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[No. 5.

**ART. XXI.—ON THE TREATMENT OF CHRONIC INFLAMMATION OF THE BLADDER BY INJECTIONS OF NITRATE OF SILVER.**

BY ROBERT L. MACDONNELL, M.D.

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I believe it will be generally admitted, that of all diseases, few occasion more anxiety and embarrassment to the medical practitioner, or are productive of more misery and suffering to the afflicted patient, than chronic inflammation of the bladder; the consequence of previous disease of the urinary apparatus, as gonorrhœa or stricture, or as a primary affection produced by other and more general causes.

In either case, when once fully established, it entails the most excruciating suffering on its victim, prevents him following his usual avocations, debars him from society, and not unfrequently produces death, either from the morbid action extending to the ureters and kidneys, from ulceration corroding through the walls of the viscus, or from the exhaustion of the system it is certain to induce.\*

In a disease of such importance, it is only to be expected that numerous remedies should have been proposed for its cure, and consequently we find agents of various natures strongly recommended by practical writers, yet they all admit the difficulty attending the treatment of the malady, and the failure that has followed the use of their favorite remedies.†

Some years ago, Mons. Lallemand, the eminent pro-

fessor of Montpellier, discovered, accidentally,\* the great value of nitrate of silver in chronic inflammation of the bladder, and the utility of this plan was shown in a paper by Dr. O'Bryen, in the fourteenth volume of the Dublin Medical Journal. But this gentleman does not appear to have had any personal experience of its employment, and moreover, he confines his remarks to the use of the solid nitrate, the form preferred by Lallemand.

I am not aware that he has done more in this matter than introduce to the notice of British surgeons the views of the distinguished professor.

When a student of the Richmond Surgical Hospital, Dublin, I had an opportunity of seeing my friend and former preceptor, Dr. Hutton, (to whom I am indebted for much information that I have found valuable in my profession,) inject the bladder with a weak solution of nitrate of silver, but as this had (if I recollect rightly) but little effect upon the disease, the practice was abandoned in the hospital, nor have I since either seen it employed or heard of its being employed by any one but myself, and I can find no mention of it in those valuable records of medical practice—Braithwaite's Retrospect, and Ranking's Digest, or in the recently published Systems of Surgery.

Having met with some cases of chronic cystitis, that resisted general treatment, and bearing in mind the great success which attended the application of nitrate of silver in substance, in the hands of Lallemand, I determined to give the remedy a further trial in the form of solution, and the success I met with, has far surpassed my most sanguine expectations; I have now no hesitation in stating, that as far as pure uncomplicated chronic inflammation of the bladder is concerned, *that the operobrium has been removed from surgery, and that we do possess a method of treatment followed by a greater amount of success than usually attends remedies em-*

\* CRUVELIER, in the details of one of his cases, depicts the sufferings of his unfortunate patient, in the following words,—  
 "Alors se manifestèrent des besoins fréquents et imperieuses d'uriner avec contractions douloureuses de la vessie et douleur à l'extrémité de la verge, les urines devinrent catarrhales, le malade presenta tous les symptômes du catarrh vesical."—"Au bout de quelque temps, les douleurs devinrent tellement vives et tellement rapprochées qu'il lui fut impossible de quitter la chambre."—"Le malade survécut trois mois d'agonie les besoins d'uriner fréquents pressants douloureux contractions violentes detoutes les puissances expultrices, tellement que le defecation accompagnait souvent l'émision des urines."

† Sir Benjamin Brodie, the highest British authority on surgery, and who has devoted so much attention to diseases of the urinary organs, says "there is no disease for which an improved method of treatment is more wanted than for this, which has hitherto been the opprobrium of surgery."—*Lectures on the Diseases of the Urinary Organs.*

\* "When applying caustic to the neck of the bladder, the instrument slipped and cauterized the lining membrane of that reservoir, and to his great astonishment, the patient was cured of a chronic catarrh, as well as the affection for which it was intentionally employed. Speaking of this, in one of his lectures, he used the following language:—"La premiere fois que cette accident, m'arriva, J'eus pendant plusieurs jours des vives inquietudes, sur les consequences qui pouvaient en resulter, mais ils ne se manifesta aucune phenomene facheur."—O'Bryen, *Dublin Medical Journal*, Vol. xiv.

ployed in diseases of so severe and intractable a nature, and infinitely greater than attends the use of any remedy in a disease hitherto considered by the first authorities as incurable.

In proof of this assertion, I shall adduce four cases, two of which occurred in my private practice, and the other two were witnessed in the wards of the Montreal General Hospital, by a large and intelligent class. I could adduce others, but these I bring forward sufficiently support the views I am anxious to inculcate.

CASE I.—A gentleman consulted me last February, under the following circumstances. He had suffered for some months from inflammation of the bladder, marked by frequent desire to pass water, accompanied by heat and scalding, violent straining, pain in the region of the bladder, above the pubis and in the perinæum, and a constant feeling of heat and weight in the lower portion of the abdomen. These symptoms gradually increased in severity. The urine became at first bloody, and afterwards purulent, and the desire to void it became so urgent, that it had to be yielded to, at least every fifteen minutes; the discharge of the fluid being followed by pain and scalding at the neck of the bladder, and along the course of the urethra. His general health became impaired, and his sleep being so frequently disturbed, a haggard and anxious expression of countenance, and extreme irritability of the system, were soon established.

When he first consulted me, fully one-half of the fluid passed from the bladder was pure pus; and after repose, a deposit of blood globules was found to intervene between this and the supernatant urine—the latter being highly alkaline, fœtid, and albuminous. Examined microscopically, it exhibited some scales of nucleated epithelium, a large deposit of triple phosphate in prismatic crystals, pus, and blood globules. There was no pain in the loins or along the ureters. He had a stricture of long standing, about one inch from the orifice of the urethra. In addition to the above characters, the urine was frequently mixed with tenacious masses of lymph, varying in length from half an inch to an inch, and entangling a quantity of earthy matter, they frequently obstructed the passage of the urine through the stricture, and required to be broken up and squeezed through by the pressure of the patient's fingers.

Having dilated the stricture, so as to allow a large sized catheter (No. 11 Weiss) to pass, I determined to treat the disease by injections of nitrate of

silver; and accordingly, on 17th of February, I injected into the bladder a lotion composed of eight grains of lunar caustic, two drachms of tincture of hyosciamus, and four ounces of distilled water.

The injection caused hardly any inconvenience, except that of inducing a strong desire to empty the bladder, which was prevented by compressing the penis, until the fluid had been in the bladder for about one minute, when it was allowed to escape. The next day, the patient stated that he was somewhat better, but the quantity of pus and blood was not, however, much diminished, and the flakes of lymph were more numerous and larger than before. Although he continued improving, yet, as the amendment was not as rapid as I anticipated, injection of the viscus was again resorted to on the 5th of March. On this occasion, the quantity of caustic was increased to sixteen grains in the four ounces of distilled water, and the hyosciamus was omitted. A decided improvement immediately followed; the frequency of making water was greatly diminished; instead of requiring to be voided every fifteen minutes, the bladder could retain its contents for more than two hours at a time, and the quantity of pus had greatly decreased. An injection, of the same strength, was again employed on the 28th of March, and with happy results. The urine could now be retained for three or four hours, was passed without pain or scalding, was clear and transparent, and, to the naked eye, free from pus; but, when examined microscopically, a deposit of pus globules and some epithelial scales were perceptible. On the 18th of April, I repeated the injection, and since then he has been completely free from any symptoms of his troublesome disease; he has resumed his former mode of life and pursuits, and has been subject to various changes of temperature whilst travelling, without experiencing the least return of his former symptoms.

I should mention that, pending the treatment for the cystitis, he had a severe attack of laryngitis œdematosa, which was near proving fatal.

CASE II.—Mr. —, aged 33, consulted me, July 22, 1847. He stated that four years ago, after exposure to severe cold, he began to suffer from difficulty in making water, and from pain referred to the region of the bladder, and extending along the urethra. At first, he was not obliged to empty the bladder more frequently than usual, and the urine was unmixed with either pus, or blood. About three years ago, however, the symptoms

\* C'est encore dans les cas de suppuration, qu'on trouve des productions pseudo-membraneuses dont parlent les auteurs. C'est l'expulsion de ces fausses membranes par l'urètre qui a fait répéter à tant de médecins que la tunique muqueuse de la vessie pouvait être entièrement détachée et expulsée par portions avec les urines. —FERRUS Dict. de Méd., Art. Cystite.

\* By a strange coincidence (for I believe there were no other instances of the disease in the town at the time), I had two other cases of this affection under my care on the same day that this gentleman was attacked. In one, a female recently confined, hoarseness set in at 8 o'clock p.m.; at 11 o'clock, I was sent for, and she died a few minutes after my arrival.

just mentioned having existed for twelve months, he began to suffer from a constant and severe pain at the neck of the bladder, above the pubis, and in the perinæum, greatly increased by pressure and exercise. These symptoms have been gradually increasing in severity up to the present, although he has been for four years under the treatment of different practitioners in this city. He now suffers from a constant burning sensation in the situations just referred to, and an excruciating pain in passing water, which he is obliged to do every fifteen minutes; the quantity voided on each occasion not exceeding a teaspoonful.

On examination, the urine was found to be abundantly mixed with pus, (in an eight ounce phial there was an ounce and a half of pus and mucus,) with a large quantity of blood globules, highly ammoniacal in odour, albuminous, and on being subjected to a microscopical examination, it presented an abundant deposit of triple phosphate in prisms and epithelium.

In this case, I commenced at once with an injection of sixteen grains of nitrate of silver in four ounces of distilled water. The immediate effects were, the disappearance of the pain which had been constantly present for three years; the urine was passed without any heat, scalding, or uneasiness; and the necessity for emptying the bladder became less frequent; the quantity of pus was much diminished, and no more blood was observed in the deposit, and his nights were passed in ease and comfort.

About a fortnight after, the bladder was again injected with the same quantity of the solution of nitrate of silver, and the improvement which followed was equally remarkable. The urine can now, August 27, be retained for nearly the usual length of time; it contains barely a trace of pus, and is voided without the slightest pain. His nights are spent in comfort, his strength has greatly increased, and he has gained flesh. Finding himself so much improved, he has gone to the country for change of air, to expedite his cure. Even should some of the symptoms return, owing to the suspension of the treatment, I have no doubt they will quickly disappear after a third injection of the caustic is had recourse to.

CASE III.—A man, aged 26, a labourer, was admitted into the Montreal General Hospital, labouring under paralysis of the lower extremities, the result of a severe injury. In addition, it was discovered that he had lost the power of emptying the bladder, and that the urine was mixed with a quantity of tenacious fetid mucus and pus.

He remained in Hospital for some time before he came under my care, and then, the following was the condition in which I found him:—Loss of motion and sensation of

both lower extremities; inability to empty the bladder completely, but yet not requiring the catheter; the urine was constantly dribbling away, when he assumed the erect posture, was highly offensive, mixed with a large quantity of pus, mucus and blood, and crystals of triple phosphate. It is unnecessary to detail the particulars of the treatment employed for the restoration of the power and sensation of the limbs. Suffice it to say, that after some time, the sensation was completely restored, and he had acquired sufficient power over the limbs to enable him to walk about the wards, but no improvement was observed in the character of the urine. The notes taken by one of my pupils state, that "the urine was half pus, and caused great pain and scalding in passing."

January 3.—He was ordered the following mixture: ℞ Infus. Buchu ʒvss. Tinct. Buchu ʒi. Bals. Copaibæ, Liqueur. Potassæ, Tinct. Hyosciam aa ʒss—one ounce three times a day.\*

Jan. 7.—The quantity of pus had diminished to about one-third, and he was directed to continue the use of the medicine.

Jan. 21.—As the quantity of pus had not perceptibly decreased since last report, I determined to employ injections of nitrate of silver, and as the disease had received a notable check from the internal remedy, I did not consider it necessary to use a stronger solution than one grain to the ounce.

Jan. 22.—The urine was much clearer, and the deposit of pus was less by one half than previous to the injection, and he could retain the urine for two hours.

Jan. 28.—The bladder was again injected, and next day no deposit was exhibited, and the urine was almost as clear as natural.

This man, soon after the last report was taken, was attacked with maculated typhus, and passed through the disease without suffering the slightest inconvenience from the affection of the bladder; and throughout, the urine exhibited a healthy character, even when examined microscopically.

The case I am now about to detail, I have already published in a paper "On the Use of the Microscope," in this Journal, and I shall now introduce it as it then appeared:—

CASE IV.—A strong, healthy man, aged 30, who had been under the care of my colleague, Dr. Hall, in

\* This is the prescription I usually employ in mild forms of the disease. I have tried extensively the pareira brava, so much lauded by Sir Benjamin Brodie, and have not experienced the same success from its employment. I have seldom used the uva ursæ, as my practice is, to resort to injections in cases which do not speedily yield to the above remedies, and in cases in which various plans of treatment have already failed in the hands of other practitioners.

the Montreal General Hospital, for gonorrhœa, and was discharged cured of the complaint, came to me about a month after his dismissal from hospital, complaining of frequent desire to make water, and of pain and difficulty in doing so. As there was no discharge whatever from the urethra, I thought it advisable to pass a catheter, and not meeting with any obstruction, I collected the urine drawn off by it, and examined it at the moment. It was slightly acid, spec. grav. 1024, at temp. 72° Fahr., coagulated on addition of nitric acid, and yielded an abundant exhibition of pus globules on examination with the microscope. Having no symptoms referrible to disease of the kidneys, I treated him for cystitis, and with decided benefit at first, but as he had not a comfortable residence, and was obliged to walk a great distance to my house, in the late hot weather, I recommended him to enter the General Hospital under my care. Here I had frequent opportunities of directing the attention of the students to his case. The urine being again examined, exhibited not only a deposit of pus globules, but also of blood globules. Notwithstanding this unfavourable complication he was discharged about five weeks after admission perfectly cured.

In this case I injected nitrate of silver solution into the bladder; the quantity of pus immediately diminished, and after the third injection, completely disappeared. The microscope was of the greatest aid to me in every stage of this interesting case.

I introduce this case for the purpose of showing that the injection of a solution of nitrate of silver into the bladder, is not only of use in cases which could have been cured by other means, but that it is eminently successful in those instances which have resisted the most valuable general remedies.

In the foregoing observations, I have made no mention of the method of injecting the bladder which I have found most efficient. I will now make a few practical remarks on the operation:—The patient being placed either in the erect position or on a sofa, a gum elastic catheter, about the size of No. 9 or 10 (Weiss), is introduced, and water at the temperature of 98° Fahr., is injected through this into the bladder, by means of a caoutchouc bag, or what I prefer, a syringe, with a "three-way valve," by which the fluid can be drawn back from the cavity if necessary. After the bladder has been completely cleansed of any fœtid urine and mucus which may be contained in it, the solution of the caustic, being heated to the same degree, is to be introduced in a similar manner, and allowed to remain there for about one minute, care being taken by compressing the urethra, to prevent its being forcibly ejected

by the violent straining that is certain to be induced. The quantity of water or solution should never exceed four ounces, for though the bladder in its healthy state is capable of containing nearly a pint and a half of urine, without being over distended, yet as the quantity it is capable of retaining in severe chronic inflammation, seldom exceeds a few table-spoonfuls, the bladder accommodates itself to its diminished contents and gradually becomes smaller, and consequently a large injection would act injuriously in two ways—by over-distending the organ, or by passing up into the ureters. In fact, we find it unnecessary to use a larger quantity of the solution than I have mentioned, for it requires some address to introduce even that amount without resorting to force. The patient is then ordered a warm bath, and should the urine become bloody or mixed with shreddy concretions, he should use frequent fomentations and anodynes. But these symptoms seldom last for more than a few hours, and our patient should always be informed that such consequences are likely to be the immediate effects of the operation.

My patients have not suffered from retention of urine, which it appears frequently follows the use of the solid nitrate in the practice of Lallemand, nor have they had any inconvenience which was not readily allayed by an opiate.

The advantages which I consider the solution of nitrate of silver possesses over that substance in a solid form are, First, that we can employ it of various strengths, from one to four grains, or even stronger if necessary. Secondly, we are certain that the application comes in contact with the entire diseased surface. Thirdly, we are also satisfied that it does not act more violently on one part than on another. Fourthly, it is more readily employed by an inexperienced operator; and above all, it cannot possibly be attended with any risk, from the apprehension of which, it is not easy to divest the mind, when using the *porte caustique* of Lallemand, and together with the above advantages, it has this also to recommend it, that it will be found at least equally successful.

The foregoing observations apply altogether to *severe chronic inflammation of the bladder*; acute inflammation and mild cases of chronic catarrh of that organ, are manageable by other means, to which it is unnecessary to allude.

In the treatment of these cases, we derive great assistance from the microscope, for long after the naked eye fails to detect pus or blood in the urine, these fluids are recognizable by the microscope, and so long as they are present, our treatment should not be relaxed.

I have intentionally avoided alluding to the general

treatment of chronic cystitis, and have omitted some other practical points, to which I shall probably direct attention at some future period.

51, Great St. James' Street, Montreal.

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ART. XXII.—CASE OF POISONING BY VINEGAR.

By A. H. DAVID, M.D., MONTREAL.

Poisoning by acetic acid is so uncommon an occurrence, I have to request a small portion of your valuable columns for the details of a case I met with a few days ago; in which the patient—a widow woman, with four children—took, as near as I could ascertain, a quart bowlful of common vinegar. It appears she had been dull and low spirited for two or three days previous, in consequence of the neglect (as her friends suppose) of a person from whom she had received the most marked attention, and to whom she had been attached prior to her marriage with her late husband. When I saw her, about three hours after she had taken the vinegar, she was in bed, covered with a cold perspiration, and trembling from head to foot, and apparently alarmed at every body and every thing about her. Her breathing was very laborious and hurried; her countenance perfectly wild, and the pupils dilated; the tongue was dry and cold; pulse 96 and full; the abdomen much distended, with extremely acute pain at the *scrobiculus cordis*, so much so, that the slightest pressure there caused her to shriek out. She did not know any one about her, not even her own children, nor had she any recollection of anything that had happened from the time of taking the vinegar, which was about eleven at night, not even of her having gone to bed, which she was the last in the house to do. About one o'clock the inmates were all awakened by her shrieking for cold water, of which she had drunk an enormous quantity before I was called to see her. There was not any pain, heat, or constriction of the throat or fauces, but there were slight efforts to vomit. Having procured some sulphate of zinc, I gave her two scruples in a cup of water, which soon produced full vomiting, with great straining. I had then to leave her, but ordered full and repeated doses of carb. magnesia, till I could see her again, which I did about six hours after, and found her much relieved, and only complaining of headache, which left her after the operation of a dose of castor oil. Two days after, she was taken ill with a slight attack of continued fever, but is doing well.

I should mention that the quantity she threw up from the effects of the zinc was very great, and smelt strongly of vinegar, which she still perseveres in saying she did not take, although she was seen with the bowl filled

with it in her hands by some of the family, when they were retiring to rest, she maintaining that she used the whole of the vinegar in bathing her head. However, I think we have strong presumptive evidence against her having so used it, and are justified in concluding that she took the whole of it.

The only case of poisoning by acetic acid that I have been able to find, is the one related by Orfila in the *Annales D'Hygiene*, and quoted by both Beck and Christison. The experiments instituted by Orfila prove that common vinegar, in large quantities, was found destructive to dogs when vomiting was prevented.

Taylor, in his work on Medical Jurisprudence, says, "Acetic, citric, and tartaric acids are not commonly considered to have any poisonous action on the body. At least, as far as I know, there is no case reported of them having acted injuriously on the human subject;" and he is the only modern writer on Medical Jurisprudence who takes any notice or makes mention of acetic acid.

Montreal, August 15, 1847.

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- ART. XXIII.—I. *Geological Survey of Canada—Report of Progress for the Years 1845-6; and*  
 II. *Geological Survey of Canada—Report of Progress for the Years 1846-7.* By W. E. LOGAN, Esquire, Provincial Geologist.

(THE SUBJECT CONTINUED.)

