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[No. 3.

ART. XI.—ON THE PHYSIOLOGY OF THE MUSCLES OF THE EYE, WITH SOME NEW VIEWS OF THEIR FUNCTIONS.

By HENRY HOWARD, M.D.,

Surgeon to the Montreal Eye and Ear Institution, Craig Street.

RECTI MUSCLES.

Speaking of the four recti muscles of one eye, without considering those of the other, they may be said to be all voluntary, and their action, either separately or collectively, completely under the influence of the will; that is to say, they do not act without the will, still they cannot at all times obey it, in opposition to any of the involuntary muscles of the eye in action, as, for example, when the inferior oblique is acting.

This can be understood by a very common illustration. If a foreign body gets into the eye, which gives pain, the cornea becomes turned upwards, through the action of the inferior oblique (which is an involuntary muscle), in opposition to the strongest efforts of the will that can be made upon the inferior rectus muscle to bring the cornea down, and keep it in that position.

The use of the four recti muscles, acting collectively, is to fix the eye when looking at any object: in this action they are perfectly voluntary, and obedient to the will. They likewise prevent the eyeball being protruded during the action of either of the obliques. The separate actions of those muscles are as follows:—The superior rectus turns the eye upwards, the inferior downwards, the external outwards, and the internal inwards; and when talking of one eye only, *all* these separate actions are voluntary, being in obedience to the will. The internal rectus acts involuntarily, or as is now more correctly said, automatically, whenever the external rectus of the other eye acts in any degree, thus turning the one eye inwards without the exertion of the will to follow the voluntary outward motion of the other. In opposition to the opinion of other physiologists, I maintain that this muscle (the internal rectus), is the *only* automatic muscle of the eye. The two oblique muscles of the eye, supposed by Carpenter and others to act sometimes automatically, or to be partly voluntary and partly involuntary, act *always involuntarily*; and are, as I shall presently show, absolutely dependent for their action upon the movements of the orbicularis, or levator palpebræ.

The superior recti always act consentaneously to turn the eyes up, the inferior recti consentaneously down, the internal recti acting together voluntarily, as well seen when we examine a very minute object, turn the cornea towards the nose. The external recti never act consentaneously; the voluntary action of one external rectus being accompanied by the automatic action of the internal rectus of the other eye, as already stated. The obvious harmony of this arrangement, in preserving the axis of vision perfect, is abundantly evident. It must be remarked, that any intermediate movements of the eyeballs, when the eyes are open, such as turning the eye upward and outward, upward and inward, &c., are due to the combined action of two recti muscles, and *in no such case* to the action of either of the *obliques*.

The rapid consecutive contractions of these four muscles, give that appearance to the eyes which is called rolling, and is perceived in persons when in a passion, drunk, or insane. But the appearance is deceptive; there is no such motion in the eyes as rolling.

Physiologists have assigned another use to the recti muscles, viz., to retract the eyeball into the orbit when the eyelids are closed; but they have no such power, nor is there any occasion for such an action, for the eyeball is no more protruded when the eyelids are open, than when they are shut. The cause of this deceptive appearance will be explained by and by.

SUPERIOR AND INFERIOR OBLIQUE MUSCLES.

The two oblique muscles are purely involuntary or reflective, and are always antagonists to one another. The action of the inferior oblique is to turn the cornea upwards and inwards; the action of the superior being to turn the cornea downwards and *inwards*. It will be now necessary to prove that these muscles are involuntary in their action. If there be the slightest irritation produced on the lower part of the eyeball, the cornea is at once seen to turn up by the action of the inferior oblique, and to be retained in that position, in opposition to the will, as long as the irritation is kept up. That it is the action of the inferior oblique which thus elevates the cornea, is proved by the fact that it is turned up nearly altogether out of view—a power which the superior rectus has not; for if a person wills to look up, he can do so, but cannot turn the cornea out of view. If

the superior rectus of any animal be cut, it will be at once seen that the voluntary power of looking up is lost; but let the same eye be irritated, and the cornea will be found to turn up out of view, as much so as though the superior rectus were uninjured. Let the inferior oblique then be cut, and the superior rectus left uninjured, and, no matter how much the eye is irritated, the involuntary power of turning up the cornea will be lost.

But the question will naturally arise, what is the great benefit to be derived from these involuntary movements of the eye, and would not the voluntary motions answer all purposes? No! The involuntary motions of the eye are (as has been already stated) altogether for its protection, or nearly so; a use which the voluntary muscles do not possess. If danger threaten the eyes, up goes the cornea for its protection by the action of the inferior oblique, at the same time that the orbicularis closes the lids. Sir C. Bell gave another benefit to be derived from this action, which was that it stretches the lachrymal ducts like a nipple, and thus produces a greater quantity of tears to lubricate the cornea, and wash off any offending matter that may have adhered to it, producing the irritation. When it is remembered where the lachrymal ducts open, it will be at once obvious that the above-mentioned action must put them on the stretch.

The inferior oblique always acts consentaneously with the orbicularis palpebrarum; for at the very moment that the orbicularis acts in closing the eyelid, the inferior oblique turns up the cornea almost entirely within the orbit; and by this action it proves a protection to the retina, for it darkens the eye as if in sleep, and prevents the light, which in passing through the lids becomes red, from reaching the retina, upon which the continuous action of the red ray is always hurtful.

The orbicularis palpebrarum thus acting at the same time, the effect will be to carry any simple foreign body that may have got under the eyelids and produced those actions, into the internal carthus, where it is protruded from the eye by the caruncula lachrymalis and semi-lunar membrane.

The direct action of the superior oblique is to turn the cornea downwards and *inwards*; its anatomy will show that this *must be* the result of its action. That it is involuntary, is evident from the fact, that no exercise of the will can produce the same effect. It has been stated that the inferior oblique acts in unison with the orbicularis palpebrarum, for when the orbicularis closes the lids, the inferior oblique turns the cornea upwards and inwards. The superior oblique acts consentaneously with the levator palpebræ superioris; for when the levator raises the upper lid, the superior oblique turns the cornea downwards and slightly inwards. This action,

with that of the inferior oblique, takes place every time the eye is shut and opened, as in winking, but the actions are so very rapid as not to be observable. But if a person be watched awaking out of sleep, (when there is no will exercised), it will be seen, the moment the levator raises the upper lid, that the superior oblique turns down the *cornea*, which thus *depresses* the lower lid, so that the superior oblique muscle is the true but negative depressor of the lower lid. This is a novel statement, but of which I shall adduce conclusive evidence presently.

Previous to the views taken by Sir C. Bell, anatomists and physiologists, perceiving that in opening the eyes the lower lid is depressed, sought, but in vain, for a depressor for it. He looked for a direct muscular depressor, and thought that he had found it in the levator palpebræ superioris, which he said not only raised the upper, but depressed the lower lid. The following are his words, (page 153, third edition of his work on the nervous system)—“The muscle elevator palpebræ superioris opens wide the eyelids, depressing the lower eyelid at the same time that it elevates the upper one. If we put the finger upon the lower eyelid, so as to feel the eyeball when the eye is shut, and then open the eye, we shall feel that during this action the eyeball is pushed outwards. Now, the lower lid is so adapted as to slip off the convex surface of the ball in this action, and to be depressed whilst the upper eyelid is elevated.” He then gives a plate of the eye and levator muscle, showing that the muscle, from its origin to its insertion, is in contact with half the circumference of the globe; and infers the above conclusion to be the result of its contraction; evidently having forgotten at the time that the levator was not in such close contact with the globe of the eye as he stated—the superior rectus muscle lying between them—so that the contraction of the levator could not produce the effect he alleged. But he was wrong in supposing the eyeball to be *protruded* at all. If the finger be placed on the lid, as he recommends, it would appear as though the eyeball were protruded; and certainly the lower lid is depressed, but *not* by the agent to which he ascribes it. It is effected in this way. The globe of the eye is composed of the segments of two spheres of different diameters, of which the cornea is the segment of the less sphere; in consequence of which the antero-posterior diameter of the globe is much its larger diameter. Hence it follows that when the orbicularis closes the eyelids, and the consentaneous contraction of the inferior oblique takes place, whereby the cornea is upturned, a vacuum occurs in the spot previously occupied by the cornea, which is filled by the rising of the lower eyelid, due partly to the elasticity of its structure, and partly

to the contraction of the lower orbicular fibres. But when the eyelids open, these fibres of the orbicularis being relaxed, the cornea pushes the lower eyelid outwards and downwards to its original place; and as this is effected by the superior oblique, acting consentaneously with the levator palpebræ superioris, my position is maintained, that the superior oblique is the muscle whose action is the real cause of the depression of the lower eyelid. Under ordinary circumstances, when we look at any thing in the line of the cheek bones, the rectus inferior, by still further depressing the cornea, becomes in a similar manner the voluntary depressor of the lower eyelid. That such is the case can be easily proved. Thus, hold the upper and lower lids of a person close to the edges of the orbit, so as not to allow any voluntary effort of the orbicularis to close the lids, then let him make the effort, when it will be found that the cornea will turn upwards and inwards under the orbit. My attention was first drawn to this fact by observing a man, who presented himself at the Eye and Ear Institution with ectropium of both eyelids of one eye. I directed him to shut his eyes (knowing that he could not do it). When he made the effort, up went the cornea out of my view, so that the man was in complete darkness, and fully under the conviction that he had both eyes shut; and when I asked him to open them, the above detailed action of the superior oblique was shown, by the cornea turning downwards and inwards, and then instantly assuming the ordinary appearance of the eyes when regarding an object.

Again, let a person close both eyes, and put a finger upon one, so as to feel the eyeball through the lids, then let the other eye be opened, when it will be found that the cornea of the closed eye will come down and press against the finger, or rather against the lower lid which the finger is on.

It may be asked, how is the cornea turned down when the eyelid is closed, if, as has been already stated, the superior oblique acts in unison with the levator? The answer is, in the same way as the inferior oblique acts when the orbicularis cannot close the eyelids. It does act, but is prevented from raising the lid by artificial means. Another answer is, as has been already explained, viz., that the eyes act consentaneously, so that one eye cannot be kept still while the other is moving, even though the one eye should be blind.

LEVATOR PALPEBRÆ SUPERIORIS.

This is a compound muscle, acting both voluntarily and by reflex stimuli, its use being to raise the upper eyelid upwards and backwards, exposing the ball of the eye, making it appear as though it were protruded. It is an antagonist to the orbicularis palpebrarum; and, as

has been already stated, acts in unison with the superior oblique. Its reflex action takes place during the rapid motions of winking. During sleep this muscle is relaxed.

ORBICULARIS PALPEBRARUM.

This is also a compound muscle of the same nature as the preceding, and antagonistic to it. With it we close the eyelids, by its superior fibres drawing down the upper lid, and its inferior fibres drawing the lower lid upwards and inwards. When danger threatens the eye, the rapid reflex action of this muscle protects it by closing the lids. It also, by its reflex action, endeavours to remove, and usually with success, any foreign body which may get under the eyelid, by directing it towards the internal canthus. This reflex action is sometimes so great (blepharospasmus), as to defy every effort of both the surgeon and patient to get the lids opened. Indeed, this effort of nature to remove foreign bodies from the eye, sometimes acts very injuriously: for instance, should the offending matter be a particle of glass, the action of the orbicularis can only make the glass stick more firmly into the part with which it is in contact. That the orbicularis acts consentaneously with the inferior oblique has been already explained. During sleep, the orbicularis muscle, like all others of its class, is relaxed; therefore the eye is not shut in sleep by the action of the orbicularis palpebrarum, but by the relaxation of the levator palpebræ superioris suffering the upper eyelid to drop down into its natural state over the globe of the eye; consequently the upper lid covers more of the eye in this state than when the lids are closed by the action of the orbicularis palpebrarum, as in the latter case the lower lid is always drawn a little upwards.

TENSOR TARSII.

The use of this muscle is to draw the puncta and eyelids into close contact with the eye, to press the puncta towards the nose, and to compress the lachrymal sac, and force out the secretion from the follicles of the caruncula. It is thought to act independently of, as well as in conjunction with, the orbicularis palpebrarum.

I cannot conclude the physiology of the muscles of the eye without mentioning a use that has been assigned to the orbicularis: it is an error, and the more dangerous because it rests on the authority of Sir C. Bell, an authority which one hesitates to doubt. He attributed to the orbicularis palpebrarum the power of pushing the eyeball back into the socket when the lids are closed, and asserted that it, with the oblique muscles, kept the eye in its place, and prevented it from protruding. This mistake will not be wondered at, when it is remembered that the power of protruding the eye he attributed to the levator. He was well aware that no muscle in the orbit had the power of retracting the eyeball; consequently he was

forced to devise some means of pushing it back; so he invoked the aid of the orbicularis to perform this office, and thought he was right, in consequence of perceiving the eye to be flatter when the lids were closed than when they were open. But this appearance has been already accounted for by the fact, that when the lids are shut, the long diameter of the eye is turned upwards. That the orbicularis has nothing to do in keeping the eye from protruding, is easily seen, by raising both lids with the fingers from off the globe, when it will be found that the eye does not protrude in the slightest degree; whereas, if it were kept pressed back by the orbicularis palpebrarum, of course the ball would protrude when the pressure caused by the lids is removed. In addition, we have the further support of the pathological fact, that the eyeball does not protrude in paralysis of the orbicularis palpebrarum.

Montreal, June 15, 1847.

ART. XII.—CASE OF SUBMAMMARY ABSCESS, DISCHARGED THROUGH THE TRACHEA.

By S. C. SEWELL, M.D., &c.

Mme. A — D —, aged 29, ten years married, barren, consulted me early in March, 1840, for a painful affection of one breast, which I treated as a case of irritable breast, by frictions of iodide of potassium ointment, ioduretted solution of iodide of potassium, &c. In three weeks she expressed herself much relieved, and dispensed with farther attendance. On the 20th April, Mr. D. called on me, and stated, that some uneasiness still remaining, and the breast having increased in size, Mrs. D. had consulted Dr. —, who had declared it to be cancer, and advised its removal. I immediately went to see her, and, on examining the breast, I found that it was somewhat larger than the other, with fluctuation, indicating matter or other fluid behind the mammary gland. I repudiated the idea of cancer, expressing my conviction that it was a chronic abscess between the ribs and gland, and requesting that further advice might be called to decide the controversy. They suggested Dr. Robertson, who came on the following day and confirmed my diagnosis. Owing to the depth of the abscess, we declined making any incision, and the ioduretted frictions were continued. On the 10th of May, I was hastily summoned to see Mrs. D., who, I found, had commenced about an hour before to expectorate pus in considerable quantities; the expectoration was now less abundant; every few minutes a tracheal rale was heard, followed by cough and expectoration of pus. The breast was now the size of the other, and the gland moved loosely under the hand, as though detached. Pressure on the

breast caused increased expectoration of matter. I applied a compress and bandage over the breast; the expectoration gradually ceased in four or five days, and Mrs. D. has remained in good health to the present time. In this case, adhesion of the pleuræ, perforation of the intercostal muscle, pleuræ and substance of the lung, until a large bronchus was reached, must have taken place. I should have mentioned that there was no effusion of pus into the pleura or emphysema of the cellular tissue, but there was loud mucous rale à grosse boules under the abscess.

ART. XIII.—CASE OF FRAMBÆSIA.

By R. W. EVANS, M. D., Richmond, C. W.

In the month of Feb., 1847., I was consulted by A. R., lately from Ireland, aged 20, of a lymphatic temperament.

He stated that he had been afflicted during the voyage to this country with an eruption; but since his arrival, in August last, the eruption had assumed the appearance of what he called boils, and that at its invasion he observed small red spots, similar to flea bites, affecting the groin, upper part of the left thigh, and posterior part of the neck, which increased daily in size, causing great inconvenience in walking; having the appearance of fungoid growths, distinct from each other at their summits, but connected by their bases; of a dirty pale colour, and very similar to a mulberry in their formation, having a profuse discharge of an ichorous fluid. These excrescences were about 20 in number.

The surface affected was deprived of its cuticle, and he did not experience much pain on handling the part; appetite good; bowels costive; pulse regular; tongue slightly furred; great lassitude; and inability to enter upon or endure active exertion.

The causes of *Frambæsia* may be divided into the predisposing and the exciting. The first depend on a certain condition of climate, where damp and heat prevail, and where intermittent fever is common. The exciting causes are local irritation, filth, exposure to damp, febrile attacks, suppressed evacuation, and sudden changes of temperature. The yaws are classed under the head "tuberculæ," which is distinguished by the occurrence of small hard tumours projecting in different degrees from the skin: five principal genera are referred to this order, viz., *frambæsia*, elephantiasis, cancer, molluscum, and lupus. It is not easy to determine the exact time which the yaws take in going through their different stages. It is said by various authors that lusty well fed negroes, in Africa, have had several yaws as big as a mulberry in a month's time, whereas the low in flesh, with a scanty allowance, have passed three months with-

out their growing to the size of a strawberry. They appear in all parts of the body, but are most plentiful, and of the largest size, (as in the case under consideration), about the groin, pubis, and neck, they are largest when fewest in number, and *vice versa*. The treatment of frambæsia has hitherto led to very imperfect results, and has varied according to the view taken by different practitioners.

The treatment adopted in this case was as follows:—A purgative dose of calomel, to be followed by diaphoretic medicines and diluents. The patient was enjoined to keep his bed. Feb. 6th.—The bowels had been freely opened; ordered pil. hyd. gr. v. bis in die, also, 3i. of iodine ointment to be rubbed on the tumours every night. Feb. 12th.—Applied nitrate of silver to tubercles and “charpee.” 14th.—Complained of headache and loss of appetite; tongue white; pulse 90; ordered calomel gr. v., and pulv. antimonialis gr. iv., to be taken instanter, also, a warm bath at night. The tubercles to be painted with iodine. 17th.—Nitric acid lotion to be applied to part affected; blue pill to be continued.

