have this in common, that they are accompanied with a desire of the peculiar substance, which is necessary to the renewal of the interrupted action; and they further agree in this, that the Sensation instantly ceases when the action is renewed by the necessary application: From which, and from the arguments before adduced, it is plain that uninterrupted action of the sensoreal power is not adequate to the production of sensation; and that the hypothesis which is built upon that supposition, instead of enabling

abling us better to understand Sensation, only serves to bewilder our minds and render this subject, naturally intricate, still more perplexing and unintelligible. That action and sensation are truly opposite conditions of vitality appears from the instances above adduced ; and this view of the subject seems to render Sensation more intelligible, as it is not difficult to conceive, that an active intelligent power should *feel* when its motions are interrupted. In my next paper I shall resume the investigation of this principle, and hope I shall be able to prove, by reference to the other general phenomena, that Sensation in these also proceeds from interruption to action habitual or stimulated.

I shall conclude at this time, Gentlemen, by observing, that as I cannot help considering the idea here opened to be highly important, and I hope, useful in its consequences ; so I earnestly wish that any errors or oversights I have been or may be inadvertently guilty of in the prosecution of it, may not deter your intelligent readers from entering upon the examination of this interesting, though difficult subject, but rather stimulate them to assume the investigation, and supply the deficiencies of our knowledge by more able and diligent researches.

I am, respectfully, Gentlemen,
Your most obedient Servant,

T. SMITH.

Bristol, April 10th, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOUR Journal being a Miscellany for every principal as well as every collateral branch of medical science, likewise for every novelty in natural and philosophical history ; every case in medicine or surgery, which conveys information or novelty in practice, from whatever part of the world it may arise, does, and ought to find a place for the good of mankind, in your useful publication of so extended a range.

I should not have troubled you with the following case, but for a communication, in Journal 143, of Dr. Harrison from his son in America, on the fatal effects of eating cherries ; and the observations of Senex on the treatment, which whether right or wrong I shall not comment upon ; nor have I any doubt as to the truth of Dr. Harrison's relation of the case, or the practicability of opening the arteries at the wrists or ankles.

(No. 148.)

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I will briefly state a case, and the method of treatment, which occurred to me last summer at the time of the cherry season. The mother of a young woman applied to me for her daughter, about twenty years of age, who had eaten voraciously of ripe cherries and swallowed the stones; soon after she complained of great uneasiness, pain, weight and nausea at her stomach, with tension and soreness of the abdomen, so that she was obliged to leave the place of her employment and return home, a few miles in the country. On the following day I was applied to, and ordered her an emetic of ipecac. and antim. tartariz. and a cathartic of pulv. jalap. and zingib.; the emetic to be taken immediately, and the purge a few hours after its operation, and repeated till copious evacuations by the bowels had been obtained; these had the desired effect, and in a few days she returned to her employment again perfectly well, after taking three doses of the purging physic. I enquired whether, during the operation of the emetic, she ejected from the stomach any cherry stones, but not one came up; nor did she know whether they passed per anum as the *cloaca* was inconvenient for observation; but that they did pass there can be no doubt, as such substances usually do pass the canal undigested. Whether the *rationale medendi* here pursued would have had the same good effect in Dr. Harrison's case, not being attended with convulsions, I am not sanguine enough to say, but leave it to your numerous class of pathological readers to form their own opinions upon.

Another case of repletion I shall relate from memory, (having mislaid my notes) which fell under my inspection in the summer, 1790, while on a tour in Ireland.

The history of the case was this; a boy, eight years of age, son of a labouring Irishman, having eaten great quantities of new wheat at the time of harvest which he had gleaned, until he was very ill, the parents brought him to me for advice. He was much swollen in the abdomen, face flushed, skin very hot, and painful to the touch, difficult respiration, and extremely restless, the state of his pulse I do not recollect; my attention was directed by the mother to a tumour in the posterior part of the perinæum, with the anus so much dilated that I could perceive the wheat therein, which surprised me much: I paused a little; but on recollecting what the late justly celebrated Dr. Hunter had said in his lectures on the abdominal viscera, in an impressive story respecting his saving the life of an old woman, labouring under a complaint of the ball stool, by manual operation, I instantly determined on attempting evacuation by mechanical means as far and as fast as I could; for this purpose I
took

Case of Periodical Spasm cured by Liq. Arsenicalis. 477.

took the blunt end of a silver probe and bent it, so as to form a small obtuse angle, and sometimes the handle of a tea-spoon; with these I picked out the wheat as far, as I could reach, which seemed to relieve the child much, and ordered the mother to bring the child again as soon as she found the tumour again formed; which happened in a few hours. I used the same method, and at the same time gave it a purge of pulv. jalap. & scammon. c calomel. By a few repetitions of these means the boy was soon restored, and I presume his life saved.

It is to be observed that the poor in Ireland see but little bread, therefore, it is not to be wondered at the child's eating so greedily and so much of such a rarity as wheat, and so impacted was it in the rectum, and swelled from the moisture of the bowels, that it was with great difficulty it could be moved.

If you think these cases worthy a place in your publication, by inserting them, you will oblige your constant reader,

CHARLES BATHAM, M.D.

Cowick, April 12, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I BEG leave to hand you for insertion in your valuable Journal, the following case of periodical spasm entirely subdued by the use of the liquor arsenicalis; thinking it contains some facts, which may greatly tend to establish its more frequent, but at the same time discriminate use, in most disorders where there is a regular intermission.

I am, Gentlemen,

Yours, &c.

W. H. LEADBEATER.

Overton, Hants, 2d April, 1811.

CASE.

On the 30th of December, 1810, I was called in to see a young lady, aged 18, whom, I was informed, had been labouring under a hard dry cough, for a month previous to the above date; she had a trifling pain in her side, bowels regular, pulse rather low, menstruates regularly.

Considering the case as nervous, I recommended a change of air, and at the same time, the following medicines. R. Mist. amygd. zix. tinct. opii. gutt. viii. oxym. scillæ zi. M. ft. haustus ter in die sumendus.

478 *Case of Periodical Spasm cured by Liq. Arsenicalis.*

These medicines were continued with the best effect until the 5th of January following, when finding the cough entirely gone, and some degree of debility remaining, I ordered the following:—R. Decoct. cascarillæ ʒix. oxym. scillæ ʒi. vin. ipecac. gutt. v. tinc. cardam. C. ʒss. M. ft. haust.umat. unum ter in die.

This plan pursued for a fortnight had the effect of bringing my patient into, apparently, perfect health. On the 20th of the same month, I was sent for in immediate haste to revisit her; I found her on a bed labouring under a most violent spasmodic affection of nearly the whole muscular system; the spasm was so violent as to require two persons to hold her in order to prevent her throwing herself off the bed. I immediately ordered her the following mixture: R Tinc. valer. ammon. ʒiij. opii. gutt. lx. mist. moschi. ʒvss. M. ft. mistura capt. coch. iij. ampla. ʒtia. quaque hora.

In about ten hours the spasms had in a great measure subsided; on inquiry I found it to be four or five days previous to the time of her expecting the menses. I ordered her into the warm bath, and left her for the evening, desiring she might take a cup of strong coffee occasionally, and to continue her medicine for the night. The following morning I visited her and found her free from spasm, but ordered her the warm bath again, in order to accelerate the menses, this however, had not the desired effect. On the 24th instant she was again attacked with spasm, affecting the larynx only, but this in a most violent degree, so much so as to alarm every bye-stander; it did not put on the appearance of globulus hystericus, but exactly resembled a person in the last stage of suffocation. During the whole time, eight hours, she was frequently able to swallow barley water, which seemed to give her momentary relief. Ordered—R. Hydrarg. submuriat. gr. ss. ext. hyoscyam. gr. j. ext. conii. gr. iv. M. ft. Bolus.umat. unum 4ta. quaque hora cum haust. sequent. R. Ammoniae carbonat. gr. v. conf. amygd. ʒj. mist. camphor. ʒix. spt. æther. C. ʒss. M. ft. haustus.

After twice taking the above medicines the spasm considerably abated, but was not entirely removed. The warm bath was continued every evening, and the above medicines taken three times a day, until the 27th instant, when the menses appeared, which had the effect of removing every unpleasant symptom, but at the same time leaving a great degree of debility. On the 3d of February the menses having subsided, I again put her on the tonic plan, with the cascarilla draughts as before, with the addition of the pills, as follows:—R. Pilul. ferri cum myrrh. pilul. galban. C. sing. ʒj. M. ft. Pilul. xx.umat. iij. ter in die cum haust. cascarilla.

On

On the 10th of February, the day fortnight, from the last period of menstruation, she was again attacked as before, with the addition of a most violent cough, resembling, as nearly as possible, the barking of a dog, every two or three minutes; this, as before, was relieved by a free use of laudanum. On the 13th instant, exactly at the same hour, she had a return of the spasm as before; this continued eight hours and then went off. It now first struck me if we could gain a regular intermission, the liquor arsenicalis might be of great service; however, I determined on seeing the case more fully established, previous to ordering it; on the 15th the spasm returned at the same hour, was more violent and of longer duration. On the 16th, 17th, and 18th, it returned regularly at the end of the twenty-four hours. The case being now so distinctly periodical, I ordered the following—*R. Pulv. trag. comp. gr. v. aq. distillat. ʒix. spt. cinnam. ʒj. liq. arsenic. gutt. v. M. ft. haustus sumat unum ter in die, augendo dosin liq. arsenic. gradatim ad guttas decem.*

On the 20th the spasm returned much as usual; on the 21st it was less violent, and much shorter; the medicines were continued until the 29th, when the spasm had entirely left her; she has since menstruated without any inconvenience, and is now in perfect health. I recommended change of air through the whole, but her friends would not accede to it, under the idea that she was not able to undertake a journey.

I have, within the last six months, had several cases of periodical headaches, which have always given way to the use of the liquor arsenicalis; my professional engagements have prevented my keeping an account of these cases.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I WAS much amused, as well as instructed, with the excellent paper of Medicus on Tobacco, inserted in a former number of your Journal; such communications are creditable to your publication, and prove highly interesting to practitioners, who, like myself, cannot command an extensive library. I did not observe, however, that your correspondent offered any remarks on the origin of the word Tobacco, which is involved in some obscurity. Some authors have supposed that the plant derived its name from the island Tobago. Labat asserts that it was named from Tabasco, a town in New Spain. The most probable origin of the name

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is from the pipe which was used in smoking being called Tobacco. The aborigines of Cuba were accustomed to celebrate a victory by a general dance, at the end of which they seldom failed to make themselves inebriated with the fumes of tobacco. Charlevoix, in his history of St. Domingo, relates that they do not begin to smoke, till ready to fall from fatigue in dancing. They then lay some leaves of the tobacco plant, not quite dry, upon some hot embers; they then take a forked pipe in the shape of Y; the extremity of this instrument is placed amidst the smoke which ascends, and the two branches are put into the nostrils of the smoker, who very soon becomes intoxicated; and this instrument is called Tobacco. The Spaniards say *Hazer un Tabaco*, to signify the diversion which they take in dancing and smoking in a circle like the Americans; and it is very probable that the term *Tabagie* as much used by some of the old French writers, to express the feasts of savages, was thence derived.

I am, Gentlemen,

Very respectfully, your Friend,

S. L.

London, April 19, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN your last Number, 146, there is what the writer calls "a singular case of twins," which terminated more favourably than happens in general under such treatment. The case is published from laudable motives, "that others may have an opportunity to pass their opinion on it." As the first child was "smaller than common," it is probable its membranes were weaker than common, and the adhesion of the placenta slighter than usual, and that premature labour was the effect. That the uterus being unloaded, had ceased to act for several days. It was a fortunate circumstance that the placentæ were not united, as is the case very often. Indeed if they had been united, the operator must have discovered the other child. The advice of the writer, under the circumstances he mentions, "the woman having continued well for the space of a week, without any dangerous symptoms," appears very judicious, and as the mouth of the womb was so much contracted, it was unnecessary to proceed to deliver. But this one singular case, and the practice followed in it, must not be looked on as a general rule in all cases of twins.

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The writer complains that "the teachers of the present day are not sufficiently explicit in their directions for the management of cases, similar to the one I have related, namely, where the placentæ are separate, and each follows the body to which it belongs." It is not very likely that the public teachers of the present day ever heard of a twin being overlooked and left in the uterus for the space of six days. Whatever directions the modern teachers give, they could be of no use in the case, as the first gentleman not having discovered the second child, had no occasion for directions for what I suppose the writer means, whether to deliver or leave the affair to nature. The present case was left to nature, but as that was owing to a mistake or want of experience, it must not be considered as a precedent for our conduct. It may be said to be a termination more owing to good luck than good management. If the placentæ had been united, the result might have been very different.

The earliest writer on midwifery in my possession (Mauriceau) recommends the delivery of the second immediately after the first. He seems to have had as extensive practice as any of the moderns, and to all appearance as successful. He says, "*Aussi-tot que j'eus tiré le premier dehors, je rompis les membranes des eaux du second, pour accélérer par ce moyen sa sortie?*" In twenty-eight cases of twins which he has published, he acted on these principles; and it cannot be supposed he would have done so, if he had ever been unsuccessful, or observed any inconvenience or danger attending the practice. In fifteen of these cases the placentæ were joined; the others were separated.

Dr. Burton, of York, also appears to have been in extensive practice, and gives the same advice. "The operator should introduce his hand immediately; he must break the membranes without waiting for pains; there will be room to turn the child if necessary, with ease to the operator, and with little pain to the woman; after which it may be extracted by the feet."

Dr. Smellie is of the same opinion, and therefore it is unnecessary to transcribe from him.

Dr. Hamilton, as quoted by the writer, says, "In the interval (when the affair is left to nature) the patient is apt to suffer from impatience and anxiety. Floodings frequently come on, and the labour is more painful and hazardous, in proportion as the time of delivery is protracted. It may, therefore, be recommended to practitioners as a general rule, if labour pains do not naturally recur soon after the birth of the first child, to pass the hand gently into the uterus, break the membranes, and manage the delivery according to the presentation." Fifth edit. p. 383.

The Editor of the *Edinburgh Practice of Physic* (vol. v. p. 408) says, "the above practice is bad, whatever authors have said to the contrary;" but gives no reason for his opinion. He says, "If the woman is healthy, and the child presents favourably, natural pains ought to be waited for; (he does not tell us how long we ought to wait) when the child will be expelled by the force of these only: failing which, manual assistance must be had recourse to." Can an experienced or any practitioner get information from such advice? It is one among the many vacillating ambiguous expressions of no use to young or old.

Dr. Denman says, "I have concluded that we may safely and ought to wait for four hours at least, after the birth of the first child, before we deliver the patient by art of the second child, if there be no particular cause for delivering her sooner." (P. 401.) But in the former page he says, "*this (meaning the interval) from some cause we cannot comprehend or counteract, no efforts whatever are made for the expulsion of the second. This is a state of great solicitude to every person careful of his patient and of his own character, as he must know she will be in some degree liable to unpleasant, and even dangerous symptoms, till the second is also born, and the business compleated." Why then wait four hours at least, in a state of great solicitude to himself, and what is worse, of great danger to the woman and also the child, when the business may be safely compleated in four minutes? The above, like most of the directions in modern books of midwifery, is full of ambiguity, without giving a fixed or general rule by which a young practitioner can determine what conduct to follow.

The anonymous publication called *The London Practice of Midwifery*, (1803) said to be a copy of Dr. Clark's Lectures, speaking of twins and the method of delivering them, says, "Now with regard to the second child, deliver directly, says one; leave it to nature, says another; do nothing at all, says a third. We generally find truth in the medium. If we deliver directly we shall not be acting right; and if the woman is left to nature for two or three days, it is not right either. We must not leave her till she is delivered; if we

* We have not altered the text of our ingenious and respectable correspondent, but insert here the passage he quotes as it stands in Denman. (Introduct. Midwif. 8vo. 2d Edit. vol 2. 399.) "But when after the birth of the first child, expelled in a reasonable time and by the natural efforts, from some cause which we cannot comprehend or counteract, no efforts whatever are made for the expulsion of the second child, the patient being as much at her ease as if there had been no previous labour; this is a state of great solicitude, &c." EDITORS.

do, we do it at her hazard. It is proper then to wait a moderate time." What is a moderate time? Here is the same indecision and ambiguity as mentioned by (I suppose his teacher Dr. Denman) the last author I have taken notice of; and which has no other effect than to puzzle and unhinge the young practitioner. He recommends waiting four hours as Dr. Denman has done, and subjects himself to great solicitude, and the woman and child to great danger. He then tells the young practitioner to amuse the woman with some insignificant chicanery, unbecoming a respectable professional man, to keep her in ignorance of there being another child, as he was advised by his teacher. But he goes on, "The time however comes when we see it necessary to turn and deliver, or at least to deliver. We have now to undo what we have been doing. To tell her the sponge (vid. p. 200) is separated, which it is very easy to set right without much pain." Could not the sponge have been set right without much pain in four minutes, by which he would have saved himself, the mother, her husband, and all concerned, four hours' anxiety, attended every moment with danger to both mother and child; and at last to surprise her with another child and two sponges.

The writer of the paper asks, "*If no unfavourable symptoms occur*, are we not justified to leave the second child to nature?" He thinks there is no danger from hæmorrhage unless the placenta have been united. He is not sure that the part of the uterus to which the placenta was attached, may be pouring out blood and filling the space left by the child, which in an inactive uterus may not appear externally. As the case he has given, as I observed above, perhaps never before occurred, it must not be adopted as a precedent; and I hope such a case may never occur again: the fortunate termination of it must not be produced as a general rule in future cases of twins.

Dr. Denman (c. 17. s. 3.) says, "I have found the second child produced, or nearly so, before I had time to separate the first." He does not say there was any inconvenience or danger occurred to the woman or child from this rapid progress of the labour. It may then with great propriety be said, that if the second had not appeared so soon, there would have been no impropriety in proceeding to deliver the second as soon as he had discovered it, after disposing of the first.

Dr. Denman says, "by this decision (meaning waiting four hours) we shall certainly avoid many unnecessary operations, without detriment to the patient, without increasing our own difficulties, or hazarding our reputation." There cannot be

many unnecessary operations; twins are not remarkably frequent: and as to delivering a second child, there is no difficulty that ever I experienced. But if hæmorrhage or other dangerous symptoms occur in the space of four hours, there will be detriment to the patient, and a serious hazard to the operator's reputation.

If any reader choose to look at page 234 et seq. of this *London Practice of Midwifery*, he will there see the result of a case left to nature, by the philosophising forbearing Dr. Hunter. I hope the tale is not true; if it is, he appears to have been guilty of little less than manslaughter; and I am suspicious that his doctrines, infused into thousands, are the cause of the forbearing system, and that of leaving every thing to nature in the present fashionable practice.

There is not the shadow of a reason in the *London Practice of Midwifery*, or in any other book I have seen, why we should not deliver the second child soon after the first. The writer talks as his teacher (I suppose) of waiting four hours. "We should therefore let her have an hour to cool and to nourish; and if when she begins to feel herself strong, she begins to be again uneasy about the after-birth, we may alarm her a little. So after playing this piece of artifice, she will be quiet enough?" But if the woman has not been heated or fatigued, from having had a moderate easy labour, why wait four hours? Granting she has been fatigued and heated, during the extraction of the second child, she lies quite passive, undergoing no additional exertion; and the extraction of the child and placenta must abstract a very considerable quantity of caloric from her system, by which she will be cooled much sooner than she would have been undelivered. The natural discharge from the uterus may also contribute to assist in cooling her.

I have now mentioned the practice I have adopted through a long life; it has been uniformly successful in cases of twins. I hope the professor you allude to will speak as decidedly, whether for or against me; and that he will produce proof where he has seen inconvenience or danger occur from the immediate delivery of the second child, whether natural or cautiously artificial.

I conclude by relating, in few words, a case I was informed of by the midwife. The woman bore a child on the Sunday morning. No pain after:—on the Monday she began to be alarmed, finding there was another child, and sent for a surgeon, who did nothing, but desired he might be sent for if pains recurred. On Tuesday evening slight pains, with no advantage. The mother and midwife, M. W. were sensible the child was alive and very active. The surgeon, who
had

had been again called on the appearance of pains, proposed to take some blood from the arm, which was submitted to with great reluctance, the patient never having been bled before, and had a great dread of the operation. She returned to bed, and in a short time told the midwife that she had not felt the child move since the bleeding. On Wednesday evening the pains recurred stronger; the surgeon was sent for, but before he arrived another child was born dead; and soon after that, a third, dead also.

Here was a case left to nature, though not entirely, terminating in the loss of two full-sized boys, which, in my humble opinion, might and ought to have been extracted on the Sunday morning.

I am, Gentlemen,

Your most obedient,

A. FOGO.

Newcastle, April 11, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MR. Jones's case of twins in the last Journal is highly interesting, and I think he displayed much judgment in allowing nature an opportunity of effecting the delivery of the second child.

In the absence of any particular bad symptom, delay cannot be very hazardous, whereas producing delivery "per artem" is always attended with danger both to the mother and her offspring. Our best practical writers on midwifery expressly caution practitioners in that art, not to be hasty and precipitate in doubtful cases. In long protracted labours the greatest difficulty which the accoucheur encounters is the keeping up the confidence of the patient and attendants; when that fails he is sure to be harassed by unceasing requests to do something for her relief, and distressed by doubtful hints as to his ability and knowledge. This often leads him to take a fatal step which may blast his reputation and credit, and furnish him with a never failing source of regret. These observations particularly apply to young professors of the obstetric art, among whom I reckon myself.

In a case which I am about to detail, I condemned myself for rashness, whether justly or not you and your readers may determine. A woman, 22 years of age, under the middle size of females but well proportioned, felt the first pains of child-birth on a Sunday afternoon about the middle

of last Summer*. I was desired to attend on the occasion. On my arrival the pains were so slight that I deemed an examination unnecessary. During the night the pains continued, but in the most trifling degree, yet they were sufficient to rupture the membrane, and shortly afterwards the pains entirely ceased. Being some miles from home I slept at the house where my patient was confined, and on Monday morning I made my first examination. I found the head presenting in a natural position and very low in the pelvis; I encouraged my patient with the hopes of a speedy delivery on the return of the pains; these I waited for in vain till Tuesday afternoon: I was now prevailed upon by the request of herself and friends, as well as the weak state in which she was, to deliver the child by the forceps. This was the first case in which I ever used that instrument, and I succeeded in delivering the child in a few minutes with but little pain, considering this was her first pregnancy.

The child was a little under a full grown *foetus*, and from her very great size before delivery I immediately judged there were twins; this was really the case. No hæmorrhage succeeded; the placenta was retained by the undelivered child. I continued to encourage my patient with flattering expectations and a little wine, without informing her of the nature of her situation. I waited two hours, no pains returned, nor was there any hæmorrhage, but a great degree of languor. I now introduced my hand into the uterus, ruptured the membranes of the second child, and delivered it by the feet: flooding to an alarming extent instantly succeeded. With as much promptitude as possible I brought away two placentæ, being obliged for this purpose to introduce my hand a second time into the uterus. The gush of blood was now such as I had never before witnessed; the woman exhibited every symptom of mortal syncope, not a trace of pulsation remaining. I was prepared with cloths wetted with brandy and vinegar, and having thrown off the bed cloaths excepting the sheet, I instantly covered the loins, pubes, and abdomen with them, changing them frequently for others. The flooding soon abated, but this arose from the sunk state of the patient, who had, in a few moments, lost not less than 6 or 7 pounds of blood. For some minutes scarcely a vestige of life was apparent; every attendant had left me excepting one; with her assistance I carefully administered cordials, and my pleasure was great at finding a gradual return of life. The flooding continued in

* Having lately changed my residence, I am obliged to narrate the case from recollection, my notes being left behind.

a trifling degree for a short time, and then altogether ceased. Good nursing and attention gradually restored the woman.

Was this case to occur to me again I would deliver the first child "per artem," for the great distension of the uterus connected with the weak state of the woman rendered the return of labour pains improbable; but after the delivery of the first child, the uterus being relieved, and no very bad symptom intervening, I might safely, I think, have waited, and allowed nature a reasonable time to have resumed her efforts.

I am, Gentlemen,

Your most obedient servant,

AN ESSEX PRACTITIONER.

April 14, 1811.

To the Editors of the Medical and Physical Journal.