To the great mass of mankind who as yet regard the labours of the geologist as little superior to those of the pains-taking quarryman, or the operative mason, or who, at most, give him credit for being a wonderfully indefatigable collector of curious stones and pebbles without end, the perusal of even the briefest survey of such works as those above named, and far less of the volumes themselves, will present very few attractions; but by the philosophic inquirer, the watchful statesman, the enterprising merchant, and even the intelligent agriculturist, they will be welcomed as prospective harbingers of many valuable and instructive results. Still, however, we cannot help feeling that, to the general reader, there *must* be an unattractive dryness in all geological narrative, which it is out of our power to enliven, and which, therefore, renders our re-approach to the subject a task of considerable reluctance, even after a whole month's respite.\*

In our last article, we introduced our readers to the

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\* Much additional interest and information would have been infused into the Report had it been accompanied by a small outline map of the region described; and this, considering the facility and little expense attending the lithographic process, appears to have been almost an inexcusable omission, which we trust will not be overlooked hereafter.

more interesting preliminary details of Mr. Logan's progress towards the sources of the noble Ottawa,—in our present essay, we purpose to confine ourselves to condensing, from the Reports before us, a short sketch of the general character assigned by that singularly indefatigable and elaborate observer, to that river and its tributaries; together with some notices of the sequence and distribution of the geological formations and of the various substances capable of economic application, peculiar to the little known region through which they flow. Having accomplished so much, should our limits permit, we shall next invite our readers to accompany us in a rapid survey of Mr. Murray's labours in an opposite distant quarter,—the peninsular mountainous district of Gaspé,—but we fear we shall have to reserve a review of Mr. Logan's interesting explorations in the at present all-attractive mineral regions bordering on Lake Superior, for some future number.

The whole course of the Ottawa presents to the eye of the traveller, perhaps the most extraordinary continuous succession of labyrinthic lakes, headlong cataracts, and tumultuous rushing rapids to be met with in the world; and of this our Provincial Geologist must have had no little perplexing as well as fatiguing experience, as may be judged from a perusal of the following hastily condensed notices of his progress:—

The Ottawa and its tributaries discharge the waters of an area which cannot fall much short of 80,000 square miles. The hydrographical basin which contains them may be described as bounded on the east by a line commencing at the lower extremity of the Island of Montreal, and running about 230 miles in a nearly direct course, to a point about half a degree north of the intersection of the 48th parallel of north latitude, and the 76th meridian of west longitude, constituting in this distance the water shed between the Ottawa streams and those of the St. Maurice and Saguenay. From this point where the source of the river is to be found, the boundary turning to the westward, runs for 300 miles along the height of land dividing the waters of the Hudson Bay Territory from those of Canada, to the vicinity of the intersection of the 48th parallel of latitude with the 82d meridian of longitude. The western limit, stretching from this angle to within a few miles of the most eastern part of Lake Nipissing, separates it from the streams tributary to Lakes Huron and Ontario; while the southern passing to the north of the Midland and Eastern Districts of Upper Canada, and forward to Vaudreuil in Lower Canada, leaves but a small space between it and the St. Lawrence. The general shape of this area is that of an irregular rhomboid, with its long diagonal pointing north-westwardly, and roughly parallel with three sides of the rhomboid, the north, the west, and the south; at a distance seldom exceeding twenty and sometimes not over eight leagues, the great artery of the region runs, presenting a length of between 600 and 700 miles. Taking its source in the north-eastern corner, it heads with the Saguenay and the St. Maurice; and, flowing in a general course a little to the south of west, it widens into several considerable lakes, and is fed by several tributaries from the north before it reaches Temiscamang, at a distance of about 250 miles. One of the intermediate sheets of water, about equally removed from Temiscamang and the source, called the Grand Lac, is represented as possessing a deeply indented form, divided into three long narrow transverse belts of water (united to each other by narrow gulle or straight) of from 50 to 30 miles in length, by from 1 to 10 in breadth. On the north side of the Lake, near the extreme of a tongue of land between the eastern and middle belts, is situated the Grand

Lac Post of the Hudson Bay Company. Another expansion of the Ottawa, with an east and west length of 45 miles, has a breadth of from 2 to 12 miles. Its western extremity, where the Ottawa bends to the south, is removed from Temiscamang about 15 miles; and in the eastern twelve of these there are no less than fifteen portages, giving to this part of the river and lake the name of the Riviere and Lac des Quinzes. The foot of the lowest of these fifteen portages was the highest limit attained by our explorers' canoes. Three of them, however, were visited on foot. At each, the waters, contracted to a space not exceeding 40 or 50 yards, are precipitated over a step in the rocks; and the first occasions a beautiful cascade falling obliquely across the channel, and presenting a face of about 100 yards, with a height of 12 feet. The average breadth of the stream between these rapids is between 200 and 300 yards; but just at the entrance of Lake Temiscamang, it attains a quarter of a mile.

Lake Temiscamang, which is now entered, is another extensive strip of the Ottawa, which, with a length of 67 miles in a north and south direction, gradually diminishes in breadth from six miles to about 500 yards. It is pinched in, however, to about one-fourth of a mile at the Hudson's Bay Company's Post, 20 miles down the Lake, and again about 35 miles farther, to a width of 200 yards, at a straight called La Galère, and a third time to the same breadth 10 miles farther on. At each of these narrow a current is perceptible, and at the Galère its strength is considerable; but the whole length of the Lake affords an uninterrupted navigation, and the depth of water appears to be sufficient for respectable sized craft.

About half-way down the Lake, two short-coursed tributaries enter together on the right. The smaller, called the Metabeechuan, which appears to empty a neighbouring narrow and deeply indented lake; and the other, the Montreal, which has its source in Lake Tamagamingue; and about 60 miles below these, on the opposite side, occurs the Keepawa, which, though its source is but 60 miles east of Lake Temiscamang, appears to wind through a length of about 90 miles before reaching it, forming, in this space, merely the connecting links of a succession of lakes, one of which, known by the same name as the river, 150 feet above the level of Lake Temiscamang, occupies a length of nearly 50 miles, and offers a very irregular and ramified shape, studded with great and small islands; presenting altogether an intricate labyrinth of waters, equal to 2500 square miles, with every part of which, even the oldest of the Indian hunters are scarcely acquainted.

Immediately below Lake Temiscamang there occurs a serious impediment in the navigation of the river in a succession of violent rapids, which occupy a distance of 64 miles, throughout which the stream is very crooked, and seldom more than 300 yards in breadth, and frequently contracted to 100, and sometimes to 50 yards. This collection of rapids bears the appellation of the Long Sault, and the total fall from their head to their foot is 49 feet; which, although the water is swift all the way, occurs chiefly in five distinct leaps, with a name to each, producing five portages to voyageurs going up the stream; but canoes shoot the whole in descending.

To the Long Sault succeeds a beautiful stretch of 17 miles of navigable water, bearing the name of the Seven League Lake, varying in breadth from half a mile in the upper to a quarter of a mile in the lower part, with banks rather rocky and bold, and presenting a pretty constant height of from 1 to 200 feet; after which succeed three powerful rapids, called the Mountain, the Erables, and the Chaudron, with an average separation of a quarter of a mile from one another. Here the river runs in a section across a range of hills, rising to heights of about 400 or 500 feet, after cutting through which, and meeting the Mattawa, opposite to Graham, the most remote laid out township in Lower Canada, the Ottawa changes its course more to the eastward, and, after an embarrassed course of 25 miles farther, over five or six more rapids, plunges over one of a peculiarly fierce, violent, and crooked character, called the Roche Capitaine above, and the Maribou lower down, having a depression of near 43 feet; shortly after which it is joined by several petty streams, the largest of which, named the Riviere du Moine, near which the survey commenced, presents at its mouth a width of between 40 and 50 yards.

Though this river is the largest tributary of the Ottawa below Lake Temiscamang, the Mattawa, which has already been mentioned, is, from its position, perhaps, destined to become of much

more importance, having been often than once thought of as affording the best line for a canal to connect the waters of the Ottawa with those of Lake Huron by Lake Nipissing.\* The general course of this river is very much in the direction the Ottawa assumes after their junction, and it flows in the same geographical depression which the main stream occupies to the Levier Rapid. In a straight line from its source to its mouth, the distance is 36 miles, and 40 following its bends; and it consists of a chain of lakes united by short, and slender streams flowing from one to another; and the farthest extremity of that forming its summit level, called Trout or Turtle Lake, approaches in a continuation of the general direction of the chain within three miles of the north end of Lake Nipissing. The surface of Trout Lake is 25 feet higher than Nipissing, but what is the lowest elevation in the three miles between them was not ascertained, the canoe route from the one to the other being to the south of this line, and the distance greater.

It is worthy of remark, in connexion with this important embryo enterprise, as well as with the consequently probable more early settlement of this as yet sequestered region, that the flat land at the mouth of the Mattawa, on the south side, is of good quality, producing a mixture of hard and soft wood, such as black birch, maple, elm, white pine, and cedar, and that it seems to extend some distance both east and west; that two or three clearings have already been made on the margin of the Ottawa, and that several persons connected with the lumber business express intentions of effecting others; and that a fertile tract of country is described as existing on the south side of Lake Nipissing. On the north of the Mattawa a range of mountains, of no great elevation, runs nearly the whole way from Trout Lake to the mouth; and between their base and the margin of the water, there are occasional good mixed flats, on one of which, at the head of Lake Talon, were seen elm, ash, and maple trees, with a few oaks, while marsh land in the vicinity yielded good meadow hay; but the slopes produce soft wood chiefly, the prevailing species being red pine, some of the groves of which appeared to be of good size.

Of the quality of land in the interior, observes Mr. Logan, some evidence is also derived from the rivers; for while at the mouth of the Blanch, for example, the land was ascertained to be good, producing elm, poplar, maple, and basswood, mixed with balsam fir, it could be gathered from the great quantity of white sediment held in suspension by its waters, giving the river its name, that it must flow through an alluvial valley; and the extent of its delta which displays a marked protrusion into the lake, renders it probable that this alluvium may reach to a considerable distance. The marshes arising from the sediment deposited by the rivers at their mouths, as has already

been mentioned, are extensive. They produce an abundant supply of good meadow hay; and so valuable a provender does this prove for the purposes of the lumbermen lower down, that it is occasionally transported in double barges sixty-seven miles, to the foot of the lake, and then run down the rapids of the Long Sault on cribs, for the winter support of the oxen used in hauling timber.

But in the district that came under our examination, though some species of hard-wood trees are found on the flat lands and occasionally clothe the higher grounds, the proportion which they bear to timber of a soft description is quite insignificant. Red and white pine form the staple wood of the country, and the banks of the Ottawa and its tributaries may most emphatically be said to constitute one of the most important pine timber regions any where to be met with. The endless succession of forests of both species mentioned, presented to our view in the whole of our exploration above Bytown, would seem to be almost inexhaustible, and it appears to me that in the higher parts of the main stream visited by us, the quantity of red pine preponderates over that of white. The greater value of the former causes it to be sought for at greater distances than the other. We found chantiers established for the purpose of cutting it, as high as the Galère, on Temiscamang, where lumberers were then in full operation; and we observed a deserted one several miles above the Hudson Bay Company's post, where red pine had been prepared two or three years ago, by the Messrs. McConnel, whose enterprise has carried them further up than any other lumberers on the river. We were informed the time occupied in conveying the timber from this distant point to Quebec, was, under favourable circumstances, just two months. No white pine timber has yet been carried from any place higher than Bennett's Brook, which is about 140 miles lower than the other spot, but as settlement creeps up the river, and increases the facilities with which provisions and material for the uses of the woodsman, with fodder for his cattle, can be supplied, it will gradually be sought at higher points.

On the Ottawa, the occupations of the lumberer and the farmer have been a great encouragement to one another, and while the advance of settlement has enabled the lumberer to push his enterprise further and further up the stream, it is mainly in consequence of the trade in its timber that the banks of the river are so fast filling up with inhabitants. The wants of the lumberman afford to the farmer a ready market for his produce at high prices, and present a great encouragement for location wherever good land occurs; while this has been found in sufficient abundance to establish many thriving settlements in localities, which but for the timber trade, might have been overlooked for some time to come. These settlements once established, producing enough for their own consumption and something to spare, may ultimately constitute a back country of considerable importance to the prosperity of those points at the mouth of the river, conveniently situated for supplying the wants of its inhabitants; and Montreal as the principal of these may hereafter find the valleys of the Ottawa and its tributaries of essential benefit in assisting to support the eminence she has attained among the cities of British North America.

Above the Joachim Falls several clearings occur on the south side of that fine navigable reach of the Ottawa, called the Deep River, which there stretches twenty-four miles, in an almost perfectly straight line: at the foot of it also there is a block of settled land, not yet surveyed, behind Fort William, on Lake Allumettes, and many locations have been cleared on the Allumettes Island, which has been now recently surveyed; but the village of Sydenham (including Campbelltown, which is part of it) at the mouth of the Muskrat River, in Pembroke Township, may be considered the highest centre of settlement on the river. The distance above Bytown is about eighty-five miles by land and ninety-five by water; and in addition to many neat and substantial houses, with stores for the sale of merchandise, it possesses a grist and two saw mills, and several respectable tradesmen there find full occupation in their several arts. In the grist mill there were ground in the season previous to our visit 12,567 bushels of wheat, 13,789 bushels of oats, 5,659 bushels of Indian corn and peas; and as there is another grist mill at the foot of the Allumettes Island, which probably may have done equal work, about 25,000 bushels of wheat, one half of which is fall sown, may be considered the quantity of this species of grain raised from the clearings in the vicinity. But the grain to the cultivation of

\* This idea has been lately revived, and the subject was introduced to the notice of the House of Assembly, in a tangible shape, on the 26th of July last, by the member for Bytown, in a series of resolutions advocating the opening of a water communication between Lake Huron and the Ottawa, the 3d clause of which was as follows:—"Resolved—That it is the opinion of this House, that such water communication can be attained by following the channel north of the Manitoulin Islands, to the mouth of French River to Lake Nipissing, and thence down the river Mattawa to the Ottawa river, and descending the Ottawa to Montreal." But unfortunately this patriotic movement shared the same fate as many other matters of even greater importance, and remained undecided.



which the cleared land is chiefly devoted, is oats. It is found a more profitable crop than any other, in consequence of the great demand and the necessities of the timber trade occasion. Sydenham constitutes a market for a considerable quantity of oats brought from lower points on the river; and in winter this and other descriptions of grain, with flour and barrelled provisions, in addition to the regular supplies of these last commodities, carried up systematically by the principal timber merchants, by the Ottawa, are brought from localities on the St. Lawrence as low down as Brockville. The ordinary price of wheat is 6s per bushel, and that of oats 3s per bushel. Hay is sometimes brought from equal distances, and its ordinary price is from £6 to £7 per ton.

To the interesting, and, as regards futurity, important details from which the foregoing very disjointed sketch has been condensed, there is appended an elaborate tabular series of the rapidly rising levels of the Ottawa and its branches above that of the St. Lawrence at Three Rivers (the highest point affected by the action of the tides), by which it appears that at Bytown, 205 miles above Three Rivers, the height is 118 feet; that at the confluence of the River du Moine, 141 miles further, it is 424 feet; at the mouth of the Mattawa, 44 miles further, 519 feet; and at the head of Lake Temiscamang, 492½ miles from Three Rivers, it is altogether 612 feet above the level of the sea.

A similar table is also given of the levels of the Mattawa, by which it appears that at its mouth it is 519.5 above the level of the St. Lawrence; and that from thence to Upper Trout Lake, during a short distance of 39¾ miles, a further rise takes place of 170.7 feet—making a total elevation of 690 feet above the level of the sea. And this is followed by two more tables, the one, showing the levels from the surface of Upper Trout Lake, near the source of the Mattawa, to that of Lake Nipissing, by which it appears that a rise takes place from thence to the anticlinal ridge or height of land between it and the Vase River of 24 feet 6 inches, and that from thence there is a fall of 26½ feet to Lake Nipissing, in the course of 4½ miles: the other, showing, according to Mr. Hawkins, the Upper Canada Surveyor, the levels from the surface of Lake Nipissing to Lake Huron, at the mouth of French River, from which it would appear that there is a descent from the former to the latter of only 84 feet, that of Lake Huron being estimated to be 581, or three feet more than the ascertained height according to the State Surveyors of Michigan.

To these tables is also appended an interesting Register of the mean temperature for two years at the Hudson's Bay Company's post on Lake Temiscamang, where, the good folks of Montreal will be rather surprised to learn, at the height of 630 feet above the level of the sea, the thermometer was never much lower at sunrise in January, 1844, than 1 degree below Zero; at noon 12° and at sunset 10°; and that in July it ranged from 58° at sunrise, to 72° at noon, and 66° at sunset; and that in

January, 1845, it varied from 8° to 17°, and back to 13°, and in July from 58° to 67°. While in this city, during the same years, the thermometer frequently descended, during the winter, as low as 10 and 15 degrees below Zero; and in the summer reached as high as 93°,—and in more instances than one, even to 96°.

Having devoted so much space to the above details, we are compelled to be as brief as possible in our notices of the sequence and distribution of the geological structure of this interesting region; and in these we shall endeavour, as far as possible, to quote a few isolated extracts, rather than attempt to condense disadvantageously Mr. Logan's lucid observations on the subject.

#### METAMORPHIC SERIES.

That part of the Ottawa which lies between its tributary the Mattawa, and a point about three miles south of the mouth of the Montreal and Metabeechuan rivers, appears to cross the axis of an anticlinal arch, which separates the rim of the great southern trough of fossiliferous formations of which the western geological area of Canada has been heretofore described as forming but a part, from a northern trough whose strata, partially seen in Canada, probably run under the waters of Hudson Bay; but whose general relations cannot be fully understood until a great collection of facts shall have been accumulated beyond the northern bounds of the Province.

The lowest rocks which this undulation brings to the surface are of a highly crystalline quality, belonging to the order which, in the nomenclature of Lyell, is called metamorphic instead of primary, as possessing an aspect inducing a theoretic belief that they may be ancient sedimentary formations in an altered condition. Their general character is that of a syenitic gneiss. Their general colour is reddish and it arises from the presence of reddish feldspar, which is the prevailing constituent mineral. The feldspar, however, is often white, and frequently of a bluish grey. The rock is in no case that I have seen without quartz. Hornblende is seldom absent, and mica very often present. The prevailing colour of the quartz is white, but it is often transparent or translucent. The hornblende is usually black and sometimes green. The mica is often black, frequently brown, and generally of a dark tinge. The rock (carefully distinguished from dykes) is almost universally small grained, and though the constituent minerals are arranged in parallel layers, no one constituent so monopolises any layer as to exclude the presence of others; but even in their subordinate arrangement there is an observable tendency to parallelism.

What the thickness of the whole volume may be, has not been ascertained. The dip of the strata was usually at high angles, and toward the Mattawa it appears to point more generally southward. But there evidently exist many undulations, often accompanied by contortions.

To the south of the Mattawa and of the Ottawa in its continuation after the junction of the two streams, important beds of crystalline limestone become interstratified with the syenitic gneiss, and their presence constitutes so marked a character, that it appears to me expedient to consider the mass to which they belong as a separate group of metamorphic strata, supposed from their geographical position and general attitude to overlie the previous rocks conformably. The limestone beds appear to be fewer at the bottom than at the top of the group, but whether few or many, they are always separated by beds of gneiss, which in no way differs either in constituent quality or diversity of arrangement from the gneiss lower down, except, in regard to the presence of accidental minerals, the most common of which are garnets.

The limestone beds are in general crystalline in a high degree; occasionally they are composed of an aggregation of rhombohedral crystals of calcareous spar, with faces equal to an inch square. They are in general cross-grained; sometimes they may be termed saccharoidal, but it rarely happens they are so fine in texture as to be entitled to the character of compact. Their general colour is white. They are sometimes barred with grey in the direction of the strata, and are occasionally wholly grey. It sometimes occurs

that they are partially flesh or salmon coloured, but I have never seen this tinge diffused throughout a bed, or extending to any great distance in it. It is seldom that the beds are found wholly composed of pure carbonate of lime. Several accidental minerals are usually associated with this, and they may vary in quantity and kind in different parts of the horizontal and vertical extension of the group. The most frequent minerals imbedded in the calcareous strata, independent of such as may belong to the dykes, which occasionally traverse them, are apatite, mica, serpentine, tabular spar, scapolite, pyroxene, hornblende, tremolite, chondrodite, idocrase, quartz sphene, specular iron, iron pyrites, copper pyrites, and graphite.\*

On the south side of the great anticlinal axis, the rocks on the Ottawa, succeeding the two metamorphic groups which have been described, belong to those at the base of the American fossiliferous series of formations. They rest unconformably on the metamorphic rocks, the contortions and dykes of which they were sometimes seen to cover in a quiet and nearly horizontal attitude, while they were nowhere observed to be tilted up to a very high angle. The lowest is a sandstone of a partially calcareous character, passing by a diminution of the arenaceous mixture into the next, which is a limestone, becoming bituminous at the top; and the third is a bituminous shale.