April 1st.—The tubercles have all disappeared; the surface affected, red. Ordered a warm bath and fomentations. Occasional and gentle laxatives proved sufficient to remove all the symptoms of this disease.

This disease is one of very rare occurrence in Europe or Canada. It is known to occur endemically in Guinea, and among the Negroes in the West Indies and Florida. During a residence in East Florida of two years, I had an opportunity of seeing two cases of this disease among the negroes on the plantations. They called it “Pian.”

Richmond, C. W., April 19, 1847.

ART. XIV.—A FEW OBSERVATIONS ON THE FEVER PREVALENT AMONG EMIGRANTS.

By W. FRASER, M.D.

The disease prevalent among the emigrants just arriving here, claims the particular attention of every medical practitioner on this continent, for most assuredly it will be carried, in many instances, to the remotest hamlets in our forests, as well as into the mansions of our most respectable inhabitants. It therefore behoves the members of the profession to make themselves acquainted with its symptoms, its nature, and its treatment. In consequence of being one of the physicians in attendance at the Montreal General Hospital for the last six weeks, I have seen a good deal of the disease, and made a few observations, which at this early period of the epidemic may be useful to those who have not seen it, and may, besides, stimulate others, who have had a wider field of observation, to record their experience.

In the majority of the cases, I have observed the following symptoms. 1st, Great prostration of muscular power. 2d, Maculæ on the body after the fourth or fifth day. 3d, That three cases out of every four are complicated with bronchitis, or diarrhœa, some with both; a few have a deep jaundiced appearance, with pain in the hepatic region—and many more have a slight bilious tinge of both the skin and conjunctivæ.

In reference to the first of these observations, I have remarked, that even at a very early period of the attack, the patient staggers from weakness of his limbs and stupor of his head, and that the pulse, as a general rule, is soft, no doubt from the heart's partaking of the general debility.

In corroboration of the second observation, of 42 cases which I examined in one apartment at the Emigrant Hospital, I distinctly observed maculæ on 36 of them; and I had reason to believe that the others had been also maculated, as they were convalescing—the proportion of maculated in the Montreal General Hospital is about the same; I therefore regard maculæ as the peculiar characteristic of this epidemic; in many cases the limbs have the appearance of *purpura hæmorrhagica*, are swollen, and very painful. Of the 42 cases just alluded to, 11 were complicated with bronchitis, 6 with diarrhœa, and 24 with both—one only having neither complication.

The morbid appearances found on dissection are venous congestion, with effusion of serum on the surface, in the ventricles and base of the brain, but no trace of active inflammation. When the case has been complicated with bronchitis, I have found the bronchial mucous membrane throughout tumid, swollen, highly vascular, and containing much mucous; the vascularity extending to the submucous tissue, with congestion and partial hepatization of portions of the lungs. When diarrhœa has existed, the small intestines, especially the lower portion of the ilium, has presented the appearance of active congestion of its mucous coat, which was slightly thickened, without being softened; some patches had the appearance of sanguineous extravasation, not unlike the maculæ observed on the skin. When the patient had a jaundiced appearance, a common occurrence in this epidemic, I have found the liver enlarged from congestion, presenting a bloody and bilious appearance when cut into, and the gall bladder distended with inspissated bile, thick enough to maintain its form when deprived of its covering. When there has been only a slight bilious tinge of the skin and conjunctivæ, the liver presented the same appearance in a less degree, the bile in the gall bladder being about the consistence of treacle.

The great muscular debility during life, and the mor-

bid appearances after death, which are evidently more of a congestive than inflammatory nature, clearly point out the low type of this epidemic, and contra-indicate any general treatment of a depleting nature, while, on the contrary, they indicate, what I believe universal experience here confirms, a stimulating plan of constitutional treatment, together with the milder alteratives to correct the depraved secretions, and local measures to overcome the complications of the bronchiæ, head, liver, and bowels.

Montreal, June, 1847.

On carefully re-perusing the report, however, I am induced to alter my opinion; for, if I were to attempt to write a full criticism on the work, I should have to make a dozen remarks on each page, and should occupy more space in your valuable journal than the subject merits. There are, however, a few points on which I may be allowed to make a few observations.

In the commencement, Mr. De Rottermund says, "After having analysed the waters of the St. Lawrence and Ottawa;" (this refers to a paper published in the 1st volume of your journal, No. 5, in the 3d paragraph of which you will find the following statement):—"I obtained so small a quantity of residue from a litre of the Ottawa water, that I found it difficult to weigh it with perfect precision, but I estimated it at 1.5 grains." To allow the weighing accurately 1.5 grains to be an operation of difficulty, is rather a curious admission for an analytical chemist; but it appears that although Mr. De R. is unable to weigh with precision 1.5 grains, he is able to ascertain that in this quantity are contained 0.62 grains of sulphate of magnesia, and 0.38 grs., 0.27 grs., and 0.31 grs. of other salts.

As he does not say that these weights were also estimated, we may take this statement as a fair criterion for the credibility of Mr. De R.'s quantitative analyses.

Mr. De Rottermund classifies mineral waters under the heads of magnesian, iodurated, saline, antimoniferuginous, sulphureous, and gaseous springs—a classification of no value whatever, as many saline springs may contain variable quantities of iodine and magnesia, and a water does not cease to be magnesian if it contains a little iodine.

At page 7, the George's Spring is mentioned. This water has been analysed by Dr. Hall, McGill College, and found to be somewhat different from the Caledonia water; to which, according to Mr. De R., it is precisely similar as regards its compounds. It contains, he says, neither iron nor hydro-sulphuric acid; while in the preceding page he states that the Caledonia water contains the latter substance, and Mr. Chilton had found iron. Mr. De R. occasionally contradicts himself.

In his analysis of the Kingston water, Professor Williamson found both carbonic and hydro-sulphuric acids. Mr. De R. finds neither, and accounts for it by the water of the original spring becoming mixed with that of others—and this, says Mr. De R., has caused the change. What other change than dilution could have taken place does not exactly appear. Moreover, he calls into play a leaden pipe and an iron pump, and adds, "by the motion of the pump the gas is separated from the water, the temperature of which is increased by the same."

APP. XV.—MEAN RESULTS OF METEOROLOGICAL OBSERVATIONS—AT HAMILTON, C.W., FOR THE YEAR 1846.

By H. CRAIGIE, Esq., SURGEON.

MONTH.	THERMOMETER.					BAROMETER.					RAINY DAYS.	DAYS WITH SLIGHT SHOWER.	FAIR DAYS.
	MEAN, 9, A. M.	MEAN, 9, P. M.	MEAN OF BOTH.	HIGHEST.	LOWEST.	MEAN HEIGHT.	HIGHEST.	LOWEST.					
January	29.2°	30.4°	29.8°	51°	4°	29.657	30.30	29.22	3	9	19		
February	26.54	24.4	24.47	48	-4	29.655	30.21	28.97	5	7	16		
March	38.16	35.22	36.74	53	10	29.66	30.14	29.00	5	9	18		
April	47.16	44.93	46.05	65	26	29.774	30.22	29.17	5	7	18		
May	62.645	57.323	59.984	85	35	29.603	29.92	29.25	4	7	18		
June	70.43	64.13	67.28	90	45	29.704	30.10	29.40	2	8	20		
July	77.87	67.00	72.435	98	49	29.70	30.08	29.37	2	7	22		
August	74.74	70.52	72.63	93	53	29.716	29.90	29.44	4	8	22		
September	68.21	66.00	67.12	90	41	29.716	29.95	29.40	7	8	18		
October	48.065	48.615	48.355	76	25	29.753	30.17	29.30	4	8	15		
November	41.1	45.4	44.75	60	20	29.725	30.22	29.02	7	7	19		
December	31.74	34.2	32.97	53	16	29.663	30.22	29.05	4	4	23		
Mean Temperature of the year	56.224					29.686					43	83	231

Hamilton, 1847.

APP. XVI.—CRITICAL REMARKS ON THE LABOURS OF MR. DE ROTTERMUND, LATE CHEMIST TO THE GEOLOGICAL SURVEY.

By HENRY CROFT, Prof. of Chemistry King's College, Toronto No. II.

In my first paper, I elucidated those parts of Mr. De Rottermund's report which relate to the Tuscarora Spring, and it was my intention to have treated the remaining portions in a similar manner; as on first perusing the pamphlet I thought they were fit subjects for criticism.

This is a beautiful rationale ; the gas is separated from the water, and, in so doing, must, of course, produce a diminution of temperature, but, by the friction of the particles of water on each other, and on the pumps, so much heat is generated as to overcome this and to raise the temperature. This is something entirely new, and we hope soon to have a calculation of the probable quantity of heat evolved by the Falls of Niagara.

At page 10, Mr. De R. gives us a profound dissertation on the "Ice Spring," (on the road from Hamilton to St. Catherine's), which he says is *nothing*, and he then proceeds to explain this *nothing*. I must candidly confess that the paragraph is utterly beyond my comprehension. I have endeavoured in vain to arrive at, and may, perhaps, be mistaken in the meaning, but the only points which Mr. De R. seems to have made out quite clearly, are, 1stly., "That ice cannot be formed without water." 2ndly., "That ice is produced by the temperature of water being lowered." 3rdly., "That salts, by dissolving, produce cold." These are certainly very novel facts, but not of such a nature as to require discussion.

Mr. De R. attempts an explanation on scientific principles, but, as he scarcely mentions what it is he wants to explain, and the whole paragraph is most illogically written, it is quite impossible to ascertain his real meaning.

In the next page he seems inclined to assume that salt may be separated on the surface of water by evaporation ; that this salt may then dissolve again and cause the water to freeze.

The first question to be answered is,—Does such a phenomenon really exist ? and 2ndly., What are all the circumstances attending it ?

When this information has been obtained, I have no doubt an explanation may be offered in more intelligible language than that used by Mr. De R.

At page 16, we have a notice of the Petroleum Spring at Gaspé. This, according to Mr. De R., "is composed of creasote, naphtha, petroleum, bitumen, and paraffine." It would be desirable to obtain from Mr. De R. his ideas concerning the characteristics of three of these bodies, viz., bitumen, naphtha, and petroleum, for, according to most chemists, the latter contains naphtha, and bitumen.

Mr. De R. then gives us, (without acknowledgement), a literal translation from Berzelius, (Lehrbuch der Chemie. Bd. viii. s. 465), concerning the petroleum springs found in other countries. Not one has yet been discovered containing creasote, and as Mr. De R. finds antimony, zinc, and chlorine, where they do not exist, it is most probable that his creasote belongs to the same

class,—a supposition which can be easily decided by experiment.

Lastly, Mr. De R. mentions an *oil* spring, and says, "*such springs are really valuable to the country*;" a statement which no one would be inclined to deny, if they really did exist.

In concluding, it is scarcely necessary for me to make any remarks on this most singular production. The few extracts and quotations I have made will enable your readers to form their own conclusions concerning it, and I think they will agree with me in considering it a tissue of the most glaring absurdities, the most erroneous statements, and the most trashy reasoning. It cannot but be regretted that such a work should be printed by order of the Legislative Assembly, for when published under such authority, and by the chemist attached to the survey, under the superintendence of so talented a geologist as Mr. Logan, it must necessarily acquire a character for correctness among the mass of the people, to which it cannot, in reality, have the slightest pretension.

Toronto, April 24, 1847.

Contributions to Terrestrial Magnetism. By Lieut.-Col. E. SABINE, Royal Artillery, Foreign Secretary R. S., E.—Philosophical Transactions, Part III. for 1846.—No. VII. Quarto.

There are few facts which will more strikingly arrest the attention of the future historian of science, than the remarkable impulse given to inquiries in terrestrial magnetism within the last few years. Equally finding a field for its researches in the snows of the arctic circle, or at the "nether pole," in the most familiar of European countries, and the least known regions of Asia or Africa—at sea or on land, it has yet sprung so suddenly into life, and so suddenly embraced the globe, that the bulk, even of intelligent and well informed persons, are scarcely conscious of its existence, and quite unaware of its aims. We think we shall be doing good service to many of our readers in introducing our notice of the volume named at the head of this article, by an account, as brief as we can make it, of the circumstances which have led to such a remarkable development of a particular science, and placed it upon a basis of ascertained facts so extensive and so recent.

The modern science of terrestrial magnetism, (as distinguished from the science as it was left by Halley), may be said to owe its existence to the labours of a very few eminent men. Humboldt, Hansteen, Sabine, Gauss, and some others—all living philosophers—have in different ways been almost entirely the authors of its present prominent position. Either as extensive observers, or profound analysts, or indefatiga-

ble collators of labours originated by themselves, all have been for the last twenty or thirty years unceasingly engaged in advancing its progress—and with a success which can only be accounted for by the general conviction they have aroused of its interest and importance.

It was in his memorable travels in South America in 1799—1803, that Humboldt first proved the fact that a magnetic needle makes a greater number of vibrations, in a given time, near the equator, than it does beyond the tropics, consequently, that the force which brings it to rest is less in the former than in the latter situation: and he thus made a beginning in the work of determining, experimentally, the relative force of the earth's magnetism in every part of the globe. He found that a needle which made 245 vibrations in ten minutes, in Paris, made only 211 at a certain spot in Peru where the dip was 0° , and since the forces are inversely as the squares of these numbers, it followed, that if the force at the station in Peru is called unity, that at Paris will be 1.3482, and this value has been attributed to the force at Paris in all subsequent European observations which have taken that city, either directly or indirectly, as their base of comparison. During the long and desolating wars of the early part of the present century, magnetic science made little progress, still very interesting facts were brought to light by observations made at Berlin in 1806-7, by the same philosopher. At length, in 1828, he instituted an observatory at Berlin especially devoted to magnetism, and since that period has witnessed the continual extension of similar establishments, until there is scarcely a country in the world without them. It was in 1832 that the illustrious Gauss, turning his attention to the subject, perfected methods of observing—first changes in the direction of the magnetic force,—and, a little later, in its amount, which so far surpassed, in delicacy, any that were previously known, that they have superseded all others, and render the measurement of a deviation of $5''$ from the North—or a variation to the amount of one ten-thousandth part of the force of the earth—(quantities measurable with certainty). Great Britain did not take her place in these pursuits, by the establishment of magnetic observatories, until comparatively late in the day. They were established in Russia, at the instigation of Humboldt, in 1829; and in Germany, through the influence of Gauss, in 1836; but it was not until 1839 that the Royal Society matured their plans for a great naval expedition, with the especial object of observing the magnetic elements in the antarctic regions; for the simultaneous establishment of observatories in the colonies; and for the prosecution of the magnetic survey, of which we have a specimen in the present volume. And now, it may be asked, To what end all these efforts?

The reply, like that to any *cui-bono* question in science, must shew one of two things—either the prospect of attaining by them a knowledge of facts useful to mankind and not to be neglected, or of the higher reward of being conducted, through them, into secrets of nature's operations hitherto veiled from our scrutiny—to new manifestations of the wisdom of the Creator—and to new gratification of that undying desire for truth and knowledge which He has implanted in the human heart. It offers both. Practically a more accurate knowledge of one branch of the subject, the magnetic variation, has long been wanting for purposes of navigation; and indeed every other in which the compass was used: and it was, also, expected that the isochronous perturbation of the needle, in distant places, would afford an accurate means of determining their differences of longitude. The last has, however, been found attended with difficulties, which are likely to prevent its general adoption; but, with reference to the former, great benefits have already been realized. It is, however, particularly on the latter division that we would base our reply to any such question. In magnetism we have a force universally present, claiming our attention by the extraordinary nature of its effects and changes; if not itself directly cognizable to the senses, intimately related to phenomena which are so: and yet, one of which, fifty years ago, we knew scarcely anything beyond a few palpable facts, such as that one, that, whereas, in the year 1600 the compass, in London, pointed about $9\frac{1}{2}^\circ$ to the East of North—it pointed, in the year 1800, 24° to the West of North. It had been a reproach to the nineteenth century, if it had acquiesced in such a state of ignorance, in relation to facts so interesting; and accordingly the efforts we have very briefly sketched above, have for their object—first, the accurate determination of the magnetic elements for every part of the globe, at the existing epoch; and secondly, an enquiry into the laws of the changes, both periodical and secular, to which they are liable. We have, already, in two previous numbers (vol. 1, Nos. 7 & 8) given some account of the establishment and working of Her Majesty's observatory at Toronto, in this Colony, which is more particularly devoted to the second of the above enquiries. The first is the object of magnetic surveys, which leads us to the consideration of the volume before us.

“From the moment,” says the author, “that the fact was known that the locality of the maximum of the magnetic force in a hemisphere is not coincident, as was previously supposed, with the locality where the dip of the needle is 90° , researches in terrestrial magnetism assumed an interest and importance greatly exceeding that which they before possessed; for it was obvious

that the hypothesis which then generally prevailed regarding the distribution of the magnetic force at the surface of the globe, and which had been based on a too limited induction, was erroneous, and that even the broad outline of the general view of terrestrial magnetism had to be re-cast." It was Colonel Sabine himself, who, by his observations within the arctic circle in 1818, '19, and 1820, and at New York in 1822, first established this important fact; pursuing the enquiry at the instance of the British Association, in 1835, he proved by a general examination of all the observations which had been made up to that date, that the central point of the curved lines, embracing regions of the highest force, or the point of the maximum of force, was situated somewhere about 52° of North latitude, and 90° of West longitude, or about midway between Lake Winnipeg, and the Southern extremity of Hudson's Bay. "To confirm this previously unsuspected characteristic of the magnetic system of the globe—to establish beyond a question so remarkable a fact in Physical Geography—to fix within narrow limits the geographical situation of the point of maximum corresponding to a particular epoch,—to ascertain with the precision of modern instruments and methods, the intensity of the magnetic force at its point of maximum, and to assign the form and geographical localities of the isodynamic curves adjacent to that point, were objects which presented themselves amongst the most important desiderata for our present knowledge, and as likely to have a peculiar value at a future period in respect to the ætiology of the science; when, like the earlier determinations in astronomy, these researches might serve to elucidate the laws of those secular changes, which, in our present ignorance of the cause of the earth's magnetism, seem even more mysterious than the apparently complex relations of contemporary phenomena." It was with such objects that, on the proposal of Sir John Herschel, the President and Council of the Royal Society addressed the Hudson's Bay Company in 1842, to learn whether that body would furnish the facilities afforded by its establishments in the interior, for a complete magnetic survey of the region in question; and having received a favourable reply, with the concurrence of the late Lord Vivian, the Master General of the Ordnance, Lieutenant (since Captain) Lefroy, of the Royal Artillery, (the scientific officer at present in charge of Her Majesty's Magnetical Observatory at Toronto), was appointed to carry the design into execution.