"In cases of wounds attended with denuded pericranium, do not hastily act upon the principle that an exfoliation must sooner or later follow, for this may not eventually be the case one time in ten." Sir William Blizard's M. S. Lectures on Surgery.

GENTLEMEN,

NOTWITHSTANDING the great advances made in surgical practice towards that perfection which it is the honourable aim of the practitioners of the present day to exert every effort to approach, still there exist too many discouraging obstacles to its perfect attainment, without reviving those which increasing knowledge and the result of attentive experiments have happily removed. No. 144 of your Journal contains at p. 146 the following remark, under the title "Theoretical Suggestions for the improvement of Practical Surgery."

"In the operation of trepanning the skull, when the scalp is sufficiently removed it is essential to remove just so much of the pericranium and no more, as the head of the trephine will include, *because the cranium when denuded of its pericranium will, like other bones denuded of their periosteum, grow carious.*" The former part of this quotation, doubtless, contains most useful advice, but I conceive not a new suggestion; no dexterity can justify a wanton use of the knife, nor should an occasional happy effort of nature in a sound system cause an implicit reliance that such efforts will prove successful under every variety of constitutions, or always be adequate to the counteraction of ill directed modes of cure.

To

To a young mind the necessary distinctions which terms are intended to convey are not always present, and first impressions are ever of high importance. The term carious excites instant alarm, and the difference between that state of bone and diseased bone are too often overlooked. That tedious exfoliation, in defiance of the most skilful surgery, will follow denudation of pericranium and periosteum, under some circumstances, is irrefutably true, but it is no less true that apprehension of such an event being unavoidable, has led to practices which have produced the dreaded evil; *e. g.* when exposed bone has assumed an appearance indicative of that destruction having taken place, which sometimes precedes exfoliation, how common has it been to adopt very active measures upon the principle that such an event must necessarily succeed, when an exactly opposite mode of reasoning and of practice would have been nine times out of ten (as observed by Sir William Blizard) successful.

Let not then the young and inexperienced practitioner be needlessly alarmed, when with laudable zeal and anxious thirst after knowledge he reads the above statement, and hastily adopt sentiments which may influence his practice, to his own discredit and the injury of his patient. "Exfoliation," said the sagacious Pott, "from a cranium laid bare by external violence, and to which no other injury has been done than merely stripping it of its covering, is a circumstance which would not so often happen, if it was not taken for granted *that it must be*, and the bone treated according to such expectation."

"Exfoliation is full as often the effect of art as the intention of nature, and produced by a method of dressing, calculated to accomplish such end under a supposition of it being necessary."

A few years ago, a youth of 14 bathed in a canal on a chilly day when much heated; a few hours after he complained of universal pain, had a smart rigor followed by sickness. Continuing thus indisposed for several days I was desired to visit him; he now complained of severe pain near the middle of the left tibia, that all his "other pains had gone there." On examination there was considerable inflammation with some swelling discovered; he was labouring under severe pyrexia with constipation, indicating general and local antiphlogistic treatment, which was immediately instituted and persevered in till it was manifest an abscess in the leg was unavoidable. On this event taking place I was prevented making the necessary opening in due time; the tumour was large and remained in a state fit for the knife several days before it was suffered to be used; upon discharging upwards of a pint of matter, I found

found the periosteum denuded to a much greater extent than I could have supposed possible in the time ; the subject was become feeble, emaciated, had considerable night sweats with a thin discharge from the wound, gradual thickening and deformity of the limb ; a free use of the cinchona and a more generous diet removed these instances of debility, and the sore, in a few weeks, contracted round the denuded bone, which comprehended an extent of near two inches of a very unpleasing aspect. However, as healthy granulation advanced in every direction with great general improvement of the system, I felt encouraged to aim at approximation of the sides of the sore by every possible means position and dressing could suggest. The progress of cure was slow but highly satisfactory ; a very small portion of bone ultimately exfoliated, not larger than the size of a little finger nail, when a solid union of parts was effected in a limb which had borne every disheartening appearance that osseous inflammation and great thickening could bestow.

A respectable glazier of this city, middle aged, and long afflicted with dreadful arthritic attacks, was returning from a neighbouring village one tempestuous night, and had the misfortune to be thrown from his horse on a hillock of gravel ; pitching upon his head, from which his hat had been previously blown, he received an extensive contusion and detachment of the right side of the scalp. Stunned by the blow he remained on the ground some time, and had barely recovered the possession of his faculties on being brought home an hour afterwards. Upon being called to his assistance I found the integuments so comminuted, swoln, and loaded with gravel, that no idea of replacing the scalp could be entertained. I directed the whole head to be well fomented, and a large emollient cataplasm applied, renewing it every six or eight hours ; in a few days free digestion commenced with extensive foetid discharge ; cinchona, wine, and nutritive diet corrected and moderated this state ; very considerable sloughing was followed by as healthy granulations as could be expected ; the middle of the right parietal bone was bare to the extent of an inch, of nearly a circular shape, it had a faded brown appearance. I was anxious concerning the result, but determined upon a diligent application of adhesive plaster to facilitate the union of the soft parts over it ; in the course of a month this was effected, so that the spot now formed a firm shining cicatrix of the size and shape of a small almond.

I am, Gentlemen,

Your obedient Servant,

GEORGE NESSE HILL.

Chester, March 21, 1811.

To the Editors of the Medical and Physical Journal:

GENTLEMEN,

YOUR Correspondent, Mr. Barlow, at p. 390 of your last Number, doubts the fact of the inoculated Small-pox proving infectious, except under particular circumstances, and then rarely; he is aware that this sentiment will meet with an adverse opinion from the *advocates of vaccination*, yet he is actuated to hazard it—from *motives of utility*!

By mentioning the *advocates of vaccination* in particular, does your correspondent mean to insinuate, that *they* only will differ in opinion with him on the subject? I thought this matter had been decided long before either *vaccinists* or *anti-vaccinists* were known. By merely turning to your 14th volume, page 511, your Correspondent may be made acquainted with several fatal cases of small-pox communicated by casual infection from those who had been inoculated; among which is the never-to-be-forgotten fact, recorded by Dr. Willan, in the year 1796, (before vaccination was in use) of the inoculation of a child, whose parents kept a shop in a small court. *From this child seventeen persons caught the small-pox in the natural way, and eight of them died.* Thus in order to save the life of one person, seventeen were put in danger of their lives, and eight, or nearly one half, were actually sacrificed.

These cases are comparatively of modern date; perhaps your Correspondent will be better satisfied with some of an earlier period. Let us go back to the year 1721, and we shall find records to substantiate the assertion that “infection may be traced from inoculation *even when the inoculated disease has not assumed the confluent character.*”

Dr. William Douglas “a physician of the best credit and practice,” at Boston in New England, writing to Dr. Alexander Stuart, under date of December 20, 1721,* says, “at first they gave out that it was a *method not infecting*, procuring only a small quantity of eruptions, but never death, nor any bad consequence, and was an infallible security against ever after having the small-pox.”

“*We soon found it infecting; many have died of the infection received from the inoculated, whose deaths in a great*

* Published by Dr. Wagstaffe as an Appendix to his “Letter to Dr. Freind, shewing the danger and uncertainty of inoculating the Small Pox.” 2d Edit. 1722.

measure lie at the inoculators' doors. *Then the persons gave up this point*, but continued to maintain the rest, *till they found some of the inoculated with immense numbers of pustules, &c. &c.*

These extracts confirm the fact, which Mr. Barlow doubts. *The small-pox, it appears, was propagated by infection from the inoculated, when the disease was not confluent; for the immense number of pustules, or, in other words, the confluent small-pox from inoculation, was not known till after the idle notion of the non-infectious nature of the inoculated small-pox had been given up.*

It is very well known, that Mr. Maitland, the first English inoculator, entertained the opinion, that the inoculated small-pox would not communicate the disease by casual infection; and in consequence, he took no care to separate his inoculated patients from persons liable to receive the infection; but woeful experience soon taught him otherwise, and made him more cautious in future.

If the pages of your Journal are not better occupied, I will request you to insert an extract from another letter of the same Doctor Douglass. It shews, in a very lively manner, the danger of promiscuous inoculation, and will, I think, convince all who consider the matter temperately, that the Governors of the Small-pox Hospital, and of some other charitable Institutions, have acted a wise, humane, and patriotic part by altogether prohibiting variolous inoculation at these institutions. I wish the facts stated by the worthy Doctor, who "though dead, yet speaketh," may have the effect of influencing others to refrain from sowing the seeds of so destructive a malady as the Small-pox, in the narrow courts and alleys of this great metropolis; where, unfortunately, a soil is found too well fitted for the propagation of this loathsome and fatal disease: but I can have little expectation that this or any thing else will induce those persons to desist from the practice, *who find their account, in being at the expence of advertising for poor objects to be inoculated gratuitously.*

There are, I know, in this town, apothecaries who profess to *give advice gratis*, at certain hours of the day, but oblige their patients to pay for their medicines; and I apprehend that the same plan is followed by the advertisers of small-pox inoculation *gratis*. If so, it may certainly answer their purpose; for what with preparing persons for the inoculation, purging them afterwards, and giving them medicines during the disease, a large expence may be incurred under the idea of performing an act of humanity and kindness *gratis*.

Extract of a letter from Dr. William Douglass, to Dr. Alexander Stuart.

Boston, Feb. 15, 1722.

" Since my last to you the small-pox has made little or no progress in the country. Our newspapers tell us that in some towns it is entirely ceased, in others abated. Who then but madmen would have advised inoculation in the severest season to those who are likely for ever to escape the small-pox? In this town several hundreds have escaped, and it is probable many more might have escaped, (as was the case nineteen years ago) *if inoculation had not rendered the infection so universal and intense.*

" Last small-pox, the month of the greatest mortality (December, a severe winter month) *did not exceed eighty persons*: at this time, the month of the greatest mortality (October, a favourable autumn month) *exceeded four hundred burials*, which is more than all that died of the small-pox nineteen years ago.

" For the three months of September, October, and November last, *in which inoculation prevailed*, the town was a mere hospital, and *we buried seven hundred and sixty persons*. The last small-pox spread gradually in the extent of ten or a dozen months, and vast numbers escaped. *Inoculation of the small-pox this time set us all in a flame, and in half the time leaves few exempt from its rage.* With what face can any man call our methods of inoculation a regular procedure?

" I heartily wish success to this and all means designed to alleviate the epidemic distempers incident to mankind, whether casnally discovered, or ingeniously contrived by the sons of *Æsculapius*; but rashness and headstrong irregular procedure I shall for ever exclaim against, ESPECIALLY THAT DETESTABLE WICKEDNESS OF SPREADING THE INFECTION."

I am, &c.

REPREHENSOR.

May 7, 1811.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THOUGH your Correspondent H. R. has professed to "reply in a few words" to the observations on what he is pleased to call (I will not say unjustly) "the uncourteous attack" on Dr. Harrison's Bill, which you did me the favour to insert in your Journal for March last, I cannot yet acknowledge myself satisfied

fied with his explanations, or admit that he has obviated any of the material objections to the proposal in question. I must, indeed, plead guilty of some inaccuracy of language in describing the leading features of the Bill; but I was perfectly aware, that the comfort and advantage of "the present generation" were not consulted in its provisions; and instead of thinking it too *mild*, as H. R. would insinuate, I have spoken, in express terms, of "the *mischiefs* that must arise" from its enactment, because "every thing seems to have been studiously contrived with the view of degrading all that is great, and learned, and respectable in the profession; of consolidating every abuse that exists, and of perpetuating every irregularity of which Dr. Harrison and his fellow-reformers so loudly complain." A bill to oblige all future physicians, surgeons, and apothecaries, "to take out annually certificates" of leave to practise, just in the same manner that people take out licences to kill game, or to retail beer!—a bill to enable half-educated country magistrates, or their clerks, to license bone-setters!—a bill which interferes not with the sale of stamped medicines!—Is this the mild "*bill for the improvement of the Medical, Surgical, and Veterinary Sciences*," which has been "*most favourably received by the faculty*," which will produce "the gradual amendment of medical men," and "be productive of immediate advantages to society at large?" No, ye sapient worthies of the Lincolnshire Benevolent Medical Society, this bill has been egregiously misnamed; it should be termed, **A BILL FOR THE ENCOURAGEMENT OF IRREGULAR PRACTITIONERS, AND FOR PROMOTING THE SALE OF QUACK MEDICINES.**

Your Correspondent, however, is not disposed to admit these consequences, and declares himself unable to see either how "additional countenance" will be afforded "to the sale of stamped medicines," or how "the powers of the existing corporations" will be strengthened by the passing of the projected act. Now, really, Gentlemen, as to the first point, I scarcely know how to express my astonishment that Dr. Harrison and his friends should, notwithstanding all the objections that have been urged, and notwithstanding all the happy ridicule of Dr. Beddoes on this great defect of their scheme, persist in asserting that it gives no sanction to the sale of quack-medicines. Cannot they be made to understand, that if, in any legislative measure professing to be "for the improvement" of a particular art, a saving clause be introduced in favour of any abuse prevalent in that art—cannot they be made to understand, that this abuse becomes, by such a proceeding, directly countenanced and legalized? Cannot they perceive how much it is the interest of the proprietors of *nervous cordials*, *solar tinctures*, and *vegetable balsams*, to assist them in forwarding a bill that shews them such

marked favour? But the Association, it seems, discovered, that they were treading upon tender ground, when they touched upon the province of quackery, and deemed the clause in question necessary to assuage the fears of those alarmists who might apprehend a falling off in the revenue from the passing of the proposed act. Such an extreme degree of prudence may be commendable, but on the wisdom and policy of the proceeding it is impossible to bestow applause.—The assertion, that the powers of the existing medical corporations would be confirmed and increased by an act which greatly extends their jurisdiction, seems to require equally little proof. It is true “the Licentiates of the College of Physicians *may* prefer their claims with as much cogency, after, as before the passing of the Bill, as may the commonalty of surgeons and independent apothecaries, for the severe treatment received from their respective corporations:” but does your correspondent believe, that the vast augmentation of funds which those societies must experience, if the scheme were carried into effect, would be of no account; or that the disposition to abuse their authority would not be increased by it? Let him take the case of the London College of Physicians which has now on its list nearly three hundred members, and which after the passing of the proposed act, would probably reckon thousands; let him consider how its finances would be improved by this addition, and then say, whether its rulers would not be supplied with all the power which wealth could bring, “to purchase up submission and to overawe resistance.”

The Association resolved, at one of their earlier meetings, “that the reform, *to be complete, must pervade all the departments in physic;*” and yet, according to their present plan, the most perfect immunity would be granted to all the *intruders* “at present practising, however irregularly.” They regret, “that women, porters, grinders of paint, pestle-pounders, distillers of peppermint, &c. soon think themselves qualified to sell drugs, and prescribe them too, in all cases;”^{*} and yet they introduce a clause into their bill, by which these anomalous beings are to be protected, and empowered to prescribe and kill “*impune per totam terram.*” It may be urged, that the magistrates, who are to take cognizance of their behaviour, will be able to check any daring attempts at imposture, or, to use the words of your correspondent, “secure the suppression of notorious offenders.” *Sed quis custodiet ipsos custodes?*—Will those guardians of the public health be so far above all suspicion themselves, that the public may safely rely on their vigilance? Will they be always so well versed in medical science, as to

^{*} Harrison's Address, p. 67.

judge correctly of medical ability? And will they never bestow licences but upon those who are truly skilled in the art?—To these questions the best answers will be found in the attestations of wonderful cures performed by advertising quacks, which are daily presented to the world, under the hands of worshipful judges, and right reverend bishops; who, whether it be in their own cases, or in those of their butlers and coachmen, decide on the virtues of a medicine with much greater confidence than Sydenham or Rattcliff would have shewn; and who declare, without scruple, their implicit belief in the efficacy of *nostrums*, which are commended for the cure of all incurable diseases. When such is the case, what man in his senses would think of appealing to Their Worships the Justices at the General or Petty Sessions, as a competent tribunal to decide on the practice of physic?

In perusing the "Address to the Lincolnshire Society," I was not a little surprised to find the author alluding to the late Dr. Beddoes, as one of those who were disposed to second their view—to the same Dr. Beddoes, who, in his "Letter to Sir Joseph Banks," had so successfully exposed the futility of their former scheme, and who, in the following passage seems to have anticipated something like their present bill.

"To an individual, or a body, which has once lost the public confidence in a matter dependent upon skill, *rehabilitation* by dry statute is impossible. The power of a former French king, or present French emperor, would be unavailing. Whereas, to use, by way of example, the words of the Association, '*abundant proofs have been produced of the deplorable state of society, in being exposed to the injuries resulting from a numerous race of unqualified practitioners, and the consequent discouragement of well-educated members of the faculty*,' what would it avail, if, to this litany, our legislators were, *nemine contradicente*, to respond—'*be it therefore enacted, by and with ———, that Doctors of Medicine, of the Universities A. B. C. are from the present date respectable; and let them henceforth be respected, and feed in preference to all pretenders whatever?*'" (Letter, p. 16.)

"There are laws," says Montesquieu, "so little understood by the legislator, as to be contrary to the very end he proposed;" and of exactly this nature would be those which our medical reformers are desirous to enforce. Nothing, in fact, can be more preposterous, than the idea of regulating the practice of physic by an act of parliament, at least by such an act of parliament as that now recommended. If carried into execution, it would have about the same effect, and be about as much regarded by the public as the ordonnance which was issued by the Spanish court in the year 1785, when a destructive epidemic raged at Cartha-

gena, directing the physicians of that place to administer no other medicine to the sick than the opiate of Don Joseph Masdeyal—subjecting them to the Intendant of the Dock-yard—and commanding them to prescribe according to his instructions. The physicians, after some fruitless expostulations, found themselves compelled to obey; but the people were more refractory, and treated the royal mandate with such disrespect, that rather than submit to the prescription of the opiate, they actually refused to send for any medical assistance whatever. At length, the Court, finding that the physicians were starving, while the citizens continued to die in great numbers, agreed to compromise the matter, by confining the operation of the obnoxious edict to the Royal Hospital*.

Yet we are told, that the Bill “has been most favourably received by the faculty†.” By what part of the faculty, I would ask, has it been thus “favourably received?” On a point of such magnitude why not give the names? My opportunities of learning the sentiments of my brethren are probably as great as those which Dr. Harrison enjoys; and yet, upon no occasion when his plan has been the subject of discussion, have I heard a single voice raised in its praise. None of the Reviews have had the complaisance to applaud it; and the Colleges who were applied to by the Secretary of State for their sentiments on the subject, are, as I have access to know, unanimous in its condemnation.

On the whole, I must give it as my opinion that if the former scheme of the Association was futile, their present one is downright absurd, or, rather that it is calculated to extend the mischiefs it was intended to remedy; that there is scarcely any one irregularity in medical practice which would not find a fostering provision in its enactments, and that there is not one excrescence of the profession which it would deaden or destroy. I have examined it in all its parts with the most scrupulous attention; I have viewed it in its probable consequences; I can perceive nothing in it but the seeds of disorder and confusion; and till I read the pamphlet in which it is detailed, I could not have believed that after the many facilities which had been afforded to the views of the reformers, after the ample discussion which their measures had undergone, and after the many useful hints which had been furnished them, I could not have believed that it was possible for any set of men so circumstanced to have toiled so long and to have done so little; to have conceived with such mighty efforts, and to have produced nothing but a miserable abortion.

* Townsend's Journey through Spain, Vol. III. page 137-142.

† Harrison's Address.

Before I conclude, allow me to request H. R. to explain the data on which he grounds his very singular calculation, curtailing the "aggregate lives" of the medical men of the United Kingdom to "seven years' purchase" and killing them off at the rate of 2000 a year. Though, perhaps, but few of the votaries of Esculapius now reach a Hippocratic old age, yet a considerable proportion of them contrive, I believe, to spin out their existence to *ten times seven years*, if not to the advantage of their patients, at least to the manifest annoyance and mortification of their more youthful competitors.

I remain, Gentlemen,

Your most obedient Servant,

London, May 13.

A. H.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN my letter, inserted in a former number of your Journal, containing a valuable and interesting communication from Mr. Park, on the state of vaccination at Liverpool, my signature was omitted by mistake. This would not be material, did I not consider myself responsible for the accuracy of the statement, in the concluding part of that letter.

I now request the favour of you to insert a few miscellaneous observations on some topical remedies, which I have found beneficial; and which deserve to be more generally known.

Styptics.

The most powerful styptic that I have ever used, is powder of charcoal. Having seen the remains of a small box of a black powder brought from Flanders, which was sold at a high price, and reputed to be possessed of extraordinary properties as a styptic, I suspected it to be charcoal; and had some charcoal powdered, which, on trial, proved equal, if not superior, to the original. In bleedings of the nose, it may be applied by means of tents, first moistened with water, and then dipped in this powder; but in slight cases it has answered, by being taken like snuff. In other cases it is to be sprinkled on the part affected; and retained there by means of a compress.

On Ophthalmia and Psorophthalmia.

The advantage of metallic oxyds, particularly that of mercury, in obstinate cases of this kind, is well ascertained. The ung. hydrarg. nitratis is a good preparation in skilful hands, when cautiously

cautiously applied, either with the finger or a camel hair pencil ; but it is too strong for popular use. The following, which is much milder, has proved so efficacious, and given such general satisfaction, that I deem it an indispensable duty to make it public. R. Hydrarg. nitrico-oxydi. gr. xv. butyri. ʒj. M.

The edges of the eyelids should be anointed with this ointment every night ; or every night and morning.

On the Favus.

I several years ago published in this Journal, some remarks on the treatment of tinea, the common effect of favus when it takes place on the scalp ; I now beg leave to add, that when this eruption occurs in the face, where it is the common effect of a cold, nothing has appeared to be more efficacious than the ung. picis liquidæ ; but a certain degree of caution is necessary in its use ; otherwise it will prove too stimulating.

On Excoriations behind the Ears.

The following is the best remedy that I have ever found for this complaint. R. Plumbi superacet. ʒj. adipis præpar. ʒj. M.

This is to be spread on lint. The disorder often extends over the ears ; but is easily cured by this application. The sores must not be washed.

On Herpetic eruptions.

The best remedies for these eruptions are ointments prepared from hydrarg. præcip. alb. with a small quantity of hydrarg. oxymur. and lard.

The ung. zinci has also been found serviceable in such eruptions ; particularly in those of the hands, or other irritable parts.

A lotion similar to the nostrum, sold under the name of Gowlard's lotion, has cured some herpetic eruptions, which were so troublesome as to render life intolerable. It is as follows :—R. Amygd. amar. decort. ʒiij. tere in mortario marmoreo cum aquæ. ʒviij. et adde hydrarg. oxymur. gr. viij. in spiritûs ros-marini. ʒij. prius solutæ. Fiat lotio.

Oleum Ricini.

This important article of the Materia Medica is much improved by filtering ; and it is of some consequence to ascertain the best mode of exhibiting it, particularly in delicate stomachs. I have found it most convenient to give it in sugar and water. A little moist sugar should first be dissolved in tepid water, in a tea-cup ; and stirred with the spoon in which the oil is to be measured. By this method the oil is prevented from sticking to the

the tea-cup, or the spoon ; and not only the dose will be more exact ; but it will float loosely on the surface of the vehicle, and be more easily taken.

I have almost always found this the best aperient for puerperal patients ; many of whom had in vain tried to take the oil in other forms.

I cannot conclude without observing, that this department of physic stands in need of reform. An aperient should always be given within forty-eight hours after delivery, unless the patient has had a stool. It is proper to direct it on the morning of the third day inclusively. A table-spoonful of the castor oil is in general sufficient ; and ought not to be repeated in less than twenty-four hours, lest it should operate too much. If occasion requires, its operation should be promoted by a clyster.

I have frequently heard, and heard with great concern, of cases in which women have been suffered to remain without a stool, and even without an attempt to procure one, six or seven days. This gross and shameful neglect can only arise from the practice being still, in some measure, in bad hands. It is, indeed, an Augean stable, and ought to be cleansed. Many of the male sex, who now practise that branch, were never educated to the medical profession.

To these remarks it may be added, that during the month, no woman should be suffered to go more than twenty-four hours without a stool ; and that the dose of the oil should be gradually diminished,

I am, Gentlemen,
Yours, &c.