In the valley of the Ottawa the whole three formations under description, from the base of the arenaceous deposit to the summit of the bituminous, do not, it is probable, afford a greater total thickness than 1000 feet. To the northward it has not been ascertained that they reach beyond the immediate banks of the river; but in a westward direction the upper formation is known to extend to the vicinity of Bytown, while the middle and lower ones prolonged from the main body of the area to which they belong, in finger-shaped troughs, and in patches disjoined by considerable intervals, were found to attain to the Mattawa, a distance of 150 miles farther. In no instance was the limestone, which is well stored with fossils, found to rest on the metamorphic strata without the intervention of the calciferous sandstone, in which, for the present, is included only that portion of the series that is nearly destitute of organic remains; and the lithological character of the whole three formations, excluding the more silicious part at the very base, seems to be maintained with considerable uniformity throughout the district.

The bituminous shales which rest on the sandstone formations are met with in two localities in the neighbourhood of Bytown. One of them at the extremity of St. Louis' Dam, and the other about two miles up the river Rideau.

As in other parts of the Province where this deposit has been met with, the shales are black in colour, giving a brownish streak. They are thinly laminated and brittle, and the amount of bitumen in them is usually sufficient to yield a flame when they are placed on the fire. This property has in this instance, as in others, produced delusive expectations of coal in the district, the mineral condition of the deposit having been compared to that of several shales which will sometimes constitute the roof of a workable coal seam, or be found interstratified with true coal measures. But mere black bituminous shales are not an indication of coal measures, any more than blue argillaceous shales, or sandstones, or limestones, which are all occasionally interstratified with such measures, and must, almost inevitably, with mineral coal, compose the mass of them, for shales, sandstones, and limestones constitute nearly all the unaltered sedimentary rocks of the globe. The colour and mineral quality of rocks do not afford the means of identification in localities distant one from another, without a reference to a traced-out succession or organic contents; and the remark is peculiarly applicable in this part of America, where no less than four formations are strongly marked by the presence of black bituminous shales. The highest is the coal formation; the

next is one about 3,000 feet below it; the third is 3,000 feet still lower; and the fourth further down still being the next in succession.

The succession of rocks in ascending order met with on the north side of the great anticlinal axis, after crossing 63 miles, measuring on the Ottawa, from the mouth of the Mattawa, occupied by the unbroken uniformity of the lower metamorphic or syenitic gneiss formation, is, 1st, chloritic slates and conglomerates; 2d, greenish sandstones; fossiliferous limestones.

Along the whole valley of the Ottawa, tertiary deposits of clays, sands, gravels, and boulders are met with in many parts; and marine testacæ, of the post-pliocene period were found embedded in the clays and sands in various sections of the country in the lower part of the rivers. The deposits in which they occur, cover the whole valley of the South Petite Nation and its tributaries, and were found in Templeton, Hull, Nepean, Packenham, and Fitzroy, to the mouths of the Mississippi and Madawaska, in some instances at a height of 410 feet above the sea.

Fresh water shell marls occur in many places in the alluvial deposits of the Ottawa; and among the phenomena which come within the recent period rounded and polished rock surfaces bearing grooves and scratches (indicative of glacial action), are of not unfrequent occurrence. But, on the shores of Lake Temiscamang, they are so numerous, and are combined with other circumstances of so marked a character, as to deserve particular notice. This, however, our limits will not permit; and we are therefore compelled to refer our readers to the report itself.

The substances capable of economic application, found associated with the harder and softer formations of the Ottawa, are of various descriptions. The chief are the magnetic and specular oxides of iron, bog iron ore, brown ochre, galena, copper ore, plumbago, limestone, and serpentine fit for marble-work, building-stones, flagging tile-stones and slates, second class mill-stones, grind-stones, and whet-stones, stone for glass-making, clay suitable for pottery and bricks, stone-yielding common and hydraulic lime, peat, shell-marl, and mineral springs, possessing medicinal virtues. Of these our limits will only allow us to notice, that the galena or lead ore may certainly prove of considerable importance; that the fact of copper ore existing so far east of the Lake Superior mineral region ought to lead to further investigation, particularly as the specimens found in the Township of McNab, though small in quantity, were accompanied with the important circumstance of occurring associated with a vein; and that the plumbago or black lead may also prove of commercial value, parcels already exported to Britain by Mr.

\* Though our limits will not permit of further quotations from this part of the work, we cannot refrain from adverting here to a minute tabular view, given by Mr. Logan, of the manner in which the beds succeed each other, as exhibited in a section measured at the High Falls, in descending order, to a depth of 1351 feet, throughout an almost endless series of elaborate observations.

Harwood of Vaudreuil having found a remunerating price. Among the limestones of various shades, fit for the purposes of ornamental architecture, may be mentioned those of Terrebone, Packenham, Grenville, and M'Nab; but the most remarkable, and of greatest prospective value, connected with the fine arts, is a snow-white, fine-grained dolomite (magnesian limestone) or best statuary marble, found near the source of the Mississippi, to the rear of the Township of Barrie, in the Midland District. Common-limestone, for building and agricultural purposes, as also shell-marl, is still more abundant. Of the medicinal mineral waters, the already far-famed Caledonia Springs are a well-known example; and an analysis of several others will be found classed in an appendix under the head of sulphurous, saline, and chalybeate, as examined by the chemical assistant of the Survey.

Having already exhausted the limited space allotted to us, we are unable to do that justice to the labours of the Assistant Geologist in the Gaspé peninsula which they deserve; and we are the more led to regret this, as in the view which we proposed taking of the recent survey, it was our intention to associate with it a favourite idea which we have long entertained, that if *colonization* on a limited, and, therefore, anti-Godby & Co. scale, is deserving of encouragement, there is no quarter of wide-spreading Canada which would prove a more congenial home to a large, well-associated immigration from parts of the coast of Ireland, or from the Highlands and Islands of Scotland, than the District of Gaspé. Nay, so much are we impressed with this opinion, that we may, perhaps, be tempted to resume the subject hereafter, in an article expressly devoted to that at present all-engrossing topic—emigration. In the meantime, we are content to offer the following remarks, incorporated with a few condensed extracts from Mr. Murray's Report.\*

\* The eligibility of the district of Gaspé for settlement by emigrants of small means, was first pointed out in the time of Lord Dalhousie, and was revived during the government of Lord Durham; and was again encouraged by the Gaspé Commissioners in 1842, as well as by Dr. Gesner, the Provincial Geologist of New Brunswick, and still further concurred in by Dr. Douglas of the Quarantine Station, Grosse Isle, from a memorandum by whom we make the following truly important extract:—"This fine country (alluding especially to that part which fronts on the Bay of Chaleur from the Restigouche to the Percé) having a front of 200 miles on the sea coast, along which are excellent harbours for vessels of any size, and having five rivers flowing through it, has advantages in point of soil and climate equal to any part of Canada East. The forests contain pine and other timbers of value, and the sea and rivers abound in fish, the taking and curing of which employ some thousands of people in the summer season. The soil is generally excellent, and yields good returns of wheat, potatoes, and other kinds of grain and roots." It may be added, that the people above alluded to are transient visitors, to the number of between 3000 and 4000, who come to be employed during the fishing season, and leave again in the autumn, after earning during their stay from six to ten dollars a month, besides board.

This survey was, in a geographical and geological point of view, a continuation of that of the former season, and embraced the prolongation of an important base line, at the same time that geological objects were not forgotten, specimens being collected of all such rocks and fossils as were supposed to be necessary to illustrate the structure of the country, while samples of such mineral waters as were met with were preserved and forwarded to Montreal for analysis.

Without detaining the reader with any topographical description of the short-coursed rivers, or of the interior, of the Gaspé peninsula, we proceed at once to notice its most remarkable and imposing feature, viz., the chain of Notre Dame Mountains.

Their western extremity, as observed by Mr. Murray, is within two miles of the River Matan, in the District of Rimouski, and about 21 miles inland, and its breadth does not here exceed two miles, while the summit heights are, on an average, about 2000 feet above the sea. The range runs nearly due east and west, and increases in width and elevation as it advances eastward. At the lakes of Matan, it occupies a width of four miles, and the highest summits are about 2700 feet, while at the Chat, where that river intersects the range, there is a breadth of six miles, and the most elevated peaks rise to upwards of 3500 feet. . . . At the Forks of the Matan, the deep valley which cuts the chain is rather wide. On the east are seen elevated mountains, a spur of which, bounding the valley of the Ste. Anne in its southern turn, separates its waters from those of the Magdalen. On the west rises a vast mountain, ascertained by barometrical observation, to attain an altitude of 3778 feet, which our Geologist was led to name Mount Albert, in honour of his Royal Highness, it happening to be the anniversary of his birth-day on which its side was scaled. The summit is a barren waste, extending over an area of between seven and eight square miles, the most elevated parts being on the north-east and south-west extremities, from each of which the surface slopes gently towards the centre, where it is frequently boggy, producing a short wiry grass, almost the only trace of vegetation to be met with.

Pools and springs of excellent water are observed in almost every direction over the bare surface of the great mountain, supplying numerous brooks and streamlets, several of which, uniting on the south-east side, form a considerable body, which flows rapidly in a deep gorge to the eastward, and joins the main south branch of the river; others, running to the northward, empty themselves into the main stream below the Forks. Between Mount Albert and the eastern part of the high continuous chain from the Chat, the mountains do not appear generally to exceed from 2,000 to 2,500 feet in elevation, and have frequently small lakes on their summits.

The whole of the range west of Mount Albert is covered with forest, except on the extreme summits of the highest mountains, which are bare rocks. The growth on the more elevated plains

is chiefly dwarf spruce, and in smaller proportion white birch trees of diminutive size, standing widely apart, the intervals being generally carpeted over with a luxuriant growth of tall ferns. The mountain sides lower down are clothed with balsam fir, spruce, and white birch, with a few white pine and black birch trees at wide intervals, and cedars in the moist places. Mount Albert itself is almost entirely, both on its summit and its sides, a vast bare rock, while the mountains to the east of it, lying between the Ste. Anne and the Magdalen, seems likewise for the most part to be destitute of vegetation.

The country generally to the north of the great mountain range consists of a series of ridges running parallel to it and to one another, which decrease in elevation as they advance to the westward and as they approach the shores of the St. Lawrence. These ridges are entirely covered with a dense forest, consisting of balsam fir, spruce, white, black, and yellow birch trees, white pine, and white cedar; maple, elm, and ash likewise occur, but are comparatively rare. Pine trees of good size, and many groves of fine spruce, occur upon the hills, near the banks of the Ste. Anne and Chat, but on the main branch of the Matan such timber, although not altogether absent, is rare. This is the more to be regretted, as it affords facilities for driving far superior to any other river on the south coast of this part of the St. Lawrence, being easily accessible to the highest of its lakes.

Except on the flats, and on the low lands near the shores, the soil appears to be of a very light description, and holds out but few inducements for agricultural improvement; on them, however, the quality is frequently very favourable, and of this the settlements at Matan, Ste. Anne, and Cape Chat, are examples. South of the mountain range, on the Matan, the size and character of the forest growth indicate a better description of soil than on the north, and the country being less broken or mountainous than that to the eastward, might, were it less remotely situated, be cleared and cultivated. Hitherto it has been but rarely visited, except by Indians or hunters in pursuit of fish or furs. Game abounds through the whole of these forests, and the rivers are amply supplied during the summer season with fish and water-fowl. The Chat and Ste. Anne abound with the finest description of salmon and sea-trout; but since the erection of a saw-mill, being unable to get over the dam, they have entirely disappeared from the waters of the Matan, where they are said to have formerly been more numerous than in any other river on the coast.

The rivers on the north coast of the Gaspé Peninsula, running for a considerable portion of their course directly transverse to the general strike of the stratification, afford the best, if not the only, means of obtaining exposed sections of the older rocks in the interior; the whole country elsewhere, except on the summits of the highest mountains, being clothed with a dense forest.

For the sake of distinction and convenience, we may divide the rocks that have been examined, into four groups:

1. Red and green shales, black and dark green shales with calcareous bands, and brecciated limestones.
2. Metamorphic rocks of the Notre Dame Mountains.
3. Gaspé limestones and shales.
4. Gaspé sandstones.

The first of these occupies a breadth on the Matan of 21 miles, on the Chat 12 miles, and on the Ste. Anne from 12 to 13 miles. On the Matan, red shales occur in two different places, and are usually striped or spotted with green, and associated with shales of that colour. Superior to the red shales, the most conspicuous rock in this groupe is a brecciated limestone conglomerate. On the Chat, the same breccia occurs, resting on red and green shales, underlaid by sandstone. Up the Ste. Anne a breccia occurs, composed of large flattened pieces of limestone and black shale, and grey or greenish coloured fragments of an arenaceous rock, in small quantity, in one strong band, and a few minor ones interstratified

with black shale, resting on dark grey or black slates, holding in the upper beds numerous nodules of dark blue limestone, some of which are as large as a 32 lb. shot. Both the shales and the brecciated conglomerates hold great quantities of iron pyrites, sometimes in the form of balls or nodules, and at other times in aggregated crystals. In one instance, black bituminous matter, resembling coal, was found in the cracks of a blue limestone, which underlaid the brecciated rocks.

The resemblance between the brecciated band, with its associated rocks, and the rocks on the coast between Ste. Anne and Cape Chat, as described in the previous Report, suggests the probability of their being identical; but if such be the case, it must follow that the rocks of Ste. Anne are completely overturned, showing an inverted dip, as there the conglomerates appear to plunge below the pillar sandstones, whereas in the position they occupy in the river sections on the Matan, the Chat, and the Ste. Anne, they appear to be above them. In every part of this region there is evidence of vast and violent disturbances, and in some sections exposed on the Matan, as in many of those observed the previous year on the coast, a complete inversion of the strata is traceable on the face of the cliffs.

The limestone beds have an oolitic appearance, mentioned as sometimes associated with the brecciated rock, and are of good quality for burning into lime, and on the Matan have been quarried and used for that purpose. Among the black slates, tolerably good roofing material may occasionally be found.

The 2d, or metamorphic rocks of the Notre Dame Mountains, correspond with the description given in last year's Report of the mountains of the Chat. The colour is invariably, more or less green. In some instances, of a pale yellowish green, striped or mottled over with red jaspery patches, and are very hard, compact, and siliceous. At other times they are found of an olive-green colour, as a fibrous splintery slate, and occasionally they possess a character allied to mica schist. Talc and steatite were sometimes observed among loose fragments on the surface.

Mount Albert is composed of a dingy-green and brown or buff coloured micaceous earthy trap, which in many parts is strongly magnetic. Boulders of red syenitic rock, sometimes of large size, weighing probably three or four hundred pounds, but more frequently smaller, and a few of red indurated slate, almost converted into jasper, are found in the brooks and rivers.

The 3d, or calcareous and fossiliferous group, which at the Forks of the Chat rests on the southern base of the mountain range, strikes from them nearly due west, and occupies a similar relative position on the south bank of the Matan.

Among the embedded fossils were observed *Cunularia*, *Leptæna*, *Atrypa*, *Spirifer*, numerous univalves (principally of one species), and a few orthoceratites and encrinital columns. . . . Near the source of a small brook, which joins the Matan five miles above the junction of Trout River, are some springs of a mineral character, having a strong sulphurous odour, and an incrustation of a yellowish white material, sometimes varied with a pinkish tinge, around their edges; the water limpid and mineral taste very weak; with a feeble evolution of gas at intervals of several minutes, and temperature at mid-day 48° Fah., while in the open air it was 66°. These springs are greatly resorted to by herds of rein deer, and numerous broad paths beaten by their feet, diverge from them in all directions.

The lower 13 miles of the course of the St. John flows over a portion of the remarkable arenaceous group already noticed, to which Mr. Logan has given the name of Gaspé Sandstone.

The general character of these rocks is that of drab-coloured coarse-grained sandstones, sometimes in thick massive beds, at others in thin irregular strata, interstratified with greenish-gray arenaceous shales, the sandstone beds sometimes parted by thin beds of carbonaceous shale, composed almost entirely of carbonized and comminuted vegetable remains. Various sized peb-

bles are frequently scattered through the sandstones irregularly, although nowhere sufficiently numerous to constitute a conglomerate. Red or brownish coloured nodules are distributed through some of the beds, from which proceed extensive ferruginous stains, and the divisional planes of the rock are generally thickly covered over with carbonized and comminuted remains of plants. Shells were likewise frequently met with, among which the genus *Spirifer* was common, and large loose masses were found on the banks and in the bed of the river, composed almost exclusively of shells inclosed in an arenaceous matrix.

At the mouths of the rivers there is usually a tertiary deposit of clay, generally of a blue colour, with sand or gravel over it, forming the banks. Over the clay, in some cases, marine shells were deposited in layers: the genera *Mytilus*, *Mya*, *Tellina*, and *Balanus*, some of them apparently specifically identical with those which now inhabit the St. Lawrence, were met with at the height of from thirty to eighty feet above high water mark.

Many of our readers may be disposed to think that we have devoted a great deal too much space to the above to them dry, but, to the philosophic enquirer, interesting details, and we plead guilty to the charge; but when we reflect how much of the future prosperity of our splendid Province depends upon an accurate knowledge of our natural resources, as applicable to economic and commercial purposes alone; and how much that knowledge will tend to a speedy settlement of vast portions of the yet pathless wilderness, we confess we are anxious to infuse, if possible, into our compatriots generally, some degree of fellow-feeling with the very few scientific gleaners at present to be found in the vast field of the natural history of Canada, and more particularly with the isolated, talented individuals whose laborious investigations we have of late had the pleasure of contemplating; and we would, at the same time, earnestly recommend to every son of the soil not to consider the possession of science as indispensably necessary to being materially assisting in forwarding any future geological operations, in whatever part of the country his lot may be cast; as the merest collector, or casual observer, by carefully laying by specimens of any uncommon rock or fossil which may fall in his way, with a memorandum of its locality attached, may often be the instrument of directing the attention of the geologist to the most important discoveries.

We would also take the opportunity of here expressing our deep regret that no provision has yet been made, for the incorporation of a *Zoological and Botanical Department* with the Provincial Survey; as we are confident that a peculiarly rich field of inquiry would be developed in the very mountain regions of which we have just been taking a cursory view. That this should still be a desideratum in so important a *national* undertaking, must astonish not a little the enlightened Nobleman at the head of the Government; and we shall therefore not altogether despair for a season. In the mean time, we rest satisfied with having so far done our duty as a public writer, in having, in our former article, called the atten-

tion of the Government as well as the public to the remarkably un-British *puny* scale, on which the Provincial Geological Survey is at present conducted, and we even venture to indulge a hope that the old Roman adage, "*Verbum sat, sapienti*," will not, in this instance, be applied altogether in vain.

L.

*Summary of the Transactions of the College of Physicians of Philadelphia, from December, 1846, to April, 1847, inclusive.*

The College of Physicians of Philadelphia publish semi-annually a report of their transactions, embodying a general detail of their proceedings, and the most important papers read before them. One of these papers in the transactions before us, possesses but a local interest, as, for example, the annual report, by Dr. Moore, on meteorology and epidemics—demonstrative, however, of great industry; but there are several others of a different description, and we take the opportunity of quoting the following interesting remarks on, and case of, phlebitis.

Dr. C. D. Meigs narrated the outlines of a case of phlebitis from venesection in the arm, occurring in a gentleman about fifty years of age. The inflammation of the *membrana vasorum commune* resulted in the production of pus which filled the vessel. The abscess thus formed was partly discharged, after some days, at the orifice made by the lancet in venesection, another large tractus of the vein was not thus emptied, but seemed to discharge itself by a re-opening of the communication with the sub-clavian vein, causing thus the injection into the circulation of a large quantity of pus, which produced almost immediate death, with the usual symptoms of a purulent infection of the blood. The doctor suggested, in a similar case, the propriety of an early opening to give discharge to the pus, and prevent fatal results.