Our limits will not permit us to follow that officer through his extensive journeys, made with this view. We will merely mention that he left Montreal, accompanied by a N. C. Officer of the same regiment, in May

1843, with the brigade of canoes of the Hudson's Bay Company; followed the usual route to York Factory, and thence proceeded to Lake Athabasca, where he passed the winter. Resuming his travels in March 1844, he proceeded on the ice to Mackenzie's River, descended it with the earliest navigation to the arctic circle, and thence, returning southwards, we find him observing the dip in the comparatively civilized region of Penticanguishene, on the 14th November. Throughout this circuit of some ten thousand miles, the dip of the needle, the magnetic force, and the variation, appear to have been almost daily subjects of observation; we have a table of determination of the first of these elements, for example, at about 160 distinct and widely distant localities. Colonel Sabine has combined in the same volume extensive observations by Dr. Locke of Cincinnati, Major Graham of the U. S. Topographical Engineers, and several other eminent American observers, which have been most liberally communicated to him for the purpose; but as these relate to a region not now under consideration, we shall continue to refer principally to the observations of Captain Lefroy.

There are three or four methods of determining the magnetic force of the earth at a given station. Two of these are on the principle of the balance, in which the attraction of the earth for a small needle is counterpoised by a known weight; one is by the vibration of a small magnet, which comes to rest in a shorter or longer time, in proportion as the earth's attraction for it is greater or less; and the last is by a combination of observations, too complicated to be explained in this place, but which gives the force, not relatively, *i. e.*, as being in such a proportion, less or more, than at the station taken for the point of departure, absolutely as 1, 2, 3, or 4, upon a scale of which the units are as definite as a pound or a foot, and are irrespective of the force of the magnet employed. We find all these methods employed in the series before us, and, in some instances, at the same station, thus affording a comparison which must test the accuracy of the results. For example:—Before proceeding any further, it was necessary to determine what relation the force at Toronto bears to the force in England. (Woolwich was the station.) Now the absolute method alluded to above, gives us the value of that portion of the earth's force which acts horizontally in the direction of the meridian, and which is less than the whole force in the proportion of the side of a right-angled triangle to its hypotenuse; but if we know the angle between this side and the hypotenuse, we can calculate the latter from it,—this angle is the Dip: accordingly, when we have observed this portion of the force, which may be called for brevity

the horizontal force and the dip, we are as completely in possession of the total force as if it had itself been observed.

It was found, then, that in 1845 the mean value of the horizontal force at Toronto was 3.538, and the dip $75^{\circ} 15' 5''$, hence the total force must be 13.904. Another observation in 1845 gave it 13.897; a third in 1846 gave it 13.887,—the average of these is 13.896. Again in 1846 Capt. Lefroy observed with the same instrument an horizontal force of 3.728 at Woolwich, and a dip of $68^{\circ} 58'$ —consequently the total force there must be 10.388. We have then the total magnetic force of the earth at Toronto—to that at Woolwich, as 13.896 to 10.388, or as 1.338 to 1, one-third greater at the former than it is at the latter station. The same proportion was observed directly by Capt. Lefroy in 1842, and found to be 1.340. It was again observed in 1846, and found to be 1.338, identically the same as by the absolute method: the mean of all these is nearly 1.339 at Toronto to unity at Woolwich. We have explained above how the force was determined to be 1.348 at Paris to unity at a certain station on the magnetic equator, and by comparison with Paris, Woolwich on the same scale is 1.372. Taking Woolwich therefore as 1.372 instead of 1.0, the force at Toronto upon this arbitrary scale is 1.836, and as such has been taken as a base of comparison throughout the work. It is a little puzzling to find so many values assigned to the force, but we must first distinguish whether the total force or only that portion which is efficient in the horizontal direction is concerned, and then whether it is expressed in terms of the absolute scale, or of the relative scale; for if the latter, it is evident there may be as many values as there are bases of comparison. In effect the base in general use, and to which the above value of 1.836 refers, is that station in Peru at which Humboldt found the dip 0° , and erroneously concluding the force to be the lowest any where on the globe, called it unity—we say erroneously, because a weaker force has been since observed—but this was the origin of the values ever since adopted. Starting then from Toronto, we have the force at a great number of stations all reduced to the above scale, and it is concluded from the whole, that the locality of the maximum is in $52^{\circ} 19' N.$, and $91^{\circ} 59' West$, almost identically the same as was assigned by the author ten years previously. We regret that our limits will not permit us to dwell upon the steps of the process which have led to this most interesting result. They are by no means so brief as our relation of it, but display great mathematical power, together with the patient, laborious, impartial induction which distinguishes Colonel Sabine's labours. The results are represented graphically upon a large map, by

which we perceive that the region displaying the highest magnetic force is bounded by an ellipse or oval, of which the length is about 7° of latitude, and the breadth about 5° of longitude; its axis lies in a direction of N.N.W.; its centre we have given above. This oval is surrounded by one of greater size, including all that region where the force is 1.850 and upwards; it extends from Lake Huron to the Great Slave Lake. Another oval, surrounding the region where the force is 1.800 (to 1.000 in Peru), includes nearly all Canada and a large portion of the Western States. The actual force at the point of maximum is computed to be 1.878,—at the corresponding point in the southern hemisphere it is greater, 2.059; but as there are two points of greatest force in each hemisphere, which are nearer together in the southern than the northern one, it does not appear certain that the aggregate force, or what we may call the magnetic charge, of the former is greater than that of the latter. There is another map exhibiting the direction of the line of equal magnetic dip, which is nearly east and west in Canada, but curves upwards towards the north on either side. The actual dip, it appears, is $77^{\circ} 12'$ at Quebec; $77^{\circ} 9'$ at Montreal; and $75^{\circ} 15'$ at Toronto: it is $77^{\circ} 16'$ at Kingston, but this is clearly the result of local influences, which that station exhibits to a remarkable degree. They seem to prove the presence of iron in some form in the limestone there, which is the same, we are informed by Mr. Logan, as the formation at Marmora.

We must here conclude our notice of this interesting Report, with the hope that the subject, which is far from being exhausted, will continue to find students; and that Canada, as it possesses within its limits one of the regions of the greatest magnetical interest in the globe, may be hereafter distinguished by observers of its own in this and many other branches of physical science, and by its own well supported scientific establishments, on a scale commensurate with the prosperity and enlightenment of its people.

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- I.—*Report of the Pennsylvania Hospital for the Insane, for the year 1846; by Thomas Kirkbride, M. D., Physician to the Institution, published by order of the Board of Managers, Philadelphia, 1847.*
 - II.—*Fourth Annual Report of the Managers of the State Lunatic Asylum, made to the Legislature, Feb. 2, 1847.—Albany, 1847.*
 - III.—*Twenty-sixth Annual Report of the Bloomingdale Asylum for the Insane; by Pliny Earle, M. D., Physician to the Asylum.—New York, 1847.*
- I.—The following is the return of the admissions into,

and discharges from, the Pennsylvania Hospital for the Insane :

Remaining in Hospital Jan. 1, 1846, . . .	169
Admitted during the year,	167
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Total under treatment,	336
Of those discharged during the year 1846, were :	
Cured,	89
Much improved,	17
Improved,	28
Stationary,	27
Died,	14
Remaining in hospital,	161
<hr/>	
Total,	336

"Of the fourteen deaths, seven were males, and seven females; of these deaths, seven occurred in various periods of from one to sixteen days after the patients entered the hospital; one case was not insanity, but the delirium of a low form of fever, and not at all suitable for this institution. Four died of the exhaustion following acute mania; two from organic disease of the brain, of which mental derangement was only a symptom; two died of epilepsy; one of pulmonary consumption; two of a gradual wasting of the vital powers, following a long period of excitement and refusal of food; one from suicide, and three from cholera morbus."

The mortality in this hospital during the year, is thus exhibited at 1 in 24, or 4.16 per cent., and the cures at 1 in 3.77, or 26.52 per cent.

The annual expense of the establishment amounted to \$34,182.98, from which is to be deducted the nett receipts of \$30,743.12, giving an actual expenditure of \$3,439.86; and the average cost of each patient per week amounted to nearly \$3.80.

In this report are a number of valuable statistical tables, amounting to fourteen, which we shall employ for general purposes immediately.

II.—The Annual Report of the State Lunatic Asylum is the work of Dr. Brigham, and evinces the sound views and clear judgment which usually characterize the productions of that gentleman's pen.

At the commencement of the year, December, 1845 :

There remained in the Institution,	285
Admitted during the year,	337
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Total number treated during the year,	622
The results of treatment are thus exhibited :	
Discharged recovered,	133
Improved,	60
Unimproved,	33

Died,	22
Remaining in the Asylum,	374
<hr/>	
Total,	622

"Of the deaths, two died of inflammatory affections of the lungs, seven of marasmus, five of consumption, two of convulsions, two of diseases of the heart, one of effusion in the brain, one of suicide, one by paralysis, and one by apoplexy."

The mortality was at the rate of 1 to nearly 28.27 patients, or 35.36 per cent. The cures averaged 1 in 4.67, or 21.41 per cent.

The annual expenses of the Institution amounted to \$26,189.15; the nett receipts to \$45,617.15, giving a balance in favour of the treasurer of \$9,454.05. The treasurer's report further includes the sum of \$29,726.06, being for payments on account of the buildings, furniture, &c., authorized by Act of May 7, 1844, of the Legislature of the State of New York, for completing the establishment.

Besides an interesting account of the history of the New York State Lunatic Asylum, this report contains a valuable paper on homicidal insanity, which we will take an early opportunity of transferring to our columns.

III.—The third and last of the reports of the American Asylums which we have received, is that of the Bloomingdale Asylum, under the charge of Dr. Earle.

In this Asylum at the last report there remained	117
Admitted during the year,	133
<hr/>	
Total treated,	250

Discharged cured,	54
Much improved,	15
Improved,	21
Unimproved,	16
Died,	13
Remaining in hospital,	131
<hr/>	
Total,	250

The mortality, on the whole of the admissions during the year, was 1 in 19.23, or 5.20 per cent.; and the expenses of the establishment amounted to \$23,666.26; the products of the farm decreasing that amount by \$3,872.99.

Besides a series of valuable tables in reference to the circumstances attending the attacks of insanity in the patients admitted, this report contains a valuable series of meteorological tables, indicative of the atmospheric changes observed at the Asylum during the past year.

Having thus the particulars of the Asylums, the reports of which we have received, we shall conclude our remarks upon them by the enumeration of gene-

ral results, deduced from the observations furnished by each. And the first result is the following, furnished by the report of the New York State Asylum, embracing a period of four years, joined with the operations of the last year at the other two.

The total number of cases treated was 1767.

Of this number, we have:

Cured,	596
Improved,	290
Unimproved,	132
Died,	93
Remaining in the hospitals,	566
	1767

Giving us a mortality for the whole of the admissions of 5.26 per cent.; and cures at the rate of 34.48 per cent. This ratio of recoveries is in fair proportion to that observed in England and France, and confirms Esquirol's statement, of the average recoveries being "about one in three."

For the sake of convenience we shall designate the Pennsylvania Hospital as No. 1, the State Lunatic Asylum as No. 2, the Bloomingdale Asylum as No. 3.

As regards sex, we obtain the following results:

	Total.	Male.	Female.
Admitted into No. 1 (6 years)	936	542	394
" " No. 2 (1 year)	133	75	58
" " No. 3 (4 years)	1181	594	587
Total,	2250	1211	1039

As regards civil condition:

	Married.	Single.	Wid.
Of 1181 admitted into No. 2, there were	545	564	72
Of 115 " " No. 3, there were	52	51	12
Of 936 " " No. 1, there were	359	489	88
Total,	956	1104	172

The following table is deduced from the admissions of 2232 cases into the three Institutions, and will be found to exhibit the ages at which insanity first exhibited itself:

Under 20,	245
From 20 to 25,	465
" 25 to 30,	396
" 30 to 35,	288
" 35 to 40,	255
" 40 to 50,	358
" 50 to 60,	143
" 60 to 70,	70
" 70 to 80,	12
Total,	2232

From this table, it would appear, that in nearly one-fifth of the cases, insanity first made its appearance between the ages of 20 and 25, and that the next characteristic period most fruitful in the production of

the disease, was the succeeding quin-ennial. As the human mind at these periods is the most susceptible to impressions of an exciting or depressing nature, the tendency to insanity at such times, cannot much excite surprise.

The following table will exhibit the nature of the mental affection in the cases admitted into Nos. 1 and 3. No. 2 affords no such statement, which is to be regretted.

No 1.	Mania		Melancholia		Mono-Mania		Dementia		Delirium	
	M	F	M	F	M	F	M	F	M	F
No 1.	254	200	98	82	91	62	93	49	6	1
No 3.	46	34	12	12	—	—	5	6	—	—
	300	234	110	94	91	62	98	55	6	1
	534		204		153		153		7	
	Total,.....1051									

Dr. Brigham, in his report, gives his observations on the state of the pulse of the insane, having commenced his observations in 1840, in the "Hartford Retreat for the Insane." He obtained the following results:

Pulse of the Insane.

From 40 to 50 in 8	
50 to 60	22
60 to 70	183
70 to 80	233
80 to 90	466
90 to 100	144
100 to 110	124
110 to 120	54
	1234

Pulse of the Sane.

From 60 to 70 in 6	
70 to 80	47
80 to 90	23
	76

"The observations were made when the individuals, both sane and insane, were eating and in a sitting posture. Age seems not to have much influence on the rapidity of the pulse, as a few of the most aged were found to have a rapid pulse. Those who have recently become insane, most generally have a frequent pulse, above 80 in a minute, though there are exceptions to this, as in some few cases the number is remarkably low."

There are a number of other valuable tables, indicating the causes of the attacks of insanity, the relative durations of the disease, the places of nativity of the patients, the occupations, and the months of the year in which the disease chiefly manifested itself. We have extracted from the results, however, that information which is likely to prove most useful to the profession, and others interested in this subject, in this province.

PRACTICE OF MEDICINE AND PATHOLOGY.

Iodine and the Iodide of Potassium in the Treatment of Syphilis.—By Dr. F. A. ARAN.—After an elaborate historical sketch of the introduction and employment of iodine in syphilis, Dr. Aran gives an account of Dr. Moij'sisovic's method of treating this disease, by means of iodide of potassium combined with iodine. According to this physician, his plan cures syphilis in three or four weeks. His method is to give the iodide of potassium in doses of from 5 to 20 grains, three times a day, while, at the same time, a bath of iodine, iodide of potassium and common salt is employed, the quantities of iodine and iodide of potassium used in each bath, being a drachm of the former, and a drachm and a half of the latter, and the iodine is not to be added to the water till the patient is in the bath. The patient is to remain an hour in the bath, and gets into a warm bed to promote perspiration. During three days this practice is continued with the least dose of the iodide above mentioned (5 grains three times a day), when some itching of the skin begins, and then the dose of the iodide is gradually to be increased. About the tenth or eleventh day a febrile state arises, accompanied with itchings of the skin, and a scarlet rash or an eruption like zoster. This rash or eruption is followed by a desquamation from the fifteenth to the twenty-first day, and these taken together indicate that the iodisation has reached its maximum, and Dr. Moij'sisovic affirms, that he has never seen any return of the disease in those cases in which the eruption and desquamation ran this regular course. He employs a weak solution of iodine and iodide of potassium against exostoses, condylomata, and pustules, and uses local baths still weaker. This kind of treatment Moij'sisovic's uses against every sort of syphilitic affection, whatever be their duration, and even in primary symptoms. Dr. Aran complains that there is no account of the cases in which this treatment failed, or in which the disease returned, and calls on the physicians of venereal hospitals to make trial of this practice, with the view of determining its merits with greater certainty.

Dr. Aran says, respecting the efficacy of iodide of potassium in tertiary symptoms, that there is an almost universal agreement among those who have published on the subject all over Europe. Hassing says, of 250 cases falling under this head, in the Copenhagen Hospital, treated with the iodide, there were forty-nine deep ulcers of the throat, of which forty-two were cured, three benefited, and four only unsuccessful,—the cure in the latter being effected at last by mercurials; three cases of sub-cutaneous tubercles, of which two were cured; fifty-one cases of tumour of the bones and periosteum, of which six were cured, and thirty-two benefited, the treatment failing in twenty-three,—while the duration of the treatment was on an average nearly thirty-six days; of seventy-three cases of osteocopium, sixty-five were cured, three benefited, and five failed,—the average duration of the treatment being about ten days; of seventeen cases of caries and necrosis, six were cured, four benefited, and seven failed,—the average duration of treatment being forty-four days. Bassereau reports a similar success in tertiary affections, in the practice of Ricord at Paris. Gauthier gives the like account of the effects of this treatment at Lyons; and Payen describes the results as equally satisfactory at Aix, on a most extensive experience of the remedy.