*New Street, Hanover Square,
April 16, 1811.*

JOHN RING.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I SHALL feel much obliged to any of your chemical readers for the explanation of the red colour which immediately results from the combination of rhubarb with the carbonate of potash, or any of the other alkalies.

Murray, in his *Elements of Materia Medica*, states the constituents of rhubarb to be gum, resin, gallic acid, and a quantity of earthy matter, chiefly lime, combined with the sulphuric and citric acids.

By the insertion of the above you will much oblige an old Correspondent.

Your's, &c.

APOTHECARIUS.

*Ipswich, March 24, 1811.
(No. 148.)*

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For

*For the Medical and Physical Journal.**On Stramonium.*

(Continued from P. 325.)

BOERHAAVE has recorded some similar instances of the peculiar kind of ebriety and mental aberration occasioned by Stramonium, as well as some particular uses to which it was applied by the sensual natives of the East; in his *Hist. Plant. quæ in horto Acad. Lugduni. Bat. crescunt, &c.* it is stated "hæc utuntur meretrices Javanenses, dum a primariis sunt conductæ, tum hanc plantam maritis suis dant et delirii species subsequitur, unde coram maritis lascivia utuntur, et si hæc planta in majori copia detur, stupidi manent, languent et tandem moriuntur. Hæc planta facit mirificè insanire et temulentiam conciliat; qui hanc plantam comederunt, oculis apertis respondent, sed nullius rei memores sunt, nec putant sibi ulla re interesse; hinc tali potu utuntur Indi principes ad suos rivales stupidos reddendos, adeoque imperio minus capaces tamen in vivis servant, ut populo tum possint ostendere."

These effects are frequently attempted to be produced by a potion composed of opium, stramonium, and hyoscyamus, it is so mixed as to have little taste or smell; when taken in considerable quantity, or often repeated, the narcotic effects are seldom cured; for though, in a few instances, emetics given immediately after it, with large doses of salt and vinegar, afforded some relief, the faculties of the mind remained permanently injured.

Every part of the plant seems to possess active properties; but the effects produced by the seeds are the most violent. *Blancardus* relates that a girl 18 months old swallowed some seeds of Stramonium which she accidentally found. In a short time she raved, striking every thing, biting, and tearing the bye-standers with her nails, treading on the feet of others, and foaming at the mouth: she presently died in horrid convulsions. A boy of 30 months, who also swallowed some of the seed at the same time, was restored in 24 hours, by exciting vomiting with olive oil and sugar; an enema was injected, and cordial stimulating medicines were afterwards given.

A case is mentioned by *Kramer*, in which a man swallowed some seeds of Stramonium and fennel mixed with sugar in spirits of wine. It occasioned violent delirium; the patient was cured by drinking vinegar in which pepper was infused.

Hein has stated a shocking case of two infants who, in consequence

sequence of swallowing some seed of the Thorn-apple, were affected with somnolency, burning heat of body, fury, swelling of the abdomen, convulsions, *strangulatio faucium*, *hydrophobia*. These violent and threatening symptoms were relieved by oleaginous remedies, milk, acid drinks, and clysters.

In a fatal case where some seeds were found in the stomach of the patient, the vessels of the brains were turgid with blood, and extravasation had taken place.

The fifth volume of Medical Commentaries contains two cases of the poisonous effects of the seeds of the Thorn-apple, by Mr. Thomas Fowler. The first, a girl near six years of age, October 11th, 1777, swallowed, between twelve and one o'clock, three fourth parts of the seeds of a fresh, ripe, middle sized Thorn-apple. "About two o'clock in the afternoon, she began to look stupid, seemed to forget herself, and gave incoherent answers. At three o'clock they gave her some bread and milk, which she attempted to swallow, but could not; upon which they laid her down upon the bed, where she seemed to sleep for about half an hour; but, when she awaked, her belly, tongue, face, and eyes were obviously swelled, and the two latter were also very red. These last symptoms abated about six o'clock; but, from half past three till seven, she seemed to sit like a perfect idiot.

About seven o'clock she seemed to have a motion to stool, and passed a living lumbricus teres, 14 inches long, with a little water, but without any fæces, or relief of symptoms; for, soon after, she began to grow worse, biting a man's hand, sometimes crying out that she saw cats, dogs, and rabbits, at the top, sides, and middle of the room; at other times with great eagerness catching at imaginary objects with her hands, and declaring that she saw many people who were not present. She suffered a continuance of these symptoms with little variation, and totally without rest, from eight o'clock in the evening, till six o'clock in the morning, being all that time restrained in bed by force in a raving and maniacal state." She had taken at half past eight in the evening half an ounce of ipecacuan wine, and four grains of ipecacuan powder, without any sensible effect being produced. Towards morning she had a costive stool. About eight o'clock, she took a pint of milk, and became more composed, though not rational. At nine o'clock Mr. Fowler found her "a little come to herself, but still frequently incoherent, and looking rather stupid. Her pulse was about 100 strokes in a minute, and her breathing not difficult." He gave her a powder with four grains of calomel and eight of jalap, as an evacuant. In half an hour she vomited freely, immediately fell into a sound sleep, and did not wake till near one o'clock, when she was

perfectly sensible and composed, only complaining of a pain in her head. The purgative operated well in the afternoon, and in three days she was free from all complaints.

Another child aged nine, swallowed, at the same time with the preceding patient, her play-fellow, one fourth part of the seeds of a Thorn-apple, but was not at all affected with either idiotism or mania. "About three o'clock in the afternoon, she found herself affected with considerable head-ach, and hiccup and swelling of her face; but these symptoms went off by the usual time of going to bed; nevertheless she had but a troublesome night, awaking three or four times with sickness and vomiting." In the morning she arose free from all symptoms except a slight head-ach; she took a purgative and was quite well in two days.

Mr. Fowler calculated that the eldest child swallowed a dram and a half of the seed, and the youngest only half a dram, to which circumstance he attributes the difference of symptoms in the two patients.

The following case, by Dr. Abraham Swaine, well illustrates the effects of the Thorn-apple. "Robert Bulmer, a man of a strong constitution, 69 years of age, and who had enjoyed a good state of health all his life, till about two years before, when he was afflicted with the gravel; in October 1746, being advised by a friend to take a decoction of the fruit of the common burdock, as a remedy for his disease, by mistake gathered the fruits of the Stramonium or Thorn-apple. After dividing three of these, each of which was as big as a small hen's egg, into two parts, he boiled them in a pint of milk, which, when a little cooled, he drank off about eight o'clock in the morning fasting; presently afterwards, he became vertiginous or giddy; and therefore rose from his chair to take the air, with an intention to pluck more fruit. In walking two or three hundred yards from his house, he staggered as if drunk, feared he should fall on his head, and that he was about to lose his senses; but had no sickness or inclination to vomit. As soon as he got home he went to bed, and complaining of an excessive dryness of his tongue and throat, a little water mixed with wine was given him; he also felt an odd sensation of dryness in, and violent girding across the thorax. In less than half an hour he began to falter in his speech, became insensible, restless, and muttered frequently; in which condition I found him. His extremities and also the trunk of his body were cold. His pulse small and quick: he often raised himself on his knees, continually stretching out his arms, and employed his hands as if searching for something he wanted; his eyes were dull and heavy; after some time he became dumb and more quiet, had al-
most

most no pulse ; and, upon his being taken out of bed that it might be put into better order, his limbs were visibly paralytic. Although he changed postures a little, yet he remained stupid for six or seven hours ; then he raged furiously, requiring two persons to hold him in bed, notwithstanding which he raised himself up, tossed greatly, and seemed to catch at the bye-standers with his hands, uttering incoherent sentences. At last he became sensible and more quiet, restless and delirious by turns ; and about ten o'clock in the evening of the same day perfectly recovered. After taking a purgative, he slept well all night, and had several stools in the morning. For the space of fourteen hours he neither slept, vomited, nor discharged any thing by stool or urine, though he frequently passes urine at other times, being grievously afflicted with the gravel."* Edin. Essays and Obs. Phys. and Lit. vol. 2.

The potent qualities of the Thorn-apple being sufficiently attested, it was natural to expect that physicians would attempt to apply them in the cure of certain diseases in which remedies of the narcotic class were more especially indicated. Storck has given us the result of considerable experience in the effects of the extract of Stramonium, in mania, epilepsy, &c. The first patient to whom he gave it was a girl aged twelve years, who had been insane about two months ; the remedies she had taken had all failed of success. She answered questions incoherently, and could not distinctly express the words she uttered. She was morose, disobedient, and could not be induced by either mild or rough treatment to act with propriety. Half a grain of the extract of Stramonium was given her night and morning, and she was directed to drink after it a little veal-broth, or tea. After taking the pill fourteen days no alteration appeared ; but in the third week, she began to be less stubborn, answered questions more readily, and spoke distinctly. In two months, (the remedy being continued, and in the second month repeated three times a day) she began to reason correctly, and regained her memory and other faculties. From this instance Dr. Storck concluded that the extract of Stramonium may be given safely, for a long time, and with good effect.

* The effects of a decoction of the seeds of Stramonium are well described by Bergius, *Materia Med.* tom. I. p. 122. "Decoctum è capsulis iij seminalibus Daturæ, in lacte coctis, hora 8 a m, epotam, vertiginem subito fecit, subsequente aponia, agrypnia, frequente blatteratione, extremitatibus truncoque corporis frigidis, pulsu exili, celeri. Hunc statum excepit paralysis apparens totius corporis per horas 7, quæ tandem in furem abiit. Hora 10 vespertina ad se rediit æger, et tranquille dormivit per noctem.

The second case in which he tried it was a woman aged 40, who had been affected with vertigo for two years; her mind was disturbed and insanity soon followed. Being brought to the hospital, she became furious, rose from her bed in the night, and by her wild exclamations disturbed and alarmed the other patients, some of whom she attempted to drag from their beds by force. Half a grain of the extract of Stramonium was given her night and morning. The first day she was more quiet; but became as furious in the night as before. The third day the dose was increased to a grain night and morning; the symptoms were rendered milder, and she continued to mend. On the 8th day the dose was increased to a grain three times a day. This quantity was continued to the fourth week, at which time all the violent symptoms had subsided, the mental functions were restored, and she ate and slept well. Still the vertigo recurred frequently and suddenly, and sometimes so severe as to threaten apoplexy, which indeed actually ended her sufferings in the course of a few months: "*Vires sensim diminuti sunt, demum supervenit vera apoplexia, et subita mors.*" On examination after death, the veins of the cerebrum were found varicose; the anterior part of the falciform sinus was ossified for a considerable space; the two anterior ventricles of the cerebrum were distended and filled with hydatids of various form and magnitude. All the other viscera were sound. The Doctor pronounces this an incurable case, observing, "*Quis enim medicus, etiamsi morbi cognovisset veram causam, potuisset hydatides tollere, aut sinum osseum ad mollitiem naturalem reducere?*"

Dr. Storck has related some other cases in which extract of Stramonium proved useful in epilepsy and convulsions. In one patient he increased the dose to five grains in the day.

In Murray's *Apparatus Medicaminum*, the extract of Stramonium is said to have cured mania, and to have been given with good effect to women *post puerperium delirantibus*.* In the Stockholm hospital, out of fourteen cases of epilepsy and convulsions eight were reported to be cured by Stramonium, five received relief, and one obtained no relief. Bergius mentions a case of mania, and two of convulsions that were quieted by this remedy. Reef, a Swedish physician, has stated two maniacal cases in which it proved of service. Murray has also cited from Wedenberg, that four patients, three of them girls of delicate habits, were liberated from convulsions by the use of this remedy. The fourth, a servant girl at Stockholm, who was supposed to have a dæmon, but

* This is confirmed by the testimony of Bergius. *Mat. Med.*
whose

whose malady consisted in convulsions and a perverse imagination, was completely restored by it. He also mentions two cases of chorea, that were cured by the same means, one of them a young man, began with four grains of the extract, and the dose was gradually increased to twelve grains. The other patient was a girl in whom the disorder appeared to have been contracted from fright.

Some cases of mania are stated in Ludwig's *Adversaria Med. Pract.* by L. I. E. Greding, M. D. in which he gave the extract of Stramonium to considerable extent, increasing the dose from one grain to ʒss in 24 hours. The paroxysms were quieted, and sleep and perspiration followed the use of the remedy. Some of the patients continued it till they had taken from ten drams to two ounces, with no other unpleasant effects than lax bowels and tormina; none of the cases however were cured by it. Dissatisfied with this want of success, Dr. Greding concluded that the extract which had been made according to Dr. Storck's directions was not good. He therefore obtained some on which he could depend, and prepared some pills with 17 oz. of the fresh extract of Stramonium, and 3½ oz. of the powder of the mistletoe. Of this mass he formed pills of one grain each, which he gave to thirty-two patients with various success. None of them could bear more than six of the pills in twenty-four hours, and in most of the patients three or four of the pills were sufficient. "Nulli autem plura pilularum exhibere potuisse; cum plerique, sumtis tribus vel quatuor ejusmodi pilulis, de capitis obnubilatione, oculorum hebetudine, siti insigniter auctis et sat copiosa salivatione conquererentur, quod a longe majore dosi extracti Vindobonensis in præcedentibus non observaram."

Upon summing up the result of 46 cases of mania and epilepsy, it appears that the extract of Stramonium may be safely given in small and frequent doses. In several of the cases it immediately induced tranquil sleep, though in some the sleep was disturbed. In most instances the organ of vision was much affected, *oculorum hebetudo* being noticed by various observers. It occurred in two-thirds of the patients who took the extract prepared by Dr. Greding; he states, "Hi omnes enim pilula grani unius pondere, præsertim matutino tempore, vix deglutita, oculorum hebetudine plus minus gravi et binas horas ad minimum durante, affligebantur ita, ut plerique tantum de oculorum caligine, ac si, reticulo bombycino tecti essent; quidam de oculorum scintillatione rerumque oculis objectarum vacillatione; aliæ de visu, dupliciter quin et oblique res cernente, alius et quidem adolescens quindecim annorum de presbyopia satis grave;

et

et alius denique de solis, absentis licet, splendore, oculos graviter adficiente, conquererentur. Temporaria vero hæc oculorum ægritudo, intermisso Stramonii usu, statim quoque evanuit, ita, ut certo asseverare possim, neminem omnium postea oculorum quoddam incommodum retinuisse. Ludwig *Adversaria Med. Pract.*

In some instances the remedy occasioned a shedding of tears, in others *lippitudo*; in some the head was attacked with pain, and the faculties were stupified; some were affected with ebriety, many with vertigo, and some with swooning fits. The imagination, in some, was principally touched, in others every mental faculty; “immo mentis plenariam perturbationem diu post ejus usum et tres denique faciem aliquoties rubore suffusam expertos esse. Ex quibus omnibus tam peculiare Stramonii agendi vis in caput, quam etiam veritas vetustæ jam opinionis, mentem ejus usu perturbari posse, satis elucet.” Ludwig.

Some of the patients were affected with extreme thirst, and dryness of the fauces, whilst in others a great flow of saliva was excited. The appetite during the use of the Stramonium was generally good, and occasionally even keener than natural, though it was sometimes less. In several instances bilious vomiting was occasioned, and the bowels were frequently affected with diarrhœa, tormina, and flatus. The secretions of perspiration and urine were promoted during its use. It also had much influence in provoking the catamenia; in one case they occurred after having stopped for four years. In four women vehement hiccup was observed; and in two a sense of itching over the whole body. From all these particulars Ludwig concluded, that besides its stupifying qualities, Stramonium possesses a remarkable acrimony, and when taken for a long time, has a powerful effect on the solids as well as the fluids of the body, exciting the secretory organs, and producing spasm and debility: his words are—“Hi omnes autem recensiti effectus clare demonstrant, Stramonio, parva dosi ingesto, præter sopiendi vim, insignem acrimoniam inesse, quæ, ubi diu sumere perseveraris, humores potenter resolvere, eosdem que ad varia organa se et excretoria majore copia allicere, solidaque nostri corporis, tono eorum hac ratione debilitate, variis spasmodicis obnoxia reddere possit. Quam ob rationem quoque evacuantia, inter ipsum ejusdem remedii usu data, plus nocuisse, quam juvasse videntur.” Notwithstanding these properties of Stramonium, it appeared to exert very little salutary influence over the diseases in which it was administered; out of forty-six cases, alluded to by this writer, only one was cured; seven were made worse; and in three instances, death appeared to have been hastened

hastened by its use. The successful case was a severe attack of epilepsy and convulsions ; the former was entirely removed by the extract of Stramonium, but the patient never remained free from convulsions.

Externally applied, it is said to repel milk from the breasts ; bruised and employed as a poultice, it has been recommended in some cutaneous affections, in burns, scalds, inveterate ulcers, and inflammation. Mr. Sawrey, who has devoted great attention to diseases of the eye, has found benefit from the application of an infusion of Stramonium in deep seated inflammation of that organ. It occasions dilatation of the pupil, and gives little pain.

From the preceding observations it will appear that Stramonium possesses powerful narcotic qualities, which operate especially upon the brain and nervous system. It may be given with safety in small doses, but in larger quantity it produces fatal effects. The diseases in which it has principally been administered have been mania, epilepsy, and convulsions ; but the benefit derived from its use has been so rare and equivocal, that it never acquired the confidence of physicians, and modern practitioners have altogether discarded its use in such cases. The instances indeed cited by Storck are in favour of the remedy ; but we must bear in mind that the Baron wrote a book on the subject, and evinced a degree of confidence in the medicine which his own experience hardly warranted, and which subsequent experiments have contradicted. The complaints alleged to have been relieved and cured by the thorn-apple, we must also recollect, frequently resist the action of all known remedies, while they occasionally terminate without our being able to assign any legitimate cause for the event. Unquestionably cases of mania, epilepsy, or convulsions, may exist, in which medicines of the narcotic class may prove beneficial ; but they are not yet sufficiently defined. Dr. Cullen has remarked, " I have no doubt that narcotics may be a remedy in certain cases of mania and epilepsy ; but I have not, and I doubt if any other person has, learned to distinguish the cases to which such remedies are properly adapted. It is therefore that we find the other narcotics, as well as the Stramonium, to fail in the same hands in which they had in other cases seemed to succeed. It is this consideration that has occasioned my neglecting the use of Stramonium, and therefore prevented me speaking more precisely from my own experience on this subject."*

(To be continued.)

Upon the Decomposition of some Vegetable or Animal Substances, submitted to the Action of Heat. By M. GAY-LUSAC. Communicated to the Society D'Arcueil, November, 1809.

WHEN we submit to distillation certain substances of a vegetable or animal nature, such as oxalic acid, indigo, &c. one portion of them is decomposed, and another is volatilized without experiencing any alteration. The proof that these effects are not owing to the impurity of these substances is, that if the portion which has been volatilized be again distilled, it is again decomposed proportionally, as much as at the first time; so that by frequently repeating the operation, we obtain a complete decomposition.

These facts, though very curious, have not fixed the attention of chemists. I shall endeavour to explain them on the principles which I have established in a Memoir on the Volatilization of Bodies, in the first vol. of the Society D'Arcueil. The question to resolve is, why, when we distil certain substances of a vegetable or animal nature, is one part of them decomposed, whilst the other part is volatilized? Why are they not wholly decomposed, or wholly volatilized?

The substances which present this kind of change are volatile, and at the same time susceptible of being decomposed by heat. Besides, a body cannot be volatilized before the period when its vapours have an elastic power sufficiently great to overcome the weight of the atmosphere, unless they can mix with the air, or with any other elastic fluid.

Now, if we submit to the action of heat a volatile substance capable of being decomposed, it may happen, either that it will be completely volatilized before it has acquired a temperature sufficient to decompose it, or that it will be decomposed before its vapours have attained elasticity enough to overcome the pressure of the atmosphere.

The first case presents no difficulty; it is that of the distillation of acetic acid, of alcohol, of ether, of the volatile oils, &c. The substances comprized in the second, such as indigo, the gallic, oxalic, and succinic acids; wax, tallow, the fixed oils, &c. will suffer decomposition before they are volatilized; but their decomposition gives rise to gases, and these gases will determine the volatilization of the undecomposed part, in the same manner as the air determines that of water below the temperature of its ebullition.

Since it is the gases resulting from the decomposition of a substance, which determine its volatilization, and prevent its complete

complete destruction, and since all elastic fluids, in this respect, have similar properties, it is easy to volatilize indigo, several vegetable acids, and a number of other bodies, without occasioning them to undergo any alteration. It is sufficient to raise their temperature a little above that at which they are decomposed, and to make them pass through a current of an elastic fluid, which, in this circumstance, does not act upon them chemically.

These observations no doubt will receive frequent applications; it is from not having known them, that M. Chevreul has given an unsatisfactory explanation of the action of caloric upon indigo.

Copy of a letter from M. PERCY, to the President of the first Class of the Institute, February, 1810, upon some Platina found at St. Domingo.

(Annales de Chimie.)

SIR,

I HAVE the honour to present the class with a specimen of Platina from St. Domingo, where this metal was not supposed to exist. I feel great pleasure in being able to offer it the first fruits of a work, which in its very commencement has been interrupted by the accidents of war.

Platina certainly exists in the Antilles. The present specimen was found in the river D'Iaky, at the foot of the mountain of Sibao. This river also carries along with it abundance of gold, especially after heavy rains. M. Dubizy, Surgeon-major, an eminent naturalist, and a man worthy of every confidence, returning from St. Domingo, procured some of the gold on the spot, and brought it to France. He separated it by means of the loadstone, from the sand which was mixed with it in considerable quantity.

Platina and gold are purchased in abundance, at very low prices, of the Spanish-Indian women, (*femmes Indiennes-Espagnoles.*)

The men are occupied in the chase, and do not engage in searching for and collecting the precious metals. St. Domingo is about 35 or 40 leagues from the mountain of Sibao, and when the communication was free, the French residing in that city made large profits in purchasing gold and platina.*

* When Columbus visited this island at the beginning of the 16th century, he obtained a plentiful supply of gold from the natives, who, before the arrival of the Spaniards, were accustomed to value this metal,

Observations on an Amaurosis and Cophosis, attended with diminution of voice, motion, &c. in consequence of organic lesion of several parts of the Brain. By A. LEVEQUE LAFORCE, M. D.

A. DEVILLE, a seamstress, aged 35 years, born in the department of La Somme, of robust parents, of a sanguine bilious temperament, had never been attacked with any other disease than the small-pox, when in June 1808, she was seized with severe head-ache, accompanied with anorexia, giddiness, disturbed sleep, and frightful dreams. Nothing was done. Soon afterwards, giddiness was so frequent that she was obliged to keep her bed. The head-ache became severe and continued 30 days. Her sight, at first, was slightly affected, but this weakening increased sensibly with a sensation of pricking and distention at the bottom of the orbit; (a beginning of amaurosis.)

In September, 1808, the patient entered into a hospital, where she remained four months. She became worse, her sight, which had been gradually diminishing, was now entirely lost on her left side, and forty-five days after, in the right eye also; the amaurosis was now complete. The sensation of pricking and fulness at the bottom of the orbit, which, before the loss of sight was troublesome, now ceased, but the head-ache remained. Deville had for some time experienced a noise in the ear, and soon the loss of hearing on the left side was added to blindness. A cautery

which they collected with great care. They contented themselves, however, with picking up small grains, which they readily found, and after having flattened them a little, made them into pendants for the nostrils. It is curious to remark the superstition which prevailed amongst these uninformed Indians; before a party proceeded on an expedition in search of gold, they prepared themselves by long fasting, and several days of *continence*, for the undertaking, which they declared would fail if they omitted this practice. Charlevoix informs us that Columbus wished to make his people observe a similar ceremony, and not to go to the mines *sans s'être auparavant approchés des Sacramens de Penitence et d'Eucharistie*. They did not however approve of this pious restriction of their Chief, and remonstrated that the Church having only directed Confession and Communion, once a year, it was not for him to make new precepts. Besides they urged that the Spaniards having left their wives at home, were condemned to a much longer period of continence than that of the natives, and that with the scanty and bad diet to which they were reduced, they actually endured a continual and very rigorous fast. EDITORS.

was

was used, and different internal means were employed without any benefit. The patient returned home.

In February, 1809, she was affected with general weakness; and soon afterwards a difficulty and finally incapacity in walking. She remained in this state for several months.

At the beginning of August she was carried to the Hotel-Dieu, they gave her two purges and applied a blister to the nape of the neck; these means, however, were not successful.