This case gave rise to considerable discussion as to the proper treatment of phlebitis, both previous to, and after the formation of, pus within the vessel. In the course of which, the success attending the treatment by blistering, as recommended by the late Dr. Physick, was alluded to by several of the fellows. In illustration of the effects of this treatment, Dr. Evans related a case of phlebitis, occurring in a female over fifty years of age, affected with mania, constitutionally feeble, and much excited. The disease made its appearance first in the superficial veins of the right fore-arm, and had existed for a day or more, before it attracted much attention. The whole fore-arm and hand, to the end of the fingers, became highly reddened and oedematous, the veins were greatly distended, and their coats thickened and resisting; the pulse was small, about one hundred pulsations in the minute, and hard; tongue coated with yellow fur; great restlessness. A blister was applied, and hydrarg. prot. chlorid. et ipecac. aa gr. 1-6, to be given every two hours.

The next day the fore-arm was improved, but the inflammation had extended up the arm, into the axilla, and the superficial veins over the top of the shoulder, and along the clavicle were affected, the whole being greatly swollen, hot, and sensitive. Pulse, in the left arm, about the same frequency, but smaller; skin hot and dry; bowels confined. Applied a blister along the course of the veins of the arm, and another over the shoulder and along the clavicle. The fore-arm and hand to be kept covered with cloths kept saturated with lead water and laudanum. Directed magnes. sulph. ʒ j; and to continue the hydrarg. et ipecac. Finding at night that the blisters had not vesicated the skin, they were re-applied.

In the ensuing twenty-four hours there was some abatement in the violence of the symptoms; the limb was less swollen, and the

veins not so prominent; pulse rather fuller and softer, with a slight moisture over the surface of the body. Continued hydrarg. et ipecac., and had the blistered surface covered with poultices of ground flax-seed. The next day the swelling of the arm had increased; the pulse was more frequent; skin dry; tongue brown but moist; the bowels had been opened in the night. The blistered surface over the shoulder and clavicle was discharging freely, but the arm had not been fully vesicated, and there was no discharge from it. Directed another blister to be applied along the arm, and the hydrarg. and ipecac. to be continued.

The day following, the patient was much the same, the blister on the arm well raised; continued medicine, and directed magnes. sulph.  $\zeta$  ss.; the blistered surface to be dressed with basilicon.

The salts operated freely, and the next day the pulse was fuller, but the skin dry and the mouth parched; both of which symptoms were aggravated after the opening of the bowels two or three times in the course of the day. Potassæ nitrat gr. x. were directed to be given with each dose of the hydrarg. et ipecac.; continued the same dressing to the arm and shoulder, &c.

The next day the swelling and heat of the arm were much diminished; heat over the surface of the body less; patient more tranquil; blistered surfaces discharging pretty freely. Stopped the hydrarg. et ipecac. and ordered instead mass. cærul. hydrarg. gr. i. pulv. ipecac. gr  $\frac{1}{2}$  nit. potass. grs. x. to be given every three hours. Continue same dressings to blistered surface. On the following day the arm and shoulder were decidedly improved, and the constitutional symptoms better, pulse fuller and softer, mouth and skin moist, tongue cleaning, bowels opened naturally. Directed the potass. nit. to be stopped, and morph. sulph. gr. 1.2 to be given with the mass. et ipecac.

From this time the phlebitis rapidly subsided, though for many days after, the small veins of the fore-arm and hand were occasionally turgid.

A most valuable report, embracing "a review of such interesting facts and doctrines," in relation to the diseases of children, as have been offered to the profession during the preceding twelve months, was presented and read by Dr. Condie. This valuable paper begins with a summary of the observations made on an epidemic of cerebro-spinal arachnitis, as observed in three localities in Ireland, at the commencement of the last year. Some remarks on tubercular meningitis are then offered, which are followed by the latest observations on cephalæmatoma neonatorum, by Dr. Doepp, of St. Petersburg. The following extract will be found of interest:

M. Lassere has recently shown (*Journ. de Med. de Toulouse*) that the fetus and new born infant are subject to cerebral hemorrhage, as persons of a more advanced age. The effusion, he states, presents exactly the same anatomical characters. The first case observed was one of meningeal apoplexy, in which there were effused into the cavity of the tunica arachnoid nearly one hundred grains of viscid blood. The child was born dead at the full period. M. Lassere ascribes the effusion in this case, to pressure on the cord during labour. In the second case, effusion had taken place into the ventricles; the fetus had reached five months and a half, and was born in a putrid condition; the blood, which filled the whole of the four ventricles, was in smooth, polished, irregular, but moderately firm coagulum. In a third case, apoplectic effusion had occurred in the posterior part of the left hemisphere in a new born child. This was followed by encephalomeningitis. From the facts which have fallen under his observation, M. Lassere concludes, that cerebral apoplexy does not give rise to the same symptoms, nor produce the same functional disorders in the new born infant as in the adult, and that it is not so speedily fatal.

Trismus nascentium next comes under observation.

This disease is exceedingly frequent in the cotton plantations of Alabama and Louisiana; and appears to be

the most fatal malady attacking the negroes in these states, the cases occasionally occurring so numerously as to simulate an epidemic character. White children are rarely, if ever, affected in the former State. The most remarkable pathological appearance is a vascular engorgement of the peritoneum, all that portion surrounding the umbilicus, in a circumference of one to three inches, being gangrenous. Besides this, there was also noticed engorgement of the substance and membranes of the brain at its base, and along the medulla spinalis, and cervical portion of the spinal marrow. The disease has usually manifested itself about the period when the umbilical cord drops off. It has, as yet, mocked all methods of treatment.

We extract the following treatment of whooping cough, as possessing some novelty:

In the *Annuaire de Thérapeutique* for 1846, it is stated that the following mode of treating whooping cough has been found very successful in the hands of M. Berger. In the first stage, the employment of a moderate course of antiplogistic remedies, purgatives, and repeated emetics, particularly of ipecacuanha, in combination with tartar emetic. In the convulsive stage, in which the indication is to combat nervous irritation, M. Berger, being dissatisfied with the results obtained from the remedies ordinarily employed, was induced to administer the nitrate of silver, from which he has obtained results singularly beneficial. He prescribes it in doses of from a sixteenth to a twelfth of a grain, at first three times, and afterwards four times a day; of course the remedy should not be administered in cases, where the state of the digestive organs contra-indicates its employment.

The paper concludes with a *resumé* of M. Chomel's observations on the diagnosis between rubeola and scarlatina; on polypus of the rectum, by M. Guersant; on fissure of the anus, by M. Duclos; on nocturnal incontinence of urine, by Dr. Morand; and on the effects of emetics on the young subject, by Dr. Beck, a paper which has already appeared in this journal.

## PRACTICE OF MEDICINE AND PATHOLOGY.

*The Convulsive Affections of Infants and Children. Read by Dr. Marshall Hall, at the Medical Society of London, Monday, May 17, 1847.*

The author began by alluding to the dangers attendant on infantile convulsion, to its consequences to mind, limb and life, and to the possibility of idiocy, or liability to epilepsy, being its result. He then made reference to the causes, forms, and effects of such convulsions, and the mode by which they are induced; and then proceeded more particularly to consider them. He dwelt especially on—

1. *The terms employed* to designate certain forms and symptoms of them; and on one especially, laryngismus stridulus, which the author contended was no more a disease than cough was a disease, or "any other symptom of disease was a distinct disease." He said that laryngismus was not always stridulous, but depended on the same causes, whether it was or was not so; the most dangerous forms of it were those which were noiseless. He would associate this symptom, which was certainly one of great peculiarity and danger often, with contractions of the hand, which he would call *chirismus*, and with that of the foot, which he would

style podismus; the term sphincterismus, too, might be applied to spasm of the sphincter ani, or neck of the bladder. "Let the termination in *ismus* be used only to designate a symptom, and that of a purely nervous or convulsive character."

2. *The predisposition* to convulsive affections, and laryngismus more especially, was very marked. The latter had been known to affect a whole family. The cause of such predisposition is obscure: was it hereditary? was it the effect of locality, or emanations from the soil?

3. *The causes.*—No irritation of the cerebrum or cerebellum could immediately produce muscular spasm, as experiment had shown again and again. But irritation of the membranes of the brain might excite it, as appeared from an experiment which he had performed, and recently detailed. Irritation of the medulla oblongata, or medulla spinalis, produced the most frightful spasms. The incident nerves, when affected at their origin in the cutaneous, mucous, or other tissues, were the most frequent source of the attacks. The condition of the gums in teething, gastric, or intestinal disorder; matters retained in the lower part of the alimentary canal; the atmosphere itself, especially when north, east, or north-east winds prevailed; perhaps certain vapours;—these were all insisted on as being intimately connected with the production of convulsion, or that form of it called laryngismus. Strabismus, or the spasmodic condition of the hand or foot, might arise from teething, &c.; but the larynx was very apt to be affected by the north or east winds, or other conditions of the atmosphere. He also associated laryngismus stridulus with undue excitability of the spinal centre: when it seemed got rid of, it was very apt to recur. Hence the precaution of persevering with remedies longer than would otherwise be necessary.

4. *The influence of sleep.*—He alluded to the frequent occurrence of convulsions at this period, chiefly epilepsy.—There was congestion of the nervous centres then; probably unusual excitability of them. Altogether, it produced a state favourable to convulsive seizures.

5. *Cerebral diseases.*—On this the author forcibly insisted. He referred to the consequences of inflammation, tubercular granulation or tumour, and effusion at the base of the brain; and also to the congestion of pertussis.

6. *Excited reflex actions.*—By far the greater number of convulsions were of a reflex nature. Laryngismus was most effectually avoided by removing every exciting cause of reflex action. He would chiefly guard against four causes of such action: first, irritation of the trifacial nerve, which took place in teething; second, that of the pneumogastric nerve; third, irritation of the spinal nerves; and fourth, the effects of the atmosphere upon the larynx, under certain circumstances. The organs affected in a convulsive seizure were precisely those which its pathology would lead us to expect—the larynx, the sphincters, &c. The author then called the attention of the Society to certain bronchitic, hepatic, and renal symptoms, and to the condition of the urine,—points which needed further investigation. He then dwelt on the effect of—

7. *Emotion, passion,* and showed how great and important was the part which they played in the affections he was treating of. He enforced the necessity of bearing them in mind fully in certain cases; he showed that they often constituted the real and only objection to the use of the gun-lancet, which consequently should always be cautiously employed.

8. *The effects of augmented excitability* were insisted on. States of the nervous system, induced by mild electricity, were compared with those occasioned by disease. The results of increase of excitability were entered into—irritants then acted, which at other times would be inert. A change in the direction of the wind, even, was not without had consequences. Strychnia induced a species of laryngismus.—

Emotion, hysteria, epilepsy, tetanus, hydrophobia, all affected the larynx in a special manner.

The author next described those affections of the cerebrum which were consequent on convulsions,—the congestion, the effusion, the occasional paralysis, the risk of idiocy, &c.—He then passed on to the question of sudden dissolution, demonstrating how difficult it was to foresee it often, and stating how frequently it happened when the patient appeared in progress to recovery. It was the result of common asphyxia, but not rarely of what he had called secondary asphyxia, which he believed was closely dependent on the blood of the coronary arteries being unduly arterialized.—The remedies of asphyxia should be enforced promptly in such cases of sudden death.

Some observations were then made on the diagnosis of convulsions, in which the transient, or permanent, or complicated character of symptoms, as the case might be, were all pointed out as modes of assistance in conducting the inquiry. The author drew attention to the post-mortem appearances, which varied as the disease was centric or eccentric, or according to the mode of death. These might be the results of inflammation within the cranium, or nothing found whatever but the appearances proper to asphyxia.—Lastly, he made some practical observations upon prevention and treatment; as to the latter, insisting on an accurate diagnosis as an indispensable preliminary, on a due attention to the complications of the affection, on the necessity of bearing in mind all the varied forms of irritation, and applying the appropriate remedies without delay, on having regard to the state of the patient during the time of sleep, on protecting it from cold air, &c. And if he had shown the application of the physiology of the nervous system to its pathology, he had gained the object which he had in view in bringing the subject before the Society.

Mr. HIRD considered that the profession were much indebted to Dr. Hall for his researches on the subject of infantile convulsions, and for his explanation in respect to those cases in which the brain was involved in the cause, and where it was not. He agreed generally in the views of the author, but should be afraid to lance the gums so freely and so often as Dr. Hall had recommended in some of his published papers. In the other plans of treatment recommended he fully concurred.

Mr. BARLOW agreed fully with Dr. Marshall Hall as to the ill consequences of cold in laryngismus stridulus. In some cases, a keen wind was certain to bring on the paroxysm.—In a case related by Dr. Hugh Ley, the first attack was produced by the application of cold to the head. He thought no one could contradict the correctness of the view which had been taken of the causes of the disease. He believed by far the larger number of cases were eccentric in their origin, and that depleting measures should never be used without much caution. Irritation of the trunk of the nervus vagus produced reflex actions, contrarily to what happened in the nerves proceeding to the limbs; and he thought that in disease, spasm of the glottis, either with or without crowing, might occasionally be brought on by affections of the trunk of this nerve, giving rise either to direct or reflex closure of the glottis. In a case where Sir Astley Cooper tied the carotid artery, inflammation and suppuration extended upwards in the course of the nervus vagus, and there was a cough like that of whooping-cough. Sir Henry Marsh, in his instructive paper on spasm of the glottis, had suggested irritation of the origin of the pneumogastric as a cause of the affection; but the state of parts far remote from the nervous centres was mostly at fault. He had never been able to associate enlargement of the bronchial or cervical glands with the disease by way of cause and effect, as Dr. Hugh Ley had done in a work which would ever be consulted for its abundant information in regard to the malady. In two cases he (Mr. Barlow) had found it connected with hydrocephalus;

in another, which he had examined after death, with bronchitis; in a fourth, which was fatal, he thought that the last paroxysm had depended on over-feeding. In the country—he meant the country properly speaking—the disease was acknowledged to be rare; and even in the crowded districts of towns he thought it rarer than was supposed. Out of 6879 patients who had been admitted at the Children's Infirmary since Jan. 1st., 1846, there were only seven cases reported of this disease. In three cases he had observed the paroxysm produced by the act of drinking—a fact of interest, viewed as an addition to those phenomena which connected laryngismus with the convulsive actions, of which it was certainly one. He would ask Dr. Hall if he had observed this fact.

Dr. THEOPHILUS THOMPSON remarked, that in the majority of obstinate cases of laryngismus stridulus, hydrocephalus was either present, or threatened to develop itself. Sometimes convulsions were the result of simple irritation; in other instances they originated in inflammation.

Dr. CLUTTERBUCK thought that the brain was always involved in cases of convulsions, and that it suffered at these times from inflammation. The brain was a complicated organ, and various parts of it performed various functions.—He agreed in the treatment recommended by the author.

Dr. REID did not find that dampness of the atmosphere was a cause of laryngismus; on the contrary, the affection was rare in damp localities. He had some doubts respecting the prejudicial influence of a north-east wind in these cases, and mentioned two instances in which it had no such bad effects. He had never seen a case during the time the infant was suckling.—*London Med. Gaz.*

*Effects of Syphilis on the Fœtus in Utero.*—*South London Medical Society.*—*May 27th 1847.*—Mr. Lodge brought before the notice of the Society, the “*Effects of Syphilis on the Fœtus in Utero*,” remarking that he wished to elicit discussion on a subject of so much importance. He referred to the following heads: viz.—

1. Abortion occurring from a syphilitic taint in one or other parent.
  2. The death of the fœtus, although abortion does not occur.
  3. The fact of the fœtus being infected in utero, although such infection is not evident until after birth; and
- Lastly. The appropriate treatment.

He fully canvassed the opinion of authors on the above points, and stated, that, from his experience (and he was borne out by the majority of authors), he believed that syphilis in one of the parents caused the death of the fœtus, and abortion was the consequence. He was decidedly opposed to the opinions of those who think that the mercury exhibited was the cause of abortion, inasmuch as he considered it the only means of averting it. His practice was to give mercury to the mother, so as to produce gentle salivation, when many successive dead children had been born, and there was no other evident cause for the repeated abortion; and he did this although neither parent shewed any signs of syphilis. He related three cases which had occurred to him during the past year. In the first case, nine successive abortions had occurred; in the second case, four; in the third case, frequent abortions had taken place; and in all three, after a cautious and continued use of Hyd. c. Cræta, a living child was the result. In the first and third cases, secondary symptoms appeared in the child a few weeks after birth.

Dr. Murphy did not believe the habit of frequent abortions curable by mercury could be attributable to a syphilitic taint. It was, in his opinion, extraordinary how so intimate a connection as that between the mother and the fœtus in utero could exist, without the syphilitic poison, which was circulating in so virulent a manner through the vessels of the fœtus as even to deprive it of life, being communicated to the

mother; for it is well known the mother, unless infected by the father, shews neither primary or secondary symptoms. In reference to Mr. Lodge's first case, it was unlikely the mother should not have the disease, and yet nine children die in utero. Supposing the fœtus to be contaminated on the father's side only, it would then be necessary to salivate the mother during each pregnancy; but this is not contended for. He believed, therefore, that abortion was not caused by syphilis, but generally depended on some constitutional cause. There were two forms under which the appearances termed “*syphilis*” in infants may present themselves:—those which present themselves soon after birth, and are easily curable by mercury; and those which arise from contamination by the nipple of the nurse. These latter are due to a disease called “*sibens*”; the symptoms are all external; the constitution never suffers, and they are curable by nitrate of silver or sugar of lead lotions, and not by mercury.

Mr. Lodge did not mean that syphilis is always the cause of abortion, although it is by far the most frequent one.

Mr. Hicks had observed several cases, which he had traced to syphilis, and the women had afterwards borne healthy children. He alluded to the peculiar characteristic snuffles in the nose, and the aged appearance a child has, when affected by syphilis, and also to the fact that the use of mercury renders the children robust and healthy. In reference to Dr. Murphy's opinion that the symptoms thus affecting children are not syphilitic, he would ask him if he had seen coppery blotches ever occur without syphilis preceding?—and if so, and these secondary symptoms were produced by mercury, why should they not occur after the use of mercury for ordinary affections?

Dr. Murphy, in reply, stated, that the mode of exhibiting mercury in inflammatory and syphilitic diseases was extremely different; in the latter being often given in a secret and careless manner: therefore the two cases were not analogous.

Mr. Hilton said that Dr. Murphy had not given a satisfactory answer to Mr. Hicks' question, “*If coppery blotches were ever observed after the use of mercury, without preceding syphilis?*” He thought the majority of the Society would agree with Mr. Lodge in his opinion of such cases, and that the treatment by mercury was eminently successful. He believed Sir B. Brodie's plan of using mercury the best.

Dr. Murphy thought that, in the cases referred to, the children would die unless mercury was used; and, therefore, he should not touch on the treatment; but it was a doctrine that could not be too emphatically condemned, that because curable by mercury, their disease was necessarily syphilitic.

Mr. Lodge stated, in reference to the treatment of syphilis in children, that he merely gave mercury as an adjunct, preferring the iodine.

The President remarked, that, although it was difficult to say how the syphilitic poison acted on the fœtus in utero as to cause its death, yet it was generally agreed that a mercurial treatment prevented abortions in such cases, and also cured the child, when the symptoms appeared after birth.

Mr. B. Evans believed there might be a syphilitic taint in the father, so as to cause abortion, and yet the mother should never have been affected by either primary or secondary symptoms, and related a case where the mother aborted five times, and, mercury being given to the father, the mother afterwards bore a living child.—*London Medical Gazette.*

*On the Treatment of Chronic Cutaneous Affections by Arsenic, as proposed by THOMAS HUNT, M. R. C. S., &c.*—The employment of arsenic in chronic cutaneous affections is no new practice, but the directions given for its use by Mr. Hunt, are very different from those generally laid down by preceding writers, and approximate rather to the method followed in prescribing alterative doses of mercury, where the



intention is to produce an alterative action, without affecting the system so decidedly as to bring out the more evident effects of the mineral on the salivary glands. Accordingly, in the same manner as the tender state of the gums, induced by the prolonged action of small doses of mercury, becomes at once an evidence of the system being brought under the influence of the medicine, and an indication for the diminution of the dose, so in like manner is the effect produced on the conjunctival membrane of the eye by the lengthened use of small doses of arsenic, an evidence of the system being brought under the influence of this remedy, and an indication also for reducing the dose.