In the symptoms, however, which come under the head of secondary, there is not the same unanimity as to the efficacy of this remedy. Hassing describes its employment in 217 persons affected with the secondary form. Of these, twenty suffered under flat pustules (*pustules plates*), eight at the arms, ten at the genital organs, and two in both places at once; and seven were cured, four benefited, nine derived no advantage; forty-nine suffered from squamous and pustular eruption; and twenty-six were cured in a mean period of forty-eight days, nine were benefited, and fourteen derived no advantage; forty-seven had superficial ulcers of the throat and mouth; and twenty-four were cured in a mean period of about forty days, eight were benefited, fifteen derived no advantage; twenty-seven had pustular eruption; and nine were cured in a mean period of fifty days, four were benefited, four derived no advantage; there were twenty-one cases of tubercular syphilitic eruption, and fifteen were cured,—the mean duration of the treatment being about forty-four days, three benefited, and three derived no advantage; fifty-three cases of syphilitic rupia; and forty-three were cured,—the mean duration of the treatment

being about thirty-nine days, seven were benefited, and three derived no advantage. We cannot make room for the analysis of the cases of the secondary form given by our author, as treated by Ricord, Gauthier, and Payen; but on the whole, it appears that less success attends the treatment of those of that form with the iodide of potassium, than those falling under the head of tertiary symptoms. Gauthier and Payen agree that generally the older the secondary symptoms are, and the more approaching to the character of the tertiary, the more influence has the iodide over them; for example, when syphilitic eruptions become ulcerated, And Payen adds, that the iodide is particularly indicated when the secondary affections are obstinate under the mercurial treatment, and that the iodide should be resorted to at once in cases which, from their long standing, are likely to resist the influence of mercury, and in those cases in which, from the presence of debility, the constitution requires additional tone.

As regards the use of the iodide of potassium in primary symptoms, there is much difference of opinion among the authorities referred to. Hancke, Kluge, Hocken, Hassing, and Bassereau, give an unfavourable account of its effects, and Hassing doubts its efficacy even in bubo; on the contrary, Bazin, Midtler, and Payen, assert its efficacy in primary sores, without or with bubo. On this discrepancy our author remarks, that the cases referred to by Payen in particular, are cases of indurated chancres; and these, he says, are not regarded by some authorities, as by Ricord, among primary affections. On the whole, then, Dr. Aran considers the title of the iodide of potassium to be considered as the basis of treatment in primary affections to be unsubstantiated, though when circumstances prohibit the common treatment, it is sometimes of service.

Respecting the comparative effect of the treatment by the iodide, when the mercurial treatment has, and when it has not, been previously used, Dr. Aran observes,—“Hence it follows that syphilitic spots, pustules, superficial ulcerations of the throat, caries and necrosis of bones, are the more easily cured by the iodide, that a mercurial treatment has been premised; and on the contrary, that tubercles, rupia, deep ulcerations of the throat, swellings, and deep-seated pains of the bones, yield more readily when no mercury has been previously employed.”

Should the iodide be used alone or combined with mercurials? Hassing's conclusion is that in the treatment of secondary affections, the combination affords no beneficial results, and this opinion is supported by the evidence of numerous cases treated in the Copenhagen Hospital, in the mixed mode. Gibert and Ricord, however, stand opposed to Hassing's decision on this point.

As to the proportion of relapses, little statistical evidence has been supplied hitherto by authors. Hassing says that relapses are rare in the case of tuberculous eruption, syphilitic rupia and deep ulcerations of the throat, while they are common in the flat pustule, syphilitic eruptions of the papular and squamous character, and superficial ulcerations of the throat—and adds, that these relapses are most common at the end of about eleven months, though he has seen them take place at the end of seven weeks, and of between four and five years.

With regard to the proper dose, Ricord has carried the dose to the greatest extent—for example, as far as 135 grains in a day. Our author considers doses so large as altogether unnecessary, and cites as sufficient, the doses mentioned by Hassing, whose largest dose does not exceed fifteen grains a day, Gauthier, who does not go beyond thirty grains a day, and Payen, whose extreme dose is about sixty grains a day. There is this general agreement on the administration of the remedy, that the dose should be gradually augmented, and that it should be kept up for some time after the symptoms have disappeared.—*Archives Générales de Médecine.*

Ether as a Remedy in Spasmodic Diseases. *Proceedings of the Medical Society of London, March 15, 1847.*—Mr. Headland inquired whether, in cases of obstinate and prolonged laryngismus stridulus, when all the usual means of treatment failed to afford relief, and when it was obvious that unless some amendment took place the patient must inevitably sink, any benefit was likely to ensue from the inhalation of ether. He threw out this question mere as a suggestive hint than to recommend the treatment, and with the view of hearing the opinions of members on an agent of great power, and one which appeared likely might be of service in spasmodic diseases. In the case to which he had alluded, the

little patient was seven months old, the child of parents in the higher station, and in an atmosphere which could not, by possibility, have an effect in prolonging or aggravating the complaint. There was no condition of gums to warrant the opinion that teething had any influence on the disease, and the secretions were healthy. If the child presented any peculiar aspect, it was that of constitutional debility, a deficiency of power preventing the development of the teeth. The treatment pursued had been of the ordinary character in these cases—attention to the secretions, strict rules regarding diet (the child being brought up by hand), and the avoidance of all excitement. The disease, however, had continued to increase in severity, and the little patient had now as many as eight or nine attacks in a day. The nurse was warned of the approach of the convulsions by an attack of crying. Now, what would be the effect of allowing the child to inhale the vapour of ether by sprinkling a little of that agent on a towel or handkerchief, and holding it to the mouth and nose? He knew that ether had failed in trismus and tetanus, but he threw out this question for the purpose of eliciting discussion.

Dr. Chowne inquired if, in the case related, the convulsion arose from spasm of the glottis, producing difficulty of breathing, or from some other cause. When it arose from such a spasm in the air-passage, the difficulty to the admission of air would bring on convulsions, and, under these circumstances, the administration of the ether would only make the quantity of air inspired less. If, however, the ether acted as an anti-spasmodic, then the glottis would be opened by its agency, and afford the patient time to respire. It had been found that in cases of irritable larynx and trachea, there was a difficulty in administering ether. We required further experience to determine the effects of ether generally, but more particularly on infants. He should be fearful of applying it in cases similar to the one detailed.

Mr. Headland said, that in his case the convulsions evidently arose from spasm of the muscles of the larynx. What was to arrest that? It was evidently referable to some disturbance of the pneumogastric nerve; and in this extreme case all anti-spasmodics and other remedies had failed of affording relief. He was fully alive to the necessity for caution in such a proceeding, and stated his conviction that ether was at the present time too indiscriminately employed.

Dr. Chowne believed that ether did not necessarily produce congestion of the brain; a state of collapse certainly sometimes followed its use, but he had neither observed stertorous breathing nor dilated pupil, though he had heard of the presence of such effects in some cases. In one instance a man certainly did appear to suffer from fulness of blood in the head after inhaling ether.

Dr. Risdon Bennet had seen little of ether; but, from what he had observed at St. Thomas's Hospital, it would appear, in some cases at least, to resemble in its effects the nitrous oxide, at first producing excitement, followed, as was usual with these agents, by a state of collapse. We were too ignorant, he thought, of the operation of ether at present, to employ it in convulsive diseases. Could we, or could we not, with safety try its effects in convulsive diseases, knowing its tendency occasionally to produce convulsions? It was an important subject, and deserved the attention of the profession.

Dr. Chowne had recommended the inhalation of ether in a case of hooping cough, as it had been stated that it had in some instances cut short the disease. It had been inhaled by holding to the nostrils a handkerchief sprinkled with ether.

Dr. Bennett said that it would be more likely to be useful in hooping-cough than in laryngismus stridulus.

Dr. Garrod said that ether might be so exhibited as always to produce excitement. If inhaled from a bag into which ether had been put, it usually produced that state, followed soon by narcotism. Judging from the effects of alcohol on the young of animals, he thought that ether must be used to children with caution.

Mr. Bishop said, that the question before the Society was one of importance. It was difficult to say in the present case what was the source of the irritation which, acting on the pneumogastric nerve, produced the convulsions. Any particles in the atmosphere which might irritate the superior laryngeal nerve were sufficient to produce the effect. Change of air had occasionally been of benefit in these cases; and a warm moist atmosphere was undoubtedly likely to be of service, from its preventing anything irritating the mucous membrane of the larynx.

Dr. Clutterbuck considered that one of the greatest advantages

which we should derive from the use of ether would be the power we should possess of bringing our remedies more directly to the organs of respiration when in a state of disease than now. Twenty years ago there was a great disposition in the profession to the administration of remedies by inhalation. Dr. Beddoes had found great advantage from the use of carbonic acid and other agents in this way. The plan had been since neglected, though it was undoubtedly the readiest, of carrying our remedies directly to the seat of disease without first sending them through the course of the circulation. He considered that great advantage would arise from the employment of the inhalation of ether and other vapours in affections of the air-passages. He related the case of a lady who had been for years the subject of a distressing catarrhal affection, which was much influenced by weather and other causes, and the attacks of which were often obstinate, and difficult of relief. He thought this might be a case in which the inhalation of ether might be of service, and he accordingly directed her to inhale it in the simplest manner, by holding a bottle of ether to the nose, smelling it strongly, and drawing deep inspirations, until she found it affected her. She was usually under its influence in about five or ten minutes. She had pursued this treatment for several days with the greatest advantage; it acted by diminishing the sensibility of the mucous membrane.—*Lancet*.

SURGERY.

Etherization. (From a Correspondent.)—In the *Gazette des Hopitaux* of the 30th of March, Monsieur Pertusio, Surgeon of Turin, asserts that he has employed ether successfully in traumatic tetanus. Monsieur Roux has been unfortunate at Paris in an analogous case.

Extract from the Gazette des Hopitaux.—"M. Pertusio, surgeon of the hospital of SS. Maurice et Lazare, at Turin, has just obtained a successful result, by the aid of etherization, in a very marked case of traumatic tetanus.

"From Feb. 4th, some tetanic symptoms had been manifested in a young patient received into the wards of this physician, and on the 13th these had attained the greatest intensity. M. Pertusio conceived the idea of trying etherization, and instantly obtained complete resolution of the muscular retraction. In fact, the tetanic symptoms reappeared as soon as the influence of the ether had ceased; but M. Pertusio immediately renewed the inhalation, and obtained, on the whole, sufficient benefit to encourage him to return to the etherization, at first as often as six times a day.

"By degrees, the tetanic attacks becoming more feeble and less frequent, the inhalations of ether were diminished, and at the end of a week, one single etherization was sufficient.

"On the 4th of March, the patient had passed a week without experiencing the slightest tetanic symptom, although the etherization had been discontinued, and he now walked in the hall of the convalescent patients, nothing of his complaint remaining, except a slight rigidity in the abdominal muscles."—*Clinique de Marseille*.

Vapour of Ether.—M. Boullay, jun., has made several experiments on animals with the vapour of ether. Four dogs which were subjected to it gave no signs of pain under mangling of all kinds. From sixteen to eighteen grammes of ether were injected into the jugular vein of a horse, and he immediately fell into a sound sleep. MM. Malgaigne, Roux, Velpeau, &c., have experienced the most decided success from its use with their patients. Amputations of the thigh, leg, and finger, operations for hydrocele, the extirpation of tumours seated deeply among muscles, vessels, and nerves, have all been performed, not only without the patient's being in the least disturbed by what was going on, but even while under the knife without losing that intrinsic comfort and agreeable feel so characteristic of the intoxication from ether. We give shortly one of the cases laid before the Academie de Medecine by M. Laugier. A young girl, aged 17, with white-swelling of the knee, had her thigh amputated. Having previously inspired the mixture of air and vapour of ether for three or four minutes, she fell into an extatic sleep. When the limb was removed and the vessels secured, M. L. began to dress the stump, and then the patient gave the first evidence of consciousness by complaining of being awakened, and of being brought among men, as she said, and added that she had been sleeping with God and

his angels, whom she had seen about her. She had given no signs of pain, and when asked if she had felt any, she exclaimed with astonishment, "What! have you cut off my leg?" When the dressing was completed, still without her feeling any uneasiness, she was put to bed, and then she began to suffer from the wound, as has occurred in all the cases of amputation. The Academic has not pronounced on the dangers or disqualifications attending the employment of the vapour of ether.—*Dublin Medical Press.*

On Scrofulous Inflammation of the Eye: By A. JACOB, M.D., F.R.C.S.I., Professor of Anatomy and Physiology in the Royal College of Surgeons, and one of the Surgeons of the City of Dublin Hospital.—That the eyeball is sometimes the seat of a species of inflammation justly entitled to the denomination of scrofulous, from its symptoms and results, will not, I believe, be denied; but how far that inflammation is an immediate consequence of general constitutional derangement, or a concentration of a specific disease pervading the entire system, may not be so freely admitted. It may be assumed that the inflammation is not so much a local outbreak of scrofula as an inflammation caused by exposure to cold, and modified by that disease. The distinction is, however, not perhaps practically of importance, because in either case the peculiarity of the affection arises from its specific character. But while it cannot be denied that the eyeball is sometimes the seat of scrofulous disease, it may at the same time be doubted whether it is so frequently attacked by it as is generally supposed; for in many cases assumed to be of this nature, there is really no evidence of the existence of any such malady, either in the system at large or in the part affected. When treating of rheumatic and gouty inflammation of the eye it was necessary to enter at length into an inquiry as to the occurrence of such species of disease of the organ in any case; and assuming that to be established, it became necessary to consider how far the visible changes in the parts affected afforded conclusive evidence as to the fact. In treating of scrofulous inflammation of the eye, it becomes equally necessary to inquire whether the appearances are so peculiar as to justify the practitioner in pronouncing the disease to be of this peculiar specific character; or in other words, whether he can form a correct diagnosis from the changes in vascularity, diminution of transparency, or alteration in colour of the structures engaged. The common practice of assuming that certain forms of inflammation of the eyeball and conjunctiva are scrofulous, because the patient does not appear to be in a vigorous state of health, or because the disease does not yield to depletion or other usual remedies, leads to erroneous views and unsuccessful practice, and should be abandoned. No inflammation of the eye should be pronounced scrofulous unless the local disease or the constitutional peculiarities fully justify it, and it therefore becomes necessary to consider carefully what are the characteristic symptoms.

If a person of delicate frame, with fair skin, light hair, and blue eyes, be attacked with iritis or other form of internal inflammation of the eye, it is often assumed that such inflammation is either the immediate consequence of scrofula pervading the system, or at least that if it has been induced by exposure to wet or cold, it is so modified by the constitutional disease that it should be considered scrofulous. It seems even sometimes to be supposed that the disease is the local manifestation of a malady affecting the entire frame, a concentration of the specific poison, if it may be so called, necessarily accompanied by inflammatory action. This assumption is, however, far from being justified by experience and careful observation. It remains, I believe, after all, to be proved that persons of fair skin, light hair, and blue eyes, are more prone to scrofula in any form than those of a different complexion, and I am convinced that true scrofulous disease affecting the eye is not more frequently found to occur

in such subjects. On the contrary, indeed, true scrofulous disease of the eyeball probably occurs more frequently in persons of dark coarse skin, black hair, and deep brown iris. The practitioner must therefore form his opinion as to the character of the inflammation from some more certain indication. His object should be to determine how far his treatment is to be modified in consequence of constitutional diathesis, and to attain this object he should first ascertain with certainty whether any specific constitutional diathesis be present or not. To establish the fact of the existence of scrofulous disease in the constitution with this view, it may not be necessary to have evidence of the presence of scrofulous tubercle, or other conclusive proof of the active progress of the malady; but there should be some more characteristic marks of it than those afforded by the tint of the skin or the general formation of the body. A thick upper lip, brawny prominent cheeks, and tumid nose, accompanied by coarse greasy, and dingy discoloured skin, will, when present, enable the practitioner to form a safe estimate of the state of the constitution: and if cutaneous excoriations at the angles of the mouth and margins of the nostrils, as well as at the edges of the eyelids and about the ears, be also present, and causing enlargement of lymphatic glands beneath the chin and angles of the jaws, little doubt need remain of at least a predisposition to the specific malady. I have also to remark that although I have denied that a fair skin and light hair necessarily indicates a scrofulous constitution, it must be admitted that extreme transparent delicacy of the cutaneous surface permitting the subjacent blue veins to appear ramifying beneath it, and displaying a florid brilliancy of colour of the cheeks and lips, is evidence, if not of that diseased state of the system, at least of a very feeble state of constitution, entailing great liability to destructive local inflammatory action. To enlarge on this subject would, however, be to write a treatise on scrofula, and I must therefore leave it to the practitioner to determine from his own resources how far constitutional symptoms justify him in modifying his treatment in each particular case which comes under his care. He has to be on his guard against pronouncing the disease to be scrofulous on insufficient grounds, while at the same time he has to guard against the risk of treating it as a simple uncomplicated attack, although truly specific in its nature.

In endeavouring to determine correctly the state of constitutional or local disease justly entitled to be considered scrofulous and to restrict the term to such state, care should be taken that we do not lose sight of the real object aimed at in our attempts to secure accuracy of nomenclature and arrangement: that we do not, in other words, overlook facts because we differ as to terms. Many who pronounce an inflammation of the eye to be scrofulous, probably do not thereby mean to assert that there is scrofulous deposit in the lymphatic glands, or any other form of local disorganization or constitutional condition undoubtedly of this nature; they probably mean only to intimate that the inflammation is of peculiar character, because the subject of it presents certain appearances of defective bodily health. The meaning intended to be conveyed perhaps is, that the inflammation will pursue a protracted and destructive course, because the powers of assimilation and growth are weak, the circulation feeble, and consequently the entire frame destitute of vigour. Of the correctness of such an inference there can be no doubt, and it therefore does not matter much as to the terms used in arriving at it. Deposition of fat, instead of growth of muscle, pallid skin, and feeble circulation, in consequence of ill-assorted or deficient food and defective respiration, are indications of a state of constitution calculated to modify the local inflammation as much as any positive proofs of the existence of specific scrofulous disease. This state of the system so often assumed to be scrofulous is of such frequent occurrence, and is so often the forerunner or cause of the

development of real scrofula, that its indentification with that disease need not cause surprise, and the practitioner, in adjusting his treatment, may with safety resort to the same measures in the one case that he employs in the other.