By the 5th of September the pains in the head had almost ceased: The face was bloated, there was stupor, continual debility in the superior and lower extremities; the pupils were much dilated, and the blindness appeared irremediable.

On the 10th, there was cophosis on the left side, and occasionally, difficulty of hearing on the right side. Her voice was altered, the tongue was inclined towards the left side. The faculties of the mind were little interrupted, except the memory, which was treacherous. She had a cough without expectoration; she could lie easy on either side, but her power of motion was very limited both from paralysis, and on account of her great weakness.

15th of September. Sleep lasted longer than in the natural state. The pulse was small, weak, and rather frequent.

25 and 26. She could hardly open her mouth; somnolency and coma succeeded, involuntary dejection, and laborious breathing, and on the following day she died. Catamenia ceased only in September.

Dissection.—The state of the brain: The lateral ventricles contained 2 oz. of serosity; the pituitary gland was twice as large as usual, and contained several puriform spots with a foetid smell; it adhered strongly to the posterior clinoid processes, these, but chiefly the left, were nearly destroyed, the sella turcica and its membranous covering were in a similar condition. The sphenoidal membranes were filled with serosity mixed with pus.

In the left lateral and middle cavity of the cranium, was a tumour which had originated in the bottom of the meatus auditorius internus, and occupied three fourths of the posterior surface of the petrous portion of the temporal bone. The orifice of this meatus was destroyed, and in its place was a cavity which was filled by the tumour. The tumour was of fourteen lines in diameter, and $3\frac{1}{2}$ drams in weight, its structure partly fibrous, and partly carcinomatous. A very thin layer of dura mater covered it, it reached to the tentorium, and pressed against the annular protuberance, which it pushed about three lines out of its situation to the right.

Reflections.

Reflections.—May not the cause of the blindness, of the deafness, and of the other phænomena, be thus explained?

1st. The blindness from caries of the sphenoidal bone, and the communication of the sphenoidal membranes with the brain. The external air would have penetrated into the cranium if it had not been hindered by the pituitary gland, which it caused to inflame; and this gland mechanically closed the opening which the caries had made; and as it exceeded its usual rise and projected as far as the optic foramen, it must have made pressure upon the optic nerves, and from this pressure resulted the paralysis of the retina, and loss of sight.

2d. As to the loss of hearing, the tumour which occupied a portion of the meatus auditorius internus, had not destroyed the auditory and facial nerves, but only compressed them. The pressure must chiefly have acted on the first, and hence resulted the deafness on that side.

3d. We may explain the universal paralysis from the pressure on the annular protuberance by the aforesaid tumour; a pressure which more or less interrupted the influence of the brain upon the spinal marrow.

Observations on Luminous Animals. By J. MACARTNEY, Esq.

(Concluded from page 424.)

THE phenomenon of animal light has been attempted to be explained in different ways. By many persons it was formerly ascribed to a putrefactive process, but since the modern theories of combustion became known, it has been generally believed to depend upon an actual inflammation of the luminous substance, similar to the slow combustion of phosphorus. Others have accounted for the luminous effect, by supposing the matter of light to be accumulated, and rendered latent under particular circumstances, and afterwards evolved in a sensible form.

The opinion of the light of living animals being the consequence of putrefaction, is evidently absurd, and contradictory to all observation on the subject. It has been proved by the experiments of Dr. Hulme and others, that even the luminous appearances of dead animals are exhibited only during the first stages of the dissolution of the body, and that no light is emitted after putrefaction has really commenced.

Spallanzani, who was the most strenuous advocate for the phosphorescent

phosphorescent nature of animal light, stated that glow-worms shone more brilliantly when put into oxygen gas; that their light gradually disappeared in hydrogen or in azotic gas, and was instantly extinguished in fixed air; that it was also lost by cold, and revived by the application of a warm temperature. He conjectured that the luminous matter of these insects was composed of hydrogen and carbonated hydrogen gas.

Forster relates, in the *Lichtenberg Magazine* for 1783, that on putting a *lampyrus splendidula* into oxygen gas, it gave as much light as four of the same species in common air.

Carradori has made some experiments upon the *luciole*, (*lampyrus italica*) which led him to deny its phosphorescence. He found that the luminous portion of the belly of the insect shone in vacuum, in oil, in water, and different liquids, and under different circumstances, where it was excluded from all the communication with oxygen gas. He accounts for the result of Forster's experiment, by supposing, that the worm shone more vividly, because it was more animated in oxygen gas than in common air.

Carradori adopts on this subject the doctrine of Brugnatelli, and ascribes the luminous appearances of animals, to the condensation and extrication of light in particular organs, which had previously existed in combination with the substance of their bodies. He supposes the light to be originally derived from the food, or the atmospheric air taken into the body; in short, that certain animals have the peculiar property of gradually imbibing light from foreign bodies, and of afterwards secreting it in a sensible form.*

The following experiments which I made upon this subject, would lead me to make different conclusions than those of the preceding authors.

Experiment 1.—A glow worm was put into a glass of water, in which it lived nearly two hours, and continued to emit light as usual, until it died, when the luminous appearance entirely ceased.

Experiment 2.—The luminous substance was extracted from the beforementioned glow-worm, and from others killed in different ways, but it afforded no light.

Experiment 3.—The sacs containing the luminous matter were cut from the bellies of *living* glow-worms, and shone uninterruptedly for several hours in the atmosphere, and after their light became extinct, it was revived by being moistened

* *Annal di Chimica*, Tomo xiii. 1797.

with water; some of these were put into water in the first instance, in which they continued to shine unremittingly for 48 hours.

Experiment 4.—The luminous substance of a glow-worm was exposed to a degree of heat which would have been sufficient to inflame phosphorus, without increasing the brilliancy of its light; and farther, it could not be made to burn by being applied to a red hot iron, or to the flame of a candle.

Experiment 5.—A delicate thermometer was introduced amongst some living glow-worms, during the time they gave out much light: the temperature of the room being 69, the instrument rose to 75, 76, and 77, according to circumstances, as the warmth was reflected from the hand, or dissipated by the worm crawling over cold substances. The luminous portion of the tail, when very brilliant, appeared to raise the thermometer more quickly than the other parts of the body, but it was not invariably the case. When shining strongly, I thought that the luminous rings communicated the sensation of warmth to the hand, but this was probably a deception, as the actual degree of heat was not sufficient for such an effect. It should however be mentioned, that in Templar's observations on the glow-worm, he said his feelings deceived him, if he did not experience some heat from the shining of the insect.*

Experiment 6.—To satisfy myself how far the evolution of heat during the shining of glow-worms, depended upon the life of the animals, I cut off the luminous portion of the tail from several living worms, and I found that if the thermometer was applied to them immediately, it was raised by them one or two degrees; but after these parts were dead, although they continued to emit light, they produced no effect whatever upon the instrument.

Experiment 7.—Some hemispherical medusæ were put into a spoon, containing a small quantity of sea water, and held over a burning candle. As soon as the water became heated the medusæ appeared like illuminated wheels, the spots at the margin and center alone emitting light; in which manner they shone vividly and permanently for about 20 seconds, when they shrunk and died, after which they were no longer luminous.

Experiment 8.—Some of the same species were put into spirits: a strong unremitting light was instantly given out, which issued from the central and marginal parts, as in the preceding experiment, and continued until they died.

* Phil. Trans. No. 75.

Experiment 9.—Some of the scintillating and hemispherical species of medusa, contained in a small glass jar, were introduced into the receiver of an air pump, and the air being exhausted, they shone as usual when shaken; if any difference could be perceived, the light was more easily excited, and continued longer in vacuum.

I wished next to try the influence of electricity on the luminous property of animals.

Experiment 10.—A medusa hemispherica was placed in a small glass dish, containing a quantity of water, merely sufficient to allow the animal to preserve its figure; being insulated, it was electrified, and sparks drawn from it, which had not the slightest effect; the experiment was repeated several times with different individuals, but without exciting the animals to throw out light.

Experiment 11.—Some hemispherical medusæ were placed in contact with the two ends of an interrupted chain, and slight electric shocks passed through them. During the very moment of their receiving the shock no light was visible, but immediately afterwards the medusæ shone like illuminated wheels, which appearance remained for some seconds. Upon the closest inspection with a magnifying glass, no contractile motion could be perceived to accompany the exhibition of the light. The application of electricity in this instance seems to have acted merely as a strong mechanic shock.

The above experiments on the luminous medusæ were made at Herne, with the assistance of George May, Esq. of Stroud-house, and in the presence of a large company, capable of accurately distinguishing their results.

It seems proved by the foregoing experiments, that so far from the luminous substance being of a phosphorescent nature, it sometimes shews the strongest and most constant light, when excluded from oxygene gas; that it in no circumstances undergoes any process like combustion, but is actually incapable of being inflamed; that the increase of heat, during the shining of glow-worms, is an accompaniment, and not an effect of the phenomenon, and depends upon the excited state of the insect; and lastly, that heat and electricity increase the exhibition of light, merely by operating like other stimuli upon the vital properties of the animal.

In confirmation of these opinions, I may quote the high authority of the Secretary of this Society, who has found that the light of the glow-worm is not rendered more brilliant in oxygene, or in oxygenated muriatic gas, than in common air; and that it is not sensibly diminished in hydrogene gas.

I may further add, that Spallanzani's experiments of diffusing the luminous liquor of the medusa in water, milk
(No. 148.) 3 U and

and other fluids, are in direct contradiction of his own theory, as is also the extinction of the light of these mixtures by the application of a high degree of heat.

If the light emitted by animals were derived from their food, or the air they respire, as supposed by CARRADORI, the phenomenon should be increased or diminished, according to the quantity of food or air, that the creatures consume; but we do not find this to be the case; for in those situations where they are sometimes found to be most luminous, they are deprived, in a great measure, of these assumed sources of their light.

In fact, the luminous exhibitions of living animals are not only independent of all foreign light, but are frequently destroyed by the latter. I have always found the shining of the medusæ to cease upon the rising of the moon, or at the approach of day; and when out of the sea, I never could excite them to throw out light until they had been kept for some time in the dark; all the luminous insects likewise secrete themselves as much as possible during the day time, and go abroad only at night. I have, it is true, found that the scolopendra electrica will not shine unless it has been previously exposed to solar light; but I have observed that it shone as brilliantly and as frequently, after being kept a short time in a light situation, as when left unrecovered the whole day. The circumstance of the scolopendra requiring exposure previous to its giving out light, is very unaccountable, as the insect, when left to itself, always seeks as much as possible concealment during the day; indeed it is the opinion of some naturalists that it is killed by the light of the sun.

The opinions of Brugnatelli and Carradori are connected with some general doctrines, respecting the nature of light, which I shall not at present venture to discuss. It appears to me, that the question is still unresolved, whether light has a substantial existence, or is a phenomenon depending upon certain operations or conditions of the ordinary forms of matter. But the highly ingenious researches of Count Rumford, on the laws of what had been called subtile fluids, and the extraordinary advances lately made by Mr. Davy, on the decomposition of substances, that were hitherto looked upon as elementary, give us reason to hope, that future investigations may unfold views of the material world, of which we can at present have only an indistinct conception; that new modes of analysis may enable us to see things, not "through a glass darkly," but more nearly as they are; and that the boundaries of physical and metaphysical science, now so far asunder, may be made to approach each other.

In the present state of our knowledge, our business should be

be, to collect, arrange, and compare phenomena, rather than to speculate upon their nature. Nevertheless, I cannot refrain from observing, that the circumstances attending the luminous appearance of living animals, are much more favourable to the supposition of light being a property, than a substance. The quantity of light emitted by an animal in a certain time, (admitting it to be matter) far exceeds that which could be possibly supplied by the sources, from whence it is usually supposed to be derived. Thus the luminous appearance of some medusæ may be continued with the intermission of short intervals for an indefinite time, notwithstanding the creature be kept in darkness, and without any other food than what a small quantity of filtered sea water would afford. The uninterrupted and long continued light that is sometimes evolved by the luminous sacs, and the ova of the glow-worm, is also inconsistent with the notion of an accumulation and subsequent dispersion of a material substance.

I shall terminate this paper by an enumeration of the several conclusions, that are the result of the observations I have been able to make upon the phenomena of animal light.

The property of emitting light is confined to animals of the simplest organization, the greater number of which are inhabitants of the sea.—The luminous property is not constant, but in general, exists only at certain periods, and in particular states of the animal's body.—The power of shewing light resides in a peculiar substance or fluid, which is sometimes situated in a particular organ, and at others diffused throughout the animal's body.—The light is differently regulated, when the luminous matter exists in the living body, and when it is abstracted from it. In the first case, it is intermitting, or alternated with periods of darkness; is commonly produced or increased by a muscular effort; and is sometimes absolutely dependant upon the will of the animal. In the second case, the luminous appearance is usually permanent until it becomes extinct, after which it may be restored directly by friction, concussion, and the application of warmth; which last causes, operate on the luminous matter (while in the living body,) only indirectly, by exciting the animal.—The luminous matter, in all situations, so far from possessing phosphoric properties, is combustible, and loses the quality of emitting light, by being dried, or much heated.—The exhibition of light, however long it may be continued, causes no diminution of the bulk of the luminous matter. It does not require the presence of pure air, and is not extinguished by other gasses.

The luminous appearance of living animals is not exhausted

hausted by long continuance, or frequent repetitions, nor accumulated by exposure to natural light; it is therefore, not dependent upon any foreign source, but inheres as a property, in a peculiarly organized animal substance or fluid, and is regulated by the same laws which govern all the other functions of living beings.

The light of the sea is always produced by living animals, and most frequently by the presence of the medusa scintillans. When great numbers of this species approach the surface, they sometimes coalesce together, and cause that snowy or milky appearance of the sea, which is so alarming to navigators. These animals, when congregated on the surface of the water, can produce a flash of light, somewhat like an electric corruscation. When the luminous medusæ are very numerous, as frequently happens in confined bays, they form a considerable portion of the mass of the sea, at which times they render the water heavier, and more nauseous to the taste; it is therefore adviseable to always strain sea water before it is drunk.

The luminous property does not appear to have any connection with the œconomy of the animals that possess it, except in the flying insects, which by that means discover each other at night, for the purpose of sexual congress.

On preparing Acetate of Potash, so as to obtain it in a saturated State, and of a White Colour. By Messrs. BERNOULLY and FREMY.

(Annales de Chimie.)

MR. BERNOULLY, of Basil, commenced his memoir with attempting to discover the colouring matter that is so injurious to the appearance of the salt, and which does not belong either to the potash or the acetic acid, so that it must be a foreign matter contained in common vinegar, and carried over with it in distillation. This principle is less volatile than acetic acid, as distilled vinegar leaves a residuum on being evaporated. It is not very soluble itself without the assistance of the acid, as it is partly precipitated when the acid is saturated with potash. It is evidently of a vegeto-animal nature, from the odour that it exhales upon a burning coal, and from the prussiate of ammonia that is yielded in the distillation of acetate of potash prepared with distilled vinegar, but which does not occur in the distillation of that prepared with radical vinegar. So that the colouring matter appears to be some remains of the yeast left in common vinegar,

vinegar, carried over when it is distilled, and more or less altered by this operation.

The acetate of potash may also be discoloured by the empyreumatic oil with which the distilled vinegar becomes charged when the operation is pushed too far. The accidental sullyng arising from the oxyds of iron and of manganese contained in the common alkalies, or from metallic vessels being employed in its preparation, is easily avoided.

In order to get rid of the yeast, it is necessary to choose for distillation clear, very strong, and completely fermented vinegar, and to distill with a very gentle heat, not exceeding that of a gentle boiling heat. If, however, in spite of these precautions, the acetate should not be white, the solution must be gently boiled with well-calcined charcoal previous to evaporation; the operation must be conducted slowly.

The distillation of the vinegar must be stopped the instant that the empyreumatic oil begins to come over: for although the succeeding vinegar may be perfectly white, it becomes coloured during the evaporation, and when this once happens it cannot be remedied.

Mr. Fremy's memoir enters into more details. In crystallising the acetate, it is extremely difficult to separate the crystals from the mother-water; he therefore tried the effects of double decompositions. Acetate of lime treated with carbonate or sulphate of potash afforded a salt of the usual colour. Common acetate of lead and carbonate of soda afforded a salt sufficiently white; but an error in the quantities of the ingredients may be attended with bad consequences. He found that the colour of the acetate proceeds not only from some foreign colouring substance that is contained in the distilled vinegar, but also from the alkali itself when it is in excess, and thus enabled to re-act upon the foreign substance; for on preparing two portions of acetate with the same distilled vinegar, one of which had designedly an excess of acid, and the other of alkali, the latter portion was evidently deeper coloured than the former.

To destroy the colouring matter, he filtered the distilled vinegar upon charcoal, then nearly saturated it with carbonate of potash, and carefully retained an excess of acid during the evaporation, by which means he obtained an acetate as white as if it had been melted.

Although this process is very simple, it is not practicable, because the acetate of potash is mixed with acetate of lime coming from the charcoal, which is prejudicial to the drying. It would be easy to separate the lime, by adding a slight excess of carbonate of potash, afterwards adding an excess of the acid; but it is more simple to saturate the acid

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at first. The liquor being left upon the charcoal for twenty days, and exposed to the sun's rays, furnished a salt still whiter than before; and Mr. Fermy imagines the same effect may be obtained by exposure to the rays of the sun without the addition of charcoal.

Part of the colouring matter is precipitated during the saturation of the vinegar: it is but slightly soluble in water, but some portion of it remains in the solution of the acetate of potash. When distilled vinegar has been filtrated upon very pure charcoal, such as that from sugarcandy, the same precipitate is not obtained as before the filtration.

Two hecatogrammes (6 oz.) of excellent acetic ether were obtained by rectifying the first produce of the distillation of 70 litres (quarts) of distilled vinegar upon potash.

The discoloration of the acetate by exposing it to the solar rays, did not succeed when tried by the Committee to whom the two preceding memoirs were referred.

Observations respecting the Sensible Perspiration of the Dictamnus Albus, or Fraxinella. By Mr. ROBERT LYALL, Surgeon, M.R.P.S.E. &c.

(Nichol. Jour.)

IT has been said, that in calm summer evenings the dictamnus albus evolves hydrogen gas, or a highly odorous inflammable effluvium, which explodes when brought into contact with the flame of a candle; an opinion that is maintained in the latest botanical publications I have seen.

When I first became acquainted with the above notion, my curiosity was excited, and I longed for an opportunity to make the experiment, which was not very long denied me. The result of my observations I shall now relate in order, that the subject may be more accurately investigated.

I need scarcely premise, that the peduncles, the calyx, the outside of the corolla, and especially the tops of the filaments, and the germen of the dictamnus, are covered with glands of an oblong form, many of them supported on little pedicles, all of them of a beautiful red colour, and containing a somewhat viscid fluid.

On the 10th of July, about ten in the evening, the weather fine, and the temperature 66, I commenced my experiments on the dictamnus. By holding a lighted candle at the bottom of a raceme of flowers, inconsiderable explosions, or rather a hissing noise was occasioned, accompanied by light-blue coloured flame, which proceeded along the course of the peduncles,

peduncles, &c. and ascended even higher than the top of the stem ; a good deal resembling an amusing experiment sometimes practised in the theatre, and often by boys, by means of powdered resin and a burning candle, &c. Immediately after the combustion, the surrounding atmosphere became tainted with odoriferous effluvia, exactly similar to what the healthy flowers, though much stronger, emit. July 13, I repeated this experiment, at the same hour as before. The evening was fine, but the plants were wet with the afternoon's rain. Scarcely any noise was produced ; the experiment not succeeding as before.

At another time I brought home a raceme of flowers, and after it had stood with its end placed in water for two hours, I approached a burning candle to it, and little explosions followed. I replaced the raceme in the water, and next morning darkened my room, and made the same experiment, but heard no explosions. Since the 13th of July, I have frequently repeated the first experiment, but never have succeeded nearly so well as at first ; a little hissing noise, attended with a small flame, only occurring now and then, occasioned in consequence of the bursting, I imagine, of the glands of new flowers ; which, from their not being before developed, remained uninjured, during former experiments.

On examining the plants after the combustion, I observed that the glands were completely destroyed ; and thus I was led to suppose, that the resinous fluid which they contained was burnt during the explosion ; and not that hydrogen, or any inflammable vapour was exhaled. Since after-experiments never succeeded so well as the first ; and because the smell of hydrogen was never present, either before or after the experiment, I think I am strengthened in my opinion. At the same time, however, I confess, that I am not completely satisfied with my own observations, and therefore wish that some one, who has convenience, would not only repeat the experiments, but communicate the result of them to the public, and thus either ascertain the truth of what I have reported, or annul it altogether.

CRITICAL ANALYSIS
OF
RECENT PUBLICATIONS
IN THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL
PHILOSOPHY,

Observations on Ophthalmia, and its Consequences. By
CHARLES FARRELL, M. D. 8vo. Lond. 1811. pp. 138.
Murray.

DR. FARRELL arranges his work under "Introductory Remarks," and two Parts; the first containing three, and the second four Chapters: and its object is, to investigate the causes concurring to produce the ophthalmia which has appeared with such severity in the British army, to establish a division of this disease into varieties, and to institute a method of cure adapted to each variety.

Though instances of ophthalmia are to be met with in all places, and under every accidental circumstance of society, whether civil or military; yet the disease here noticed does not seem to have been known, at least in modern Europe, prior to the year 1801, or the landing of the British troops in Egypt. It is an observation made by our author, that the prevalence of ophthalmia in the British army followed the landing of the troops in that country; and that "Egypt is, perhaps, the part of the world, in which all the causes of ophthalmia, arising from soil and climate, exist in the greatest abundance and force." He considers the peculiarities of the soil and climate of Egypt as sufficient to account for the prevalence of the disease in that country; and he admits, or seems to admit, though he professes not to be able to determine how far, that this combination of causes may contribute to the production of a species of ophthalmia, which by frequency and inveteracy, "or other means," may acquire the power of propagating itself by *contagion*: and he sees nothing contrary to analogy in the supposition, that the violent species of ophthalmia, observed at present among our troops, is *contagious*. This fact he corroborates by the French army having suffered as much, or more; than ours, by this disease while in Egypt. The complaint accompanied this army to France, and is not, even yet, Dr. Farrell believes, eradicated. Here is the time and the place of its first appearance in the
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armies of Europe stated, the causes that combine in the soil and climate of Egypt to produce it, the probable reason of its becoming contagious deduced from its frequency and inveteracy arising out of those causes, and the actual fact asserted of its being disseminated among our troops by contagion; yet Dr. Farrell objects to its being denominated *Egyptian Ophthalmia*.

If we see no reason to reject the term Egyptian Ophthalmia, but rather to adopt it on the ground of Dr. Farrell's statement, we are not to be considered as advocates for the erroneous influence that names may produce. In this instance, however, we are not aware that this term has improperly directed the practice.

It is contended, and we believe with truth, that this disease, though it may be contagious, is inflammatory; and that its danger is in proportion to the violence of the inflammation. Nor does it appear that those practitioners who understand it best, and admit its contagious property, have been influenced in their treatment of it by the name; for the most active remedies employed against inflammation have been used to an extent in this ophthalmia, that would have been considered as bold to rashness, in any other disease.

"Though I have gone thus far," Dr. Farrell says, "in endeavouring to establish an Egyptian origin for the violent species of ophthalmia which has latterly excited so much attention, still I can see no reason why a violent inflammation of the eyes should not occasionally take place in other countries. I fear the fashion of putting down the ophthalmia observed in Egypt as a disease *smi generis*, and as considering it as different from every other inflammation of the eye, met with in Europe, has had some share in disturbing our opinions as to the true nature of the disease, and consequently leading us away from the right method of treating the disease."

With the author of these "Observations," we see no reason "why a violent inflammation of the eyes should not occasionally take place in other countries." We know that such a disease does occasionally take place, and we have had the misfortune to see it, in a most violent form, before the Egyptian expedition or Napoleon himself were thought of. But those cases, because they were only occasional and isolated, differed in some essential particular from that general affection of the eyes which afflicted our troops, as well as those of the French army in Egypt; and which was imported into Europe by the French and English armies, on their return.