The usual mode of administering arsenic is, as is well known, to commence with very small quantities, gradually augmenting them until the stomach shews that a further increase in the dose of the poison can no longer be borne, and the tolerance of the mineral is exhausted. Its exhibition is then stopped, and if the disease for which it had been given should fail to be alleviated, the remedy falls into disrepute for what has rather been an error in the mode of administering it, and the case, usually one in which numerous other remedial measures have been previously tried, is pronounced obstinate, intractable, perhaps incurable.

One great merit of the practice recommended by Mr. Hunt is, that it accords with the *rationale* of the action of other medicines of a like character; and we are so much in the habit of using medicine empirically, to produce an immediate and specific effect, and are so little acquainted with the physiological action or *modus operandi* of almost all of them, that any contribution to our knowledge of the action of medicinal agents on the general system is fraught with instruction and benefit, the ultimate results of which indeed can scarcely be calculated.

The administration, then, of arsenic, in these minute doses, (five drops of Fowler's solution, three times daily, with, or shortly after, the meals,) seems well calculated to insure its absorption and diffusion through the system. Given in this manner it may be expected gradually and safely, as far as the tolerance of the mineral can be established, to induce those alterative changes in the blood, and through that on the organism, which its individual properties enable it to effect. The point of tolerance is, it seems, indicated by the action on the conjunctiva, an inflamed state of that membrane being after a time induced. The dose of the medicine must then be lessened, perhaps, for a time, the use of it altogether discontinued, to be again resumed in smaller quantities, and its influence kept up for weeks or months, until, as in the case of cutaneous diseases, the morbid disposition is counteracted or destroyed by the prolonged use of the remedy. This is, in brief, a summary of the history of Mr. Hunt's cases, and among those special affections which have yielded to the constitutional influence of arsenic thus induced, the most satisfactory instances will be found in those well-known *opprobria medicina*,—prurigo, lepra, psoriasis, eczema, acne, and even lopus.

The failures of arsenic as an internal remedy for cutaneous affections is attributed by the author,—1st, to the syphilitic characters of many of these cases being overlooked,—arsenic is prescribed when mercury is wanted; 2nd, to its being administered during the inflammatory or febrile stages of the disease; 3rd, to the exhibition of the remedy on an empty stomach, when it is frequently obliged to be abandoned from the gastric irritation excited; 4th, to the doses in which it is ordered being too large, and the intervals too distant; and lastly, the most common and most serious error of all, the giving it in *gradually increasing doses*.

The properties of arsenic to be kept in view in its medicinal action on the system are, according to the author,—1st, its cumulative character; hence the necessity for avoiding the common practice of gradually increasing the dose to the utmost verge of toleration by the stomach. 2nd, The sudden

arrest of diseased action often observable under the administration of the maximum dose. "A full dose being administered at regular intervals, in a few days (or possibly weeks,) a pricking sensation is felt in the tarsi, and the conjunctiva becomes slightly inflamed. *At this crisis the disease is brought under arrest, and generally from this period appears to be shorn of its strength.* The return of healthy action in the cutaneous vessels often become visible, and is sensibly felt by the patient, on the very day on which the eyes become suffused with tears." 3rd. The effect of an over-dose on the nervous system, producing for a lengthened period subsequent intolerance of the medicine even in the smallest doses. 4th. That while in large doses it irritates the bowels, in small doses it soothes them, tending to check the diarrhoea and gastric irritation, which frequently accompany skin diseases. And lastly, that the susceptibility of some individuals to the influence of arsenic, is so great as to amount almost to complete intolerance, and that yet in persons of this description, suffering under diseases of the skin, in very greatly reduced doses it proves equally beneficial in curing the disease, as in those of ordinary susceptibility.—*Provincial Medical and Surgical Journal.*

*Case of Spontaneous Cure of Aneurism of the Arch of the Aorta.* By Dr. O. B. BELLINGHAM.—Mary Pierce, *ætat.* 64, a cook, was admitted into St. Vincent's Hospital, under my care, labouring under gangrene of the right lower extremity, which had commenced six weeks previously upon the anterior surface of the tibia, and had extended gradually until the muscles of the leg were laid bare, and the cavity of the ankle-joint was exposed, and the gangrene had reached to within a few inches of the knee before she died.

Her chest was examined while in hospital, but nothing unusual was observed, except a double sound, similar to that of the heart, which was audible below the right clavicle, as if the sounds of the organ were transmitted beyond the usual limits. The action of the heart was perfectly regular and natural; there was no increased impulse, and no abnormal sound, nor was there any difference in the strength of the pulse at the wrists. As she suffered excessive pain in the limb, and complained of nothing else, she was not teased by a more minute examination of the chest, particularly as her temper was not the very best. I ascertained from her friends that she never was qualified to become a teetotaller, that she had had cough, and that she had occasionally suffered from palpitation, but it had never prevented her from following her avocation. When questioned herself, she denied having ever laboured under any chest affection beyond a trifling cough.

On a post-mortem examination, an aneurism of the aorta was found, which sprung from that part of the arch where the ascending joins the transverse portion, and extended across the sternum to the right clavicle, where it formed adhesions to the right lung. It was about the size of the closed hand of the subject, and was completely filled with concentric layers of fibrine, which was very firm, and evidently of some standing. The aorta was dilated, its inner coats much distended with numerous ossific patches, and the orifice by which the aneurismal sac had communicated with the aorta would admit the point of the finger. The heart itself was about the normal size; the left ventricle was hypertrophied, its cavity diminished in size, and the left auriculo-ventricular orifice was smaller than natural; the right auriculo-ventricular orifice was normal; the valves were healthy; both coronary arteries were ossified; the femoral and popliteal arteries of the affected side were diseased, and the popliteal vein contained a firm coagulum. The lungs were healthy.—*Dublin Medical Press.*

\* \* \* The statement of so careful an observer as Dr. Bellingham must of course have great weight; but we should have been more satisfied with the above case, had the condition of the fibrine at the mouth of the sac been more expressly described. The complete filling of an aneurismal sac with firm adherent layers of decolorized fibrine, the canal of the vessel still remaining pervious, certainly forms one of the principal features in a process of spontaneous cure; but, so long as there remain any interstices between the fibrous layers still exposed to the current of the

blood, or any irregular surface upon those layers over which a coagulum may be deposited. A cure cannot be said to be effected; for, at any period, a quantity of fluid blood may insinuate itself between the layers, breaking up their connections, separating them extensively, and thus producing renewed distension in the sac, or a massive coagulum may be deposited over the roughened surface at the mouth of the cavity, and will then, by its resistance to the current of blood, tend to increase the widening of the diseased vessel at that point, and to press the entire sac outwards against some neighbouring structure. We have had frequent opportunities of observing both of these processes in various degrees and stages. An aneurism of the ascending aorta can only be stated to be cured when its orifice is completely occluded by a firm layer of dense fibrine which is perfectly level and continuous with the lining membrane of the vessel, and which does not prevent any irregularities of surface that may produce a tendency to infiltration or deposit of blood. An appearance of this kind has been several times observed in very small aneurisms of the aortic arch; but we are not aware that larger sacs have been found occluded in this manner.—*Ed. Gaz.—London Medical Gazette.*

## SURGERY.

*On the Rubefacient and Counter-Irritant Effects of Potassa Fusa, or Vegetable Caustic, in certain forms of Disease.* By JOHN BARNES, M. D., of St. Louis, formerly Lecturer on Botany, in the Academy of Natural Sciences of Philadelphia, Professor of Obstetrics in Jefferson Medical College, Philadelphia, and Member of the Board of Medical Censors of the State of Mississippi.—Having, in a large number of cases, employed the *potassa fusa*, or *vegetable caustic*, for upwards of twenty-five years, in my practice, in Philadelphia, Mississippi, and St. Louis, as a powerful *rubefacient* and *counter-irritant*, in some forms of diseased action; and which mode of using this remedial agent, so far as my reading extends, is not explicitly described in medical works, either practical or elementary, it being regarded by most, if not all writers, exclusively, as a powerful *escarotic* for the destruction of parts requiring removal; and believing that its employment, in the manner to be described, and in the forms of diseased action to be designated, has been pre-eminently successful over other modes of treatment in like affections, at least, so far as my own observations extend, I deem it due to the profession, to present, for the consideration of its members, the results of my experience in the employment, in the manner designated, of this article of the materia medica.

In the different forms of whitlow or paronychia, and in all the stages of each form of this painful affection, I have used this remedy very extensively and with the most satisfactory results. If applied early and before deep-seated suppuration and ulceration have taken place, the disease may be promptly removed; and, even in later periods of the disease, when suppuration has commenced, the mischief in many cases may be quickly arrested, and the patient's suffering greatly mitigated, and its duration shortened. Even in those cases, in which, owing to neglect or mismanagement, the deep-seated suppuration and consequent ulceration have been extensive, and the pus has made its exit, causing great injury to the surrounding parts, the chronic inflammation and consequent enlargement of the diseased tissues are essentially benefited by its application; care being taken to avoid those parts where the cuticle has been destroyed.

I do not pretend to assert that in all cases the early application of the vegetable caustic will supersede the necessity of an operation to procure an exit for the confined pus, but this much I will say, that I have seen a great many cases get well under its action, which I believe could not have

been cured without an operation, had any other mode of treatment been adopted.

This remedy is especially adapted to the treatment of those cases of whitlow in which the disease has its seat in the vicinity of the metacarpal bones, as the operation of cutting down to the diseased tissues in this part is rendered hazardous, owing to the situation of the circumflex arteries of the hand.

My mode of using the vegetable caustic in cases of whitlow, or paronychia, is to take a portion of a stick of it, and, wrapping a roll of paper around one end of it, to protect the fingers from its action, I slightly moisten with water the other end, and rub it over the surface of the diseased and adjacent parts for a few seconds, and until the patient complains of a painful burning sensation—if this burning sensation very quickly subsides, I frequently re-apply it for a short time. In most cases, however, the burning sensation lasts for several minutes, which I deem sufficient for the time, and patients often complain of its great severity.

To avoid all danger of destruction of the skin, I attend, carefully, during its application, to the sensations of the patient, and desist so soon as much pain is experienced, and carefully remove, with a piece of linen cloth, any portions of the vegetable caustic which may remain on the surface to which it has been applied.

These applications of the vegetable caustic are to be repeated as often as the exigencies of each respective case may demand. In some cases the application may be made daily, and even oftener; in other cases every other day will be sufficient; while, in some cases, once or twice a week will be as often as the diseased parts will admit of its application. During the employment of this remedy, such other treatment as the case requires should be adopted in connexion with it.

In the treatment of *Veneral Bubo*, I have derived great benefit from the application of the vegetable caustic in promoting its dispersion or absorption. I apply it, repeating the application as often as may be necessary, over the whole surface of the skin covering the enlarged gland, and for an inch or two beyond, in the same manner as directed in the treatment of whitlow; and its use when applied to the delicate skin of the groin is usually succeeded by a crop of minute pustules.

In a large number of cases, I have very happily effected dispersion of the bubo by the use of this remedy, and in those cases where, notwithstanding its application, the bubo has gone on to suppuration, and thereby greatly mitigated the sufferings of the patient.

If deemed necessary, the application of leeches may precede the use of the vegetable caustic, and during its employment, mercurials may be taken internally, and mercurial frictions be made to the inside of the thighs and the bubo itself, dressed with stramonium ointment, or any other appropriate application. In many cases, however, if the bubo be not very large, a few applications of the vegetable caustic will be sufficient for its entire removal, without the use of any other remedy, but prudence, at the same time, dictates the exhibition of some alterative medicine for the protection of the constitution from ulterior consequences, which may arise from the venereal poison.

As respects the use of the vegetable caustic as a *rubefacient* and *counter-irritant* in the forms of disease before mentioned, I feel no hesitation in recommending it as a most efficient remedy, having fully tested its virtues in numerous cases in a long course of practice.

I have no doubt, the vegetable caustic will be found an invaluable remedy in almost all cases, in which it may be desirable to produce prompt and efficient influence by *rubefacients* and *counter-irritants*.—*St. Louis Jour.*

*On the Employment of Issues.*—By Dr. BROWNLESS.—After a severe but just criticism upon the ordinary method of employing issues, the author gives the following account of his own notions upon the subject. He observes:—

I would recommend, instead of using the remedy in the manner which I have condemned, in the foregoing paragraphs, a method which, as I shall presently attempt to explain, seems to have reason on its side, and of the great value of which I have fully satisfied myself by experience.

Issues should be made of moderate size, and before the effects of the one first made are lost, by the process of repair of the ulcer being completed, another should be made at a distance from the former, so as to act upon another part of the joint affected; (for here I may be allowed to mention that this is frequently required in joints of considerable size, an issue on one side of a joint often relieving the side to which it is applied, but seeming to have little effect on the part of the joint remote from it.) Before the ulcer made by the last formed issue is nearly healed, a fresh portion of the skin should be destroyed by the caustic, and again and again should this process be repeated varying its position around the joint; and thus should a regular diversion from the diseased part be kept up.

There may be reason in some cases for not carrying out this plan to the letter, as regards the destruction of fresh portions of skin on each application of the caustic. In such cases, or where the patient has great objections to it, a new plot of skin need not be destroyed on each occasion that the caustic is used, but Sir B. Brodie's plan of frequently rubbing the old sore with caustic may be adopted; but, as a general rule, I do not consider it so efficacious as the destruction of a fresh portion of skin, nor is the benefit so lasting, and consequently, the caustic requires to be applied much oftener than where fresh skin is destroyed. Undoubtedly the latter is attended with more pain; but its duration is short, and it is not followed generally by the irritative consequences of blisters, and some other counter-irritants, or, I may add, of issues, kept open by peas and pressure. Scars may be regarded as one inconvenience arising from this plan; but if we can obtain greater benefit to diseased joints by the application of the caustic to fresh portions of the skin, the scars appear to me of trivial importance, even in the case of the fair sex; for the joints commonly the seat of the disease, are, for the most part, clothed, or at any rate may be kept so without any great drawback to the personal charms of any young lady.

The introduction of peas or other bodies for the purpose of keeping issues open, I would in no case recommend. If from any cause it be judged fit to keep open the same issue, let it be touched with caustic, but not kept open, even in this way, for any great length of time, or it will become comparatively useless.

During the treatment of a very considerable number of cases in which I had the opportunity of employing issues in this way, I found it to be the most efficacious mode of using them; and the principle, although not carried so far, has been fully confirmed in my mind, in a very extensive field for observation, by watching attentively for several years, the patients under the care of Mr. Vincent, in St. Bartholomew's Hospital.—*Lancet*, April 24.

*Cure of Nevus.*—In flat nevi up to the size of a crown piece, lint steeped in pure liquor plumbi is fastened over the part with a bandage, and wetted by fresh applications of the lead, without frequent removal. After days or weeks, the swelling becomes whiter, flatter, and firmer; soon afterwards, little, firm, white spots form on the surface, and the cure is certain. By means of a solution of alum and compression, nevi so large that extirpation would have been impossible have also been cured. It may be necessary to keep the remedy constantly applied for six months.—*Dieffenbach's Operative Surgery, and Half-Yearly Abstract*, Vol. IV.—*Prov. Med. Surg. Jour.*

## MIDWIFERY.

*Puerperal Anæmia; or a peculiar anæmic condition, occurring in gestating and lactating Females.*—By H. N. BENNETT, M. D. of Bethel, Ct.—My design in the present paper is to de-

scribe a certain morbid state, which I conceive to be peculiar to females who are either pregnant, or in conditions consequent to pregnancy; in short, a morbid state resulting only from the processes of reproduction. Within a few years past, I have met with numerous cases of the character which I am about to describe, and my description will be drawn chiefly from observation, as I have never seen in the Journals or elsewhere, any accurate and complete account of this disease. Several articles have appeared at different times in the American Journal, under the head of "Nursing Sore Mouth," which give a very correct description of one of the most common and decisive symptoms of the affection, namely, a peculiar inflammatory state of the buccal and lingual mucous membranes. One of these articles is by Dr. Backus, of Rochester, N. Y., another by Dr. Taylor, of Monticello, Florida. An extract from a paper by Dr. E. Hale, jr., was also published in the same Journal for April, 1842. I may refer to these articles in the sequel of this paper, only saying for the present, that the true pathology of the disease is not, in my opinion, recognised in either of the papers mentioned.

According to my experience, this affection frequently commences from the seventh to the eighth month of gestation, a period at which the development and growth of the fœtus are most rapid, and draw most forcibly upon the vital powers of the mother. The female begins to assume a pallid appearance, not unlike the anæmic pallor common to cachectic conditions; but this appearance is not at first accompanied by emaciation. The appetite is often impaired, and digestion rather difficult, accompanied with gastralgia, especially after taking certain articles of diet. There is a decided tendency toward diarrhoea where the gastric symptoms are marked. The function of digestion, and the appetite may, however, at this period, remain unimpaired, and the female only complain of lassitude, neuralgic pains in different parts of the body, and some slight cerebral symptoms common to all anæmic conditions. After a continuance of this state for a longer or shorter period, it is not uncommon to witness the occurrence of œdema. This may supervene either before or after delivery, and is confined to no particular part of the body; it is very generally perceptible in the face. It may be either slight or excessive. I have known one instance in which the œdematous effusion was accompanied by alarming symptoms. In this case the œdema was excessive, and was attended by accidents on the part of the respiratory organs; namely, difficulty of breathing, respiration accompanied with humid râles, and inability to lie in the recumbent posture. The lady was delivered of twins, and notwithstanding the temporary increase of all the symptoms, after this event, she finally recovered. This œdema has no special characters, and is to all appearance, similar to that which occurs in other anæmic states.

Accompanying the symptoms just described, or immediately succeeding it, I have frequently seen the "Sore Mouth," previous to delivery. It is this symptom which I look upon as pathognomonic of the affection in question. The inflammation of the buccal and lingual mucous membranes, has characters which I believe to be peculiar, and which I have never seen in any other disease. Upon inspection, the parts affected appear dry and polished, of a pink colour of different shades, sometimes very nearly approaching a red, while the other portions of the mucous membrane appear paler than natural. The inflamed parts are usually the edges and inferior surface of the tongue, the surface of the lower lip in contact with the teeth, and that of the cheeks. The parts thus affected are painful and excessively tender. The first indication of the development of this inflammation is very correctly described by Dr. Taylor. There is "a sensation of soreness and heat of the tongue and lining membrane of the mouth, accompanied by a discharge of a thin watery fluid." "The patient compares the pain and heat of the mouth to the sensation produced by scalding." The female is compelled to avoid those articles of diet which contain much salt, or spice of any kind, particularly pepper. Sometimes even all solid food.

At a later period of the disease, you will frequently see, within the limits of the pink patches, especially upon the edges and inferior surface of the tongue, and upon the labial membrane, a number of pustules or rather vesicles of some size, containing a milky fluid, which pustules sometimes degenerate into small ulcers with raised edges, which are exquisitely tender. At other times, the fluid would seem to have been reabsorbed, or discharged without leaving an open ulcerated surface. In any case the ulcerations occurring in this disease, are very distinct from those

of aphthous affections. I may remark, in passing, that this inflammation, particularly in its first stages, has appeared to me very superficial, and that it materially changes the character of the epithelium, which becomes thickened and of a smooth polished appearance. This inflammation is not peculiar to the mouth, it sometimes occurs upon the external organs of generation, and occasions a very troublesome soreness and pruritus. I have known but two instances of this kind. In these the mouth, and labia were affected conjointly.

While the mucous membranes of the mouth, &c., are in this condition, there are also increased symptoms of gastric disturbance. All stimulating and acrid ingesta produce a lively burning sensation at the epigastrium. The bowels are sometimes constipated, but usually immoderately loose, the discharges being thin and watery. In short, the whole gastro-intestinal tube gives evidence of severe functional disturbance, if not of anatomical lesion.

It is very commonly the case that the "Sore Mouth" does not occur until after delivery, and sometimes not until after lactation has been, for a length of time, fully established. It then, together with the gastric disturbance, (and I believe the two are inseparable,) constitutes the chief evidence of the morbid state. The affection of the mouth cannot, however, as supposed by Dr. Hale, be "dependent upon some peculiar state of the system, produced by the secretion in the mammae." I have recently attended a lady, who in the last month of her pregnancy, and for the first time, suffered very much from the "Sore Mouth," but who has not felt it since her delivery, being a period of three months, and, notwithstanding, she nurses her child, and has an abundant secretion of milk. The following case, which I shall briefly relate, and to which I have before referred, also militates forcibly against such a supposition.