Whatever difference of opinion may exist with respect to the state of constitution entitled in strictness to the denomination of scrofulous, it is important to determine what are the peculiar symptoms and effects observed in inflammation of the eye caused or modified by that disease. With this view the practitioner should observe whether or not any one part of the organ is more engaged than another: whether the inflammatory action is intense and acute, or slow and languid; and whether the changes in organization are slight and of ordinary character, or considerable and unusual. I am of opinion that in persons either of scrofulous habit or of feeble frame, the parts most frequently engaged, and which suffer most, are those situated most anteriorly; such as the cornea, membrane of the aqueous humour and iris. In other words, I believe that true circumscribed corneitis, and inflammation of the lining membrane of the chambers of the aqueous humour, causing adhesions of the margin of the pupil to the capsule of the crystalline lens, are more frequently caused or modified by this state of the system. The retina, it is true, is not unfrequently attacked by slow, destructive, and insidious inflammation under similar circumstances; but general and severe inflammation involving the entire organ is oftener of a simple idiopathic or of a rheumatic or syphilitic character. Any form of inflammation of the eye may be modified by a scrofulous diathesis, but these insulated affections appear to be more frequently so influenced than others. The sclerotic also appear to give way more frequently from protracted inflammation, and to permit the choroid to project in the form of black prominent tumours in persons of scrofulous constitution or debilitated system. It remains, however, to be determined whether true scrofulous inflammation presents any peculiarity of appearance or change which will enable the practitioner to pronounce a confident opinion as to the nature of the disease.

The remarkable increase in red vascularity of the sclerotic which accompanies all other inflammations of the eyeball, is present in the scrofulous form also. In the more transient and languid attacks which appear confined in a great degree to the membrane lining the chambers of the aqueous humour, and which disappear after causing adhesions of the margin of the pupil to the capsule of the crystalline lens, this vascularity is very slight, often indeed scarcely to be perceived; but in more severe attacks, and where the iris, or the cornea, or both, are engaged, the characteristic sclerotic vascularity is displayed as conspicuously as in any other species. The redness, however, is in general somewhat different from that observed in simple uncomplicated inflammation of the eyeball occurring in a healthy subject. The colour has less of the florid arterial tint and more of the purple shade, derived from venous turgescence; and it is also more uniform and diffused than confined to distinct vessels converging to the circumference, as in syphilitic iritis and other varieties. It sometimes also, especially where the cornea is particularly engaged, commences in a patch or circumscribed spot at one side, which is followed by a similar one at the opposite, and ultimately by general redness of the entire membrane. This is, I think, a remarkable character of the disease, and therefore when such insulated inflammatory vascularity is observed at the commencement, the practitioner has reason to expect a form of disease less likely to yield to usual plans of treatment.

The cornea in scrofulous inflammation of the eye is, I think, more frequently engaged in the disease than in other forms or varieties. Insulated inflammation of the cornea, the true *corneitis* of writers on diseases of the eye, appears to take place always in persons exhibiting marks of scrofulous constitution, or at least of such languor or debility of the frame

as is equivalent to such a state; but as I propose hereafter to consider this form of disease in detail, I will not dwell on it here. What I have now to observe respecting the state of the cornea in true scrofulous inflammation of the eyeball is, as I have said, its being more implicated than in simple idiopathic, syphilitic, or even rheumatic inflammation. It is not the gray margin described as frequently found bounding the circumference in inflammation of the eye in advanced life, and considered to be characteristic of the rheumatic or gouty species, that is to be observed in scrofulous inflammation, but a general haziness or milky hue, and a remarkable roughness or loss of polish on the surface of the conjunctival layer, or a slight loss of transparency, having more of a yellowish tint, as if some very slight effusion had taken place in the structure of the part. Very deep-seated small white opacities, generally in or near the centre, are sometimes to be seen. The consequences of these attacks often prove that the disease has extended to the cornea, that part of the organ often losing its correct curvature in protracted and unmanageable cases, or becoming prominent or conical in common with the anterior portion of the sclerotic, or separately. It also, in cases of long duration, is pervaded by vessels carrying red blood, and becomes permanently opaque.

In scrofulous inflammation of the eye, or in simple idiopathic or other inflammation modified by a scrofulous diathesis, or by an inactive or languid state of the functions of circulation and nutrition, the membrane lining the chambers of the aqueous humour is as much affected as in the most acute attacks in healthy and robust subjects. This is displayed by a muddy or hazy appearance of the cornea, caused by opacity of this membrane, where it covers or lines its posterior surface, as well as by the adhesions which form between the margin of the pupil and the capsule of the crystalline lens. This diffused muddy or hazy appearance which so frequently presents itself in syphilitic, and sometimes in simple idiopathic inflammation, does not perhaps occur so frequently in the scrofulous form, but it sometimes does occur and is easily recognized. When the cornea is much engaged, an opacity sometimes exists on its posterior surface, in the shape of a small distinct white circumscribed spot; but this may be in the elastic layer of this part, or in its proper structure. The mottled opacity which remains in the shape of delicate specks on the back of the cornea after the inflammation subsides, and which I have particularly noticed in describing the symptoms of idiopathic and syphilitic inflammation, often remains after scrofulous inflammation also. Adhesions of the margin of the pupil to the capsule of the crystalline lens take place very generally in scrofulous inflammation, as well as in inflammation modified by a feeble or languid state of the system; and sometimes in consequence of very slight and transient attacks. I am often surprised to see the strong and extensive adhesions which are found in the eyes of females of feeble constitution at an early period of life, who, when questioned on the subject, declare that they never had any pain or redness of the eye, notwithstanding this unequivocal proof of inflammation having occurred, and notwithstanding the defect of vision which accompanies this state of parts. I do not think I have seen hypopyum, or effusion of purulent matter into the aqueous humour, in scrofulous inflammation; the nature of the disease does not, however, render such an occurrence improbable.

The iris in this, as in all other forms of inflammation of the eyeball, is particularly affected, and the changes in colour, as well as the contraction and adhesions of the pupil, are as conspicuous as in the species already fully described. It is, however, I believe, in scrofulous inflammation alone that deposits resembling those which take place in syphilitic iritis, commonly assumed to be coagulable lymph, take place; but in scrofulous inflammation the deposition, when it occurs, is not of the same nature as in the syphilitic disease. It is,

in fact, of the nature of true tubercular matter, and instead of being absorbed, as the matter is in syphilitic iritis, it increases in bulk, and either bursts as an abscess externally, or sometimes, but very rarely, into the aqueous humour. This I consider to be the most characteristic and unequivocal proof of the scrofulous nature of the disease, and so much so, that I consider all the other changes in structure above enumerated to be but corroborative evidence of its specific nature, taken in connection with constitutional symptoms. The tubercular deposition here alluded to generally takes place towards the circumference of the iris near its junction with the ciliary ligament, and consequently under the margin of the cornea. It is at first a small yellow irregular mass with red vessels passing over it, as in the deposits in syphilitic iritis, but it gradually enlarges and extends under the margin of the cornea beneath the sclerotic, which gives way before it, and allows a prominent yellow mass to project beneath the conjunctiva. This continues to enlarge, and assumes the appearance of an abscess; and in some cases becomes so prominent and irregular in form, is so enveloped in large and tortuous vessels, and presents so peculiar an appearance from the dark choroid coat, appearing through the thinned sclerotic around it, that it has sometimes been supposed to be of malignant character, so much does it resemble fungus hæmatodes. Attention to the history of the case, independent of obvious difference in appearance and structure will, however, generally prevent any such mistake from being made. This state of disease has not escaped the observation either of Dr. Mackenzie or Mr. Lawrence, although they both direct attention to it more with a view to prevent its being confounded with fungus hæmatodes than to treat of it as a consequence of scrofulous inflammation of the eyeball. Dr. Mackenzie, in alluding to "Non-malignant Tumours of the Eyeball," observes that "he thinks it extremely probable that scrofulous tubercles, exactly similar to those frequently met with imbedded in the cerebrum of children dying hydrocephalic, form upon or within the eye; for instance, in the substance of the sclerotic, iris, or choroid: and that such tumours lying deep in the eyeball will, with much difficulty, be distinguished from fungus hæmatodes;" and again, that "he had seen several cases of albuminous or scrofulous tumours originating from the sclerotic, sometimes single, sometimes in clusters, soft in some cases, and firm in others, but with little or no vascularity; the subjects of such affections being always cachectic children, and the affected eyes having generally suffered from internal scrofulous ophthalmia before the appearance of the tumours." Several of the patients, he states, died of chronic disease of the lungs. He also gives the following examples:—"A young lady about twelve had a scrofulous tubercle attached to the upper part of the sclerotic; the eye had suffered much from scrofulous internal inflammation; the tubercle was of a yellow colour; it slowly enlarged to the size of an almond, and seemed in a state of suppuration, but did not actually suppurate. The general health was much impaired, and the patient died soon after." In another girl, a cluster of scrofulous tubercles presented on the lower half of the sclerotic close to the cornea. The vision of the eye being dim, the cornea hazy, and the pupil dragged towards the side of the eye on which the tumours were situated. In another, a girl, aged nineteen, "the eye had been considerably inflamed for about five weeks, with considerable pain in it, as well as in the circumorbital region. The conjunctiva and sclerotic were injected with blood, the cornea slightly nublous, the iris somewhat changed in colour, vision very imperfect, and the motions of the pupil sluggish. At the bottom of the anterior chamber there was a yellowish mass, having much the appearance of pus, with reddish streaks, as if from blood vessels passing over its surface. This yellowish substance gradually increased in size, and assumed the appearance of a scrofulous tubercle,

It caused an elongation of the cornea downward, so that the cornea had an oval shape. The tumour diminished considerably, and the inflammatory symptoms subsided, under the internal use of mercury, quina, and belladonna. The patient was now seized with insomnia, spectral illusions, delirium, and loss of motion of the right arm, and died, but the body was not examined." Mr. Lawrence, under the head of "Diseases in which fungoid or other growths, not of malignant character, take place from the anterior part of the Eye," relates the following cases:—"A child, six years old, came to the London Ophthalmic Infirmary, with serious external inflammation of the eye, attended with so much swelling of the palpebræ that the exact state of the globe could not be ascertained. Subsequently on obtaining a view of the eye, vivid external redness, with a dull state of the cornea, was observed, and the iris was found pushed forward, and the pupil partially opaque. A tumour gradually arose behind the edge of the cornea; it was of a yellowish colour, and acquired the size of a horse-bean. Subsequently two or three other projections took place of smaller size arranged with the first in a regular series, at a short distance from the margin of the cornea. The inflammation continued severe, although leeches and aperients had been frequently used. When several weeks had elapsed, the inflammation abated, the pain became less, and the protuberances round the cornea diminished in size. At last the latter completely shrunk, the eye became atrophic, and the child recovered without any other ill consequences."

This was, I think, a case of true scrofulous inflammation of the eye, and the tumour "which arose behind the edge of the cornea, of a yellowish colour;" and which "acquired the size of a horse-bean," was, I believe, composed of tubercular matter. In Mr. Tyrrell's work on Diseases of the Eye, (p. 310, vol. i.) the following cases is recorded as an illustration of his observations on "Inflammation of the Aqueous Membrane, with Deposition of Fibrine." It is evidently another example of the same species of disease. The patient was a "female of stout make though feeble power, having light complexion and blue iris," and had been treated for rheumatism by depletion, low diet, mercury, and colchicum. There existed "a large patch of a dull purple colour at the nasal side of the cornea, and this resulted from numerous vessels of the sclerotic, which were filled with dark blood; and over these a few of the conjunctival vessels also, distended with coloured blood, could be distinguished." This was the circumscribed or insulated sclerotic vascularity which I have alluded to as taking place more frequently in scrofulous inflammation. "The globe was tender to the touch. She had a dull aching pain in it, and also on the cheek and forehead, and these pains became much aggravated at night." This was treated by tonics and nutritious diet, but the patient having caught cold, "the anterior chamber became slightly cloudy, from a low morbid action attacking the entire aqueous membrane; and besides the slight general thickening of this tunic, its surface became spotted by small tubercles of fibrine. The majority of these tubercles formed in connection with the corneal part of the membrane; and a few appeared on the iritic portion; one tubercle in particular on this part of the aqueous capsule acquired a size equal to a partridge shot." After three months' treatment by tonics, generous diet, and mercury in small quantity, the disease was removed.

In my own practice, I have so often met with cases similar to those here quoted in persons of scrofulous constitution, and even suffering from glandular disease of that character, that I think there can be no doubt as to the nature of the malady. In one, an unmarried lady of about twenty years of age, the whole eyeball became filled with a firm yellowish mass presenting all the appearance of scrofulous tubercle, and suppurating at several points; so that I could pass a probe in different directions, nearly from one side to the

other. The contents gradually crumbled down, and escaped with purulent discharge, leaving ultimately a shrunk and retracted sclerotic in the bottom of the orbit, and so little of any other morbid condition that she was able to wear an artificial eye without any uneasiness. I have now before me a drawing of an eye of a scrofulous girl of eight or ten years of age, in which a yellow tubercle, the size of a small pea, formed in the iris during inflammation, and burst near the margin of the pupil, allowing the contents to project into the aqueous humour, in which, however, it was not diffused, but remained in a solid state until it was ultimately absorbed. Of the influence of scrofulous constitution in causing or modifying inflammatory condition of the choroid or retina, I do not treat here, because I propose hereafter to allude to the subject when considering the insulated inflammation of these structures, known as corneitis, choroiditis, and retinitis. Neither do I allude to the inflammation of the conjunctiva, or rather its consequences, commonly called scrofulous ophthalmia, until I come to consider conjunctival inflammation generally. The treatment of scrofulous inflammation of the eyeball I must reserve for a future occasion.—*Dublin Medical Press.*

Abstract of the proceedings of the Académie des Sciences. Paris, February 22, 1847.—Æther iniglation.—M. Flourens read a notice respecting the influence of æther on the medulla oblongata. He remarked that he had previously ascertained that in the spinal marrow sensation was abolished before motion, but that both might be destroyed without destroying the life of the animal. The explanation of this is sought in the following experiment:—

A dog being fully brought under the influence of æther, the medulla oblongata and spinalis were laid bare. Pricking the latter in both its anterior and posterior columns, gave rise to no movement on the part of the animal. This point being clearly ascertained, the medulla oblongata was irritated, when the animal uttered a loud cry, and the muscles of the neck were seen to contract. The same phenomena were elicited in two similar experiments, from which M. Flourens draws the conclusion that the different portions of the nervous system are successively influenced by the æther, and that the medulla oblongata is the last in the series.

The same physiologist has made trial of other æthers, as the chloric and nitric, the former of which exhibited an action precisely similar to the sulphuric. In three experiments with the latter the animal was destroyed (!) in the space of two minutes.

[The French word *succomber* is generally employed with the signification of death, but possibly the experimenter here uses it to express insensibility; we do not believe that death would be produced in the short period mentioned, as we have inhaled pure nitric æther, certainly not without a remarkable feeling of thoracic inconvenience, not experienced from the use of sulphuric æther, but without any symptoms which would lead us to expect such rapidly fatal effects.—Transl.]

The inhalation of alcohol did not produce any insensibility, but only intoxication. M. Flourens sums up as follows:—1. The action of the æther upon the nervous centres is successive and progressive. 2. The cerebral lobes are first influenced; next the cerebellum, then the spinal marrow, and last of all, the medulla oblongata.

M. Laugier related several additional operations under æther, and stated that he had particularly remarked, that the colour of the arterial blood was not altered, as has been represented.

M. Gardy observed that he did not consider it necessary to produce entire insensibility, as he had found patients bear operations without manifestation of pain, in whom the ætherization had only produced slight stupefaction.

M. Landouzy related his experiments to determine the combustibility of expired æther, from which it appears that all fear of explosion may be discarded.

M. Ducros suggested that the effects of æther may be immediately dissipated by galvanism.

MATERIA MEDICA AND PHARMACY.

Combination of Bichloride of Mercury with Tartar Emetic.—M. Bertini, of Turin, has obtained very good effects from the following formula, proposed by Stenay:—

R. Purified Hog's lard, - - - 48 grammes.
Tartar Emetic, in powder, - 8 grammes.
Bichloride of Mercury, - - 30 centigrammes.

Mix well together. After two, or at most three frictions, this ointment develops numerous pustules, which suppurate more rapidly, than those produced by the tartar emetic alone.—*Bulletin de Thérapeutique from Southern Med. and Sur. Journal.*

On the Syrup of Iodide of Iron.—By Messrs. T. and H. SMITH, Edinburgh.—The process used by us for the syrup of iodide of iron is a modification of the formula of the Edinburgh Pharmacopœia, and, as we have by repeated trials long proved its value, it is here given for the use of the readers of the *Pharmaceutical Journal*.