Why a form of ophthalmia is endemic in Egypt, Dr.
(No. 148.) 3 X Farrell

Farrell states generally. The soil and climate of that country he considers as affording the causes for producing ophthalmia, in greater abundance and force than are found in any other part of the world. He believes that these causes have existed from remote antiquity. "All historians, both ancient and modern, who have given accounts of Egypt; and all medical men, both antient and modern, who have written on the diseases of Egypt, agree as to the frequency and violence of ophthalmia in that country." (Page 5.) If this be not strictly correct as to the antiquity of this ophthalmia, yet it is sufficiently substantiated that a disease of the eye, arising out of the preceding causes, has been known for several centuries. That the causes producing this ophthalmia did not operate in Egypt until that country became subject to the dominion of barbarians, is an opinion held by writers of great intelligence. And this is a fact of much importance, as shewing that the origin and propagation of the disease are connected with certain forms of society and habits of human life, conjointly with local peculiarities of climate; and therefore, in a degree, liable to the influence and controul of prophylactic regulations.

Under accidental circumstances of weather, perhaps a more than usual arid state of atmosphere, the prevalence and degree of some particular winds, and especially the increase and exasperation of diseases by war, may be induced an epidemic form of this endemial ophthalmia. Then it will happen that a disease, arising at first from external causes, becomes contagious, and propagates itself by a specific virus, either on direct contact with the sick, or in the more concentrated form of *fomites*; and this, when the remote causes no longer operate.

It is admitted that the ophthalmia here treated of, and which the most positive evidence does not permit us to doubt arose in Egypt, is contagious, and that its progress is in the course above stated. Whether it be a disease *sui generis*, having qualities peculiar to itself, specific and contagious *ab origine*; or whether the accumulation and concentration of morbid atoms, elicits or generates a contagious material, is not of much importance as relates to practice. If it is contagious, however acute, or however mild its inflammatory symptoms may be; or how much soever it may be proper to treat those symptoms on the general principles employed for subduing inflammation; the disease does not "resemble, in every respect, any other violent inflammation of the eyes, in which the climate or contagion of Egypt could have no share." (P. 7.)

It is here we object to Dr. Farrell's conclusions from his
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own premises. And we object, not so much because we think him wrong in his deduction abstractedly, but that we perceive it to confuse an important fact, and to influence, most seriously, the prophylactic practice. If practitioners are persuaded that the Egyptian ophthalmia does not differ in "any respect," from common cases of ophthalmia, however acute, no care will be taken to prevent its propagation by contagion. It will be seen on the slightest reflection, that this opinion is fraught with extreme danger. When we assume, not only on the unequivocal acknowledgment of Dr. Farrell, but on the general opinion as founded on known facts, and particularly on the investigations of Dr. Edmonston, that the disease hitherto known by the appellation EGYPTIAN OPHTHALMIA, is *contagious*; we cannot for a moment hesitate on the propriety of keeping that fact in view, and of reprobating every change in nomenclature that tends to confuse the disease with others of the same genus, which have no such property.

That names have often led to fallacious conclusions and erroneous practice we readily admit; and that the most sedate and cautious practitioners scrupulously refuse to designate diseases by determinate appellations, we have often witnessed. If this coyness, often arising from motives widely different from an attachment to scientific truth, in some instances may be proper, in others it certainly has an injurious result. The instance before us is of the latter kind. A rejection of the term *Egyptian ophthalmia*, will induce, indirectly perhaps, but it will induce a false security. Though the mode of treating individual cases is entitled to great regard, yet, as the disease is acknowledged to be of foreign growth, and is contagious, it is of still more importance to check its dissemination.

We have seen with regret an endeavour to establish an opinion, not original indeed, for it is found in obscure and almost forgotten authors, that some diseases, rapid in their progress, fatal in their termination, and spreading consternation and dismay wherever they appear, are not contagious; and that all precautions to prevent their introduction or restrain their propagation, are futile and absurd. Even in this opinion, much as it behoves legislative bodies and the guardians of public health to adopt it with fear and trembling, there is some consistency, because its authors deny the existence of the contagious principle. But Dr. Farrell admits, and indeed argues for the contagious quality in the Egyptian ophthalmia,* and yet concludes that, in no respect does it

* "The appearance, in the first British army that visited Egypt, of a more violent species of ophthalmia than had before, at least, been

differ from the common ophthalmia of Europe; and objects to an appropriate appellation connected with a distinction which he has shewn really to exist.

If the ophthalmia, which first appeared in the English and French armies, while they were in Egypt, is *contagious*, and those best informed on the subject admit it to be so, it differs essentially from the common inflammation of the eyes occurring in Europe before the year 1801, and as "observed among the people of Great Britain;" then the term *Egyptian ophthalmia* becomes appropriate, for it marks the origin of the disease, and connects with that origin its most formidable quality, *CONTAGION*: and the appellation, instead of disturbing our opinions, gives them a fixed point of rest, and impels to that caution which may restrain, perhaps, exterminate the disease.*

These remarks have arisen, not out of a propensity to censure, but from the importance of the subject, and a regard to our public duty. We should be much concerned to see the faculty, on such grounds, negligent of the only means that can prevent the dissemination of a most formidable disease; and that a separation of the infected from the healthy should be rejected, as futile and absurd.†

noticed by our army medical men; the degree to which the disease prevailed in the army; the continuance of it in some regiments after leaving the country; and the circumstance of its not only attacking a great number of men of the same corps after once appearing in it, but of its spreading from one corps to another; have *very justly* given rise to the opinion, that this *species of ophthalmia has been introduced into our army in Egypt, and that it is contagious*. In addition to these facts, I can safely state, that this *species of ophthalmia* prevailed, to an alarming degree, in some regiments in Egypt in 1807; and that it was much more prevalent for a year, or more, in some of the regiments which returned from that country to Sicily in that year, than in those which did not form a part of the expedition to Egypt. I can farther say, that when it made its appearance in any regiment, whether it had been in Egypt or not, it generally attacked a large proportion of the men of that corps. These are imposing facts; and though some of them may be accounted for without adopting the supposition of the disease being contagious, *still I am disposed to think that the impartial consideration of the whole of them will lead to, if not firmly establish the inference of the contagious nature of the disease.*" P. 51.

* "I have myself always acted on the supposition of the disease being contagious. Indeed were the evidence less strong and persuasive on this side of the question than it really is, I think it would be the duty of every medical man in the army to incline to it, until the matter is put beyond all doubt, as it holds out numerous and obvious advantages." *Farrell*, p. 53. Obs. &c. &c.

† We do not mean to state that Dr. Farrell considers the separation of the diseased from the healthy as useless. On the contrary (p. 54) he considers

Ophthalmia is considered in these "Observations," to be dividable, with practical utility, into three species. Two of these are described as acute, and one chronic. The acute species is subdivided into *O. mitis* and *O. gravis*. The 1st Chap. treating on *O. mitis*, we shall pass over with merely observing, that this variety of the disease is supposed to be a common affection of the organ of vision, occasioned by exposure to cold, &c. &c. &c. It readily subsided under the usual methods employed against local inflammations. This form of the disease Dr. F. found to be much more frequent in Sicily than in Egypt. Notwithstanding our author considers his *O. mitis* to be "that form of the disease with which most practitioners in private life are conversant," it appears to us to have been only his *O. gravis* (*Egyptian ophthalmia*) with a milder train of symptoms, arising in peculiar idiosyncracies, but more particularly meliorated by a removal from its parent climate. The *O. mitis* was sometimes met with in Egypt, but in Sicily it was the most frequent form of the disease. The chap. on *O. gravis* begins with observing, that "all the symptoms enumerated in the *O. mitis* are present in the *O. gravis*, but they exhibit in this latter a much greater degree of violence." In the 2d chapter, Dr. Farrell gives an animated, and, we fear, a faithful picture of this dreadful malady.

"The conjunctiva in the early stage of this disorder is red, swelled and turgid. The secretion of tears is copious. I have never met with a case in which this symptom was absent. The patient complains of excessive pain and roughness of the ball of his eye, and he cannot bear even a feeble light. The eye-lids are red at their edges, and swelled, and there is often a sense of weight and scalding of the eye. Sometimes the integuments of the forehead and temples are red, swelled, and painful; or there is a soreness of the integuments of the whole head, with head-ache, a hard quick pulse, rigors, and other symptoms of fever. In almost all cases there is pain shooting across the forehead or along the temples. To these symptoms succeed in a very short time, œdematous swelling and tension of the eye-lids, and prodigious tumefaction and turgescence of the conjunctiva, with a feeling as if the eye was to burst out of the head. If a ray of light now fall on the retina, the patient stoops his head with extraordinary celerity, covers his eye with his hand, and describes his feeling as if some sharp instrument was thrust into his eye, or as if something of a red colour darted through it. The eye-lids are painful to the touch, and the force necessary to use in opening them causes much distress. The coats of the eye being now enor-

considers it of the utmost importance, and he has no doubt of diminishing the number of persons attacked, by thus cutting off the source of contagion. But if it is believed that this "resembles in every respect any other violent inflammation of the eyes," its specific character will be overlooked, and this essential species of quarantine neglected.

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mously inflamed, distended and tense, and the eye-lids, and very probably the lachrymal glands, and every part contained within the orbit, being in a similar state, the globe of the eye must be greatly pressed, and its motion in the socket rendered difficult and painful. The muscles which move the eye, being themselves inflamed, are rendered highly irritable by this circumstance, and act with redoubled force on the ball of the eye. This violent action of the muscles is, no doubt, a source of pain in itself, as far as the muscles are concerned; but the violence of the action on the inflamed and distended ball of the eye, already pressed by the swollen parts within the orbit, must cause a lancinating pain in every motion of the globe of the eye. As the muscles of the eye are almost always put in motion by the impression of light upon the retina, on a person's coming from a dark place into the light, I think it probable that a portion of the excruciating pain following the impression of light on the retina in the case of violent inflammation, is owing to the violent action of the muscles on the ball of the eye, and to the difficulty of its motion in the orbit. In addition to all these causes of pain, it may be observed that the inflamed parts are chiefly membranous, or of an extremely delicate texture; and that inflammation in such parts runs a particular course, and is attended with most exquisite pain.

"In some cases the under eye-lids are turned outwards, in others both eye-lids are closed, and swollen, and the skin of these parts has an efflorescent, shining appearance. It is not unusual to see the eye-lids open, and the conjunctiva so much swelled and turgid as to protrude from the eye in the form of two or three folds. The tarsi in these cases are necessarily separated from one another, and the tumefied conjunctiva fills the whole anterior part of the space between the eye-lids, so that it is not possible to obtain, by any means, a sight of the cornea, or other parts of the globe of the eye. When, however, the tumefaction of the conjunctiva is not so great, and the eye can be brought fully into view, the cornea appears sometimes to be unusually pellucid; the pupil is contracted; the iris is discoloured, or, as it were, full of spots, and I have often thought that it was forced nearer to the cornea than it is observed to be in the healthy state of the eye."

This is but the first act of an awful tragedy, for as the inflammation proceeds,

"A secretion of a purulent-like matter takes place from the surface of the conjunctiva and glands of the tarsi. This matter is pent up for some time within the eye-lids, in cases in which the tarsi come in contact; and in others where these are separated, it flows out of the eye mixed with the tears. It is so acrid as to irritate the eye exceedingly, and to excoriate the palpebræ and cheeks in passing over them. The sufferings of the patient in this stage of the disease are excessive. He describes his feelings as if boiling water was poured into his eyes. He is hot and feverish. He can get no sleep by night or day; nor can he remain long in any one posture or situation. Bleeding from the temporal artery, large doses of opium, and washing the acrid matter repeatedly from the eye, will bring slight relief in most cases; but in others, no topical application or internal remedy will alleviate the sufferings of the patient, and he at last becomes delirious. If a sight of the ball of the eye can now be obtained, it is found bathed with the purulent matter; a groove
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or depression, filled with this matter, runs round the whole circumference of the cornea; and the cornea itself is muddy in a part or the whole of its extent, or its surface is studded with small white spots. These appearances are unfortunately the commencement of a suppuration of the cornea, and when the disease has got this length, the muddiness partial or general of the cornea increases, or the white spots increase in size, or run into one another, and a suppuration of the cornea to a greater or less extent always takes place. Sometimes the whole of the cornea is included in the suppuration and destroyed; the iris is laid bare, the lens and vitreous humours are forced forwards on the iris, or entirely evacuated, and even the form of the eye does not remain. At other times, a portion only of the cornea suppurates, and the sight is more or less affected afterwards, according to the point at which the suppuration has taken place, and the extent to which it has gone. If the abscess be situated before the pupil, and if it penetrate the whole depth of the cornea, the aqueous humour, in escaping, will carry with it a portion of the iris through the aperture in the cornea, and the pupil will be generally totally obliterated by the protrusion of the iris, and its subsequent adhesion to the sides of the ruptured cornea."

The whole compages of the eye, locked within the orbit, and excessively increased in volume, occasion the most acute sufferings to the patient. From this painful state of compression he is relieved, however, by the coats of the eye giving way, generally, in a violent paroxysm of pain.

"In cases of partial suppurations of the cornea, the patient feels at the moment of the escape of the aqueous humour, as if something in his eye gave way, or as if fire was knocked out of it by a blow. The escape of the aqueous humour, and a protrusion of a portion of the iris, events apparently so much to be dreaded, are followed by an abatement of the sufferings of the patient. The tension of the eye, and of all parts within the orbit, and even that of the eye-lids, is considerably diminished by this circumstance. The inflammation of the eye begins to decline from this moment, and the state of the eye to improve, unless in the melancholy instances in which the iris continues to protrude."

It would occupy too many of our pages to follow Dr. Farrell through his elaborate, but, perhaps, irregular description of the train of morbid appearances arising in the progress of this disease; but we cannot help noticing at the close of his detail, that some doubts arise in his mind with regard to the rejection of the term *Egyptian Ophthalmia*. Though he has rejected this "title," he is "willing to allow, that if the frequency of a disease in any country gives a right to a special denomination, no name was *ever more justly applied*."

In the treatment of this form of ophthalmia our author adopts the method of depletion, which has been carried to such a severe extent by other practitioners, particularly by Dr. Veitch.

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“As all the symptoms are of an highly inflammatory nature, and as the organ concerned can suffer no derangement in its structure, without greater or less injury to its functions, it is evident that a resolution of the inflammation must be the primary object. This, in a number of cases, is not to be accomplished, unless judicious and active means be employed within twenty-four or thirty hours after the accession of a violent degree of inflammation. Such is the tendency of the cornea to suppurate after this time, that the most active antiphlogistic means, pushed to a great extent, sometimes fail to prevent its suppuration. In no disease is it more necessary than in this to adopt a fixed and vigorous mode of treatment, in order to ensure success. As time is of the utmost importance, it will not answer to try first blisters and collyria, and then go on to blood-letting, topical or general—Bleeding, and that from one or both temporal arteries, as one or both eyes may be affected, to the amount of sixteen, twenty ounces of blood, or more, according to the urgency of the case and the strength of the patient, is to be the first measure. After this a large dose of salts is to be administered; the whole head is to be shaved; and large blisters are to be applied behind the ears and to the nape of the neck. The patient is to be lodged in a dark but well ventilated room, and the ball of the eye, if there be any purulent discharge, is to be repeatedly washed by injecting some mild fluid between the eye-lids. It is particularly necessary to avoid violence in injecting or introducing by any other means the fluid into the eye. I do not expect any advantage from this latter measure but that of simply removing the acrid and irritating matter from the surface of the conjunctiva. Whether there be a purulent discharge from the eye or not, the ball of the eye, palpebræ, and forehead, are to be kept constantly cool and moist, by means of one fold of fine old linen, wet with a weak solution of cerussa acetata, laid loosely over them. I must observe, that in some few instances the saturnine solution seemed to irritate and disagree very much with the eye; and that I have been obliged to desist from its use, and substitute for it a mixture of vinegar and water, or water alone. The cerussa acetata appeared to aggravate the symptoms in some cases in which there was a redness of the forehead and temples. When I had it in my power, I caused the temperature of the fluids I used in this way to be reduced by means of ice, and I applied them in that state to the eye.”

The aggravation of the symptoms by the application of the solution of the superacetate of lead, as above noticed, is in some measure accounted for by the following remark:—
 “When this solution is used, it will be necessary to wash the linen occasionally with which it is applied; to prevent the accumulation of this preparation of lead on it, which happens in consequence of the evaporation of the water. By neglecting this precaution, it sometimes happens that a much stronger solution is applied to the eye than was intended.”
 The observations upon collyria and other applications to the eye, as stated in our analysis of Mr. Stevenson’s treatise, (p. 75.) will enforce the propriety of attending to this circumstance.

As the favourable termination of the disease uniformly depends on moderating the inflammatory action of the first stage, the subsequent observations in which the mode and degree of blood-letting are particularly detailed, must prove acceptable.

“ If the inflammation do not become considerably more moderate in eight hours after the first bleeding, it will be necessary to take more blood from the temporal artery, regulating the quantity according to the intensity of the inflammation, and to apply a blister to a great part or the whole of the surface of the head. And if the inflammation has not completely subsided in eight hours more, it will be still necessary to repeat the bleeding from the temporal artery to a considerable amount if the symptoms seem to require it.

“ In conformity to this plan, I have, in many cases, taken from the temporal artery from thirty to fifty ounces of blood in the space of the first twenty-four hours of the disease ; and I have had the satisfaction to see the most violent degree of inflammation completely subdued by this practice in conjunction with the application of blisters and the other means just pointed out. It is not to be understood, however, that it is necessary to carry the bleeding in all cases to this extent, which I think may be fairly stated as the *maximum*. The inflammation, especially when attacked early, may be completely subdued, in many cases, by one bleeding of sixteen or twenty ounces, or by two bleedings of ten or fifteen ounces each, in conjunction with the effect of blisters and the other means. It is difficult to give precise rules as to the extent to which the bleeding is to be carried ; but as it is the principal remedy upon which the cure of the disease rests, it is evident that it ought to be proportioned to the degree of violence of the symptoms, and repeated until all the inflammatory symptoms are very considerably abated.”

To this powerful means of reducing inflammation, blistering to the head, to the neck, and behind the ears, purging, and a spare diet, were added as auxiliaries.

On the use of opium in inflammatory affections, opinion has been much unsettled. Conclusions formed on the hypothetical notion of its being a powerful stimulant, must necessarily condemn its employment in such cases : but actual observation has distinctly shewn, in a variety of instances, its useful effects, in opposition to the hypothesis. “ I have no dread of this medicine,” says Dr. Farrell, “ at any moment of the inflammatory stage ; but it is to be considered only as a palliative remedy. It is particularly well adapted to those cases in which the pain comes on in violent paroxysms.”

The first and great object of the practitioner, in encountering this rapidly destructive disease, is, very early, to reduce the inflammatory action. If this cannot be effected, the structure of the visual organ will be destroyed, or so altered, as to impede, or to annihilate its functions. Frequent and copious bleeding seems the only means on which dependance

can be placed. The abstraction of blood, according to the experience of Dr. Farrell, is only decidedly effectual when made from the temporal artery. Cupping, leeching, and bleeding from the arm, he considers as inadequate to this important object. As inflammation going on to a certain point, is always followed by a suppuration which destroys the organization of the eye, we cannot doubt the propriety of the energetic methods here laid down by the author.

Our limits will not permit us to go into a detail of the phenomena of the second stage of this disease, or those which arise when suppuration takes place. For the history and treatment of these we must refer to the work itself.

The third chapter treats of a form of Ophthalmia, which the author denominates *ophthalmia chronica*. The idiosyncrasies, or accidents that give rise to this variety of the disease, are thus stated.

“ Ophthalmia is often found to pass into the chronic state in consequence of its repeatedly occurring in the same person. This state succeeds much more frequently to attacks of the virulent, than to those of the mild species of the disease. It sometimes assumes the chronic state after a first attack of the mild species ; but this is in general owing to some peculiarity of constitution, or to bad treatment, especially the improper use of astringent or stimulant collyria. If one eye be weaker than the other, as is generally the case with persons who squint, the inflammation in the weak eye is extremely liable to pass into the chronic state, and to be afterwards revived by the slightest causes. As the other eye is affected by sympathy, persons with a defect of this kind, are liable to repeated attacks of inflammation in both eyes from causes which scarcely affect the eyes of others.

“ I have found ophthalmia prone to pass into the chronic state, when it attacked patients labouring under other complaints, or persons in a state of debility recovering from disease. It sometimes assumes the chronic state in patients under the influence of mercury ; and it is not unusual to see it pass into the chronic state in persons who have suffered much from pulmonic or rheumatic complaints, or in those labouring under herpetic affections, and in persons whose constitution is shattered by intemperance. It is extremely obstinate in all these cases, and often produces more or less imperfection of sight, or even total blindness.”

A syphilitic taint of the system, without there being any affection of the bones of the orbit, has been adopted by Dr. Farrell, as one source of chronic ophthalmia. There have been doubts whether the syphilitic virus does ever produce inflammation of the eye, through the medium of its diffusion in the system. Mr. Hunter almost denies the occurrence of a symptomatic ophthalmia as arising from this cause. In this fluctuating state of opinion, we cannot refuse to lay before our readers the observations of Dr. Farrell, which appear

pear to have been taken from nature, and to possess considerable discrimination.

“ I have often suspected that chronic ophthalmia was connected with a venereal taint in the constitution. I was led to adopt this opinion, from having observed some peculiarity in the appearance of the eye and character of the inflammatory symptoms, when this form of disease occurred in persons labouring under secondary venereal symptoms, and more especially, when a venereal eruption on the skin formed one of them. Both eyes are generally affected ; the patient complains little of pain, and still less of intolerance of light, and is not in fact conscious of any thing being wrong with his eyes, until the sight begins to grow dim. The eye is more watery than natural, but there is no great secretion of tears. The redness of the conjunctiva is not so vivid, as when the disease of the eye is unconnected with lues ; the form of the pupil is sometimes irregular, or its edges are jagged, and the cornea is muddy in its whole extent, without any red vessels passing over it. Vision, as may be easily conceived, is totally lost for a time, or imperfect according to the degree of opacity of the cornea. This series of symptoms corresponds pretty well with the appearances of the eye in by far the greatest proportion of patients labouring under this complication of ophthalmia and lues ; but the pain, weeping, and intolerance of light, go sometimes to a much higher degree. The inequality in the form, or jaggedness of the edges, of the pupil, will be found a pretty constant symptom ; but I am apt to think, the opacity of the cornea, without any red vessels shooting over it, is the symptom the most strongly characteristic of a venereal taint being connected with the disease of the eye. There is in soldiers a peculiar expression of countenance, not easily to be described, which, in conjunction with the preceding symptoms, establishes in my mind the existence of a venereal taint in the constitution.

“ The connexion between the affection of the eye and lues, is rendered still more probable, by the fact of the opacity of the cornea disappearing, and the redness of the conjunctiva vanishing as soon as the venereal symptoms on the skin, or in other parts, begin to disappear.”

Many remedies and methods of treatment are suggested, as collyria, caustic, scarification, excision of portions of the conjunctiva, blisters, &c. ; we can, however, for reasons before given, notice only in a general way, that our author found confinement in an hospital retarded the cure ; that exposure to a moderated light was more serviceable than keeping the patient in darkness ; and, that after every effort had failed to remove the symptoms, the disease frequently subsided in a short time, on discontinuing all applications to the eye.

The second part of the volume, on the “ Consequences of Ophthalmia,” is divided into four chapters, treating of Relapses, Ectropium, Entropium, and Pterigium.

In the chapter on Relapses is found the following statement

of the plan pursued in Sicily for the management of the convalescents from this disease.

“ The convalescent, on being discharged from the hospital, is removed to a spacious well ventilated building, fitted up on purpose for the reception of such persons. Here he is given in charge to a military and medical officer, and he is in every respect as well accommodated and attended as he was in hospital. He is allowed his full ration of bread, meat, and wine, unless the medical officer see something in his case which will justify him in withholding the wine. As soon as he appears likely to be benefited by exercise, he is obliged to walk out in the open air, with a shade over his eyes, for such length of time as may be thought useful to him, under the command of a commissioned officer. The moment a relapse is discovered, and from the vigilance observed, such an event can exist only a short time without being detected, the patient is immediately sent back to the ophthalmic hospital, which, I may observe, is distant only a few hundred yards from the building occupied by the convalescents. But if all things go on well with the convalescent, and his eyes gain strength, he is selected out by a medical officer and transferred to another convalescent establishment which is some miles distant from the former. Here he is also comfortably accommodated and placed under the care and controul of a military and medical officer; but he is allowed to walk about a great part of the day at his own discretion, and he is occasionally exercised in marching, and other military employments. In this way his general health is improved, his eyes regain strength, and he is gradually habituated to exercise in the open air, and to the occupations in which he is to be afterwards employed. It is, among other things, the duty of the medical officer to see that the military discipline to which the convalescent is subjected be suited to the state of the eyes and general health. The convalescent is sent from this latter establishment to join his regiment, but not without being previously selected by a medical officer as a fit subject to be discharged.