Mrs. —, pregnant with her first child, passed through all the periods of gestation in remarkable health. During the period of lactation, she suffered from the affection of the mouth. In less than a year she became again pregnant, and as the event proved, with twins. About the seventh month, she began to show the primary symptoms of the puerperal anemia. She soon became œdematous; the œdema was general, and accompanied by the alarming symptoms which I have previously mentioned. She had also at this time the "Sore Mouth;" subsequent, however, to the first appearance of the œdema. Immediately after delivery, there was an exaggeration of all the symptoms, and her life appeared in eminent danger. *There was no secretion of milk whatever*, and her infants were nourished by other means. After a period of some months she recovered her usual health. Upon her next pregnancy, at the same period, she presented the same train of symptoms, though in a minor degree. She had, however, a more or less profuse diarrhœa, during the whole of last month. The affection of the mouth was as severe as in her former pregnancy; the œdema much less. After delivery no immediate change in her symptoms. There was a slight secretion of milk, but it was thin and watery, and her infant appeared to suffer from its ingestion. She ceased to suckle it in two weeks after its birth. This lady has recently been again delivered of a healthy child, after passing through her pregnancy in good health, and is now suckling it, without suffering any particular inconvenience. She says, she occasionally feels the symptoms of "Sore Mouth."

I have never observed in this complaint any decided febrile symptoms. The pulse has appeared to me very similar to that of chlorotic anemia. I have not practised auscultation in these cases, with a view to discover the cardiac and arterial bruits usually found in chlorosis. No case has ever occurred under my immediate observation, which progressed to a fatal termination, and I can, consequently, give no accurate account of the ultimate effects of the disease. Dr. E. P. Bennet, of Danbury to whom I was indebted for many observations of this peculiar form of anemia, has, however, recently seen two fatal cases, in both of which, he informs me, there was profuse hemorrhage from the mouth and nose, as well as from the bowels. One of these females had been in perfect health previous to conception. She died in a few weeks after her accouchment.

From the observations which I have made of this condition of puerperal females, I am led to consider it a disease, consisting primarily in a lesion of the circulating fluids; a lesion followed by symptoms known only to the puerperal state. For while this possesses some of the appreciable characters common to all anæmic conditions, yet it differs from them all in certain of its

more prominent features, and especially in that of the inflammatory affection of the mouth.

The modern researches upon the blood have shown conclusively, that pregnancy exercises a marked influence upon the composition of this fluid, the most notable characters of which are diminution of the red globules, increase of the proportion of water, slight increase of fibrine, diminution of the albumen of the serum, &c. From the analyses made by Drs. Becquerel and Rodier, of the blood of pregnant females, those gentlemen derive among others, the following conclusions: that, "in a certain number of cases of pregnancy, when it is not yet advanced, and has exercised no very sensible influence upon the organism, the composition of the blood is not altered; in proportion as pregnancy forms its termination, the blood is in general modified." (*Gazette Medicale de Paris*, 1844). The modification observed by them, are those just mentioned. It is an exaggeration of these modifications which, I suppose, constitutes the primary pathological condition, and thus the physiological state of the pregnant woman becomes the transition to the pathological one, the symptoms of which I have endeavoured to describe. But these changes in the proportion of the constituent principles of the blood, considered isolatedly, differ very little from those which occur in other circumstances; in fact, they are very similar to those occurring in every anæmic state. Why then the symptomatic differences, and special anatomical expressions of puerperal anemia? It is reasonable to suppose they are the result of the specific impression, made by the process of reproduction, through the medium of the nervous system, upon the entire organism, and more especially upon the assimilating organs. This view seems the more rational, when we consider that, while it is the stomach which suffers, the greatest sympathetic and indeed functional disturbance in the early periods of pregnancy, it is also this organ and its dependencies, which manifest the most prominent lesions from the disease in question. The fact that there is frequently no appearance of this difficulty, until a certain period after the commencement of lactation, is to my mind only another evidence that its primary cause is the impoverishment or the blood from the establishment and continuation of a function consequent to that of gestation. The vital fluids already somewhat exhausted in the nutrition of the fœtus, and by the losses consequent to delivery, are unable to sustain any further drain, without inducing true pathological changes in the solids; and modified by the specific impression of the reproductive process upon the economy, which is continued even in lactation, these changes still retain a special stamp.

As this paper has already reached some length, I shall defer the consideration of *treatment* to a future number, when I may also refer to some facts which further illustrate the pathology of the disease.—*New York Jour. of Med. and Collateral Sciences*.

*Effects of the Ergot of Rye on the Parturient Female and her offspring.*—With the view of throwing some further light on the action and effect of the Ergot, Dr. Samuel L. Hardy, of the Dublin Lying-in Hospital, has kept accurate notes of a large number of cases, in which this drug has been administered during parturition. Several of his observations are of considerable value.

*Time at which the action of the Ergot on the uterus commences.*—From comparing tables which the author has drawn up, it appears that, in some cases, Ergot acts on the uterus, so soon as seven minutes after its administration, whilst in others, a much longer period of time is required; but in the generality, from about ten to fifteen minutes may be stated as the average. In those cases where the children have been expelled alive, Dr. Hardy has always observed the action of Ergot on the uterus, to commence within twenty-five minutes. On the other hand, when a longer period than this elapses before the uterus takes on action, the use of instruments has been necessary to perfect the delivery, or the children have been dead born. In some instances, the Ergot has produced in the uterus a kind of tonic contraction, without any effective expelling pains. In accordance with what has been observed by others, the author has noticed that, in those cases where the Ergot has acted beneficially, its exhibition is followed by strong expulsive pains, which gradually increase in frequency, so that, in fact, they may be said to run into each other, there being no distinct interval between them.

*Effect on the Pulse.*—In nineteen cases of those which Dr. Hardy has recorded, there was a marked diminution in the fre-

quency of the mother's pulse, following the administration of Ergot, and this effect generally began to take place from about fifteen minutes to half an hour. In all these instances where the depression of the pulse occurred, the fetal heart underwent a similar change. Hence the author is led to inquire, is Ergot a safe remedy in a case where the woman is greatly reduced by hæmorrhage arising from relaxation of the uterus after delivery? He mentions a case bearing upon this point, where a draining had continued for several hours after the expulsion of the placenta, by which the patient was greatly weakened; the usual dose of powdered Ergot was given, and was followed almost immediately after, by a most alarming depression, requiring the administration of the most powerful stimulants. In several of the cases, the depressed state of the circulation continued for several days, notwithstanding, in some instances, inflammation of the uterus followed delivery; and the uterine tumour not unfrequently remained much larger than natural, even where there was no reason to suspect the presence of inflammation of that organ.

*Effects of Ergot on the fetal heart.*—The effects of Ergot on the fetal heart, is still more remarkable than on the maternal pulse, and, in a practical point of view, deserves a much more serious investigation.

In a great majority of the author's cases, a diminution in the fetal heart's pulsations followed the administration of Ergot. The period at which this effect begins to be produced, varies from about fifteen minutes to half an hour, sometimes a little sooner, and occasionally at a later period. The most common effect, and usually the first the author has observed, is a diminution in the frequency of the pulsations; this is succeeded, after some time, by an irregularity in its beats, which irregularity continues, more or less, until the sounds intermit, and at length, after a variable period, became quite inaudible. Dr. Hardy has been led by his observations to the practical inference that, in those cases where the number of the fetal heart's pulsations have been steadily reduced below 110, and at the same time, *with intermissions*, the child will be rarely, if ever, saved, although its delivery should be effected with the greatest possible speed. But the mere depression of the fetal heart below 110, *without intermissions*, is not, in itself, sufficient to cause this result, as instances have occurred where the number of pulsations has been still more reduced, (in one case as low as 56,) and yet by speedy delivery, and adoption of the usual remedies, the children have been saved. But in none of these cases was there a *steady, distinct, and well-marked intermission*. The knowledge of these facts points out the necessity of watching closely the state of the fetal heart, after the administration of Ergot, as delay beyond a particular time cannot be allowed with impunity to the life of the child. Should the case, in other respects, be eligible for the application of the forceps or vectis, in order to save the child, it must be had recourse to within a certain period, which can only be known by the careful use of the scthoscope. The author's observation fully coincides with those of Dr. Beatty, who fixes the limit (beyond which the child will rarely be born alive) at two hours. To this rule he has met with but three exceptions. But death of the fetus may occur long before the expiration of two hours. In two instances, the children were lost, although only twenty minutes in one, and twenty-five in the other, had passed from administration of the Ergot to their expulsion. In these instances, the depressing effects of the Ergot are so great, that frequently after birth, a considerable time elapses before the children can be perfectly restored; and Dr. Hardy has observed, that infants born in a weak state, where no Ergot was given to cause their expulsion, have been restored to animation with much less difficulty, than in those cases in which this medicine was administered during labour. Hæmorrhage after the birth of the child, is an occurrence the author has never met with in any case where the uterus was sensibly affected by the Ergot during labour.

With some few exceptions the women had generally good recoveries. Of those who were attacked with inflammation, all recovered but two. One was a case of retained placenta, where the hand was introduced; this patient died of uterine phlebitis. In the second, there was inflammation of the peritoneum and uterus.

The children who were born alive, all, with one exception, did well. In this case, delivery was effected by the forceps, as the fetal heart had fallen so low as 100 from the effect of the Ergot. This statement refers only to those cases where complete restoration was accomplished after delivery.—*Dublin Journ. Med. Sci.*

*On the Treatment of After-Pains*, By EDWARD RIGBY, M. D., Senior Physician to the General Lying-in Hospital, &c., &c.—We find these pains after most labours, but they vary much, both in duration and severity. They are always most severe in women who have born many children, and in some multiparæ they continue from 24 hours to three days. These pains, in common with those in labour, depend on contraction of the uterus; and these contractions are kept up after labour, by the presence of lochia, or of coagula of blood, or of shreds of membrane in the cavity of the uterus. The after-pains, therefore, you will easily understand, are essential to the due emptying of this organ. After-pains are not usually felt in primiparæ. In multiparæ, when the woman is quite healthy, they seldom continue very long. When very severe, and of very long continuance, they may be considered as indicating the presence of inflammation, or, at all events, of a state bordering on inflammation. The pain no longer comes and goes in distinct intermissions, but it gradually becomes constant; the uterus, too, becomes tender on pressure, and the other symptoms of inflammation are established; but we shall have to consider this subject hereafter, when speaking of puerperal fever. It must, however, be borne in mind, that long continued and severe after-pains may form an insidious transition to a state of inflammation.

The treatment pursued during the last few days of pregnancy has great influence in modifying the after-pains. If the woman be allowed to go, even up to the period of her labour, with her bowels confined and loaded with unhealthy feces, and with the secretions of the *præna* *viæ* disordered, the uterus seldom contracts well during labour, and, under these circumstances, after-pains are sometimes very severe. The too rapid expulsion of the placenta, and the hasty conclusion of the last stage of labour, so that the uterus does not contract fully and firmly, are also causes of the contractions which cause these after-pains; and, in these cases, the after-pains are useful in expelling the clots and lochia, which, if allowed to remain, would become putrid, and thus prove a source of irritation, and, perhaps, give rise to puerperal fever. When the practitioner neglects to apply the child to the breast as soon as labour is concluded, the uterus does not contract fully, as before mentioned; this, therefore, is another reason for early sucking. In speaking of the application of the child to the breast, it was omitted to mention the fact of nurses having a saying, that "the child brings after-pains." This occurs, to a great extent, when the infant is not applied to the breast until the third day, and is, therefore, another reason, if more were required, for its early application.

Although after-pains are commonly, no doubt, excited by the presence of coagula in the cavity of the uterus, still, they may sometimes occur when no such coagula are to be found. On this subject, Dr. Burton, of York, who published in 1751, has given some curious observations, which explain one cause of after-pains very satisfactorily. Dr. Burton says: "upon the expulsion of the child and the placenta, the orifices of the uterine sinuses must contract, and thus retain the grumous blood which is in them; hence the use and benefit of these after-pains, which, by stimulating and compressing the vessels and muscular fibres, make them exert their force to squeeze out this grumous blood, which otherwise might remain there, and occasion inflammation, supuration, &c., from all which we find that these after-pains are necessary towards removing or preventing an inflammation of the womb; therefore, we must not be too forward in giving strong opiates, and other internal medicines, which may take them off whilst this grumous blood is lodged within those sinuses." I doubt not, continues Dr. Burton, "that those patients who die from the eighth to the fourteenth day, whose uterus has been inflamed with the symptoms above mentioned, have been injured by the too free use of opiates." The discharge, in these cases, contains little vermiform shreds, and these shreds do not consist of portions of membrane which have been left behind, but they are the casts or moulds, as it were, of the cavities of the blood vessels, and are composed of their contents coagulated. Dr. Burton mentions a case to which he was called, in consequence of severe after-pains coming on some time after labour. In this case, having introduced his hand with some difficulty, he perceived several small membranous strings, as he then thought them, adhering to the uterus; but, he says, "I was soon undeceived, for, upon expanding my fingers, by which I stretched the womb a little, several of these came into my hand, which I drew out, and found what I had imagined to be membranes to be oblong grumous blood, resembling fibres, like those that adhere to a spatula after stirring arterial

blood in a basin for some time. I introduced my hand a second time," he continues, "and made the experiment again, but found none of these little clots within the cavity of the womb; yet, upon expanding my hand, several came out of the orifices again, which I could plainly perceive, and after keeping my hand there a little while, I brought away all that were in the cavity of the uterus, and the patient's complaint immediately abated, and she recovered well from that moment." These little vermiform fibres are, therefore, the casts of the blood vessels, the contents of which had coagulated, having been retained by the contraction of their orifices. By being careful not to hasten the last stage of labour, so as to give the uterus time to contract slowly, the uterine sinuses expel their contents, and the annoyance of after-pain is, in many cases, altogether prevented.

It was formerly the practice always to administer a large dose of laudanum, to check these after-pains; and a most pernicious practice it was, but which happily has diminished considerably of late years. As much as forty minims of tincture of opium were administered as a rule in all cases by some accoucheurs. It is hardly necessary to point out the falsity of the reasoning on which this practice was founded. Opium should never be given for the purpose of checking after-pains, unless they are very severe, or in some peculiar cases which will be hereafter considered. Should the patient, however, have been accustomed to an after-pain draught, as it is called, and seem to expect it, a little tincture or extract of hyoscinum or of lettuce may be given her. A mild sedative may, however, in many cases be useful after labour, as when the system is in a state of irritability and restlessness, consequent on the fatigue and irritation of a lengthened period of suffering; but in these cases a small dose of Dover's powder, or of the sedative solution of opium, will always prove sufficient. When after-pains continue very severe for some time after labour, the best plan of treatment will be to give the customary dose of castor oil a little earlier than usual; this will generally relieve the pains, on bringing away a quantity of fecal matter. When the pains continue very severe, in spite of this treatment, the presence of inflammatory action may be suspected, and the treatment must be accordingly.—*Medical Times.*

*Source of the Catamenial Discharge.*—The physiology or the source of the catamenial discharge, so peculiar to the human female, and the functions of the interior of the uterus positively ascertained, are subjects comparatively of very recent discovery, and as the opportunities are so rare of our having proof or of our obtaining any decisive means of determining the matter or establishing the fact, that the uterus is the source of this healthy and proper sexual secretion, I think the following evidence may be interesting:—

On Saturday, the 27th ult., I was applied to by a medical friend to assist him at a *post-mortem* examination, under an order from the city coroner, of a woman who had hung herself, the jury not being able to agree in their verdict. It is not often that a medical man is called on to make a *post-mortem* examination for the purpose of assisting the jury in coming to a correct verdict after death from hanging, the cause of death being so palpably visible; and how that twelve wiseacres could suppose that we should, by an examination after death, be able to discover the motive that could have induced this poor creature to commit such a rash act I cannot conceive. But their ignorance was bliss to us, as it gave us an opportunity of making a very interesting examination.

The external appearance, and the gorged state of the blood-vessels of the brain, clearly proved that death had been caused by strangulation, and it also proved Dr. G. Burrows' theory on this subject to be correct. In removing the abdominal viscera we were struck with the size and vascular appearance of the uterus. As we understood she had been confined three months before, and the child soon after died, we thought the uterus might be impregnated, but on laying it open it presented to our view a most beautiful velvet-like appearance; the whole internal surface was covered with a dark, sanguineous mucus, which seemed to be exuding from it and could be easily scraped off. This unusual appearance we at once suspected to be the catamenial secretion, or the commencement of the process of menstruation. There was no appearance of any discharge in the vagina, and in order to satisfy ourselves on the point as to whether she had been regular since the birth of the last child, we made inquiry, and learnt from a female friend who lived in the house with her, that she had

menstruated *once* since her confinement, and she thought that she was expecting it again in a day or two. There is then indisputable evidence, and the strongest corroborative proof of the fact, that the source of the menstrual discharge, once so much disputed, is the inner membrane lining the uterus, and I think the strongest case recorded. As it is well known, and many remarkable cases are recorded, that hanging has a very curious effect on the organs of generation of the male,—Query, Did the apparently enlarged uterus, and the vascularity of the external part of this organ, arise from the process going on within, or from the mode of death?—*Mr. King in Provincial Medical and Surgical Journal, May 19, 1847.*

## MATERIA MEDICA AND CHEMISTRY.

*Prof. Liebig's new test for Hydrocyanic Acid, with Remarks.* By ALFRED S. TAYLOR.—In a paper lately published, a short translation of which has appeared in the *Chemical Gazette*, Prof. Liebig has suggested an entirely new process for the detection of prussic acid. He remarked, that, when a concentrated aqueous solution of this acid was heated with ammonia and an excess of sulphur, the prussic acid was speedily converted to sulphocyanide of ammonium, which was easily procured in a crystalline state on evaporation. Thus the persulphurets of ammonium, when boiled with prussic acid, lose their yellow colour, owing to the union of the sulphur with cyanogen to form sulphocyanic acid. In applying this process for the testing of prussic acid, the Professor states that "a couple of drops of an acid which has been diluted with so much water that it no longer gives any certain reaction with a salt of iron by the formation of Prussian blue,—when mixed with a drop of sulphuret of ammonium, and heated in a watch-glass until the mixture has become colorless, yields a liquid containing sulphocyanide of ammonium, which produces, with persalts of iron, a very deep blood-red colour."

*Modification of the test.*—Place the diluted prussic acid in a watch-glass, and invert over it another watch-glass, holding in its centre one drop of the hydro-sulphuret of ammonia. There is no apparent change in the hydro-sulphuret; but if the watch-glass be removed after the lapse of from half a minute to ten minutes, according to the quantity of prussic acid present, sulphocyanate of ammonia will be obtained on gently heating the drop of hydro-sulphuret and evaporating it to dryness. The addition of persulphuret of iron to the dried residue brings out the blood-red colour instantly, which is intense in proportion to the quantity of sulphocyanate present. Such is the simple method of employing the test: it is wholly independent of distillation, and, (unless the prussic acid be excessively diluted,) of any application of heat. In this case, the warmth of the hand may be required to expedite the evolution of the vapour.

Whatever proportion of acid may be detected by the mixture of the two liquids, as suggested by Professor Liebig, may be with equal certainty discovered by this process.—*London Medical Gazette, April, p. 765.*

*Chemistry of the Blood.*—In a work which is noticed in the *Monthly Journal* for May, 1847, Professor Haeser has analysed the hæmatological investigations of Andral, Becquerel, Rodier and others, and considers the following aphorisms warranted by his results:—

1. The average composition of the healthy blood is probably the following—22 fibrin; 131 blood-corpuscles; 70 albumen; 6.8 salts; 210 solid matters generally; 790 water.

2. The most general effect produced by acute diseases upon the blood consists in the diminution of its solid matters in general, and especially of its blood corpuscles. The only exception to this rule is to be found during the first stage of typhus, scarlatina, and measles. Whilst the blood-corpuscles appear thus diminished, the solid residue of the serum, especially the albumen, is to be met with in greater amount; the same is the case with respect to the fibrin.

3. During the progress of acute diseases, the blood-cor-

puscles become yet more diminished, and simultaneously the solid matter of the serum is also undergoing diminution; it is only the fibrin that is sometimes increasing, even during the progress of genuine inflammatory diseases, whilst it is also diminished in the "pyrexia." The same effect as occurs in advanced disease, can generally be produced by blood-letting.