Let a solution of iodide of iron be made in a flask with six hundred grains of iodine, two hundred grains of pure iron filings, and six ounces of cold water. The action being finished, after smart agitation for a few minutes, let the liquid, while yet hot from the intense chemical action, be boiled over a gas flame or in any other more convenient way till its brown colour has disappeared, which is easily known by the froth becoming white. Let the liquid be now at once filtered through a small filter into a bottle, which has previously been marked, by pasting on the outside of the bottle a small slip of paper at the level of eighteen fluid ounces, and containing thirteen ounces and a half of refined sugar, broken down into pieces about the size of peas. When the solution has all passed through, which fortunately takes place with unusual rapidity, let the filter be washed with boiling water, a further quantity of which must also be poured into the bottle till the liquid reaches the level of the mark. Let the bottle then be introduced into a hot water-bath and briskly shaken at short intervals, till the sugar is quite dissolved: and having adjusted the level of the syrup to the mark by the addition of water, after again shaking the bottle, let the syrup, without a moment's delay, be bottled into small phials, and secured as much as possible from contact with the air and light, by careful corking, and covering the bottles with some dark-coloured paper. These are the proportions adopted in the Edinburgh Pharmacopœia, and the syrup contains one grain of the iodide in twelve minims, or five grains in one drachm; but as the syrup first proposed by Dr. A. T. Thomson is weaker by two-fifths, containing three grains to the drachm, and which we believe is the strength of the syrup used in England, it is evident that the proportions must be varied accordingly. They will therefore stand thus:—

252 grains iodine
100 grains iron filings
2½ ozs. cold water
10 ozs. pure sugar

Let the syrup, when finished, measure twelve ounces and a half, the level occupied by this quantity having been marked off on the bottle beforehand. It is advisable that the bottle used in the preparation of the syrup should not have a capacity more than about a third above the quantity to be made.—*Pharmaceutical Journal.*

CHEMISTRY.

On the Removal of Stains on Linen made by Nitrate of Silver.—By W. B. HERAPATH, M.B., Lond., Bristol.—Medical practitioners in the habit of using the nitrate of silver extensively, as a remedial agent, must have frequently heard loud complaints of

their patients' linen having been indelibly stained and spoilt, by some accident having occurred during its use; and in many cases, patients have refused to employ these preparations, in consequence of the extensive destruction of linen which they occasion. I have therefore very little doubt that the following observations will prove most acceptable to my brother practitioners.

These dark stains consist of very finely divided metallic silver in intimate union with the fibres of the cloth. Had they been oxide of silver, any diluted acid would have dissolved them; but nitric acid alone produces any effect upon them, which of course cannot be employed on account of its powerfully destructive effects upon the linen fabric. Iodine immediately converts them into iodide of silver, which is instantly dissolved by a solution of hypo-sulphate of soda, and the cloth remains as white as when issued from the bleaching-house, and as firm and durable as ever.

The best mode of employing this substance is to strain the spotted linen over a basin of hot water, and then to let fall upon each spot, previously moistened with water, a few drops of tincture of iodine, and instantly to pour sufficient solution of the hypo-sulphate of soda to dissolve the iodide produced, and then immerse the spot in the water beneath, to wash out and cleanse the tissue, at once, from the stain and chemical reagents employed. The tincture of iodine of London Pharmacopœia strength is the one I employ; and one drachm of crystallized hypo-sulphate of soda, dissolved in two ounces of water, will make an excellent bleaching liquid.

A patient may thus be very readily taught the manner of removing an unpleasantness frequently attending the use of a most valuable remedy.—*Lancet*.

On Marking Ink, for marking Linen, &c., without the use of a Mordant.—By Mr. REDWOOD.—The practice of marking linen and other similar fabrics employed as wearing apparel, or for domestic use, with a preparation of silver, commonly called marking ink, has prevailed for many years, and has now become almost universal. The preparation first introduced for this purpose consisted of a solution of nitrate of silver, thickened with gum arabic and coloured with sap green; but in using this solution it is necessary previously to apply to the article to be marked, a preparation or mordant, consisting of a solution of carbonate of soda.

The following formula has been very generally adopted in the preparation of this kind of marking ink:—

- ℞ Carbonate of soda, ℥ss.
Distilled water, ℥iv.
Mix, and sign "The preparation or mordant."
℞ Nitrate of silver, ℥j. ℥ij.
Gum arabic, ℥ij.
Sap green, ℥j.
Distilled water, f. ℥j.
Mix, and sign "The Ink."

The ink made from the above, or a similar formula, which I believe almost every druggist through the country has been in the habit of preparing and selling, when used according to the usual instructions, produces a result which is subject to no objection that does not equally apply to any other marking ink having silver as its basis.

Within the last few years, however, the marking ink, made as above, has been to a great extent superseded by the introduction of a new kind of ink, which does not require the use of a mordant or preparation. This ink appears to be generally preferred to the other;—it is in one bottle, which occupies but little space, and its use is considered to be attended with less trouble and inconvenience than that of the other.

My attention has recently been directed to this subject, as I was desirous of introducing a good formula for marking ink to be used without a mordant into the new edition, now publishing, of Gray's Supplement to the Pharmacopœia. Several formulæ have been published in the journals for the

preparation of this ink, but none of these have given complete satisfaction.

The following appear to be the principal requisites in this kind of ink:—

- 1st. That it shall flow freely from the pen, and form a well defined mark without running or blotting.
- 2nd. That it shall not require a very strong or long-continued heat to be applied, by holding the article that has been written on to the fire, or passing a hot iron over it, in order to develop the black mark required.
- 3rd. That the marks produced by it, when developed by the application of heat, or by exposure to light, shall be perfectly black.
- 4th. That it shall not destroy the texture of even the finest cambric.

After several experiments, I have succeeded in making a marking ink, which I think will be found to realize all the above conditions; it is thus prepared:—

- ℞ Nitrate of silver, ℥j.
Carbonate of soda, crystallized, ℥iiss.
Tartaric acid, ℥ij. ℥ij.
Strong liquor ammoniæ, f. ℥ij. or q. s.
Archill, f. ℥ss.
White sugar, ℥iv.
Powdered gum arabic, ℥xij.
Distilled water, q. s.

Dissolve the nitrate of silver and carbonate of soda separately in distilled water; mix the solutions; collect and wash the precipitate on a filter; introduce the washed precipitate, still moist, into a Wedgewood's-ware mortar, and add to it the tartaric acid, rubbing them together until effervescence has ceased; add liquor ammoniæ in sufficient quantity to dissolve the tartrate of silver; then mix in the archill, white sugar, and powdered gum arabic, and add as much distilled water, if required, as will make f. ℥vj. of the mixture.

It will be observed that the essential difference between this formula and those which have been already published, consists in the use of tartrate of silver, instead of nitrate of silver.—*Pharm. Jour*.

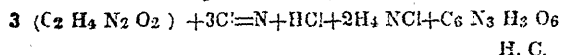
Adulteration of Iodide of Potassium.—We observe a notice in most of the daily papers, signed by the committee of inspection of the College of Pharmacy, cautioning druggists to be particular in their purchases of iodide of potassium, as there is a large quantity of the bromide of potassium, which is sold by unprincipled wholesale dealers for the iodide. Country practitioners, who are in the habit of using this article, would do well to be careful from whom they purchase, or to apply chemical tests before using it.—*N. Y. Med. and Surg. Rep., from Western Lancet*.

Taurine.—Redtenbacher has discovered that his substance contains sulphur—a fact which was not previously known. There is considerable difficulty in determining the quantity, on account of the difficulty of oxidizing it completely. He succeeded best by burning taurine in a glass tube, with a mixture of carbonate and nitrate of soda. He finds the quantity to be 25.7 per cent, and as the equivalent of sulphur is almost exactly double that of oxygen, the old formula, C₄NH₇O₁₀ must now be C₄NH₇O₆S₂. Liebig's hypothesis with regard to the formation of taurine must therefore fall to the ground.

Butyric Acid has been found by the same chemist to exist in the fruit of Ceratonia Siliqua. Siliqua dulcis. (Johannisbrod.) A method has been proposed by Bensch for preparing this acid, as well as lactic acid. Glbs. of cane sugar and ¼oz. of tartaric acid are dissolved in 26lbs. of boiling water, and set aside for

some days; 8oz. of old stinking cheese, well diffused in 8lbs. of curdled acid skimmed milk, are added to the above mixture, together with 3lbs. of finely pounded chalk; the whole is kept at a temperature of 86° to 95°, and well stirred every day. In eight or ten days, the entire mass solidifies to a stiff paste of lactate of lime. It is boiled with 20lbs. of water, and 4oz. caustic lime, and filtered; from this solution the lactate of lime is obtained, and from it the free acid and other salts. If the above mixture be left for more than ten days, it again becomes liquid, gas is given off, and butyric acid is formed from the lactic acid. The operation is completed at the end of five or six weeks. An equal volume of water is added, and 8lbs. crystallized carbonate of soda, the precipitated carbonate of lime is filtered, and the liquid evaporated to 10lbs. and mixed with 5½lbs. sulphuric acid, diluted with an equal weight of water. Butyric acid separates as an oily liquid, the solution of bi-sulphate of soda is distilled, and more acid obtained, which can be purified in the usual way. From 6lbs. of cane sugar, Bensch obtained 28oz. of pure butyric acid.

Cyanuric Acid may be easily prepared, according to Wurtz, by passing dry chlorine over fused urea. The products are cyanuric acid, sub-ammoniac, hydro-chloric acid, and nitrogen. The cold mass is washed with a little cold water, and the cyanuric acid dissolved in boiling water and crystallized.



THE

British American Journal.

MONTREAL, JULY 7, 1847.

COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA EAST.

We have delayed the publication of this number of the Journal for a few days, that we might obtain a copy of, and give publicity to, a Bill for Incorporating the College of Physicians and Surgeons of Canada East. The objections against the measure, as previously taken in this journal, having been removed, it has been almost unanimously signed by the members of the profession in this city, Three Rivers, and Quebec, and a few of the adjoining parishes. The impossibility of submitting the details to the profession generally of the Province, is the reason why it has not been more generally signed by those resident in the different districts; but we have now little doubt, that when they have seen the measure, their adherence to it will be immediately sent in, that their names may be incorporated at once. In a measure of this nature, by which the interests of the profession are to be controlled, the details ought to have been submitted, at a very early period, to those who were to be influenced by it. Va-

rious proposed points were shown to be objectionable, and the time has been too limited for the profession generally to have been made aware of the fact, that the objectionable features have been removed. The Bill was received and read a first time on Friday, the 18th June, and its second reading was fixed for the 29th June, but postponed to Tuesday, July 6. We have little doubt but that it will be carried through the two Houses, and hope it may be so. There are several points in it which we would desire to see amended, and much more which we could wish added, but we will willingly waive our own personal feelings in the matter, that a measure of some kind should be immediately perfected, by which the interests of the profession, in its education and its practice, should be governed and preserved. With reference to the apothecaries, we have long thought that the control of their interests might be left to themselves; if they have manifested apathy on this point, they can hardly blame the Medical Profession in legislating for them; they are too dependent on each other in their interests, that legislation can be effected for the one, and not for the other also.

In the Bill, however, which we publish, will be found an important omission, and which appears to have occurred through inadvertence. Having been politely favoured, by the Hon. the Attorney-General, with a printed proof of the Bill for the purpose of remarks, the second section, detailing the powers to be exercised by the college, stood as follows:—

“To examine all credentials purporting to entitle the bearer to a certificate for license to practise in this Province, and to oblige the bearer of such credentials to attest (on oath to be administered by the Chairman for the time being) that he is the person whose name is mentioned therein, and that he became possessed thereof honestly; Provided always, that if such credentials have been obtained in some University or College in Her Majesty's dominions, the said College shall grant to the holder of such degree or diploma a certificate for license.”

The words beginning at “Provided always,” have been, as we have just stated, inadvertently omitted in the Bill as now printed, but will be reinserted.

The penal clause, we think, will give general satisfaction to the country physicians. The process against illicit practice is as summary as it can possibly be made; but, summary as it is, we are not disinclined to the opinion, based chiefly on the facts announced in the letter of our correspondent under the signature of “Rusticus,” that conviction will be by no means an easy task, because the private feelings of the Justices of the Peace are as likely to be elicited in favour of the quack, and against his punishment, as they appear to have been in the case cited in favour

of his demand for professional (?) services, in direct contravention of the statute 28 Geo. III., cap. 8.

B I L L . .

An Act to incorporate the Members of the Medical Profession in Lower Canada, and to regulate the Study and Practice of Physic and Surgery therein.

Whereas the laws now in force in Lower Canada for regulating the Practice of Medicine, Surgery and Midwifery, and the vending of Drugs, require amendment; And whereas it is highly desirable that the Medical Profession in Lower Canada aforesaid be placed on a more respectable and efficient footing, and that better means should be provided for the conviction and punishment of persons practising the same or vending Drugs by retail without license: Be it therefore enacted, &c.

And it is hereby enacted by the authority of the same, That from and after the passing of this Act, the Act or Ordinance of the Legislative Council of the late Province of Quebec, passed in the twenty-eighth year of the Reign of His late Majesty King George the Third, and intituled "An Act or Ordinance to prevent persons practising Physic and Surgery within the Province of Quebec, or Midwifery in the Towns of Quebec and Montreal, without license,"—and all other Acts or parts of Acts in any manner relating to the Practice of Physic, Surgery or Midwifery, and the vending of Drugs or Medicines in Lower Canada, or in any manner relating to the mode of obtaining licenses to Practice Physic, Surgery or Midwifery, or for the vending of Drugs or Medicines therein, shall be and are hereby repealed, except in so far as relates to any offence committed against the same or any of them before the passing of this Act, or any penalty or forfeiture incurred by reason of such offence: Provided always that the Act of this Province passed in the fourth and fifth years of Her Majesty's Reign, intituled, "An Act to enable persons authorized to practice Physic or Surgery in Upper and Lower Canada, to practice in the Province of Canada," shall not be repealed or affected by this Act.

II. And whereas it is expedient that the Medical Profession of Lower Canada be empowered under certain restrictions to frame its own Statutes for the regulation of the study of Medicine in all its departments, and by Laws for its own government: Be it therefore enacted, That Daniel Arnoldi, M. McCulloch, M. D., G. W. Campbell, M. D., H. H. Sauve, J. B. Valiquet, B. H. Charlebois, M. D., S. C. Sewell, M. D., Alexander G. Fenwick, M. R. C. S. L., J. B. C. Trestler, M. D., Hector Peltier, M. D., P. A. C. Munro, Louis Boyer, M. D., Benj. Ol. Vallée, M. D., W. Fraser, M. D., Hy. Mount, M. R. C. S. L., Louis F. Tavernier, George E. Fenwick, M. D., James J. Dickinson, M. D., Arthur Fisher, M. D., Ed. Robillard, Frederick Morson, M. R. C. S. L., A. Renaud, M. D., Chs. Hugnet Latour, B. Pomenon, Wm. Sutherland, M. D., Frs. C. T. Arnoloi, M. D., Francis Badgley, M. D., A. Hall, M. D., J. G. Bihand, M. D., Horace Nelson, M. D., John Anderson, A. H. David, M. D., Henry Howard, M. D., Robt. L. MacDonnell, M. D., F. Cushing, M. D., B. G. Calder, M. D., W. Mayrand, M. D., W. E. Scott, M. D., Alex. Long, M. D., F. A. Cadwell, M. D., A. B. LaRocque, M. D., W. A. Liddell, Surgeon, James Crawford, M. D., Emery Coderre, Ths. E. d'Odet, d'Orsonnens, A. F. Holmes, M. D., J. B. LeBourdais, E. Q. Sewell, M. D., R. H. D'Amour, Pierre Bronsseau, Chs. H. Keefer, J. B. McIlleur, S. E., T. Bowie, M. D., G. D. Gibb, M. D., S. B. Schmidt, M. D., A. E. Regnier, P. E. Picault, F. Cushing, M. D., W. Fleury D'Eschambault, C. H. Castle, — Lachapelle, Cloep, Bernard, C. E. N. Courteau, Ad Eugas, M. D., J. Trudel, Ant. LaFrenière, M. D., A. R. Archambault, F. Hudon, J. B. Gauthier, Leonard Brown, A. F. Alexander, Rotus Parmelee, P. M. Moreau, J. B. DeRosiers, M. S. Glines, M. D., Benj. Damon, M. D., Frs. Sheriff, M. D., Uriah Lafflin, Michl. Puisse, Hildreth, — Von. Iffland. — Grenier, H. Cartier, T. Kimber, Hy. Lord, R. Cartier, J. H. Beauchemin, C. Pelison, Felix Coté, Hy. Carter, S. N. Goin, L. H. Gauvreau, P. O. Lassiseyave, Adol. Alexander, — Smith, — Malhiot, — Rousseau, — Brassard, Calvin Alexander, — Bourgeois, — Landry, Deslote, — Fortier, J. Trudel, Ed. McDonald, — Lemaitre, — Badau, W. A. R. Gilmour, John Fitzpatrick, L. N. Rousseau, John Clark, Joseph Coté, W. A. Stewart, Ed. Boudreau, J. B.

Noel, C. P. Dubé, J. E. Hudon, H. P. Ouellet, L. T. Chaperon, P. Clarest, H. Desjardins, R. Bédard, L. Tétin, J. G. G. Miville de Chêne, D. S. Marquis, C. Lérois, M. DeSaies LaTerrière, A. Dubord, L. Freinblay, L. D. Harvey, C. G. Couillard, L. T. J. Sinclair, E. S. Belleau, H. Germain, R. F. Rinfret, J. Marmette, A. T. Michaud, F. Poulin, P. A. Dubois, and R. MacKenzie, and their successors, to be named and appointed as hereinafter described, shall be and are hereby constituted a body politic and corporate by the name of "The College of Physicians and Surgeons of Lower Canada," and shall by that name have perpetual succession and a common seal, with power to change, alter, break or make new the same; and they and their successors by the name aforesaid may sue and be sued, implead and be impleaded, answer and be answered unto in all Courts and places whatsoever, and by the name aforesaid shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this Act and for the benefit of the said College, all such sums of money as have been or shall at any time hereafter be paid, given or bequeathed to and for the use of the said College; and by the name aforesaid shall and may at any time hereafter without any Letters of Mortmain, purchase, take, receive, have, hold, possess and enjoy any lands, tenements or hereditaments, or any estate or interest derived or arising out of any lands, tenements or hereditaments for the purposes of the said College and for no other purposes whatever; and may sell, grant, lease, demise, alien or dispose of the same, and do or execute all and singular the matters and things that to them shall or may appertain to do; Provided always, that the real estate so held by the said Corporation shall at no time exceed in value the sum of thousand pounds.