“ The advantages arising from this plan might be predicted from a knowledge of the disease and the habits of soldiers; and I have no hesitation in saying that they will more than equal a reasonable expectation. Its good effects were not confined to patients purely convalescent. The same mode of management adopted with many patients in whom the disease had assumed the chronic state, and for whom little or nothing could be done in hospital, was found to be attended with manifest advantages, without the assistance of any topical remedy to the eye, or internal medicine. It will be often necessary, however, to contribute to the improvement of the eye by the ordinary remedies on such occasions, and to attend also to the means calculated to accelerate the re-establishment of the general health.”

In works treating on the diseases of distant countries as observed on the spot by their authors, it does not unfrequently occur that the express subject of the volume makes its least interesting part. Incidental remarks on the manners, habits, and various peculiarities of the natives of remote countries; meteorological appearances; facts in the natural history of animals,

animals, vegetables, and minerals, are often of great importance. Where these remarks and facts are recorded without a bias to system, from which the medical observer will seldom be free when treating of diseases, they become particularly valuable. Though the following relation (note, p. 48.) is not entirely free from hypothesis, we consider it as too curious to pass unnoticed.

“ I often suspected (says Dr. F.) that the dust, carried about in such quantities by the winds in Alexandria, and in the adjoining desert, contained a considerable portion of pulverized salts. The surface of many parts of the desert abounds with salts, the water obtained by digging in almost every place about Alexandria, is brackish, and the ruins and walls of the houses of Alexandria are incrustated with saline productions. Perhaps some explanation of the fact of the salts being so abundant in the soil of Egypt, might be derived from the circumstance of the land being so nearly on a level with the sea. The formation of salts on the walls of the houses of Alexandria, and the absolute disintegration of the calcareous stone of which the walls are built, form an interesting subject of chemical inquiry. The stones have totally disappeared in parts of the walls of many houses, and the mortar in which they were bedded remains. It appears to me that the demolition of the stone is effected by its particles being detached from one another by the crystallization of the salts in its pores, and by a part of its composition going to the formation of saline compounds. Perhaps it is in the same way that the calcareous stones used for the construction of the ancient Syracuse, and many other cities, have disappeared, as it is said, from the face of the earth.”

Practical Observations on the Formation of an Artificial Pupil, in several deranged states of the Eye, to which are annexed Remarks on the Extraction of soft Cataracts, and three of the Membranous Kind through a Puncture in the Cornea. By BENJAMIN GIBSON, Surgeon to the Manchester Infirmary, &c. 8vo. Lond. Cadell and Davies, 1811. Plates. pp. 155.

SINCE the return of our army from the shores of Egypt, the attention of surgeons has been more particularly directed to the treatment of those derangements of the organs of sight, producing imperfect vision, than formerly; and which are frequently succeeding an attack of what is termed Egyptian ophthalmia, as well as the consequence of inflammation, induced by other causes. Anterior to that period our information was extremely limited, and, consequently, our operations were performed with hesitation and timidity. The experiments and writings of Daviel, Janin, Bart, Richter, Demours, Mounoir, Scarpa, and others, had completely established the pre-eminence of the Continental surgeons in this department

department of Surgery. The former, though frequently unsuccessful, yet, being occasionally attended with advantage, justified their claim to superiority; whilst the subject was either miserably neglected, or only slightly investigated in this country. The present race of surgeons appear, however, to be fully aware of its importance; and the foundation of institutions for the reception of patients labouring under visual maladies, will, we trust, ere long, reclaim this neglected branch of surgical study from the obscurity in which it has hitherto been involved. This will be more especially the fortunate result, if competent talent be called in to support them. Impressed with this hope, and with the gratifying prospect held out, we hail the appearance of the volume before us with pleasure, as affording a valuable addition to the small collection of good works which have been written upon the subject. We shall endeavour to give our readers a brief analysis of its contents, in order to afford them some idea of the value of the observations it contains, and to incite them to peruse the whole at length.

In his preface Mr. Gibson takes the opportunity to remark, that some practitioners may be disposed to doubt the veracity of his statement respecting the extreme insensibility of the iris, from its generally having been supposed to possess the contrary properties in a superior degree. These opinions are now, however, proved to be founded in error. The experiments and operations of Professor Scarpa, and the extensive practice of Mr. Gibson, have enabled these gentlemen to assert, as an incontrovertible fact, that the muscular fibres of the iris are endowed with a very slight proportion of nervous influence, and are little disposed to inflame on being irritated. The knowledge of this fact is of the utmost importance, as the ignorance of it has hitherto deterred many surgeons from interfering with the more complicated disorganization of the eyes, under the idea that the most dreadful symptoms might be expected to supervene, in consequence of a wound inflicted upon the iris.

The first section of this work is entirely taken up with a concise history of the operation, as it has been performed by different surgeons with different variations; but the author avoids giving an opinion with regard to the relative advantages of each. Our countryman, Cheselden, appears to have been the first who devised and executed any operation with the intention of forming an artificial pupil. After him Sharp, Wentzel, Janin, Scarpa, Mounoir, Demours, &c. proposed operations to effect the same object, each of them varying from the others, but all being liable to objections in a greater or less degree, and not adapted to the various derangements

rangements of the eyes requiring the operation under consideration. It has been Mr. Gibson's good fortune, by reasoning and experiment, to devise modes in order to supply the desideratum in question ; and provide for every exigency. We shall proceed to a concise account of his operations, occasionally extracting from his volume.

“ The mode of operation for forming an artificial pupil, it is obvious, must be varied according to the circumstances of the case. When there exists merely an opacity in the centre of the cornea without derangement in the internal parts of the eye ; or, when the pupil is closed after the extraction, or depression of a cataract ; in these cases the operation will be most simple. But if, along with central opacity of the cornea, the iris has formed adhesions to its inner surface, with, or without a corresponding diminution of the capacity of the anterior chamber of the aqueous humour, the operation becomes more complex. If again, along with opacity, and adhesions of the iris, the crystalline lens or its capsule be opaque, the adoption of still more complex expedients is necessary. The same may be observed of those cases, in which the pupil is totally obliterated, or nearly so, and the iris adheres to the capsule of the crystalline lens ; for this rarely happens without an opacity of the lens or its capsule, or of both. Sometimes, however, a blow upon the sclerotic coat, particularly affecting the crystalline lens, and probably rupturing the edge of its capsule, is followed by an absorption of the lens, and leaves only the opaque capsule.

“ In describing the operations, adapted to these cases, it is to be understood that the subjects of them were adults generally, who had either lost one eye, or had both eyes in similar circumstances of disease. I have never thought it of sufficient consequence to perform the operation where one eye was entire and perfect.”

To accomplish the operation requisite to be performed under these circumstances, in addition to the cornea-knife and curved scissars, a small hook, a minute pair of iris-scissars, and a small pair of forceps, are necessary ; the two last being of a peculiar construction, and devised by Mr. G. for the operation.

Opacity in the centre of the cornea is the first state requiring the operation which he treats upon. In this case he supposes at least a third part of the cornea to remain transparent and situated either at the superior or inferior part, internal or external angle of the eye. The latter spot he prefers, or towards the inferior part, as the operation is less difficult here.

“ The first step of the operation is to secure the eyelids, as in the operation for extracting a cataract. A puncture is then to be made in the cornea with a broad cornea-knife, within a line of the sclerotica, to the extent of about three lines. All pressure is now to be removed from the eyeball, and the cornea-knife gently withdrawn. The consequence of this is that a portion of the aqueous humour escapes, and the
iris

iris falls into contact with the opening in the cornea, and closes it like a valve. A slight pressure must now be made on the superior and nasal part of the eyeball, with the fore and middle finger of the left hand, till at length, by an occasional and gentle increase of the pressure, or by varying its direction, the iris gradually protrudes, so as to present a bag of the size of a large pin's head. This protruded portion must be cut off with a pair of fine curved scissors, and all pressure at the same time removed. The iris will then recede within the eye, and the portion which has been removed will leave an artificial pupil more or less circular.

"It sometimes happens that the whole breadth of the iris, to the border of the natural pupil is protruded and removed in this way. This, I consider as rather an advantage, as it ensures a large pupil, though generally one which is oblong in its shape. I have found, however, the mere circumstances of shape to be of little consequence in this operation, and always to be sacrificed to the object of size. It may also be remarked that the opening has no disposition to close, when, in forming the artificial pupil, the border of the natural pupil is divided.

"It occasionally happens, also, that as soon as the knife is removed, the muscles of the eye-ball act with violence, and propel a small staphyloma or bag of the iris through the incision. If this bag be not large enough to form the new pupil, the iris must be further protruded by gentle pressure.

"As soon as the operation is finished, the eye is to be lightly covered with a few folds of fine linen, dipped in water, which may be cold in summer, and tepid in winter, and the patient is to be kept in an horizontal posture for a few hours. If pain should ensue, an opiate may be taken in the evening, and a saline purge the following morning. These medicines, however, are seldom requisite, but may be used as precautionary."

The puncture in the cornea ought not to be too large, and it is of importance to cut off the whole of the protruded portion of the iris with one stroke of the scissors; otherwise, on the escape of the aqueous humour, it recedes into the eye, and another opportunity for doing this, at the time, is not afforded. Should the artificial opening, as above mentioned, not appear sufficiently large to the operator, the iris may be drawn out of the eye, by means of the small hook, and divided, or (if it appear more easy) the iris scissors may be introduced into the eye, and the opening be enlarged, by cutting off a portion of the iris.

The subsequent inflammation in the eye is very slight. The aqueous humour is speedily regenerated (in an hour or two). Sometimes a slight cloudiness of this is perceptible, but the lapse of a few days serves to dissipate it. When the cornea is flatter than usual, and the wounded iris discharges, what may be termed, much blood, the case is rather unfavourable, the new pupil being much disposed to contract. This, however, may be prevented, we conceive, by the exhibition of the belladonna. The permanency of the newly
formed

formed pupil depends on its size, and the healthy state of the iris. If this be the medium size of the natural one, and, more especially, if it include its border, no contraction ensues; but, if the contrary to this be the case, an obliteration will occasionally take place. By means of this operation, a patient will be enabled to read a moderately small print, with properly adapted glasses. This new pupil does not possess the power of contracting and dilating, which the natural pupil has in an healthy state.

From the foregoing account, it will be evident that Mr. Gibson's operation has a decided superiority over all which have been hitherto recommended, as none of their projectors appear aware of the importance which attaches to leaving the capsule of the crystalline uninjured. We now know that the slightest wound inflicted upon this membrane will be succeeded by opacity, either of it, or of the lens: and, only one author who has written upon the subject has pointed out a mode, by which the risque may be avoided; but the operation is mentioned in very vague terms, its result not stated, and reasonable doubts may be entertained whether it was ever practised. "*Ce n'est que d'après une tradition orale que notre illustre maître le Professeur Sabbatier a connu le procédé de Wentzel père. Cette habile oculiste incisoit la cornée dans les deux tiers inférieurs de sa circonférence; il saisissoit avec des pinces et soulevoit le centre de l'iris pour en exciser une portion dont le défaut laissoit une ouverture indélébiles.*"* It does not appear that Sabbatier ever adopted this plan of operating†, and Wentzel describes a very difficult operation as the one which he and his father were in the habits of performing‡. No other comment in particular is made upon the above quoted account by the writer Leveille, than that a Surgeon of Angers had performed a similar operation, substituting a hook in lieu of the forceps.

The second operation which Mr. Gibson describes is one, adapted to those cases in which there is "central opacity of the cornea, attended with adhesions between the cornea and iris, which include only an inner portion of the border of the iris."

"The consequence of considerable adhesions existing between the iris and cornea, is, that the iris frequently cannot be protruded through an opening in the cornea to a sufficient extent to form, by its removal, an efficient artificial pupil, as in the operation already described; the

* Vide Scarpa sur les yeux, trans. François par Leveille, Ed. 2d. tome 2, p. 169.

† Vide Medecine Operatione, tome 3d.

‡ Vide Treatise on the Cataract, &c.
(No. 148.)

attempt, however, may always be made, and the protruded part be cut off, however small it may be. If this expedient should not succeed, the next step must be to introduce the small hook through the part of the pupil, which does not adhere to the cornea, and to lay hold of the border of the iris. With a little care this membrane may generally be drawn out of the puncture in the cornea, and cut off, with the curved scissors. In doing this all laceration must be avoided." "Much, however, in these cases, must be left to the discretion and judgment of the operator. If, for instance, he should not observe any part of the iris, which can advantageously be drawn out with the hook, after making one attempt with that instrument, he will probably employ the iris-scissors, and enlarge the opening within the eye: or having clipped a portion of the iris, which now only adheres by a slight film, he will think the forceps the best means of removing it. Sometimes a slight point of adhesion between the iris and cornea may be advantageously separated by a cornea knife, at the time of making the puncture: or, the iris-scissors may be used for the same purpose, previous to using the hook; if it should be found impracticable to draw out the iris with the hook, on account of existing adhesions, the artificial pupil must be formed within the eye by the iris-scissors; which are to be used in the manner explained in the third operation."

Mr. Gibson's third operation is requisite in those cases where the adhesions formed between the anterior and inner edge of the iris, and the posterior surface of the lucid cornea, are very extensive, including the whole border of the iris, or nearly so. Here the attachments are to be partially divided by means of the cornea knife, at the time it is passed for the incision of the cornea. When this is effected, if the iris appear loose, the hook may be used to draw a portion of it out of the eye; but if this be not the case, the iris-scissors are to be introduced, and a portion of the membrane cut off.

We would recommend these two operations to the attentive perusal of our readers, the adhesion of the iris to the cornea being a frequent occurrence. It is often taking place in consequence of the evacuation of the aqueous humour through an ulcer which has penetrated the lamina of the cornea, producing irregularity and contraction of the pupil, which sometimes terminates in complete obliteration of sight.

Operation the fourth.—"Central opacity of the cornea, and total opacity of the crystalline lens, or its capsule; with or without adhesions of the iris to the cornea." This state of the eye is not of frequent occurrence, but when it is met with, a more complex and arduous operation is requisite, than any of the above. Mr. Gibson details the various steps necessary to be adopted, by relating an interesting case which our limits will not allow us to transcribe. In the first place, an artificial pupil was formed, as related above. The opaque crystalline, and its capsule, were then broken down (after the lapse

lapse of a few days) by means of Ney's couching needle, and portions of these impelled through the new pupil into the anterior chamber of the aqueous humour, in order to facilitate their solution and absorption. This not taking place rapidly, portions of them were evacuated through a small opening in the cornea, at two operations subsequently performed, and the remainder being absorbed, the pupil was left clear. The result of this case, which was as lamentable a one as is to be met with, where any chance remains of recovering the sight, completely evinces the talents and manual dexterity of the operator.

Our Author's fifth operation is to remedy the privation of sight in consequence of the total obliteration of the natural pupil, attended with an entire transparency of the cornea. This state is induced by inflammation of the iris, or internal parts of the eye, the result of blows, or other injuries done to it; and, is sometimes succeeding both the extraction and depression of the opaque crystalline, or its capsule. In this case the lens may be present, or absent; adhesions may be formed between its capsule and the iris; and these, constituting its varieties, require different operations. When the lens is known to occupy its situation, it should be broken down or depressed with the needle.

"Then, the point of the cornea knife, after entering the anterior chamber of the eye, must be directed to that part of the iris, which is distant about one third of its diameter from the external angle. This is to limit the artificial pupil towards the outer part of the eye. Here, it is to be passed through the iris so as to make an opening equal in extent to about one third the diameter of that membrane. If it be found practicable, a smaller incision may be made opposite to this, by repassing the point of the knife through the iris, where the pupil is intended to terminate, at a corresponding distance from the inner angle. A flap may then, by a gentle motion of the cornea-knife downwards, be sometimes formed, and may be removed by the introduction of the iris-scissars. Generally, however, only the simple incision of the iris, without a flap, will be accomplished. Under such circumstances, one blade of the iris-scissars must be advanced through the incision in the iris, and the other between the cornea and iris, until they include about one third of its diameter. The iris must next be divided from the upper extremity of the incision, a little obliquely downwards, in such a way, that when the scissars are applied in a similar direction from the lower extremity of the incision in the iris, the new pupil may approach in figure to an equilateral triangle."

To each of the operations, Mr. Gibson has added cases in point extracted from a great number on which he has operated, not on account of their being more successful in their result than many others, but as they exemplify his various positions in a better manner. He has likewise added plates

of the iris-scissors, and forceps, and views of the artificial pupils, both with and without opacity of the cornea. These last, though not done justice to by the engraver, shew, in a very accurate manner, the changes that ensue in the appearance of the eye subsequent to the operation.

Mr. Gibson closes his account of the artificial pupil with an enumeration of several varieties of blindness, in which the operation has failed. They are chiefly those cases in which the iris is more or less diseased, and altered in structure from its natural state.

The remaining part of Mr. Gibson's publication is occupied with the account of two operations for extracting the soft and capsular cataracts, through a puncture in the cornea. We regret that our limits will not allow us to detail, at length, these novel operations. The cataract in children is occasionally membranous, but mostly milky or pulpy. The capsule being tender at this early age, Mr. Gibson has adopted the plan of breaking it down with the couching needle, in which case it is always absorbed, and the patient restored to sight. Mr. Gibson has been in the habit of operating in this manner for the last ten years upon subjects of all ages. We are not aware that any other oculist (with the exception of the late Mr. Saunders) has put in practice this operation at so early a period of life. From six months to two years, Mr. G. prefers as the most eligible time for operating.

For an account of this mode of operating, in cases of capsular, along with descriptions of numerous varieties of this species of cataract, we must refer our readers to the volume itself. We shall, however, extract the relation of his operation in cases of soft cataracts.

"Every surgeon, who is accustomed to the operation of couching, cannot well fail to be aware, that he has a soft cataract to act upon, when he has felt the slight resistance which it presents to the couching needle, and observes how little change, in many cases, the instrument makes in its appearance. In these cases, when the removal of the cataract from the axis of vision cannot be effected, on account of its softness, it should be the aim of the operator to rupture, most freely, the anterior part of the capsule, and to break down the substance of the cataract, by passing the couching needle cautiously through it, in different directions, that the aqueous humour may more readily act upon it, and reduce it to a pulpy state. When this has been effected, and the eye has perfectly recovered from the operation, the surface of the cataract will probably have put on a flocculent appearance, and be fit for extraction.

"In performing this operation, the patient is to be seated and secured in the same manner as for the extraction of a cataract. The cornea-knife, of the largest size, is then to be introduced through the cornea towards

towards the outer angle of the eye, at the usual distance from the sclerotic coat. If there should be any doubt of the free laceration of the anterior part of the capsule of the lens, the point of the cornea-knife should be directed obliquely through the pupil, so as to make a more free division of it. All pressure upon the eyeball must now be carefully avoided, and the cornea-knife gradually withdrawn, which is attended with the evacuation of a part of the aqueous humour, and some portion of the cataract. The curette is next to be introduced through the incision, and advanced towards the pupil, by which the whole of the cataract may commonly be removed by degrees in a pulpy state, so as to render the pupil perfectly clear. Its removal is generally much facilitated, by gentle pressure towards the vitreous humour, with the convex surface of the curette, whilst the point is inserted through the pupil. Sometimes, however, the cataract is not reduced to a sufficient degree of softness by the action of the aqueous humour; and this state makes its removal more slow, but seldom renders the repetition of the operation necessary; for, when a considerable portion of the cataract has been removed, the remainder is generally observed to be so much reduced in bulk, before the fit period for another operation, as to insure its speedy disappearing."

From these extracts our readers may form some idea of the value of the work from which they are taken. We have experienced much gratification in perusing it, and can strongly recommend it to the profession in general. Its appearance will form an important æra in the history of surgery relative to diseases of the eyes; and will fill up that chasm in British surgery which has hitherto, almost exclusively, been occupied by the productions of foreigners. Its external appearance does not bear any proportion to its internal merits; and the modesty of the former will surely put to the blush many professional writers who drain our pockets, and overload our critical board with their expensive and ponderous lucubrations. The volume before us is evidently the production of a man who has an ardent love for the profession; who has bestowed unwearied assiduity in gaining an insight into the knowledge of it; and, who has attained extraordinary excellence in its practical part.

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

Extract from the Minutes of the Jacksonian Committee, on the 19th of February, 1811.—Read two other Dissertations on the same important subject (Rabies Canina); one having for its motto,

"On dogs the infection first began,
And last the vengeful arrows fix'd on man." *Pope's Iliad, Book 1.*

"Beware of yonder Dog,
Look, when he fawns he bites; and when he bites,
His venom tooth will rankle to the death." *Shakes, Rich. III.*

the other having the motto, "Sperp."

Whereupon the Committee Resolved,

That, in their judgment, such two Dissertations are highly meritorious productions, are additionally deserving consideration from the assurance, in each, that the author will continue to prosecute inquiries on the subject of Rabid Animals; and that such Dissertations are equally worthy of the Jacksonian Prize.

That it be, therefore, recommended to the Court of Assistants, on this gratifying occasion, to resolve on granting an extraordinary premium of 10*l.* in order that the author of each such Dissertations may receive a token of equal approbation of his valuable labour.

That as, however, the Jacksonian Prize must be awarded to one of the Candidates, and as it is a special duty of the Committee to make such award, that such prize be adjudged to the author of the Dissertation with the motto "On Dogs, &c."

That, if the proposition for an extraordinary premium should be agreed to by the Court, it is the opinion of the Committee that such premium should be given to the author of the Dissertation with the motto "Spero."

Extract from the Minutes of the Court of Assistants, on the 11th of April, 1811.—It was then moved, seconded, and resolved, that the Jacksonian Prize for the year 1810, adjudged to Mr. John Smith Soden of Coventry, and Mr. James Gillman of Highgate, be delivered to them by the Board of Curators; at such time and in such manner as that Board shall judge proper.

URINARY WORMS.—M. Pepion, Physician to the Navy at Cherbourg, has lately related the particulars of a case in which the patient voided a number of small worms in his urine. He describes them to be three lines in length, of extreme tenuity, the head round and red; the tail red and bifurcated; two antennæ; four feet; the body consisted of yellow rings. The most effectual remedy for them, was a paste formed of the seeds of citron, in doses of half a drachm, three or four times a day.—*Bulletin des Sciences Medicales.*

USE OF SAVINE IN GOUT.—M. Hufeland, for several years, has employed Savine with great success in all forms of Chronic Gout, whether in the head, the chest, or the extremities, even when the complaint has resisted the most energetic remedies, as guaiacum, sulphur, antimony, and mercury. Savine does not impair the digestive functions; but great caution is requisite in administering it, on account of its acting, like cantharides, on the urinary organs, and on the uterus, whence may result pain and inflammation in the kidneys and in the bladder, strangury, hæmatury, and uterine hæmorrhage. It has proved efficacious in the form of powder, in doses of ten grains to a scruple, in 24 hours. It has also succeeded in decoction; and the essential oil may be given with safety, but on account of its great strength, the dose should not exceed a single drop triturated with sugar, and taken at two separate times, morning and evening. When five or six drops have been taken in the day, inflammatory symptoms of the kidneys and bladder have proved very distressing.

By

By an imperial decree, dated Palace of Bois-le-duc, May 7th, 1810. Napoleon has offered a prize of a *million* of francs for the best machine for spinning flax. The money is deposited in the hands of the minister of the interior, and will be awarded *à l'inventeur de quelque nation qu'il puisse être, de la meilleur machine propre à filer le lin.*

Palace of St. Cloud, June 18th, 1810.

Sr. Proust has received 100,000 fr. and Sr. Fouques a sum of 40,000 fr. from the Emperor, as a gratification and encouragement for their discovery of the process of making sugar from raisins.

They are enjoined to employ this money in establishing manufactories of sugar from raisins, in such parts of the southern department as the minister of the interior shall appoint.

They are required to explain their process, which is to be published and forwarded to all the vinegar departments.