4. Concerning the special character of the true inflammatory process, we meet with the following characteristic alterations of the blood—Diminution of the alkaline salts, moderate increase of albumen, and a considerable one of fibrin. Besides this, there appears an incorporation between fibrin and albumen, and a direct one between the former and water.

5. Pneumonia is chiefly characterized by a great amount of fibrin; pleuritis, by that of albumen; bronchitis, by a comparatively slight alteration in the composition of the blood.

6. In acute articular rheumatism, the blood differs from that in genuine inflammation only by the greater diminution of blood-corpuscles, and the corresponding abnormal amount of the solid residue of the serum, and of the water. Another particularity of the rheumatic blood is the normal quantity of the salts, and the steadiness of the amount of fibrin.

7. In the fever accompanying the pyrexia, we do not recognise any constant alteration, either in the solids or in the blood, capable of explaining their essential character—(Andral.) In typhus fever we observe the following alterations—Till the eighth day of the affection the blood-corpuscles, together with the albumen, and in consequence of these, the solid matters generally, are in undue amount; after that time a progressive diminution of all the solid substances takes place, occurring in the blood-corpuscles most, and the fibrin least. On the twenty-first day the general increase of the solid materials return again. One or two blood-lettings, made during the first eight days, produce but a slight influence upon the composition of the blood; whilst at a later period the blood-corpuscles are thereby very considerably diminished.

8. Acute articular rheumatism, simple erysipelas, and puerperal peritonitis, considered as to the composition of the blood, form a group which differs from inflammation as well as from typhus fever, by the considerable quantity of water, serous residue, and fibrin induced, and by the extraordinary diminution of the blood-corpuscles. The analogy between the three diseases just mentioned becomes still more obvious on considering the exudations in them, the water and albumen of which, compared with the composition of the blood, are much increased. At a later period, and after blood-lettings puerperal peritonitis approaches very nearly to typhus fever.

9. Variola, scarlatina, and rubeola, constitute also a natural group, so far as the composition of the blood is concerned. To the two last-named diseases the undue amount of solid matters in general at their commencement, and the constant increase of albumen and alkaline salts, seem to be characteristic. Hence these diseases approach on the one hand to the erysipelatos, and on the other to the typhus composition of the blood.—*Ueber den Gegenwärtigen Standpunkt der Pathologischen Chemie des Blutes.—Prov. Med. Surg. Jour.*

*Source of Fallacy in testing the Urine for Sugar.*—Dr. Rees has pointed out the fact, that the dark colour produced by boiling the suspected urine with caustic potash (Moore's test,) is not satisfactory, unless the purity of the potash be first ascertained. He was led to this knowledge by having failed to detect sugar in a specimen of urine said to be diabetic, when it occurred to him that the dark colour met with by the party sending the urine might be due to the presence of lead in his potash, which was found to be the fact by test-

ing it with hydro-sulphuret of ammonia.—*Medical Gazette*, April 2.

[This hint is valuable, and as far as our recollection goes, original on the part of Dr. Rees.]—*Prov. Med. Surg. Jour.*

*A Pleasant Substitute for Epsom Salts as a Purgative.*—M. Garot recommends the following formula for the preparation of tasteless purgative salts (citrate of magnesia):—

Carbonate of Magnesia.....	15 parts
Citric acid.....	21 to 22 "
Aromatic Syrup.....	60 "
Water.....	300 "

The citric acid is separately dissolved and added to the carbonate of magnesia diffused in water.

As thus prepared it is not effervescing; but it is easily rendered so by adding only half the quantity of acid, and reserving the addition of the other half, until the dose is taken. The above proportions in grams would constitute a dose.

Dr. Pereira long since suggested the use of citrate of magnesia in nearly similar proportions. He found that one scruple of crystallized citric acid saturated about fourteen grains of light or heavy carbonate of magnesia.—*London Med. Gazette.*

THE  
**British American Journal.**

MONTREAL, SEPTEMBER 1, 1847.

*Organization of the College of Physicians and Surgeons of Canada East.*—In our last issue we notified the profession of Canada East of the passing of the Bill organizing them into a College, endowed with specific and important powers. In our present number, we present them with a copy of the Bill as it passed the several branches of the Legislature. Considered in every point of view it is a most important measure, and if carried into operation with enlarged and liberal views, is amply calculated to place the profession here in a lofty and proud position of usefulness and honour. The initiative, as may be seen by the proclamation which we subjoin, has been already taken by the Executive. The appointment of Dr. Arnoldi as the first President of the College, is one from which we think there cannot be a dissentient voice. It was a tribute at once to the elevated professional character which that venerable gentleman sustains, as well as to his respectability and private worth. We hope to witness a numerous meeting of the profession on the 15th instant; and we hope that the proceedings of that day, of what nature soever they may be, will be dictated by a single eye to the advancement of the interests of the profession, by the appointment of individuals fully competent to the discharge of the important duties which will afterwards devolve upon them as examiners, which, we need hardly observe, is a matter of deep and serious moment.

Province of Canada.

By His Excellency The Right Honorable JAMES, Earl of Elgin and Kincardine, Governor General of British North America, and Captain General and Governor-in-Chief in and over the Provinces of Canada, Nova Scotia, New Brunswick, and the Island of Prince Edward, and Vice Admiral of the same, &c. &c. &c.

To all to whom these presents shall come, or whom the same may concern—Greeting :

A PROCLAMATION.

Whereas in and by an Act of the Parliament of the Province of Canada, made and passed in the session held in the tenth and eleventh years of Her Majesty's Reign, intituled, *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*, it is amongst other things enacted, that it shall be lawful for the Governor of the said Province, by Proclamation, to fix the time and place for the holding of the first meeting of the Corporation thereby established, and the nomination of the first President thereof, as in and by the said Act reference being thereunto had may more fully appear. Now Know Ye, that in virtue of the power conferred upon me, in and by the said Act, I have appointed and declared by and by these presents do appoint and declare that the first meeting of the said Corporation shall be held at the Court House, in the City of Montreal, on Wednesday, the fifteenth day of September now next ensuing ; And I have also nominated and appointed, and do by these presents nominate and appoint DANIEL ARNOLDI, of the said City of Montreal, M.D., to be the first President of the said Corporation ; of all which Her Majesty's loving subjects, and all others whom these presents may concern, are hereby required to take notice, and to govern themselves accordingly.

Given under my Hand and Seal at Arms, at Montreal, this Tenth day of August, in the year of our Lord, one thousand eight hundred and forty-seven, and in the eleventh year of Her Majesty's Reign.

ELGIN AND KINCARDINE.

By command,

D. DALY, Secretary.

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, 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 without license ; be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and of the Legislative Assembly of the Province of Canada, constituted and assembled by virtue of and under the authority of an Act passed in the Parliament of the United Kingdom of Great Britain and Ireland, intituled, *An Act to re-unite the Provinces of Upper and Lower Canada, and for the Government of Canada*, 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 of Ordinance to prevent persons practising Physic and Surgery within the Province of Quebec, or Midwifery in the Towns of Quebec and Montreal, without license," except so much thereof as relates to the vending or distributing of medicines by retail,—and all other Acts or parts of Acts in any manner relating to the Practice of Physic, Surgery or Midwifery, in Lower Canada, or in any manner relating to the mode of obtaining licenses, practise Physic, Surgery or Midwifery 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 or Lower Canada, to practice in the Province of Canada," shall not

be repealed or affected by this Act, provided always that nothing herein contained shall have the effect of repealing any law or part of law in force in Lower Canada, relative to Druggists and Apothecaries, and the vending of Drugs by them in Lower Canada.

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, Wolfred Nelson, M. D., M. McCulloch, M. D., G. W. W. Campbell, M. D., H. H. Sauv e, 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. O. Vall e, M. D., W. Frazer, M. D., Hy. Monnt, 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. Huguet, Latour, B. Pameuen, Wm. Sutherland, M. D., Frs C. F. Arnoldi, M. D., Francis Badgley, M. D., A. Hunt, M. D., J. G. Bibaud, 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. LaRoque, M. D., W. A. Liddell, Surgeon, James Crawford, M. D., Emery Coderry, Ths. E. d'Odet d'Orsonnens, A. F. Holmes, M. D., J. B. LeBourdais, E. J. Sewell, M. D., R. H. D'Amour, Pierre Bronsecau, Chs. H. Keeser, J. B. Meilleur, S. E., T. Bowic, M. D., G. D. Gibb, M. D., S. B. Schmidt, M. D., A. E. Regnez, P. E. Picault, F. Cushing, M. D., Moses Nicolls, James B. Johnston, M. D., E. D. Worthington, M. D., A. A. Andrews, J. Alcorn, M. D., — Fowler, Joshua Chamberlin, Horatio Nelson May Thomas Boutillier, Moses F. Colby, M. D., Frederic Steel Verity, W. Fleury D'Eschambault, C. H. Castle, — Lachapelle, Cleop. Bernard, C. E. N. Courteau, Ad. Dugas, M. D., J. Trudel, Ant. LaFreniere, 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. Glinea, M. D., Benj. Damon, M. D., Frs. Sheriff, M. D., Uriah Laffin, Michl. Passe, Hildreth, — Von. Iffland, — Grenier, H. Cartier, T. Kimber, Hy. Lord, R. Cartier, J. H. Beauchemin, C. Pelisson, Felix Cot e, Hy. Carter, S. N. Guin, L. H. Gauvreau, P. O. Lassisserave, Adol. Alexander, — Smith, — Malhoit, — Rouseau, — Brassard, Calvin Alexander, — Bourgeois, — Landry, — Desilets, — Fortier, J. Trudel, Ed. McDonald, — Lemaitre, — Badeau, W. A. R. Gilmore, John Fitzpatrick, L. N. Rouseau, John Clark, Joseph Cot e, W. A. Stewart, Ed. Boudreau, J. B. Noel, C. P. Dub g, J. E. Hudon, H. P. Ouellet, L. T. Charperon, P. Charost, H. Desjardins, R. B dard, L. T u, J. G. G. Miville de Ch ne, D. S. Marquis, C. L rois, M. DeSales La Terriere, A. Dubord, L. Tremblay, L. D. Harvy, 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, R. MacKenzie, Joseph Morvin, John Rawley, J. Z. Nault, Jas. H. Sewell, M. D. C. Fremont, J. E. J. Landry, C. S. Robitaille, Francois Jacques S quin, P. D. Hubert, P. G. Tourangeau, M. D., J. B. Blais, P. M. Bardy, Jos. Parant, Jos. Painchaud, J. Blanchet, R. H. Russel, M. D., J. P. Russell, M. D., E. A. Jackson, P. D. Moffat, John L. Hall, John Watt, M. D., John Racey, J. Douglas, Louis L. Roy, P. Wells, J. Painchaud, Jeur., A. T. Michaud, F. Poulin, L. S. J. Sinclair, Ls. Tremblay, 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

\* Our own name has been, by a most unfortunate blunder, metamorphosed into Hunt. We regret this the more, at present, as in consequence of not being a member of the corporation, although a signer to the petition, we are necessarily excluded from any participation in the proceedings of the 15th instant.—Ed.



or bequeathed to and for the use of the said College; and by the name aforesaid shall and may at any time hereafter be paid, without any Letters or 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 one thousand pounds.

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."

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.

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.

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, 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; Provided always, and be it enacted, that every person who has obtained or may hereafter obtain, a Medical Degree or Diploma in any University or College in Her Majesty's dominions, shall be entitled to such certificate without examination as to his qualification.

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, unless he shall have obtained a certificate or qualification from the said Provincial Medical Board.

And be it enacted, That from and after the passing of this Act, no person shall practise Physic or Surgery, or Midwifery, in Lower Canada, unless he be a person duly licensed so to practise, either before or after the passing of this Act, under a penalty of Five Pounds currency, for each day on which any person shall so practise, 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, or Surgery, in Upper Canada, from practising the same in Lower Canada, according to the provisions of the Act hereinbefore cited.

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: Provided always, that such rules shall not be contrary to the provisions of this Act.

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 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, and to make all such rules and regulations for the government and proper working of the said Corporation, and the election of a President and Officers thereof, as to the members thereof may seem meet and expedient, which said rules and regulations shall, before they shall come into effect, be sanctioned by the Governor of this Province, after the same shall have been submitted to him for approval, and by him allowed.

And be it enacted, That the qualifications 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.

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 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. And to remove all doubts with regard to the number of lectures which the incorporated Schools of Medicine of Quebec and Montreal are bound to give yearly: Be it enacted and declared, that it is and shall be sufficient that the said Schools of Medicine respectively, shall yearly cause to be delivered one hundred and twenty Lectures on the subjects by law provided, in the English language or in the French Language, without its being necessary that any lecture should be delivered in both languages, and each lecture, in whichever language delivered being reckoned as one of the one hundred and twenty.

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. And the said election, either as member of the said College, or as Governor thereof as aforesaid, shall be made under the rules and regulations therefor, and in such manner as the said Corporation shall make therefor, to be sanctioned by the Governor of the Province in manner aforesaid: Provided always, that it shall be lawful for the Governor of this Province, by Proclamation, to fix the time and place for the holding of the first meeting of the said Corporation, and the first President thereof.

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 such fees do not exceed the sum of one pound five shillings currency; and also by all persons who obtain from the said Board a certificate for license to practise medicine; provided that the said fees do not exceed the sum of two pounds and ten shillings 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.

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; Provided that such certificate and proof shall only be required in the Cities of Montreal and Quebec, and the Town of Three Rivers.

And be it enacted, That so much of any Law heretofore in

force in Lower Canada, as may have fixed the period of prescription with regard to the claim (demande) of any person duly licensed to practise Physic, Surgery or Midwifery for professional services, attendance or medicine, shall be, and is hereby repealed; and any such claim shall be prescribed by the lapse of five years from such attendance service or medicine furnished, without any act having been done to interrupt the prescription, and not before; Provided always, that nothing herein contained, shall be construed to revive any such claim actually prescribed before the passing of this Act.

And be it enacted, That this Act shall be a public Act, and taken and received as such in all Courts of Justice, and by all persons in this Province.

(Attested.)

J. TAYLOR,

Clerk Ass't & D'pty Clerk Leg. Council.

*Health of the City.*—Judged by the mortality reports, and general professional experience, the health of the city is improving; although the ratio of deaths from fever is still inordinately high. For the last ten weeks the weekly returns of mortality from that cause alone are as follow:—

June.		July.				August.				
19,	26,	3,	10,	17,	24,	31,	7,	14,	21,	28,
3	4	12	56	53	60	68	37	40	36	31

yielding ratios far above those of New York or Boston. Other prevailing diseases are dysentery and diarrhœa, the former of which is more than usually prevalent this season. From all accounts the sanitary state of Quêbec has not improved much; typhus fever, introduced by the immigrants, being remarkably prevalent; while at Grosse Isle, though matters seemed to be improving, the mortality among the immigrants is still immense. On Sunday the 22d, at 10 A.M., there were 2,048 patients in Hospital; and the deaths for the week ending the same day at noon were 228. At the Emigrant Hospital, Point St. Charles, on August 30th, there were 1198 sick; and 20 deaths took place during the preceding twenty-four hours. Now, however, that the temperature of the air has become cooler, we may anticipate a more healthy condition of both the cities.

*Appointment of Lecturers at the School of Medicine and Surgery.*—Dr. Horace Nelson having resigned his lectureship of Anatomy, and in consequence of the provisions of the Act regulating the study and practice of medicine, several appointments to lectureships have lately taken place at a special meeting of the Corporation. Dr. Bibaud, lately lecturer on *Materia Medica*, has been appointed to the chair of Anatomy, vacated by Dr. Nelson; Dr. Coderre to the chair of *Materia Medica*; Dr. Peltier, to that of Institutes of Medicine; and Dr. Boyer to that of Medical Jurisprudence. The chairs are all worthily filled, although we much regret the loss which the school has sustained in the resignation of Dr. Nelson. This gentleman, from his

talents and amiability of disposition, had secured to himself a large circle of attached friends; and much as we regret his departure from this city, for Plattsburgh, the scene of his present professional labours, we hope that a relaxation from the arduous duties accruing to his lectureship will restore him a full measure of that health which had become seriously impaired.

*Ledoyen's Disinfecting Fluid.*—Having perused several interesting Parliamentary documents in relation to this fluid, any person at all conversant with chemistry may easily detect its composition, which would appear to be a solution of nitrate of lead. It may be easily prepared by decomposing a solution of acetate of lead by nitric acid, thus setting free acetic acid, the use of which as a disinfectant, so called, has been long known. It strikes us, however, that the name is a misnomer. A solution of nitrate of lead, one can readily imagine, can purify an apartment, &c., by decomposing the sulphuretted hydrogen, or hydro-sulphuret of ammonia existing in it; but it cannot be, with propriety, termed a disinfectant, unless it be shown, that infectious miasmata consist essentially of sulphuretted hydrogen, or its combination with ammonia, facts not yet demonstrated. The application of the nitrate of lead, however, to purifying purposes, is, we believe, original on the part of Mr. Ledoyen, and is really as deserving of attention, as it seems to be well calculated to ensure success in this particular.

*Abolition of the Concours in France.*—The Chamber of Peers has come to a vote by which the system of election by Concours in France is abolished. Some of the noisy advocates of this electioneering practice are about to present a protest to the Chamber of Deputies against this vote, and to require a restoration of their favourite panacea for bringing out professional talent! But the feeling of the most eminent and experienced men in the profession is decidedly against the re-establishment of this system.—*London Medical Gazette.*

*Medical Schools in the United States.*—The following corrected list of the Medical Schools in the United States, which we copy from the pages of our esteemed contemporary, the *Western Lancet*, published at Lexington, Ky., will be found to possess considerable interest. They have been carefully arranged by the editor of that well-conducted Journal in chronological order, from the statement submitted to the last National Medical Convention, by the Chairman of the Committee appointed to report on Medical Schools:—

MEDICAL SCHOOLS.	Location.	When founded.
1. Medical Department of the University of Pennsylvania,	Philadelphia, Pa.	1765
2. Massachusetts Medical College, (Harvard),	Boston, Mass.	1782
3. New Hampshire Medical School,	Hanover, N. H.	1797
4. University of the State of New York, (College of Phys. and Surg.)	New York City,	1807
5. Faculty of Physic of the University of Maryland,	Baltimore, Md.	1807
6. Medical Institution of Yale College,	New Haven, Conn.	1810
7. Medical Department of Transylvania University,	Lexington, Ky.	1818
8. Castleton Medical College,	Castleton, Vt.	1818
9. Medical College of Ohio,	Cincinnati, O.	1819
10. Medical School of Maine,	Brunswick, Maine,	1820
11. Berkshire Medical Institution,	Pittsfield, Mass.	1823
12. Jefferson Medical College,	Philadelphia, Pa.	1824
13. Medical Department of Columbian College,	Washington, D. C.	1825
14. Medical School of the University of Virginia,	Charlottesville, Va.	1825
15. Washington Medical College,	Baltimore, Md.	1827
16. Medical College of Georgia,	Augusta, Ga.	1830
17. Medical College of the State of South Carolina,	Charleston, S. C.	1833
18. Medical Department of Willoughby University,	Columbus, O.	1834
19. Vermont Medical College,	Woodstock, Vt.	1835
20. Medical College of Louisiana,	New Orleans, La.	1835
21. Medical Department of St. Louis University,	St. Louis, Mo.	1837
22. Medical Department of the University of Louisville,	Louisville, Ky.	1837
23. University of the City of N. York,	New York City,	1837
24. Medical Department of Hampden Sydney College,	Richmond, Va.	1838
25. Albany Medical College,	Albany, N. Y.	1839
26. Medical Department of Pennsylvania College,	Philadelphia, Pa.	1839
27. Medical Department of the University of Missouri,	St. Louis, Mo.	1841
28. Rush Medical College,	Chicago, Ill.	1843
29. Western Reserve Medical College,	Cleveland, O.	1844
30. Franklin Medical College of Philadelphia,	Philadelphia, Pa.	1846
31. Buffalo Medical College,	Buffalo, N. Y.	1846
32. Memphis Medical College,	Memphis, Tenn.	1846
33. Philadelphia Medical College,	Philadelphia, Pa.	1847
34. Medical Department of Geneva College,	Geneva, N. Y.	
35. Winchester Medical College of Virginia,	Winchester, Va.	
36. Medical Department of Illinois College,	Jacksonville, Ill.	
37. Indiana Medical College,	La Porte, Indiana.	