III. And be it enacted, That from and after the passing of this Act, the persons who compose the College of Physicians and Surgeons shall be called "Members of the College of Physicians and Surgeons of Lower Canada."

IV. And be it enacted, That the affairs of the said College shall be conducted by a Board of Governors thirty-six in number, fifteen of whom shall be elected by the College generally from among its Members in the Districts of Quebec and Gaspé fifteen from among its Members in the District of Montreal, and six from among its Members in the Districts of Three Rivers and St. Francis.

V. And be it enacted, That the said Board of Governors shall be, and they are hereby constituted, "The Provincial Medical Board," in which capacity they shall meet for the examination of candidates not less than twice in each year at such time and place as to them shall be deemed most fit, and on which occasions seven shall be a quorum for the transaction of business.

VI. And be it enacted, That from and after the passing of this Act, no person shall receive a license to practise Physic, or Surgery, or Midwifery, or to vend drugs, medicines or patent medicines in Lower Canada, unless he shall have obtained a certificate of qualification from the said Provincial Medical Board; and which license the Governor of this Province shall grant upon the production to him of such certificate of qualification.

VII. And be it enacted, That from and after the passing of this Act, no person shall be admitted as a student of Physic, Surgery or Midwifery, or as an apprentice to any Chemist and Druggist, unless he shall have obtained a certificate of qualification from the said Provincial Medical Board.

VIII. And be it enacted, That from and after the passing of this Act, no person shall practise Physic, or Surgery, Midwifery, or shall vend any drugs, medicines, or patent medicines by retail, or shall act as a Chemist or Druggist, in Lower Canada, unless he be a person duly licensed so to practise, or so to vend drugs and medicines or patent medicines, or to act as a Chemist and Druggist, either before or after the passing of this Act, under a penalty of currency, for each day on which any person shall so practise, or shall act as a Chemist or Druggist, or sell any drugs, medicines or patent medicines contrary to the provisions of this Act: And such penalty shall be recoverable on the oath of any two credible witnesses, before any Justice of the Peace for the District in which the offence shall have been committed, and in default of the payment of such penalty on conviction, the offender may be committed to the Common Gaol of the District, until the same be paid: Provided always, that nothing herein contained shall extend to prevent any person duly licensed to practise Physic, Surgery, or Man-Midwifery in Upper Canada,

from practising the same in Lower Canada, according to the provisions of the Act herebefore cited.

IX. And be it enacted, That the said College of Physicians and Surgeons shall have power,—

1. To regulate the study of Medicine, Surgery, Midwifery and Pharmacy, by making rules with regard to the preliminary qualification, duration of study, *curriculum* to be followed, and the age of the candidate applying for a certificate to obtain a license to practise.

2. To examine all credentials purporting to entitle the bearer to a certificate for license to practise in this Province, and to oblige the bearer of such credentials to attest (on oath to be administered by the Chairman for the time being) that he is the person whose name is mentioned therein, and that he became possessed thereof honestly.

3. To cause every member of the profession now practising or who may hereafter practise in Lower Canada, to enregister his name, age, place of residence, nativity, the date of his license and the place where he obtained it, in the books of the College.

4. To appoint a Committee in each District for the purpose of occasionally inspecting druggist establishments and other places where drugs, medicines or patent medicines are sold, to ascertain that poisons are carefully labelled and kept apart, and that the drugs or medicines generally are of pure quality.

5. To fix the period of probation which persons must undergo before being eligible for election as Members of the College, which period shall not be less than four years.

X. And be it enacted, That the qualification to be required by the Board of Governors from a person about to commence the study of Medicine in this Province, shall be: A good moral character, and a competent knowledge of Latin, History, Geography, Mathematics and Natural Philosophy;—and that from and after the end of the year one thousand eight hundred and fifty, a general knowledge of the French and English languages shall also be indispensable.

XI. And be it enacted, That the qualifications to be required from a candidate for examination to obtain a certificate for a license to practise shall consist in his not being less than twenty-one years of age; that he has followed his studies uninterruptedly during a period of not less than four years under the care of one or more general practitioners duly licensed; and that during the said four years he shall have attended at some University, College or Incorporated School of Medicine within Her Majesty's Dominions not less than two six months' Courses of General Anatomy and Physiology—of Practical Anatomy—of Surgery—of Practice of Medicine—of Midwifery—of Chemistry—and of *Materia Medica* and Pharmacy,—one six months' Course of the Institutes of Medicine,—one three months' Course of Medical Jurisprudence,—and one three months' Course of Botany, if obtainable in Lower Canada; also, that he shall have attended the general practice of an Hospital in which are contained not less than fifty beds under the charge of not less than two Physicians or Surgeons for a period not less than one year, or two periods of not less than six months each; and that he shall also have attended two three months' or one six months' Course of Clinical Medicine, and the same of Clinical Surgery.

XII. And be it enacted, That all persons obtaining the certificate for license to practise from the College of Physicians and Surgeons of Lower Canada, shall be styled Licentiates of the said College, and be consequently in due course of time eligible to be elected members of the same, and such persons so elected shall be at once eligible for election as Governors.

XIII. And be it enacted, That the qualifications to be exacted from a person intending to study to become a druggist shall be: the possession of a competent knowledge of Latin, with a liberal French or English education; his being at least sixteen years of age, and of good moral character.

XIV. And be it enacted, That the qualifications to be exacted from a candidate for a certificate to obtain a license to sell drugs or medicines shall be: his being not less than twenty-one years of age; his having attended not less than two six months' Courses of Chemistry—two six months' Courses of *Materia Medica* and Pharmacy—one three months' Course of Medical Jurisprudence—and one three months' Course of Botany, if obtainable in Lower Canada; and moreover, that he shall have been uninterruptedly engaged in the compounding and dispensing of drugs and medicines during a period of not less than four years under the super-

intendence and care of some duly licensed general practitioner or druggist.

XV. And be it enacted, That the Board of Governors aforesaid shall regulate the fees to be paid by all candidates about entering on the study of medicine, provided the amount of said fee do not exceed the sum of one pound five shillings said currency; and also by all persons who obtain from the said Board a certificate for license to practise medicine or to vend drugs or medicines; provided that the said fee do not exceed the sum of

currency; which fees the Governors shall have the power to dispose of in such manner as they shall deem most proper for the interests of the College.

XVI. Provided always, and be it enacted, That nothing in this Act contained shall be construed to prevent or prohibit any competent female from practising midwifery in Lower Canada, such female proving her competency before any two members of the College of Physicians and Surgeons and obtaining their certificate to that effect.

XVII. And be it enacted, That any person vending spurious or adulterated drugs or medicines, or neglecting to correctly label the poisons in his shop and to have them carefully set apart in some place especially devoted to that purpose, or vending any poison without prescription or license of a duly licensed medical practitioner or the certificate of a clergyman recommending the purchaser for the purchase of the same,—shall, on conviction thereof before one Justice of the Peace, upon the oath of any one of the Committee to be appointed by the Governors of the said College for the especial purpose of inspecting druggist establishments and other places where drugs or medicines are sold, incur a penalty not exceeding

for the first offence, and a penalty not exceeding for each and every subsequent offence, and may be committed to the Common Gaol until such penalty be paid.

XVIII. And be it enacted, That the Committees so to be named by the Governors of the said College for the purpose of inspecting the said druggist establishments, shall be, and they are hereby authorised to enter any such establishment whenever they shall see fit, during ordinary business hours.

SHIP FEVER.

This disease, which is but a malignant modification of typhus, has carried off great numbers; and, we are sorry to add, from its remarkably contagious nature, is rapidly gaining ground in this city, Quebec, and those places along the route to the upper province usually followed by the emigrants. In consequence of the crowded state of the passengers on ship board, aided by poor diet, want of free ventilation, and that total absence of personal cleanliness, for which the pauper class of the Irish who arrive here appear to be distinguished—numbers have perished on the passage; while in those, whose constitutions have enabled them to weather the hardships and distress incident to protracted voyages under the circumstances mentioned, the disease rapidly develops itself after their arrival, and is characterised by the same malignity, and a nearly uniform mortality, under whatever circumstances treated. When treated early, the disease is most usually found manageable; but if delay takes place, even for a few days, before medical assistance is called in, the cases most frequently turn out unfavourably. It is usually ushered in by a rigor, general *malaise*, and the usual concomitants of a febrile attack; to which are superadded a marked prostration of nervous energy, mental depression, disinclination to

motion, the tongue usually affording palpable evidence of irritation or congestion of the mucous membrane of the alimentary canal, and in many cases the icteroid tint of the conjunctiva and skin denoting a congested state of the hepatic system, and an impairment of its functions. Diarrhœa, dysentery, and bronchitis, are the usual complications, and in one respect the disease differs materially from the typhus which in previous years has prevailed among the emigrants, in the supervention of profuse sweats, of a *non-critical* character, breaking out at irregular periods of the disease, and in all the cases in which we have seen it, indicating the necessity for an immediate recourse to a stimulant treatment. Petechiæ make their appearance usually about the sixth day, and are diagnostic of the severity of the disease and its type.

With reference to the treatment, we have to observe that one of an active nature is to be generally avoided. So great is the nervous depression and the debility, that abstraction of blood, either local or general, can seldom be borne with impunity, even in those cases which, under ordinary circumstances, would appear most to demand it. In other respects, the treatment to be pursued is that usually employed in febrile cases, omitting every article likely to induce, or keep up, irritation of the mucous membrane; while a cautious stimulation is usually early demanded when the pulse affords signs of weakness.

Up to the present moment, 32,338 emigrants have landed on our shores; and of this number, exclusive of those who have died on the passage, and are sick in this city, Quebec, and the intermediate places, (and of whom we have no record, because not entering the hospitals,) upwards of 5000 have been known to have been ill—being about one-sixth of the whole number. The medical staff at the Quarantine, and at the Emigrant Sheds in the vicinity of this city, have received additions to their numbers; but are yet insufficient to meet the exigency. The medical officers in charge are worn out and harassed with their arduous and unceasing labours. The mortality is appalling. At the Quarantine establishment at Grosse Isle, 2,796 cases, of which more than four-fifths were cases of fever, have been treated between the 8th of May and 19th June. Of this number 565 have died, being at the rate of 1 in every 4.9 cases, or 20.4 per cent. At the Emigrant Hospitals, in the neighbourhood of this city, between the 13th and 28th of June, 1420 cases, all of fever, were admitted—the deaths during the same period numbering 331, affording a greater ratio of mortality, the rate being 1 to every 4.2 cases, or 23.8 per cent. We have not been enabled to ar-

rive at any satisfactory conclusion with reference to the Marine Hospital at Quebec, no return having been made to the Provincial Secretary's Office anteriorly to the 20th of June. The weekly return during the period between the 20th and 26th June, gave a total number of 859 cases; of which 394 were cases of fever, and 24 of dysentery. The mortality during the same period was 27. Assuming that this mortality was met with exclusively among these cases, it would form a rate of 1 to every 15.4, or 6.4 per cent, a ratio so disproportionate to what has been observed at the other stations, that we can place no reliance upon it, as indication of the character or type of the cases admitted. We are enabled to speak more positively and with greater certainty, with reference to the Montreal General Hospital. From the 28th May to the 28th June, 298 sick emigrants were admitted. Of these 143 were cases of typhus, 18 were cases of diarrhœa, and 97 of common continued fever. The mortality among the typhus cases, every one of which was of the petechial type, was 1 to 4.9, or 20.4 per cent. Of the cases of simple continued fever and diarrhœa, one only, respectively, died; while estimating the mortality upon the general number of admissions, as we have done in the other institutions, we find it to have been for the same period, 1 to every 7.7 cases, or 12.9 per cent., the total admissions having been 324, and the deaths 42.

We regret that our data are so imperfect. The returns from the institutions at Grosse Isle, the Marine Hospital, and the Emigrant Sheds in this city, afford but general results. The deaths are recorded, but without specifying the particular diseases under which the mortality occurred. For general purposes, they may be turned to advantage, but for special ends, such as the ratio of the mortality of a particular disease, they are valueless. The return of the Montreal General Hospital may be assumed as a fair criterion of the average mortality of the ship fever, even under its most favourable chances of treatment, and portrays its malignant character, and its fatality, in a manner which cannot be misinterpreted.

We do not wish to be considered as alarmists, nor are we writing for the purpose of engendering any unnecessary or groundless apprehensions. The disease is an eminently contagious one; and the records of private practice, both in this city and Quebec, (as we have been informed,) proclaim its steady progress among the inhabitants. To be forewarned is to be forearmed. Let the strictest cleanliness prevail everywhere. Let the Boards of Health be active and energetic in their duties, and let the civic authorities pay immediate attention to their reports, and carry out their suggestions with vigorous determination, laying all pecuniary con-

siderations aside. Public health is public wealth ; by paying due regard to the former, the latter is certain to follow ; and the funds of the city are much better employed, and will produce a greater and more satisfactory return by the mode indicated, than by all the embellishments which the same amount of money might command. We think that the emigrants, under existing circumstances, should be debarred all communication with the citizens.

STATEMENT OF BAPTISMS, MARRIAGES AND DEATHS, IN THE ISLAND OF MONTREAL, FOR THE YEAR 1846.

PARISHES.	Baptisms.		Marriages	Burials.	
	Male	Fem.		Male	Fem.
Montreal Parish Church, Catholic.....	1280	1182	581	853	880
“ Hôpital Général, Sœurs Grises	1	1	0	127	169
“ Christ Church Prot. Episcopal	87	61	56	51	37
“ Montreal Garrison.....					
“ St. George's Chapel.....					
“ Trinity Chapel, Prot. Epis...	37	29	36	25	25
“ St. Thomas' Ch. do do	28	25	43	14	15
“ St. Anne's Chap., Griffintown	13	20	5	4	2
“ St. Mary's Chap., Current St					
“ Mary.....	1	2	0	1	0
“ Episcopal Church Society for Montreal, &c. &c.....					
“ St. Paul's Ch. Presbyterian, St. Helen Street.....	22	26	30	17	16
“ Scotch Ch. St. Gabriel Street					
“ St. Andrew's Ch Presbyterian	53	45	30	27	11
“ Presbyterian Ch St Lawrence Suburb.....	23	13	56	22	17
“ American Presbyterian Ch Gt St James Street.....	7	3	3	9	5
“ Colé Street Free Ch or Presbyterian Church.....	14	7	3	3	4
“ Wesleyan Methodist Congregation.....	64	55	34	36	18
“ Wesleyan Congregation, Gt St James Street.....					
“ Methodist New Connexion Church.....					
“ French Presbyterian Church. Eglise Evangélique Francaise	2	1	5	0	0
“ First Congregational Church, St Maurice Street.....	7	7	20	4	10
“ Second Congregational Ch, Gosford Street.....					
“ United Associate Church, Lagauchetière Street.....	23	18	36	18	10
“ Baptist Church, St Helen St.	3	4	3	2	3
“ Jewish Church.....					
“ Unitarian Church.....	8	4	2	3	6
Lachine Catholic Church.....	65	64	20	28	19
“ Church of England.....	4	8	6	3	3
“ Church of Scotland.....	12	5	5	7	2
St Joachim de la Pointe Claire.....	34	37	12	20	19
Stc. Ann du Bout de l'Isle.....	18	22	6	10	6
Ste. Genevieve.....	58	54	25	26	20
St Laurent.....	65	62	23	41	24
Sault au Recollet.....	64	48	15	29	25
St Joseph de la Rivière des Prairies.	32	30	10	12	20
Pointe aux Trembles.....	20	38	14	15	16
Longue Pointe.....	20	16	8	16	11
	2065	1887	1087	1423	1393

La Lancette Canadienne.—We regret to announce that this Journal, which promised to effect much good among the Canadian medical practitioners of this Province, has been discontinued, after a six months' existence, in consequence of want of support on the part of those to whom it immediately addressed itself. We are not a little surprised at this, as it was the only journal published in that language with which its subscribers were most familiar, and should, were it only on such grounds, have been generally sustained. To a certain extent, this failure reflects discredit on the Canadian practitioners. We are far from including all our Canadian confreres in this observation, but the issue leaves us much reason to question, whether a large majority of them can be considered as desirous of maintaining their knowledge, *pari passu*, with the rapid progress of the medical sciences. Dr. Leprohon deserves credit, however, for his attempt, and we are sorry to perceive such an apathetic indifference to the success of the project.

We notice also that the New York Medical and Physical Journal has descended “to the tomb of all the capulets.” The place of the latter journal is worthily supplied by the Annalist, which still, and most deservedly, rises in general favour.