From the 1st of January, 1811, the sugar of raisins is to be used instead of that from the sugar-cane in all public establishments.

Napoleon has offered 100,000 fr. for the discovery of an indigenous plant of easy culture, capable of being substituted for Indigo, in price, use, permanency, and brilliancy of colour.

An equal sum will be awarded to whoever shall furnish a process for fixing an indigenous vegetable colour, on cotton, wool, linen, silk, &c. so as to replace indigo.

50,000 francs will be given to him who shall discover the means of mixing indigo with indigenous substances, or of employing it in a new manner, so that half the quantity will produce the full effects in intensity and solidity of colour.

25,000 francs will be given for ascertaining the means of diminishing the quantity of indigo one fourth.

25,000 francs will be given for the discovery of a certain and easy process for extracting, from the plant which furnishes woad (*satis tinctoria* Linn.) the colouring matter, and employing it as a dye.

100,00 fr. will be further given if this colouring matter can be made to impart the fineness and brilliancy of indigo, without its durability being injured.

25,000 fr. will be given for the discovery of a certain and easy mode of dying wool and silk with Prussian blue, so as to obtain an uniform and brilliant colour, unchangeable by rubbing or washing. The competitors for this prize are to send a description of their process with some specimens of dyed stuffs, &c. to the minister of the interior.

Mr. Davy has lately read an account (at the Royal Institution) of a meteoric stone, which fell a few weeks since in the county of Tipperary. The phenomena attending its fall were the same as described in other instances of the like kind. The stone has been analyzed by Mr. Higgins of Dublin, and contains, like other meteoric stones, iron and nickel. This ingenious philosopher and chemist, when endeavouring to explain the phenomenon of meteoric stones, observed, that hydrogen gas, or inflammable air, will dissolve some of the metals, and form, with them, an invisible metallic gas. When this gas explodes, the metals are deposited, in a metallic form, on the sides of the vessel which contained the gas. He exhibited arsenic, tellurium, and sodium,

sodium, in a gaseous state combined with hydrogen. When the hydrogen was inflamed, by a mixture of oxymuriatic gas, the metals were deposited in a solid form, coating the sides of the vessels. As the stones which had fallen from the atmosphere were all metallic, he inferred that they might be formed by an explosion of a large quantity of inflammable air, in which the metals had been dissolved. The opinion that these meteoric stones are formed from metals in a gaseous state, which explode and condense, seems very probable, and is agreeable to the appearances which accompany their fall. The dense cloud, the loud explosion, the brilliant light which precedes their descent, the heat of the stones when they are first found, are all indications of their being thus produced. Mr. Davy was, however, inclined to trace their origin to another source, and to consider them as the ruins of some planetary body; or, perhaps, they might be small satellites moving round some of the planets, which, coming near the orbit of the earth, were attracted to it. Though this opinion has been advanced before by some philosophers on the continent, it is too improbable, and wildly conjectural, to be at all admitted.

An article in a late Martinico gazette describes the effects of a tree growing on the coasts of that island, under the name of the divine *Alconorque*. It is said to be a specific in diseases of the viscera, especially of the liver and lungs. An infusion of the outer bark is the way in which it is used. A glass of this infusion is taken morning and evening with two spoonfuls of honey. Milk, acids, spices, and all irritating substances are to be avoided during its use. A cataplasm of it is used for pains in the region of the liver. This account of the virtues of the divine *Alconorque*, is said to be derived from the Indians. What is the divine *Alconorque*? and who are the Indians of Martinique?

Dr. Terry, of Coventry, has recently given the *Oleum Terebinthinæ* in a case of *tænia* with success. The patient, a lady above fifty years of age, being in a weak state of health, Dr. T. did not give the remedy in the large doses, which some practitioners have employed. He directed a tea-spoonful to be taken every four hours, mixed with honey.

The third dose acted gently on the bowels, and brought away some detached portions of *tænia* which measured about four yards in length. Before she had consumed an ounce of the oil, a worm was discharged, rolled into a ball. She did not unfold it to ascertain its length; having seen what she supposed to be the head. The oil did not produce any uneasy sensation in the stomach, nor any irritation in the urinary passages.

In another case of *tænia* Dr. Terry prescribed the *oleum terebinthinæ* in a similar manner, and with like success; a worm being expelled that measured more than nine yards.

Inflammatory Diseases.—General and Topical Bleeding. Query. Would it not be of use to follow it up immediately with strong stimulants? It appears so in the external inflammation, as to the eye. Query, in internal inflammation? *Dr. Beddoes Adversaria.*

When Dr. Beddoes made this query, he was not aware that in Pneumonic inflammation in the thorax, some veterinary surgeons pursue precisely

isely the practice here suggested. Immediately after one copious bleeding, the cuprum vitriolatum is given in large and repeated doses. This practice, apparently so contrary to all principle, is said to be completely successful, very few horses dying when thus treated; while the evacuating treatment is unfortunate in a much greater proportion. The rationale of this, if it can be said to have any rationale, is, that after the vessels are excessively depleted, for the single abstraction of blood is enormous, a degree of tone or constriction is given to them by the cuprum vitriolatum, which prevents congestion of blood again occurring in the lungs, or a serous effusion taking place. Whatever may be the theory of this practice, the fact itself deserves notice.

Dr. Adams commences his Summer Course of Lectures on the Institutes and Practice of Medicine, the beginning of June, at his house No. 17, Hatton Garden.

Mr. A. T. Thompson has commenced his Summer Course of Lectures on the Science of Botany. A lecture is delivered every morning, except on Saturdays and Sundays, at nine o'clock, in the library of the Botanic Garden, Sloan Street; and the course is particularly designed for Medical students.

Mr. W. T. Brande's Lectures on the principles of Experimental Chemistry, commenced on the 28th of May, at the Theatre of Anatomy, Great Windmill Street.

Dr. Tuthill will begin his Summer Course of Lectures, on the Practice of Physic, and on the Laws and Operations of Chemistry, with particular examinations to facilitate the acquisition of Medical and Chemical knowledge, on Monday the 3d June, at his house in Soho Square.

Dr. Merriman, Physician, Accoucheur to the Middlesex Hospital, and Westminster General Dispensary, proposes, during the Summer, to deliver a Course of Lectures on the Theory and Practice of Midwifery, and on Female and Infantile Diseases.

Dr. Hooper and Dr. Agar recommence their Lectures on the Theory and Practice of Physic, Chemistry, and the Materia Medica, at the Theatre in Cork Street, on Monday, June 3, at eight o'clock in the morning.

Dr. Haighton's first Course of Lectures on Midwifery, comprehending the Diseases of Women and Children, commences this day, June 1, at the Theatre, Guy's Hospital.

Mr Brooks' Summer Course of Lectures on Anatomy, will commence, at the Theatre of Anatomy, Blenheim Street, on the 8th of June.

*An Account of Diseases in an Eastern District of London,
from the 20th of April, to the 20th of May, 1811.*

ACUTE DISEASES.			
Typhus mitior	9	Enterodynia	3
Ephamera	4	Herpes	2
Febris intermittens	3	Hæmorrhoids	4
Peripneumonia notha	4	Ascites	3
Rheumatismus acutus	2	Anasarca	4
		Rheumatismus Chronicus	8
CHRONIC DISEASES.		PUERPERAL DISEASES.	
Tussis	10	Menorrhagia Lochialis	4
Dyspnœa	6	Ephamera	3
Tussis cum Dyspnœa	12	Dolor post partum	4
Pleurodyne	4	Constipatio	5
Phthisis Pulmonalis	4	Dysuria	6
Apoplexia	1	INFANTILE DISEASES.	
Cephalalgia	3	Febris mesenterica	3
Vertigo	5	Pertussis	6
Amenorrhœa	6	Convulsio	2
Menorrhagia	2	Ophthalmia	3
Dysuria	4		

DURING the last few weeks numerous instances of fever have occurred, and these chiefly of the Typhoid kind. This disease was a few years ago so frequent in its recurrence, and so alarming in its consequences, particularly in hospitals and other public institutions, as to engage a very considerable share of medical attention. For some years past, however, it has very seldom made its appearance.

It is not improbable that this has been, in some measure, owing to the very large increase of new buildings, some of which occupy the space on which stood many of those closely confined dwellings that were occupied by the poor, and amongst whom the disease in question was most rapidly propagated. The disease has now returned, but has appeared in most cases in its milder form, though there have been instances of its propagation amongst those who have attended upon the sick.

This disorder has approached in its usual manner. It has been introduced by a degree of shivering and chilliness which has been succeeded by an increased action of the heart and arteries, considerable pain and unpleasant confusion in the head. This has sometimes abated in its violence, and gradually subsided, but at others has proceeded to a delirium, discovered rather by a low incoherent muttering, than by any expressions of violence.

The cases here referred to terminated favourably. When the cordial plan was adopted, in the early stage of the fever, symptoms were rather aggravated than relieved. A gentle diarrhœa, which is often the occasion of alarm, has frequently proved highly salutary.

BOTANICAL

BOTANICAL REPORT.

FOUR numbers of the BOTANIST'S REPOSITORY have been published, since we last noticed this work: we shall devote the present Report to a notice of the contents of these.

Anneslea spinosa, so called by Dr. Roxburgh in honour of the Right Honourable George Annesley Viscount Valentia, who, we are here told, "discovered this plant growing in the Gagra river in Oude, and also about Chittagong." For *discovered* we suppose to understand *saw*, for specimens of this plant were brought by Sir George Staunton, from the province of Kinang, in China, from his return from his embassy to this country, long before Lord Valentia commenced his travels in India. We have not, however, the smallest objection to the name; for, when the Magnates concern themselves at all about natural history, more especially when they undertake laborious travels, with a view of acquiring knowledge therein, we should be sorry to deprive them of an iota of their honorary rewards; and we are pleased to see the most magnificent plants devoted to the record of a fame, so much more meritorious, than that of shining in the annals of the Racing Calendar, or the petty intrigues of a borough election. This is altogether a curious article about Nymphs and Naiades, not more conspicuous for their beauty and elegance, than for their mildness; and about *Anneslea*, panther-like, uniting the extremes of beauty and ferocity. We cannot suppose the author is slyly insinuating any similarity between his Lordship and his plant, between Annesley and *Anneslea*. But it gives him an opportunity of introducing something about the armour of vegetables, in which the different kinds are amusingly jumbled together in an unusual figure in rhetoric, an inverted bathos, "from the almost imperceptible hair down to the lacerating thorn;" and about the browsing of camels, asses, and goats; and about hoping to see the magnificent foliage of *Anneslea* mantling our ponds. The reasoning, however, on which our author grounds his hopes of our being able to naturalize a tropical production to our climate, is not very convincing. "Have we not," he exultingly exclaims, "already taught the Thea, the Camellia, the Takio, the Moutan, the Yulan, to resist our winters?" Now it unfortunately happens that we have not taught one of these plants to bear cold a jot better than they did ages ago, in the imperial gardens at Peking. We have indeed had the good sense to discover, that, being natives of climes more rigid than our own, it was not necessary to confine them to our stoves.

We have been so entertained with this article, that we could not withstand the temptation of amusing our readers with parts of it; but we must not forget to say something serious of this very curious kind of water-lily, which has flowered at White Knight's, the seat of the Marquis of Blandford. The flowers according to the figure are but small, in proportion to the immense size of the foliage, sometimes six or eight feet in circumference, the petals are blue, the calyx green on the outside, and red within.

Eugenia zealanica; from Boyton, the seat of A. B. Lambert, esq. It is one of the natural order of myrti. A curious observation is here made concerning the germen, which contains sixteen ovula, though the fruit admits of only one seed coming to perfection.

Schinus dentata; a native of Owhyhee, and sufficiently hardy to thrive

thrive well in a sheltered situation in the open ground, and even to produce ripe seeds in favourable seasons, if trained against a wall.

Jussiaena exaltata; the cattri calambri of the hortus malabaricus, v. 2, p. 97, 150, a new species introduced from the East Indies by Dr. Roxburgh, and communicated to the author by Mr. Lambert, from his seat at Boyton.

Leptospermum cooperianum, native of New Zealand, and one of the most beautiful of the natural order of the myrti, from that quarter, from the number and duration of its flowers. It was found also by Captain Cook to be very useful, and is the shrub described by him in his second voyage, under the name of the tea-plant.

Ardisia elegans; native of Pulo-Pinang, where it grows in moist situations, and by the sides of rivulets, introduced by Mr. Evans, of Stepney, in whose stove it attained the height of nearly five feet. This species appears not to have been before described.

Lotus australis. A plant we have before mentioned from the Botanical Magazine.

Barleria cristata. *Barleria* comes very near to *justicia*; even two of the four stamens are nearly abortive. This plant is likewise from Mr. Evans's collection, as are the three following:

Geodorum citrinum, a delicate plant of the family of the orchideæ.

Begonia evansiana; said to be discovered by Mr. Evans's collector in the island of Pulo-Pinang. We believe, however, that this plant has been long in the collection at Shew.

Clerodendrum pyramidale; supposed to be a new species, also from Pulo-Pinang. *Volkameria* and *Clerodendrum* are very unsatisfactorily defined, and several species seem to have been indiscriminately referred to either genus.

Desmanthus natans of Willdenow; *Mimosa natans* of Roxburgh's Coromandel plants; *Neptunia natans* of Loureiro. To the character, as here given from Willdenow, the flowering spikes of this plant do not correspond, being neither oblong, nor interrupted, but oval and compact. The roots in *Mimosa natans* have no attachment whatever to the soil, but are produced in fibrous bunches along the stems, which are likewise furnished with a sponge-like substance as it is called, but which must be more of the nature of cork than sponge, for the purpose of preventing the plant from sinking in the water. There is no appearance either of the roots or of this buoyant cork in the figure, nor any mention made of it in the description, nor of its mode of growth. These circumstances leave some doubt in the mind whether the plant here figured be really the *Mimosa natans* of Roxburgh, or the *Neptunia natans* of Loureiro. The specimen from which the drawing was taken, was communicated by Mr. Milne from Mr. Beckford's collection, at Fonthill.

Ardisia littoralis, discovered on the shores of Pulo-Pinang by Mr. Evans's collector, and introduced at the same time with *Ardisia elegans* above mentioned. This is probably the same as *Ardisia solanacea* of Roxburgh.

Styrax officinale. An old, but still a rare, shrub in our gardens.

Cytisus elongatus. The first account we have of this elegant species, is in the rare plants of Hungary, published by Count Waldstein and Dr. Kitabel. Introduced to this country by the indefatigable and skilful curator of the botanic garden at Cambridge.

Liatris odoratissima. Introduced by the late Mr. Fraser, of Sloane-square, from North America. This intrepid and zealous traveller has at last sunk under the infirmities induced by his laborious exertions in the acquisition of new plants. Its value consists in the fragrance of the dried foliage, exactly resembling that of the Tonquin bean, and equally durable. Being a native of South Carolina, our summers seem to have too little sun to bring it into flower. The drawing was made from a specimen which bloomed in Mr. Lambert's stove at Boyton. As a flowering plant, it is not superior to our common hemp agrimony, which it somewhat resembles; but if it should thrive well in the open air, and produce its foliage freely, it will prove a very valuable acquisition.

Peliosanthes humilis; a diminutive species from Mr. Evans's collection, native of Pinang.

Celosia cernua; a new species, introduced from the East Indies by Dr. Roxburgh. It is a very ornamental annual, and may be raised with our Cockscombs and Balsams. To the former it has a near affinity, but is more elegant in its growth.

Ipomæa insignis. This most splendid bindweed has been for some years cultivated in the stove of Mr. Benyon, at Englefield, where it extends over the trellis work for about thirty feet, producing numerous bunches of large bell-shaped flowers, of a purplish colour, with a dark centre. Its native country and time of introduction are totally unknown. We have been informed that it was long erroneously supposed to be the West Indian yam.

The second part of the tenth volume of the Transactions of the Linnean Society is just published.

NATURALIST'S MONTHLY REPORT.

APRIL.

BUDDING MONTH.

Emblem of life! see changeful April sail
 In varying vest along the shadowy skies,
 Now bidding summer's softest zephyrs rise,
 Anon recalling winter's stormy gale,
 And pouring from the cloud her sudden hail.

On the 1st of the month the wind was south-east; on the 2d westerly; on the 3d north-west, and afterwards south-west; on the 4th and 5th easterly; on the 6th east, and south-east; on the 7th north-east; on the 8th and 9th easterly; on the 10th variable; from the 11th to the 16th westerly; in the afternoon of the 17th south; on the 18th west; on the 19th south-east, and afterwards south-west; on the 20th and 21st southerly; on the 22d south-east; on the 23d and 24th south-west; on the 25th variable; on the 26th and 27th westerly; on the 28th south, and south-west; and on the 29th and 30th westerly.

There have been very few stormy days during the present month. On the 12th we had strong winds; in the morning of the 19th fresh gales, and in the following night a heavy squall with rain. The night of the 20th was also squally; and the morning of the 29th stormy.

We had rain, more or less, on the 4th, 6th, 7th, 10th, 13th, 16th, 18th, 19th, 20th, 26th, 28th, 29th, and 30th.

April 3d. This was a beautifully bright and warm day. The bloom buds upon the fruit trees have been considerably enlarged within the last few days, and promise a great profusion of blossom.

April 4th. Fine, gentle rain nearly the whole day.

April 6th. Some of the swallow tribe are arrived. Three or four were seen flying about near the surface of the river, apparently in pursuit of insects. The great body of swallows and martins will not, however, make their appearance probably in much less than a week from this time.

In the nights of the 7th, 8th, and 9th, we had very sharp frosts, which will tend greatly to check the progress of vegetation. It may be fortunate for the ensuing fruit season that very little indeed of the bloom is yet expanded.

April 11th. Gudgeons spawn.

April 13th. The cuckoo-flower (*cardamina pratensis*), wall-flower (*cheiranthus cheiri*), dog's mercury (*mercurialis perennis*), wild strawberry (*fragaria vesca*), cowslip (*primula veris*), ground ivy (*glecoma hederacea*), red nettle (*pedicularis sylvatica*), and harebell (*Scilla natans* of Smith) are now in flower.

April 17th. The cherry-tree is in bloom. Gooseberry and currant trees are in full leaf, as are likewise the elder and lime. The leaves of the hazel, and the sloe and hawthorn appear. The swallows and martins are all arrived.

April 18th. The mountain ash is in leaf.

April 19th. Apple-trees are in bloom. Young rooks are heard, and the titlark sings.

April 20th. The hedges are beginning to appear green. The flower-buds of the hawthorn are seen.

April 21st. There was much lightning in the night.

April 23d. This was a fine and hot day, in every respect like what we have in the middle of summer, the want of verdure and foliage excepted. Flesh-flies buzz about; and the common house-flies are nearly as numerous as in the summer.

The flowers of sheep's sorrel (*rumex acetosella*), and ribwort plantain (*plantago lanceolata*), colour all the dry sandy pastures.

Germander speedwell (*veronica chamaedrys*), procumbent speedwell (*agrestis*), sweet-scented vernal-grass (*anthoxanthum odoratum*), clammy mouse-ear (*cerastium viscosum*), upright pearlwort (*sagina erecta*), and soft-leaved crane'sbill (*geranium molle*) are in flower.

Elater cinereus, and several species of moths of the subdivision *tinea*, appear. Female wasps, also, now fly about.

April 25th. Hedge roses are in leaf. The May-fly, and some species of *phryganea* have issued from their chrysalids.

Perch have retired to the smooth waters to spawn among the weeds.

April 28th. So powerful were the sun-beams in the middle of this day, that sheep were compelled to retire into the shade.

April 30th. Cock-chaffers fly in the evening.

There has been much rain in the country westward of us. The rivers are muddy, and in some places out of their banks.

Hampshire.

METEOROLOGICAL TABLE.

From April 27, to May 27.

D	Therm.				Barom.		Hygrom.		Atmospherical Variations		
							dry	damp			
27	54	61	54	29 ⁵	—	—	6	28	10	—	E .. F ...
28	51	62	55	29 ⁶	—	—	5	21	5	15	S .. F .. — ... R .. R .. in n.
29	53	52	49	— ⁴	—	—	6	27	33	—	W ... F .. R ... Hail .. C ..
30	51	—	50	— ⁷	—	—	—	40	—	—	W ... R .. R .. in night
1	55	60	57	— ⁶	—	—	—	57	80	77	S .. R .. SW ... R ..
2	56	59	53	— ⁶	—	—	9	75	67	56	SW .. C ... R .. C ...
3	53	57	55	30	—	29 ⁸	—	62	52	70	SW .. C ... R .. — ... in n.
4	56	62	57	— ⁸	30	29 ⁹	—	79	72	—	W .. C ... F .. R ... in n.
5	56	59	53	— ⁷	— ⁶	—	9	80	63	53	SW .. R .. C .. R ..
6	49	53	49	30	—	29 ⁹	—	50	59	—	E .. C .. R .. — ... in n.
7	53	—	52	— ⁷	—	—	9	68	66	68	W .. C .. R ... F ..
8	50	57	53	— ⁷	—	—	6	67	50	70	E .. C ... SE .. F .. R ... in n.
9	54	53	52	— ⁵	—	—	7	71	75	70	SE .. R .. — ... F ... R ...
10	52	61	56	— ⁷	— ⁸	—	7	71	55	65	SW .. F .. — ... R ..
11	56	64	62	— ⁸	—	—	—	66	42	56	SW .. R .. F ... — ...
12	62	75	69	— ⁷	— ⁵	—	6	60	20	30	S .. F ...
13	66	74	69	— ⁵	—	—	—	39	20	14	S .. F .. — ...
14	68	65	66	— ⁵	— ⁶	—	7	15	10	17	SW .. F .. — ...
15	58	68	61	— ⁸	—	—	7	22	3	17	E ... F ... — R ..
16	62	67	59	— ⁸	—	—	—	26	14	11	NE .. C ... F ... C ...
17	58	65	—	— ⁸	—	—	9	34	7	6	NE .. F ... —
18	66	67	66	— ⁸	—	—	—	16	20	22	SE .. F ... — C ..
19	63	—	—	— ⁹	—	—	—	45	—	—	N .. R ... — C ...
20	58	73	60	— ⁹	— ⁸	—	7	43	24	30	NE .. F .. — ... C ..
21	56	—	61	— ⁷	—	—	—	42	57	—	NE .. R ... C ...
22	61	70	64	— ⁷	— ⁶	—	—	60	52	57	NE .. C ... F ... R ...
23	57	65	—	— ⁸	— ⁹	—	—	49	54	—	W ... F .. NW ... F ...
24	60	63	—	— ⁹	— ⁸	—	—	23	28	—	S .. R ... F ..
25	64	71	63	30	—	—	—	36	11	19	S .. F ... — ... — ...
26	64	75	70	30	—	—	—	27	16	20	W .. F .. — ... C ..
27	65	75	62	30	29 ⁹	—	7	30	22	—	W .. C .. F ... R .. E ..

11th. Lightning in the evening from the North.

20th. Lightning in the South, with distant thunder at nine in the evening.

Thunder storm in the night with heavy rain.

22d. Thunder storm from the South, passing over the metropolis, and falling heavy on the city near St. Paul's. Reports of damage done by this storm. A gentleman ascending Highgate Hill was struck from his horse by the lightning. Distant thunder had been heard during the day.

26th. Lightning in the evening in the East, with distant thunder.

Quantity of Rain from April 27 to May 27, 2 inches and $\frac{43}{100}$.

The hygrometer during the whole of this month has indicated an unusual degree of humidity in the atmosphere; and a great quantity of rain has fallen. The warm and humid state of the air has occasioned vegetation to be extremely luxuriant.

Princes Street, Cavendish Square

MONTHLY CATALOGUE OF MEDICAL BOOKS.

Cursory Remarks on Contagious Diseases and on Baths. By M. L. Este, Esq. late Lecturer on Animated Nature, and the Philosophy of the Animal Economy, at the Royal Institution of Great Britain, &c. &c. 2 parts, 8vo. Callow.

A Letter concerning the Royal and other scientific Institutions; respectfully addressed to their managers, proprietors, and subscribers. By M. L. Este, Esq. 8vo. Callow.

Communications relative to the Datura Stramonium, or Thorn-apple, as a cure or relief of asthma; addressed to the Editor of the Monthly Magazine. Several of them never before published. With a coloured plate, 8vo. Phillips.