## OBITUARY.

Died, in this city, on the 6th ult., Frederick Cushing, M. D., aged 52. Dr. C. was a native of South Berwick, Maine; and descended from a family which, from the earliest period of the history of New England, has been distinguished for intelligence and respectability. The late Chief Justice Cushing was an uncle of the deceased, and several members of the family have been distinguished in professional and literary pursuits. Dr. C. received his collegiate education at Dartmouth University, N. H.; and pursued his professional studies in his native state, and at Boston. He first settled as a physician at Durham, N. H., in 1817, where he practised with distinguished success for twelve years; from thence he removed to Burlington, Vt.; and in 1833, fixed his residence in Montreal. In 1834, his treatment of Cholera was characterised with eminent success, and his disinterested and humane conduct towards the poor who had been afflicted with that malady, reflected credit on his feelings. Prompted by the same desire to render himself useful to the afflicted, he did not hesitate to place his professional services at the disposal of the

emigration department, on the appearance of ship fever in this city; and accepted an appointment as one of the physicians in charge of the sheds' hospital, where he unfortunately contracted the disease, and in a few days was numbered among its victims.—*Communicated.*

At Grosse Isle, on the 25th July last, of typhus fever, contracted in discharge of his duties as one of the attending physicians, Alexis Penet, M. D., of Varrennes, aged 22 years. This promising young man lately graduated at McGill College.

On the 3rd instant, at his mother's residence, No. 48 Sanguinet Street, St. Lawrence Suburbs, Dr. John Jameson, aged 34 years, son of the late Captain Jameson, of disease contracted whilst discharging his professional duties at Grosse Isle.

On the 2d instant, Dr. Graham, of Scarborough, C. W., in consequence of injuries received from a fall on the previous evening. Dr. Graham was in extensive practice in his vicinity, and his numerous friends, by whom he was held in much esteem, deeply deplore his melancholy and premature death.

At Peterboro, C. W., on Sunday the 1st instant, of typhus fever, caught while in attendance at the immigrant sheds, John Hutchison, Esq., M. D., aged 50 years, formerly of Kirkaldy, in Fife, North Briton, and a resident in America since 1815.

At William Henry, County of Richelieu, on the 5th instant, aged 87 years, of typhus fever, Dr. Rodolph Steiger, formerly a Captain in Watteville's Regiment, contracted in the exercise of his profession, sincerely regretted by his family, and by a numerous circle of friends.

Suddenly, at the residence of his father, Joseph Vallée, Esq., on Friday, the 13th instant, Dr. Benjamin Oswald Oliver Vallée, aged 27 years and eight months.

## LICENTIATES OF THE MEDICAL BOARDS.

Montreal, July 3, 1847.—His Excellency, the Governor-General, has been pleased to grant a Licence to Alcide Faneuf, Esq., to enable him to practice Physic, Surgery, and Midwifery within the Province of Lower Canada.

July 10.—His Excellency, the Governor-General, has been pleased to grant a Licence to Alexander McDougall, of Niagara, gentleman, to practice Physic, Surgery, and Midwifery, in the Province of Canada.

July 17.—His Excellency, the Governor-General, has been pleased to grant a Licence to Peter N. Church, Esq., M. D., to enable him to practice Physic, Surgery, and Midwifery; and a Licence to William Brough, gentleman, to enable him to practice as an Apothecary, Chemist, and Druggist, in the Province of Lower Canada.

July 31.—His Excellency, the Governor-General, has been pleased to grant Licences to James Henry Richardson, of Toronto, gentleman, Charles Cameron, of Toronto, gentleman, and George S. Herod, of Guelph, gentleman, to practice Physic, Surgery, and Midwifery in the Province of Lower Canada.

August 7.—His Excellency, the Governor-General, has been pleased to grant a Licence to Charles Hugnet Latour, Esq., to enable him to practice Physic, Surgery, and Midwifery, in the Province of Lower Canada.

August 14.—His Excellency, the Governor-General, has been pleased to grant a Licence to H. H. Sauve, Esq., to practice Physic, Surgery, and Midwifery, in the Province of Lower Canada.

August 17.—His Excellency, the Governor-General, has been pleased to grant a Licence to Charles Seager, of Walsington, gentleman, to practice Physic, Surgery, and Midwifery, in Canada.

## NOTICE TO CORRESPONDENTS.

*Professor Croft's paper has been received; it will be inserted in our succeeding number. Letters have been received from Dr. Gilchrist, Dr. Pyke, Dr. Hodder, and Dr. Craigie; he first and second gentlemen are informed that their advices arrived too late for any useful purpose at the House, when the bill was passing; enquiry was made at the time, and the Bill had passed to the upper House.*

*To Dr. Hodder we have to observe, that in accordance with his desire, application was made at the proper quarter for his friend; but the Medical Staff was then suffering a diminution instead of augmentation. The pressure of numerous duties has as yet prevented a direct reply to these gentlemen.*

**BILL OF MORTALITY for the CITY of MONTREAL, for the month ending JULY 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
	<b>EPIDEMIC OR INFECTIOUS</b>	3	3	6	4	3	3	1	1					
Small Pox,.....	3	3	6	4	3	3	1	1						
Measles,.....	7	2	9	4	3	1	1							
Scarlatina,.....	1	1	2	1	1									
Fever, inclu. typhus	140	105	245	28	28	6	13	4	26	51	30	38	21	
Dentition,.....	33	54	87	48	39									
<b>DISEASES OF BRAIN AND NERVOUS SYSTEM</b>	8	3	11	10	1									
Convulsions,.....	8	3	11	10	1									
Apoplexy,.....	1	1	2	1	1								1	
Paralysis,.....	1	4	5	3	1							2	3	
Water on the Brain	2	1	3	1	1				1	1				
Coup de Soleil,.....	1	1	2	1	1									
<b>DISEASES OF THE THORACIC VISCERA</b>	30	33	63	21	9	3	1	2	7	3	8	6	3	
Consumption,.....	30	33	63	21	9	3	1	2	7	3	8	6	3	
Croup,.....	1	1	2	1	1									
Hooping Cough,.....	1	1	2	1	1									
<b>DISEASES OF ABDOMINAL VISCERA</b>	64	42	106	63	29	3	2	1	2	4		1	1	1
Diarrhœa,.....	64	42	106	63	29	3	2	1	2	4		1	1	1
Dropsy,.....	1	3	4	2	1									
Dysentery,.....	1	1	2	1	1									
Cholera,.....	1	3	4	2	1									
Worms,.....	2	0	2	1	1									
Inflammation,.....	8	12	20	11	2	2		1		2	2			
Debility,.....	4	5	9	5	4								6	3
<b>OTHER CAUSES AND DISEASES, AND DISEASES NOT SPECIALLY DESIGNATED</b>	10	10	20	10	10									
Still-born,.....	10	10	20	10	10									
Unknown,.....	17	7	24	20	1		1						1	1
Sudden Death,.....	3	2	5	3	2							2	2	1
Accidental,.....	2	1	3	1	2					2				
Drowned,.....	3	3	6	3	3		1			1	1			
Other Causes,.....	6	3	9	1	1						1	3	3	
<b>Total</b>	<b>349</b>	<b>286</b>	<b>635</b>	<b>209</b>	<b>122</b>	<b>20</b>	<b>20</b>	<b>8</b>	<b>36</b>	<b>65</b>	<b>47</b>	<b>51</b>	<b>43</b>	<b>5</b>

Besides the above, there were buried in the city cemeteries, 270 Immigrants, of whom 134 were males and 136 were females, Of this number, there died of Fever, 218=109 males and 109 females; of Diarrhœa 16=8 males and 8 females; of Measles and Small Pox, 5=3 males and 2 females; of Consumption 12=6 males and 6 females; of other diseases 19=8 males and 11 females; At the ages recorded in the table, there died under 1 year of age, 43; 1 to 3, 53; 3 to 5, 23; 5 to 10, 57; 10 to 15, 19; 15 to 25, 19; 25 to 35, 34; 35 to 45, 9; 45 to 55, 5; 55 to 75, 8. This statement does not comprise the mortality at the sheds.

**MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR JULY, 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,	+70	+89	+73	+79.5	29.71	29.71	29.74	29.72				Fair	Fair	Fair
2,	"74	"90	"75	"82-	29.76	29.78	29.79	29.78				Fair	Fair	Fair
3,	"90	"90	"76	"80-	29.79	29.78	29.75	29.77				Fair	Fair	Fair
4,	"79	"95	"74	"87-	29.71	29.68	29.74	29.71				th.&rn.	Fair	th.&rn.
5,	"76	"89	"75	"82.5	29.69	29.66	29.68	29.68				Fair	Fair	Fair
6,	"79	"98	"82	"88-	29.72	29.71	29.71	29.71				Fair	Fair	Fair
7,	"83	"97	"82	"90-	29.73	29.72	29.70	29.72				Fair	Fair	Fair
8,	"79	"102	"84	"90.5	29.71	29.69	29.69	29.70				Fair	Fair	Fair
9,	"82	"99	"80	"90.5	29.70	29.67	29.64	29.67				Fair	Fair	Fair
10,	"83	"99	"76	"91-	29.63	29.59	29.59	29.60				Fair	Fair	Fair
11,	"71	"92	"76	"81.5	29.61	29.60	29.60	29.60				Fair	Fair	Fair
12,	"79	"87	"76	"83-	29.61	29.57	29.51	29.56				Fair	Fair	Fair
13,	"72	"77	"64	"74.5	29.46	29.50	29.55	29.50				rn.&th.	Thun'r	Fair
14,	"65	"80	"66	"71.5	29.65	29.63	29.60	29.63				Fair	Fair	Fair
15,	"63	"78	"64	"71.5	29.55	29.57	29.58	29.57				Fair	Fair	Fair
16,	"76	"90	"72	"83-	29.57	29.60	29.62	29.60				Fair	Fair	Fair
17,	"77	"86	"67	"81.5	29.60	29.56	29.68	29.61				Fair	rn.&th.	Thun'r
18,	"62	"71	"59	"66.5	29.78	29.78	29.75	29.77				Fair	th.&rn.	th.&rn.
19,	"60	"80	"70	"70-	29.73	29.68	29.63	29.68				Rain	Fair	Rain
20,	"75	"86	"76	"80.5	29.61	29.57	29.58	29.59				Fair	Cloudy	Fair
21,	"78	"86	"75	"82-	29.57	29.50	29.47	29.51				Fair	rn.&th.	Rain
22,	"78	"84	"71	"81-	29.49	29.51	29.59	29.53				Fair	Fair	Fair
23,	"68	"76	"63	"72-	29.77	29.81	29.82	29.80				Fair	Fair	Fair
24,	"68	"87	"67	"77.5	29.85	29.79	29.74	29.79				Fair	Fair	Rain
25,	"70	"78	"72	"74-	29.61	29.45	29.40	29.49				Rain	Fair	rn.&th.
26,	"57	"63	"57	"60-	29.57	29.51	29.63	29.57				Rain	Cloudy	Fair
27,	"53	"65	"53	"59-	29.72	29.73	29.80	29.75				Fair	Fair	Fair
28,	"56	"74	"53	"65-	29.80	29.74	29.73	29.76				Fair	Fair	Fair
29,	"65	"76	"62	"70.5	29.72	29.61	29.63	29.65				Fair	Fair	Fair
30,	"68	"78	"64	"73-	29.67	29.67	29.63	29.66				Fair	Fair	Rain
31,	"64	"80	"61	"72-	29.56	29.55	29.60	29.57				Fair	Fair	Fair

THERM. } Max. Temp., +102° on the 8th.  
 } Min. " +53° " 27th & 28th  
 Mean of the Month, +77° 76

BAROMETER, } Maximum, 29.85 Inches on the 24th.  
 } Minimum, 29.40 " " 25th.  
 Mean of Month, 29.65 Inches.

(For the Brit. Amer. Journ. of Med. and Phys. Science.)  
**MONTHLY METEOROLOGICAL REGISTER AT H.M. MAGNETICAL OBSERVATORY, TORONTO, C. W.—JULY, 1847.**  
*Latitude 43°. 39' 4". N. Longitude 79°. 21' 5". W. Elevation above Lake Ontario, 108 Feet.*

DAY.	Barometer at Temp. of 32°.			Temperature of the Air.			Tension of Vapour.			Humidity of the Air.			Wind.			Rain on sun.	WEATHER.
	Mean			Mean			Mean			Mean			Mean				
	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.		
1,	29.745	29.737	29.753	29.745	75.1°	58.8°	65.7	331.439	336	395	.64	N. N. E.	E. S. E.	E. S. E.	—	Unclouded—Hazy.	
2,	29.795	29.763	29.746	29.770	78.4	63.6	67.7	.412.563	420	.475	.72	Calm.	Calm.	E. by S.	—	Uncl'd till 6 pm. Rem. partially cl'd	
3,	29.797	29.740	29.709	29.737	80.7	59.8	69.5	.479.578	409	.507	.81	Calm.	Calm.	Calm.	—	Gen. cl'r. Light cl'ds & haze r'n'd hor	
4,	29.758	29.698	29.709	29.709	79.2	60.4	69.5	.438.580	—	—	.60	N. by W.	S. S. W.	do.	—	Do.	
5,	29.743	29.679	29.710	29.712	80.4	67.0	71.8	.479.635	559	.566	.86	Calm.	Calm.	Calm.	—	C'r am, cl'd pm. Th & r'n 4 to 6 pm	
6,	29.737	29.679	29.735	29.735	76.3	63.4	68.8	.543.716	523	.573	.83	Calm.	Calm.	Calm.	—	Clouded all day.	
7,	29.762	29.701	29.674	29.697	80.6	65.1	71.2	.527.689	544	.567	.91	Calm.	Calm.	Calm.	—	Hazy. Air close and oppressive.	
8,	29.661	29.621	29.598	29.632	70.8	77.6	73.3	.625.675	541	618	.76	Calm.	E.	E.	—	Do	
9,	29.661	29.592	29.589	29.603	79.1	70.2	73.8	.610.665	544	603	.75	Calm.	E. by S.	E. by S.	—	Do	
10,	29.565	29.527	29.537	29.537	80.1	71.9	76.6	.577.597	557	.581	.73	Calm.	E. by N.	E. by N.	—	Hazy am, cl'd pm. Sheet Png 10 & 11 pm	
11,	29.558	29.517	—	—	75.2	78.4	—	.689.653	—	—	.81	E.	E. by N.	E. by N.	—	Gen. overcast. Detached clouds.	
12,	29.553	29.518	29.505	29.525	74.4	81.6	74.0	.666.771	600	.660	.81	E.	S.	S.	—	Light passing clouds.	
13,	29.526	29.506	29.624	29.572	75.2	77.4	62.0	.625.565	395	.493	.73	WNW	N. by W.	N. N. W.	—	Hazy. A few dense cl'ds rising from NW	
14,	29.689	29.663	29.594	29.631	61.2	71.2	62.4	.329.370	344	.360	.62	N. by W.	S. by W.	Calm.	—	Uncl'd till 5 pm. Light clouds round horizon from 6 pm	
15,	29.607	29.530	29.559	29.559	58.4	76.4	63.0	.408.582	571	.515	.86	Calm.	S.	Calm.	—	Generally clear. Hazy pm	
16,	29.612	29.574	29.595	29.595	70.3	81.6	68.4	.560.630	583	.602	.78	Calm.	S. by W. 2.0	Calm.	—	Light clouds and haze gen. diffused.	
17,	29.615	29.610	29.671	29.630	71.1	75.0	73.2	.625.731	743	.702	.85	Calm.	S. W. 3.0	Calm.	—	Gen. cl'd. Th storm & heavy rain pm	
18,	29.696	29.648	29.578	29.607	71.4	82.4	—	.746.812	—	—	.95	E. S. E.	S. E.	—	Light detached clouds gen dispersed.		
19,	29.682	29.588	29.578	29.607	77.0	84.6	76.9	.746.791	587	.699	.83	Calm.	S. S. W.	S. W.	—	Part. clouded. Sheet Png 9 & 10 pm.	
20,	29.607	29.545	29.551	29.561	75.4	80.2	73.4	.702.801	681	.705	.83	Calm.	S. S. W.	Calm.	—	Cl'd. Th, h'ng, & showers from 10 am	
21,	29.594	29.415	29.440	29.462	71.7	78.6	67.4	.716.721	569	.654	.95	Calm.	S W by S.	Calm.	0.650	Part cl'd. Show. am. L'g 10 & 11 pm	
22,	29.526	29.605	29.746	29.666	69.9	78.4	60.4	.565.459	381	.431	.80	N. by W.	N. W.	Calm.	0.835	Th storm & heavy rain 1 to 4 am. Day mostly clear.	
23,	29.871	29.853	29.841	29.846	59.0	72.4	63.4	.403.493	410	.444	.83	Calm.	S. by E.	Calm.	—	Fading clouds. Aur light 1 and 2 am	
24,	29.894	29.733	29.630	29.644	62.5	69.6	65.8	.481.583	536	.528	.87	Calm.	E. by S.	E. N. E.	—	Cl'd all day. R'ng sl'ly & steadily pm	
25,	29.439	29.398	—	—	75.9	75.7	—	.751.758	—	—	.87	S. by W.	S. W. by S.	—	0.360	Mostly clouded.	
26,	29.469	29.623	29.719	29.642	56.0	61.4	48.4	.393.291	269	.292	.89	N.	N.	—	0.190	Thun, P'ngs, & r'n fill 7 am. Mostly clear from 4 pm	
27,	29.797	29.799	29.778	29.792	54.6	63.0	55.8	.287.347	321	.324	.68	N. by E.	S. S. E.	Calm.	—	Mostly clear all day.	
28,	29.761	29.670	29.664	29.664	56.6	64.8	52.8	.335.355	331	.345	.75	Calm.	E. by S.	Calm.	—	Zenith clear. Light cl'ds round hor.	
29,	29.574	29.442	29.417	29.465	61.8	68.7	62.6	.440.557	509	.463	.82	E. by S.	Calm.	Calm.	—	C'r am. Day cloudy. L' r'n from 8 pm	
30,	29.486	29.462	29.467	29.470	59.2	65.0	57.6	.435.510	435	.435	.85	Calm.	S. E. by S.	Calm.	0.250	Gen cl'd. Rain from noon to 2 pm	
31,	29.496	29.477	29.534	29.545	59.8	68.4	60.7	.442.456	399	.414	.87	Calm.	S. W.	Calm.	0.090	Part cl'd. Morn fog. R'ng sl'ly 6 & 6 pm	
Mean	29.656	29.619	29.625	29.631	65.96	75.06	67.62	509.577	485	517	.80	.67	.84	.77	3.355		

Temperature for July.			Rain.			Winds.			Calms.			Mean		
Max.	Min.	Mean.	No. Days.	Inches.	Range.	No. Days.	Inches.	Range.	No. Days.	Inches.	Range.	No. Days.	Inches.	Mean
82.3°	47.0°	66.3°	10	6.270	35.3°	6	0.270	184	130	10.67°	10	3.899	388	0.57°
91.0	39.9	65.6	4	3.160	48.1	4	3.069	358	276	0.41	4	2.809	358	0.44
99.0	32.5	61.7	8	61.58	48.6	8	59.8	387	279	0.19	12	2.816	269	0.20
98.8	30.1	66.08	12	66.08	48.1	12	66.08	369	279	0.20	6	2.819	269	0.20
96.6	40.1	66.74	6	66.74	48.3	6	66.74	369	279	0.20	8	2.855	301	0.19
94.6	45.7	64.6	4	64.6	44.5	4	64.6	349	279	0.20	8	3.365	301	0.19
81.6	43.2	67.0	8	67.0	43.5	8	67.0	369	279	0.20	8	3.365	301	0.19

Under the head of Tension of Vapour, is given the elastic force of the Aqueous Vapour in the Atmosphere at each Observation, or the proportion of the Barometrical pressure due to its presence. Under the head of Humidity of the Air, is given the proportion the Aqueous Vapour bears to the quantity the air is capable of sustaining at the existing temperature, saturation being represented by 100. The quantity of Rain received for the last 24 hours is noted. The Observations entered at 7 a.m.; on Sundays, are actually taken at 9 a.m. The two Observations taken on Sundays are not included in any of the means.