Thompsonian Petitions to the Legislative Assembly.—The Thompsonians are a lucky and a modest crew. Their modesty prevents them from trumpeting their own praises, but their good fortune makes others do it for them. The table of the Legislative Assembly has been graced by four petitions, their object being the legalisation of the claims of Thompsonian practitioners, for their services in the cause of suffering humanity. One emanates from the inhabitants of the Johnstown District, with 143 signatures ; a second from the inhabitants of the Niagara District, signed by the Rev. W. Philo, B. T. P., and 125 others ; a third, from the Bathurst District, with 69 signatures ; and a fourth from the *the inhabitants of the Province of Canada*, with 866 signatures, among which we find the names of the following *Reverend gentlemen* :—Rev. J. Gemby, Wesleyan Methodist Church ; Rev. Thomas Alexander, A. M. ; Rev. James H. Leonard ; Rev. Thomas Webster ; Rev. John Sills ; Rev. Jonathan Scott ; Rev. John Cassie ; and a full-fledged M.D., who rejoices in the name of George Boyer, M.D., besides a host of J.P.'s. In this wholesale support of a species of quackery of the worst description, we can well excuse the countenance afforded by the J.P.'s—a class whose literary acquirements and competency for their duties are not unfrequently much upon a level with

Total increase in the County of Montreal, for 1847.....1,136
—Montreal Herald.

their legal attainments; but it is usually different with ministers of the gospel, whose more liberal education would, we might naturally have supposed, have caused them to keep aloof from charlatanism of every description, much more from a scheme which denounces, in unmeasured terms, a profession which has stood the test of ages, and the practice of which is based upon the experience and the observation of the best and most enlightened of the human race, who have made disease the sudy of their lives. With a species of hypocrisy, characteristic of the Thompsonian tribe, they proscribe the use of mineral remedies, because poisonous, studiously concealing the fact, that in the vegetable kingdom are to be found poisons of a far more active nature than any derived from the mineral, and which they scruple not to use, although grossly ignorant of their properties and doses, as evidenced by a late inquest in this city—an incidental notice of which was taken in a previous number of this journal. We hope these Reverend gentlemen will obtain their end, of which, however, we have some doubts, and that the demands of the Thompsonians will be legalized. We say we hope so, for it will then be found that the rapacity of these impostors will far outstrip their arrogance and their cunning—a consummation with which the signers to the petitions deserve to be visited.

CORRESPONDENCE.

To the Editor of the B. A. Journal of Medical Science.

Mr. Editor,—I am a plain country practitioner, a resident in a secluded rural district for the last ten years, jogging along as I best may, and unenlightened as to the march of medical science, further than the glimpses I obtain from the columns of your Journal, the monthly arrival of which I look forward to with great delight.

Your last number contains some strictures on the proposed bill for a College of Physicians and Surgeons, C. E. I am one of those to whom a circular was sent, but entertaining opinions nearly similar to your own on the subject, I have as yet hesitated to authorize my name being appended to the petition. Allow me, however, to say that I consider the penalty clause the best that has ever been suggested to fulfill the wishes of the country surgeon.

The interests of the country practitioner seem to be entirely lost sight of in all that has yet been done. Too much attention has been paid to the mere preliminary and collegiate courses of rival schools, to allow much time to be wasted on his interest; and yet where, in the whole profession, do you find any so grudgingly required for his laborious exertions, or the daily and hourly annoyances he is forced to bear, or how his preserves are poached upon by a host of rapacious quacks.

Believe me, Mr. Editor, you or your city compeers can form no conception of our position. In stating

my own, it may, without exaggeration, be taken as a sample of nine-tenths of the country practitioners of this Province. Imprimis, then, I am annoyed by a noted *bone setter*, who, mainly I believe from possessing the happy knack of dislocating his own thumb at pleasure, gulls the public with the belief, that no case, no matter how long unreduced, can withstand his manipulations, the snap of his own thumb settles all, and the fee is immediately forthcoming!

Under my very nose lives neighbour B., who bleeds and extracts teeth at exactly half the professional charge. This to you may appear a trifling grievance, yet I assure you the receipts before this infringement of my rights, has helped greatly to condition my horse for a hard midnight's ride. In the extirpation of tumours, &c., my scalpels have grown rusty for want of use, as Dr. B., so called, takes this branch under his care, and unblushingly promises a cure in all cases, malignant or benign, at a moderate cost! It was only the other day I was consulted by a woman who had suffered severely in general health from the application of his *nostrum*, to a carcinomatous mamma, and which has caused a fearful enlargement of the tumour, so as almost to preclude the *hope* of recovery; yet this *pretender* has the impudence to demand payment, and threatens law proceedings in the event of a refusal!! In midwifery, not to mention a host of illiterate midwives—until late there was a Dr. S. who used to *do the natives*, and a great run he had, till an unlucky case of arm presentation occurring, for which he was unprepared, and to remedy which he had recourse to the brutal expedient of cutting off the presenting member with a common jack-knife, and left the woman to her fate! upon the arrival of my friend Dr. R., who succeeded in effecting delivery, but too late to save the mother or child. This daring aggressor, to escape the consequences of his ignorance, *cleared* from the neighbourhood the same night, leaving his books and instruments behind him! Even the storekeepers have so far forgotten the sphere nature intended them for, as to encroach on my privileges by dispensing such articles as strychnine, arsenic, tartar emetic, calomel, quinine, and, in fact, the whole contents of a well-ordered surgery.

These illegal pretenders make regular charges, ay, and get paid too, and what must surely surprise you, it has been decided in our Commissioners Court here, that it was of no consequence whether a person was licensed or not, and that decision was acted upon. Under circumstances such as these, is it surprising that many have abandoned the profession in disgust, and entered other pursuits where their exertions are better requited? How long are such practices to be tolerated, inflicting, as they do, incalculable injury both on the regularly qualified medical man, as well as the public? The existing remedy is *totally* inadequate to stop them. The proposed medical bill—however stringent the penal clauses—if the enforcing of them is to be left to the complaining party himself, will, I venture to say, never answer. Where is the medical man who will incur the *onus* of becoming the prosecutor? Where the willing witnesses to back

him? Who would travel forty, or it may be one hundred and forty miles, or go before a country magistrate, merely to stop for a time the inroads of some quack, and thus enable him to insult you with greater impunity than ever? Constituted as society is in this country, such a plan will never do.

I have already said the penal clause in the proposed bill for the College of Physicians and Surgeons is the best that has been suggested. I repeat the conviction, and I would call upon all my brethren who are situated such as I am, and many there are, to demand from the Legislature that justice which has been so long denied them—to be no longer content with “live horse, and you'll get grass.” I would implore them not to allow the charge of stoic indifference to be brought against them, as was the case last year when the medical bill was projected; are we to toil on in the same way till we grow “grey in the service,” whilst other professions are daily achieving something beneficial? Can we not be brought to sink all petty differences for once to get some protection that will benefit ourselves, and those that may be in training for the same end?

Your aid, too, Mr. Editor, in this matter, will work a world of good. Try if you can't infuse some spirit amongst your numerous country readers that will stir them up to help themselves; for my part, rather than go on toiling for years more, as I have done, to be subject to the same vexations, I would be content to pocket the insult as the bill stands, and join the College of Physicians and Surgeons of C. E., with all its disadvantages, merely from the fact that half a loaf is better than no bread.—Yours, &c.,

St. Andrews, June 7, 1847.

RUSTICUS.

To the Editor of the British American Journal.

SIR,—The daily journals notice the presentation to the Legislature of a petition for the incorporation of a College of Physicians and Surgeons; which college shall have a superintending power over the profession generally. Now, Sir, as we are in the dawn of a better state of things, from the fact that the hitherto rival schools have agreed as to the clauses to be inserted in this act; as they have also agreed upon the Ticket for the General Hospital, (and, I regret to learn, selected as one of the twelve a vendor of “drugs, paints, and chemicals,”) and that the last number of your interesting journal announces the reception of the tickets of the School of Medicine by McGill College, induces me to trouble you with these remarks, for the purpose of suggesting to those who may be empowered to draw up rules and regulations, the necessity there exists for placing apothecary shops under better management than they are at present, and as is the case in other large cities, compelling certain of them to be kept open on Sundays and Holidays, and requiring a competent clerk to sleep on the premises every night, so that we may be enabled to procure any medicine, or other articles, at all times and at all hours, which is not the case at present.—Yours,

A GENERAL PRACTITIONER.

Licentiates of the Medical Boards.—Montreal, June 5.—His Excellency the Governor General has been pleased to grant Licenses to Charles H. Keefer and Aléide Faneuf, Esquires, to enable them to practise Physic, Surgery, and Midwifery, in that part of the Province of Canada heretofore Lower Canada.

12th June.—His Excellency the Governor General has been pleased to grant a License to Dr. Henry Reed Melville, of Niagara, to practise Physic, Surgery, and Midwifery in this Province.

NOTICE TO CORRESPONDENTS.

Mr. DeRotterdam's reply has been received, but at far too late a period to receive insertion in this number; it will appear in our next; communications for insertion must be received by the 15th of the month at the latest, as announced in the title page of the Journal.

The Editor of the Dublin Quarterly Journal of Medical Science is informed that this Journal has been regularly mailed to him. The non-arrival of the Journal may be attributed to some error in the direction; we observe that other American periodicals are in the same predicament as ourselves in this respect. We will in future address our exchange to the care of his publishers, Messrs. Hodges & Smith, Grafton Street, Dublin. The Dublin Medical Press, appears to have received our exchange regularly, and we cannot account for its non-reception by the Dublin Quarterly.

BOOKS, &c., RECEIVED.

- Stockton's Dental Intelligencer. April.
 Catalogue of the Medical Department of Pennsylvania University, for Session of 1846-47. Lexington, Ky.
 Western Lancet. March, May.
 Valectictory Address to the Graduates of the Medical Department of Pennsylvania College.—Session of 1846-47—Washington.
 By L. Atlee, M.D., Prof. Chemistry. From the Author. Philadelphia, 1847.
 Dublin Med. Press. April 7, 14, 21, 23. May 5, 12, 19, 26. June 2, 9
 Observations on Aneurism, and its Treatment by Compression. By O'Bryen Bellingham, M.D., &c. London, 1847.
 The New York Journal of Medicine and the Collateral Sciences May.
 The Southern Journal of Medicine and Pharmacy. May.
 The Medical Examiner. April, May, and June.
 The American Journal of Science and Arts. May.
 Summary of the Transactions of the College of Physicians of Philadelphia, from December, 1816 to April, 1847, inclusive.
 The Medical News and Library. May and August, 1846.
 January, April, May, and June, 1847.
 Reports of Committees of United States National Medical Convention.
 La Lancette Canadienne. May 1, 15. June 1, 15.
 Boston Med. and Surg. Journal. April 28. May 5, 12, 19, 26. June 2, 9, 16, 23.
 New York Med. and Surg. Reporter. April 24. May 8. Annalist. April 15. May 15. June 1, 15.
 London Medical Gazette. April 2, 9, 16, 23, 30. May 7, 14, 21, 28. June 4, 11.
 Provincial Med. and Surg. Journal. April 7, 21. May 5, 19. June 2.
 Missouri Med. and Surg. Journal. April. May.
 Southern Med. and Surg. Journal. April. May. June.
 Buffalo Med. and Surg. Journal. May. June.
 New Orleans Med. and Surg. Journal. May.
 Braithwaite's Retrospect of Medicine. Vol. XIV. July to December, 1845. London.
 Annual Circular of the Medical Institution of Geneva College, Session of 1847. Buffalo.
 Address to the Graduates of Geneva Medical College. By Charles A. Lee, M.D., Prof. of Gen. Pathology and Mat. Med. New York.

BILL OF MORTALITY for the CITY of MONTREAL, for the month ending MAY 31, 1847.

DISEASES	Male.	Female.	Total.	Under 1.	1 & under 3	3 — 5	5 — 10	10 — 15	15 — 25	25 — 35	35 — 45	45 — 55	55 — 75	75 upwards
EPIDEMIC OR INFECTIOUS.....	Small Pox.....	1	1	2	1		1							
	Measles.....	2	2	4	2									
	Scarlatina.....	1	2	3	1	1	1							
	Fever.....	8	4	12	3	2	3	2						2
DISEASES OF BRAIN AND NERVOUS SYSTEM.....	Dentition.....	4	5	9	4	5								
	Convulsions.....	2	3	5	5									
DISEASES OF RESPIRATORY ORGANS..	Consumption.....	28	19	47	14	3	1	1	11	7	3	1	6	
	Croup.....	1		1	1									
	Pleurisy.....	1		1	1						1			
	Hooping Cough.....		1	1	1									
	Diarrhoea.....	2	1	3	3									
DISEASES OF ABDOMINAL VISCERA,	Dropsy.....	3	1	4	2					1	1			
	Jaundice.....		1	1	1								1	
	Unknown.....	6	7	13	8		1				3		1	
	Suicide.....		1	1	1						1	1		
OTHER CAUSES AND DISEASES, AND DISEASES NOT SPECIALLY DESIGNATED.....	Inflammation.....	9	6	15	13	2	1	3	1	2	1	2	1	1
	Stillborn.....	3	3	6	6									
	Debility.....	1	6	7	2									3
	Prematurely Born.....	1	1	2	2									
	Sudden Death.....	2	2	4						1	1	1	1	
	Childbirth.....	1	1	1								1		
	Burned.....	1	1	2				1						
	Poisoned.....	1		1			1							
	Suffocated.....	1		1	1									
	Total.....	78	66	144	54	13	8	8	2	14	10	13	3	15

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR MAY, 1847.

DATE.	THERMOMETER.				BAROMETER.				WINDS.			WEATHER.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	Noon.	6 P.M.	7 A.M.	3 P.M.	10 P.M.
1.	+36	+53	+40	+44.5	29.76	29.73	29.88	29.79	W. by N.	W.	W.	Fair	Fair	Fair
2.	" 40	" 50	" 43	" 45.-	29.30	29.72	29.72	29.58	S. by E.	S. by E.	S. by E.	Fair	Cloudy	O'cast
3.	" 43	" 50	" 41	" 46.5	29.77	29.78	29.81	29.79	W.	W. by S.	W. S. W.	Fair	Hail sh	Fair
4.	" 41	" 58	" 43	" 49.5	30.05	30.10	30.12	30.09	W.	W.	W.	Fair	Fair	Fair
5.	" 45	" 67	" 47	" 56.-	30.15	30.12	30.12	30.13	S. W by W.	S. W.	S. W.	Fair	Fair	Fair
6.	" 50	" 73	" 48	" 61.5	30.09	29.98	29.94	30.09	W.	W.	W.	Fair	Fair	Fair
7.	" 55	" 80	" 58	" 67.5	29.86	29.69	29.63	29.73	W.	S. W.	S. W.	Fair	Fair	Fair
8.	" 52	" 76	" 59	" 64.-	29.55	29.46	29.57	29.53	S. W.	N.E. by E	N. E.	Fair	Fair	Fair
9.	" 51	" 71	" 53	" 61.-	29.79	29.90	29.93	29.87	N. E.	N. E.	N. E.	Fair	Fair	Fair
10.	" 50	" 72	" 57	" 61.-	30.01	29.86	29.88	29.92	N. E.	N.E. by N.	N.E. by N	Fair	Fair	Fair
11.	" 55	" 77	" 61	" 66.-	29.43	29.68	29.64	29.58	N. E.	N. E.	N.E. by E	Fair	Cloudy	Fair
12.	" 52	" 78	" 58	" 65.-	29.66	29.68	29.76	29.70	N. E.	N. E.	N. E.	Fair	Fair	Fair
13.	" 51	" 75	" 53	" 63.-	29.91	29.83	29.87	29.87	N. E.	N. E.	N. E.	Fair	Fair	Fair
14.	" 52	" 73	" 58	" 62.5	29.89	29.87	29.88	29.88	N. E.	N. E.	N. E.	Fair	Fair	Fair
15.	" 53	" 78	" 62	" 65.5	29.92	29.88	29.83	29.88	N. E.	N. E.	N. E.	Fair	Fair	Fair
16.	" 58	" 80	" 62	" 69.-	29.80	29.76	29.74	29.77	N. E.	N. E.	S. E.	Fair	Fair	Fair
17.	" 61	" 79	" 68	" 70.-	29.70	29.69	29.64	29.68	S. E.	S. E.	S. E.	Fair	Fair	Fair
18.	" 56	" 66	" 53	" 61.-	29.60	29.58	29.59	29.59	E.	E.	E.	Fair	Cloudy	Rain
19.	" 59	" 73	" 52	" 66.-	29.55	29.61	29.72	29.63	E.	E.	E.	Fair	Fair	Fair
20.	" 55	" 69	" 57	" 62.-	29.66	29.76	29.75	29.72	E.	E.	E.	Fair	Fair	Fair
21.	" 55	" 80	" 63	" 67.5	29.71	29.60	29.50	29.60	E.	E. by S.	S. S. E.	Fair	Fair	Rain
22.	" 58	" 69	" 64	" 63.5	29.47	29.44	29.56	29.49	S.	S. S. W.	S. W.	Rain	O'cast	Cloudy
23.	" 61	" 71	" 63	" 66.-	29.55	29.73	29.65	29.64	N. E.	N. N. E.	N W by N.	Fair	Fair	Cloudy
24.	" 54	" 75	" 64	" 64.5	29.67	29.73	29.64	29.68	NN. W.	N. E.	S.	Rain	Cloudy	Cloudy
25.	" 64	" 79	" 67	" 71.5	29.60	29.54	29.51	29.55	S. by E.	S.	S.	Fair	Fair	Rain
26.	" 67	" 65	" 52	" 66.-	29.46	29.69	29.82	29.66	W. S. W.	W.	W.	Rain	Fair	Fair
27.	" 54	" 74	" 62	" 64.-	29.75	29.76	29.80	29.74	W.	W. by N.	W. by N	Fair	Fair	Fair
28.	" 61	" 59	" 55	" 60.-	29.76	29.81	29.83	29.81	N. W.	N. W.	N. W.	Fair	Show's	Fair
29.	" 55	" 54	" 45	" 54.5	29.78	29.68	29.75	29.74	N. E.	N. E.	N. E.	Rain	Rain	Fair
30.	" 52	" 64	" 56	" 58.-	29.69	29.79	29.85	29.78	N. E.	N. E.	N. E.	Fair	Fair	Fair
31.	" 58	" 68	" 53	" 63.-	29.79	29.78	29.76	29.78	W.	S. by W.	S. W.	Fair	Fair	Rain

THERM. } Max. Temp., +80° on the 7th, 16th, & 21st.
 } Min. " " +36° " " 1st
 Mean of the Month, +61° 45.

BAROMETER, } Maximum, 30.15 inches on the 5th.
 } Minimum, 29.80 " " 2d.
 Mean of Month, 29.74 inches.