Surgical Observations on Tumours and on Lumbar Abscesses. By John Abernethy, F.R.S. 8vo. 4 Vol. Longman and Co.

Disquisitions in the History of Medicine; part first, exhibiting a view of Physic, as observed to flourish, during remote periods, in Europe, and the East. By Richard Millar, M.D. Lecturer on Materia Medica in the University of Glasgow, &c. 8vo. Murray.

NOTICES TO CORRESPONDENTS.

Communications from H. E. Clough, M.D. Messrs. Fordham, McCulloch, Harrold, Philanthropos, Obstetricus, &c. &c. &c. have been received, which will appear in due course.

The conclusion of the paper on Stramonium will appear in our next; besides other matter, it will contain some interesting practical information, with cases illustrating the effects of smoking that plant in asthma, by Dr. Bree, Dr. Gooch, &c.

The Title page and Index to this Volume will be given in the next Number.

CORRIGENDA.

In the Case of Embryulcia, by Dr. Clough, at p. 389, line 25, for *Ethmoid*, read *Sphenoid*; and line 30, for *Integuments*, read *Instruments*.

P. 436, l. 20, *dele* the word *of*.

437, l. 33, for *ferhaale*, read *Feshook*.

438, l. 22, for *cordifolia*, read *cordifolia*.

438, l. 28, for *cancifolia*, read *lancifolia*.

438, l. 31, for *calisaga*, read *calisaya*.

439, l. 31, for *dilatus*, read *dilutus*.

451, l. 36, for *Walden*, read *Malden*.

543, l. 38, before *Extract from*, insert **ROYAL COLLEGE OF SURGEONS, LONDON.**

INDEX.

- A**BSORPTION, on the organs of 44
 Abstinence, cases of 85
 Acid, agency of acetous 333
 — on the muriatic 446
 Adams's, Dr. edition of Hunter on the venereal disease 80
 Æther, its use in strangulated hernia 28
 Agaricus, on different species of 123
 Agricultural prize questions 455
 Air, its effects on meat 252
 Albicore, poisonous qualities of the 398
 Alconorque, observations on 546
 Aleppo, on the scammony of 157
 Allanite, a new metal, described 181
 Amaurosis, case of 510
 Andrews, Dr. on an enlarged lower extremity 400
 Aneurism, cases of 356
 Aneurismal needle, on the invention of the 32, 238
 Animals, on luminous 409, 512
 Anus, case of preternatural 449
 Apoplexy, on the treatment of 229
 Arduset, Dr. on hernia 28
 Arnold, Dr. on diseases of the troops 13
 Arran, on the rocks of the island of 453
 Arsenical solution in hooping cough 115
 Artery, case of obliterated iliac 35
 Ascites, case resembling 164
 — use of tobacco in 233
 Asthma, on stramonium in 66, 377
 — on tobacco in 231
 Atmosphere, variations of the 53
 — influence of the moon on the 85
 — on the changes of the 144
 Bailey, Mr. on the eau medicinale 114
 Baird's, Dr. case of carditis 396
 Barlow's, Mr. case of small pox 390
 Barometer, on the 52, 149
 Barytes, a test for adulterated vinegar 85
 Bateman, Dr. on the larvæ of insects 446
 Bath, on the vapour 317
 Batham's, Dr. case of repletion 475
 Baxter's, Mr. case of excision of the uterus 210
 Beddoes, Dr. memoirs of 91, 172, 259, 342
 Beet-root, sugar extracted from 363
 Berne, account of hospitals at 407
 Beroe fulgens described 414
 Bernouilly, M. on potass 518
 Berthollet, M. on the effects of the air 252
 Bladder, rupture of the gall 185
 Blair, Mr. on syphilis 364
 Blear-eye, treatment of the 85
 Bleeding, case of copious 31
 Blood, cause of the red colour in the 281
 — on white serum of the 152, 300
 — root, description of 166
 Bones, an article of commerce 98
BOOKS, CRITICAL ANALYSIS OF MEDICAL.—Transactions of the Medical Society of London, 56, 161.
 Dr. Domeir on the Climate, Manners, &c. of Malta, 64. Fisher's Treatise on the Asthma, 66. Stevenson on the morbid sensibility of the Eye, 67. Hunter's Treatise on the Venereal Disease, by Dr. Adams, 80. Freake on the Humulus, 169. Dr. Stock's Memoirs of Dr. Beddoes, 172, 259, 342. Ramsden's Observations on the Sclerocele, &c. 175, 265, 350. Faulkner on the establishment of foreign Hospitals, 348. The Edinburgh Medical and Surgical Journal, 357, 441. Dr. Gourlay's Observations on the Natural History, &c. of Madeira, 425. Dr. Bostock's Remarks on the Nomenclature of the New London Pharmacopœia, 431. Cursory Remarks on Corpulence, 494. Dr. Farrell on Ophthalmia, 522. Mr. Gibson on the artificial Pupil, 535.
 Bostock, Dr. on the new Pharmacopœia 431
 Botanical reports 92, 187, 370, 549
 Bowels, case of affection of the 61
 Braconnet, Mr. on resinous substances 320
 Bradley, Dr. on puerperal fever 193
 Bree, Dr. on asthma 231
 Brodie, Mr. on muscular motion 120
 — on vegetable poisons 361
 Brookes, Mr. on fossil remains 97

INDEX.

- Brookes, Mr. on the white serum 130
 Budding, new method of 253
 Burns, Mr. on suppuration of the liver 164
 Calculus, new species of 254
 Calmucks, on the Koumiss of the 251
 Calomel in dysentery, on 21
 ——— in obstinate vomiting, efficacy of 308
 Caloric, agency of 328
 Cancer, corrections in a case of 32
 ——— queries on 117
 ——— fulgēns described 411
 Carditis, case of 396
 Cartmell in Lancashire, medicinal spring at 84
 CASES—Of fever, 2; dysentery, 7; tape-worm, 23; change of colour, 24; vicarious menstruation, *ibid.* strangulated hernia, 28; of twins, 29; of eating cherries, 31; copious bleeding, *ibid.* obliterated iliac artery, 35; fatal effects of white lead, 60; affection of the bowels, 61; bite of a cat, 61; elephantiasis, 84; scarlatina anginosa, 102; premature puberty, 117; white serum of the blood, 152, 300; suppuration of the liver, 164; tumours in the head, 166; tape worm, 167; gout, 170; rupture of the gall bladder, 185; epidemic puerperal fever, 193; fractured vertebræ, 201; hæmorrhage, 225; morbid enlargement of the clitoris, 236; child born without eyes, 277; derangement in a fœtus, 279; of sarcocele, 294; fungus hæmatodes, 303; obstinate vomiting, 308; singular case of twins, 311; use of the vapour bath, 319; of aneurism, 356; of embryulcia, 387; small pox, 390; of carditis, 396; of enlarged lower extremity, 400; malformation of the genital organs, 441; of gonorrhœa, 445; of fungus hæmatodes, 448; of præternatural anus, 449; of repletion, 475; of periodical spasm, 477; of amaurosis, 510.
 Castor oil, its use in dysentery 22
 Cat, case of the bite of a 61
 Catarrh, prevalence of 82, 284
 Ceylon, vaccination in 460
 Charcoal, experiments with 457
 Cherries, fatal effects of eating 31
 Child, one born without eyes 277
 Child-bed, proportion of deaths in 213
 Chorea, on the treatment of 208
 Christie, Mr. on vaccination 460
 Clarke's, Dr. account of the Calmucks 251
 Clitoris, morbid enlargement of the 236
 Clough's, Dr. case of twins 29
 ——— of embryulcia 387
 Colman, Mr. on glanders and farcy 281
 Colour, extraordinary instance of change of 24
 Conquest's, Mr. case of malformation of the genital organs 441
 Cookson, Dr. on premature puberty 117
 Cophosis, case of 519
 Copland, Mr. on the muriatic acid 446
 Corpulence, remarks on 449
 Correspondents, notices to 288
 Crocodile, a remarkable fossil 97
 Cullen, Mr. on white serum 300
 Cystic oxyde, on 254
 Davies, Mr. on obstinate vomiting 308
 Davy, Mr. on the chemical relations, &c. 83
 ——— his Bakerian lecture 189
 ——— on meteoric stones 545
 Deering, Mr. on white lead 60
 Devonshire, account of exotics in 248
 Diseases of troops, on the 13
 ——— in London, reports of 82, 178, 283, 369, 548
 ——— of Mexico, on the 239
 Division of medical practice 391
 Dixon, Dr. on the bite of a cat 61
 Dogs, on the sense of 137
 ——— account of the dissection of two 449
 Domeier's, Dr. account of Malta 64
 Dropsy, use of tobacco in 232
 ——— remarkable case of 234
 Dublin, state of the college of surgeons at 89
 Dysentery, cases of 3
 ——— in a long voyage, account of 37
 Eagland's, Mr. truss for exomphalos 310
 Eclipse of the sun, on an 453
 Earle, Mr. on the aneurismal needle 32
 ——— his explanation 141
 Eau medicinale, efficacy of 114
 ——— inquiries concerning the 183
 ——— observations on 184
 ——— fatal effects of 207
 Edinburgh Journal, account of 357, 441
 ——— report of vaccine institution at 460
 ——— meetings of the Royal Society of 181, 362
 Edmonstone, Dr. on whooping cough 359
 Eggs, experiments on 278
 Egypt, on the sarcocele of 289
 Electricity, account of lectures on 280

INDEX.

Elephantiasis, case of	84	Gall bladder, rupture of the	183
—— description of the	427	Galvanic piles, on the powers of dif-	
Embryulcia, case of	387	ferent	362
Epilepsy, remedy for	167, 456	Gamboge, analysis of	320
Essex practitioner, on twin cases	485	Genital organs, malformation of the	441
Euphorbium, analysis of	324	Glanders, on inoculating	281
Exomphalos, description of a truss for	310	Glans penis, on too small a perfora-	
Exotics in Devonshire, on	248	tion of the	42
EXPERIMENTS—On the organs of ab-		Glass, method of giving a red colour	
sorption, 45; on the chemical rela-		to	363
tions, 83; on scammony, 156; on		Glasgow, state of vaccination at	458
reddening litmus, 160; on metallic		Golding's, Mr. case of parturition	205
oxydes, 180; on meat, 252; on the		Gonorrhœa, cases of	445
blood of diabetic patients, 278; on		Good, Mr. on medical technology	56
vital heat, <i>ibid.</i> ; on electrical, 280;		Goodwin, Mr. on tape worm	23
on the red colour of the blood, 281;		Gourlay, Dr. on the climate of Ma-	
on James's powder, 316; on gam-		deira	425
boge, &c. 320; on pus, 326; on		Gout, on the French medicine for the	
the thoracic duct, 361; on zeolite,		114, 183, 184, 207	
<i>ibid.</i> ; on vegetable poisons, <i>ibid.</i> ;		—— efficacy of the humulus in	169
on zuthine gas, 362; galvanic,		—— on savine in	544
<i>ibid.</i> ; on muriatic acid, 446; on		Grass lands, new mode of improving	54
plants, 452; on potass, 456; on		Greenland, description of new mine-	
charcoal, 457.		erals from	181
Extremity, enlarged lower	400	Grimstone, Mr. on tetanus	359
Eye, on the morbid sensibility of the		Gums, analysis of resinous	156, 320
67		Hamilton, Dr. on the Walcheren fe-	
—— on the treatment of blear	85	ver	1
—— diseases of the	161	—— Mr. on scarlatina	101, 406
Eyes, case of a child born without	277	Hare lip, on the	165
Faber's strychnomania, account of	385	Harrison, Dr. on eating cherries	31
Falconer, Dr. on mercurial prepara-		—— on the proposed plan of	109,
tions	61	216, 402, 492	
Farrell, Dr. on ophthalmia	522	Harrold's, Mr. case of fractured ver-	
Farcy, observation on the	281	tebræ	201
Faulkner, Dr. on foreign hospitals	348	Hawkins, Mr. on exotics	248
Ferriar, Dr. on hooping cough	115	Heat, on the nature of vital	278
Fever, report on the Walcheren	1	Hectic fever, on	72
—— on hectic	78	Hepatitis, ill effects of calomel in	62
—— on an epidemic puerperal	193	Hernia, use of ether in strangulated	
Finsbury Dispensary, address to the		28	
459		Hewson, William, memoirs of	59
Fishes, on the poison of	398	Hill's, Mr. surgical remarks	487
—— on the luminous properties of		Home, Mr. on the thoracic duct	361
409		Hooping cough, on arsenical solution	
Fisher, Mr. on stramonium	66	in	115
Fœtus, singular malformation of a	279	—— plan for diminishing	
Fogo, Mr. on twin cases	480	the	259
Foot, Mr. on imperfect perforation		Horse-flesh eaten in Norway	283
of the glans penis	41	Horses, treatment of pulmonary com-	
—— reply to	118	plaints in	281
Fossil remains, observations on	97	Hospitals, on the establishment of	348
Fothergill's, Dr. A. case of tic doulou-		—— at Berne described	407
reux	167	Humboldt, on the diseases of Mexico	
Fraxinella, on perspiration of	530	239	
France, state of vaccination in	181	Hufeland Mr. on savine	544
—— improvement of medical sci-		Humphries, Mr. on a disease of the	
ence in	454	eye	77
Freake, Mr. on humulus	169	Humulus in gout, efficacy of	169
Fungus hæmatodes, on	303	Hunter, John, on the venereal dis-	
—— case of	448	ease	78

INDEX.

- Hunter, Dr. W.** on the practice of 387
- Hydrocele**, on the acute 351
 ——— on the spurious 353
- Hydrophobia**, case resembling 61
 ——— observations on 235
- Hydrophthalmia**, observations on 163
- Hydropic complaints**, treatment of 6
- Iceland**, account of the hot springs of 181, 362
 ——— mineralogy of 362
- Iliac artery**, case of obliterated 35
- India**, fall of a meteoric stone in 457
- Indians**, on the American 243
 ——— remarkable superstition of 125
- Infection from inoculated small pox** 490
- Inflammatory diseases**, on 546
- Insects**, on the larvæ of 447
- Intermittents**, on the treatment of 4
- Ipecacuanha** in dysentery, use of 22
- Ireland**, Dr. on fungus hæmatodes 303
- Jalap** in dysentery, use of 22
- James's powder**, analysis of 315
- James I.** his antipathy to tobacco 121
- Jenkins, Jeremiah**, remarks on a pamphlet by 392
- Jones's, Mr.** case of twins 311
 ——— remarks on 386
- Kentish, Dr.** on the vapour bath 317
- Kenworthy's, Mr.** case of vicarious menstruation 25
- Knight's, Mr.** method of budding 253
 ——— remarks on the radicles of plants 452
- Koumiss of the Calmucks**, on the 251
- Lafource, M.** on amaurosis 510
- Lancashire**, medicinal spring in 24
- Lands**, new mode of improving grass 54
- Langstaff, Mr.** on luminous animals 416
 ——— on gonorrhæa 445
- Larrey, M.** on the sarcocele of Egypt 289
- Larvæ of insects**, on the 447
- Leadbeater's, Mr.** case of spasm 477
- LECTURES ANNOUNCED.**—Mr. Shute on Anatomy, &c. 90. Dr. Buxton on the Practice of Medicine, *ibid.* Mr. Taunton on Anatomy, &c. *ibid.* Mr. Brookes on Anatomy, &c. *ibid.* Dr. Adams on the Institutes and Practice of Medicine, 91. Mr. Stevenson on the eye and ear, 96. At St. Thomas's and Guy's hospitals, 186. Dr. Watt on the Theory and Practice of Medicine, 186. Drs. Hooper and Agar on Physic, Chemistry, and the Materia Medica, *ibid.* Mr. Singer on Electricity, 280. Dr. Clough on Midwifery, 368. Dr. Reid on the Theory and Practice of Medicine, *ibid.* Mr. Taunton on Anatomy and Surgery, 461. At Guy's hospital, 462. M. Stevenson on the Eye and Ear, *ibid.* Dr. Adams on Medicine, 547. Mr. Thompson on Botany, *ibid.* Mr. Brande on Chemistry, *ibid.* Dr. Tuthill on Physic, *ibid.* Dr. Merriman on Midwifery, *ibid.* Drs. Hooper and Agar on Physic, *ibid.* Dr. Haighton on Midwifery, *ibid.* Mr. Brookes on Anatomy, *ibid.*
- Leipsic fair**, number of books at 223
- Lepra Arabum**, case of 84
- Lewis's, Mr.** case of morbid enlargement of the clitoris 236
- Liver**, case of suppuration of the 164
- Liverpool**, progress of vaccination at 304
- London**, transactions of the Medical Society of 56, 161
 ——— reports of diseases in 22, 178, 283, 369, 548
- Luminous animals**, observations on 409
- Lyall, Mr.** on staphyloma pellucidum conicum 359
 ——— on fraxinella 530
- Lyons**, prize question of the society of 454
- Macartney, Mr.** on vital heat 278
 ——— on luminous animals 409, 434
- Mackenzie, Sir George**, his account of Iceland 181, 362
- Madeira**, description of the island of 425
- Magnenus** on tobacco 224
- Magnesia**, its use in dysentery 22
- Majendie, Dr.** on the organs of absorption 44
- Malta**, on the climate of 64
- Mammoth**, account of the 100
- Mastic**, description of 160
- Meat**, alteration produced by air and water on 252
- Medical Society of London**, transactions of the 56, 161
 ——— proceedings of 364
 ——— and philosophical intelligence 88, 180, 277, 361, 452, 543
 ——— publications, catalogue of 91, 187, 369
 ——— technology, observations on 56
 ——— practice, on the division of 391
- Medusa pellucens**, description of the 411
- Menstruation**, case of vicarious 24
- Mercury**, process for making the muriate of 363

INDEX.

Mercury, on the fulminating powder of	457	Plumbi acetat, its efficacy in epilepsy	456
Mercurial preparations, on the indiscriminate use of	61	Poisons, on vegetable	361
Merriman, Dr. on an excision of the uterus	210	—— on fish	398
Meteorological tables and reports	95, 142, 191, 287, 465, 553	Pole's, Dr. meteorological statements	142
Meteoric stones, fall of	283, 457, 545	Potass, incrySTALLIZABILITY of	456
Mexico, on the diseases of	239	—— on preparing the acetate of	518
Milk, an ardent spirit distilled from	250	Powders, on fulminating	457
Moon, on the influence of the	85	Practice, on the division of medical	391
Montpellier, prize questions at	455	Prize awarded by the college of Surgeons	543
Muriatic acid, lithontriptic power of	446	—— given by the French government	543
Muscular motion, on	180	Psorophthalmy, description of	74
National Institute, proceedings of the French	362	Puberty, case of premature	117
Naturalist's monthly report	189, 285, 372, 463, 551	Puerperal fever, on an epidemic	193
Navy, on improving the medical department of the	442	Pupil, on the artificial	535
Neander on the efficacy of tobacco	231	Pus, observations and experiments on	326
Needles, on the invention of aneurismal	32, 238	Quarrier, Mr. on fish poison	398
Nicotiana, various species of	120	Queries on cancer	117
Nipples, on sore	445	Questions, prize	454, 5
Nomenclature of the Pharmacopœia, on the	431	Radicles of plants, on the	452
Norris, Mr. on tumours	165	Raleigh, Sir Walter, anecdotes of	121
Norway, horse-flesh eaten in	283	Ramsden, Mr. reply to	41
Oil, substitute for Florence	84	—— explanation of	113
Olibanum, description of	160	—— apology to	141
Ophthalmia, two varieties of	357	—— on diseases of the testicle	175, 265, 350
—— Dr. Farrell on	522	Registers, observations on meteorological	145
Ornithology, account of the British	89, 285, 374	Remittents, observations on	4
Oxyde, on the cystic	254	Repletion, case of	475
Oxygen, observations on	83	Resins, on reddening litmus by	156
Oxymuriatic gas, experiments on	84	—— analysis of gum	320
Paris, prize questions of the Agricultural Society at	455	Rheumatism, on the treatment of	82
Park, Mr. on vaccination	304	Rhubarb, on the red colour of	499
Parturition, case of unusual	205	Rhododendron chrysanthum, observations on	183
Peake's, Mr. case of præternatural anus	449	Ring, Mr. on the eau medicinale	207
Pearson's, Dr. observations on pus	326	—— on topical remedies	497
Pepion, M. on urinary worms	544	Ringwood cases, on the	307
Percy, Mr. on platina	509	Royal Society, proceedings of the	83, 180, 277, 361, 452
Perforation of the glans penis, imperfection in the	41	—— Edinburgh	181, 362
Pharmacopœia, on the nomenclature of the London	431	Rupture of the gall bladder, case of	185
Physicians, the college of, intention to publish their statutes	84	Russel, Dr. on tobacco	135
—— restrictions in the practice of	313	Salter, Mr. on the improvement of grass lands	54
Placenta, on removing the	387	Sanguinaria Canadensis, properties of	166
Platina, observations on	509	Sarcocele of Egypt, on the	290
Plants, on the radicles of	452	Savine in gout, on	544
		Sauvages on the effects of stramonium	384
		Scammony, analysis of	156
		Scarlatina, observations on	35, 101, 406
		—— on the treatment of	297, 299

INDEX.

Scurrus testicle, on the	273.	Twin case, on an extraordinary	29
Sclerocele , practical observations on the	175	Twins, remarkable case of	311
Sensation , theory of	467	—— on the practice in cases of	386
Sense , on the abuse of the organs of	137	Urethra , membranous fence of the	41
Serum , observations on white	150, 300	Urinary worms, on	544
Shearman , Dr. on white lead	60	Uterus , case of excision of the	210
Small pox hospital, report of the	365	Vaccination at Edinburgh	460
—— on infection from inoculated	490	—— Ceylon	<i>ibid.</i>
—— subsequent to vaccination	390	—— in France, state of	181
Smith's , Mr. theory of sensation	467	—— addresses on	278, 459
Smithson , Mr. on the zeolite	361	—— at Liverpool	304
Spasm , case of periodical	477	—— small pox subsequent to	390
Staphyloma , observations on	161, 359	—— at Glasgow	458
Stevenson , Mr. on a disease of the eye	67, 85	Vapour bath , on the	317
Stoek's , Dr. life of Beddoes	91, 172, 259, 342	Vegetable poisons , on	361
Stramonium , observations on	377, 509	Venereal disease , on the	81
Stones , fall of meteoric	283, 457, 545	Vertebræ , case of fractured	201
Sugar in the serum of blood	277	Vicarious menstruation , case of	24
Surgery , suggestions for the improvement of practical	146	Vinegar , test for sophisticated	85
—— on the practice of	394	Vitalis , Mr. on potass	456
Swallows , on the migration of	88	Vomiting , case of obstinate	503
Syphilis , on the origin of	364	Voyage , on diseases in a long	17
Tænia , on ol. tereb. in	546	Walcheren fever , report on the	1
Tape-worm , cure for the	23, 167	Walden , Dr. on scarlatina	35
Taunton's Mr. case of obliterated iliac artery	35	Walker , Mr. on the barometer	52, 149
Terry , Dr. on tænia	546	—— Dr. on ophthalmia	357
Testicle , on morbid enlargement of the	265, 350	Ward , Mr. two engravings of	85
Tetanus , case of	359	Ware , Mr. on diseases of the eye	78, 161
Tie douloureux , case of	167	Water , its effects on meat	252
Tobacco , on the history and use of	120, 319	Watt , Mr. on the aneurismal needle	238
—— origin of the word	479	Wernerian Natural History Society , meeting of the	453
Troops , on diseases of	13	Wilkinson , Mr. on the influence of the moon	85
Turpentine , its efficacy in tænia	167	Wishart's , Mr. case of fungus hæmatodes	448
Twin cases , on the management of	480, 485	Woollaston , Dr. on the cystic oxyde	254
		—— on sugar in the blood	277
		Worms , on urinary	544
		Yellow fever , on the	360
		Zeolite , description of the	361
		Zoophyte , description of a	412

REFERENCES TO THE PLATES.

Mr. TAUNTON's case of obliterated Iliac Artery	-	Page 35
Mr. BROOKE's fossilized Remains of a Crocodile	-	97
Mr. LEWIS's Morbid Enlargement of the Clitoris	-	136
Mr. EAGLAND's Truss for Exomphalos	-	310
Dr. ANDREWS's case of enlarged lower Extremity	-	400

