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ART. XX.—*Sketches of the Endemic Fever of Upper Canada, and of the effects of its climate on European Constitutions, by* John Jarron, *Surgeon, Dunnville.*

[concluded from our last.]

Mr. Walker, in his description of the Mariegalante fever, before alluded to, has the following observations, corroborative of the views just expressed; and that the whole train of such symptoms are as likely to be produced by the poisonous nature of the secretions themselves as by an inflammatory state of the organs from which they are thrown out:

"In one man, who died in two hours, a green sediment supposed at first to be some poisonous vegetable, was found in the stomach. In others who were opened, however, no such thing was discovered; but only a bilious-looking fluid, similar to what was ejected by many, but not by all, before death. In almost every dissection, a large quantity of this fluid was found in the stomach, dyeing everything it touched of a deep yellow colour—very turbid, saponaceous, adhering to the sides of the vessel, with an odour of ammonia so strong and pungent, as to excite the olfactory nerves, and appearing to be particularly acrid, but not at all resembling the matter with the green sediment above-mentioned, nor the black vomit of yellow fever, nor even the yellow fluid which is first thrown up in the disease. The action of this fluid on the nerves of the stomach seemed to be the cause of the comatose symptoms which came on soon after the invasion of the paroxysm, or at the commencement of the hot stage; as, whenever an emetic was previously given, a considerable quantity of it must be brought up; but the remedy seemed also to increase the secretion of it; for as much of it would be ejected in the course of the succeeding day as had been discharged by the emetic."

The range of appearances exhibited by the variety with the "dry withered skin, and dark tarry secretions," is equally wide. In it the bowels are generally costive, and the affection of some vital organ more manifest than in the former, though the symptoms may often be obscured, and only detected on rigid examination. This variety, though frequent in the fevers of the East, is little noticed by their writers;—The change of the secretions from those of severe fevers, is often so slight as to escape observation, but the oppressed appearance of a patient, his general uneasiness, but want of acute local pain, and heat of skin; his pulse being small and thready, or irritable and intermitting; and his inability to bear the active depletory treatment generally resorted to, are marks by which it will invariably be detected.

I have now before me the record of cases kept for the purpose of contrasting the two varieties of fever with the congestive as they occurred on the rivers of the East.

One man was seized with fever, and strong inflammatory symptoms; he lost sixty-eight ounces of blood the first day, and thirty-six more on the third, with instant relief to the symptoms; and he ultimately recovered. A much younger and more powerful man was seized at the same time; with him the congestive symptoms prevailed. A loss of ten ounces of blood, with all the usual precautions observed in such instances, almost proved instantly fatal, but he was rallied; the disease ran its course, exhibiting all the

usual changes in the secretions; he, too, ultimately recovered, and without the use of stimuli, except to rouse him from the immediate effects of the loss of blood.

Three men in one week suddenly fell down from the fever, and were picked up with violent symptoms and determination to the head; they were instantly bled, and took strong mercurial purgatives; two of them had no second attack, and were well in a few days. In the third case, the pulse was found less full, and there was more moisture on the skin than in the others, and he vomited occasionally a quantity of greenish coloured matter; he did not bear the same loss of blood, nor derive the same immediate advantage from it as the others; had occasional fainting fits; the case went on, the secretions became black and tarry; it assumed the appearance of a bad case of typhoid fever, and notwithstanding the most decided treatment, he died in ten days.

The following case, occuring at Canton where fevers were frequent, accompanied by an inflammatory state of the brain, lungs, and liver, and becoming intermittent after a course of ten days or a fortnight, will illustrate another variety; as well as the mode of treatment usually adopted in the violent fevers of the East.

CANTON RIVER, 15th Oct., 1830.

Chopman Hankin, sailmaker, æt. 21. Had a rigor early this morning; his skin is now hot, but moist, and his tongue foul. He complains much of headache and pain of the right side of the chest, confined to a small space under the nipple; the pectoral muscle is painful when touched or when he raises his arm; the pain is very acute, increased by inspiration and cough; cough frequent and short; no expectoration; pulse 110, small and soft; bowels open.

Venæ sect. ad deliq. animi ʒxvij.

℞ Hydrarg. Submur. gr. iv. P. Opii gr. ss. Antim. tart. gr. ¼, M. ft. pilul. 6 tis. horis. sumda.

Evening.—The bleeding relieved the headache and pain of side for a time. He is now very restless, and the pain of the side acute, like a stitch; breathing short and oppressed; cough frequent and very painful, tongue dry; skin hot and dry; much thirst. He is very feeble and almost faints when he gets up; pulse 120, small, soft and fluttering; blood drawn, not cupped or buffed.

Venæ sect. (in the horizontal position) ad deliq. an. ʒxij.

Habeat. pilul. ut. ant. ij, statim, cum haust. sequent.

℞ Tinct. Opii M. xxv. Liq. Antim. ʒss, Aquæ ʒiss. M.

16th.—Much relieved by the bleeding last night: blood not cupped, slept well; had much less cough, and breathing was tolerably free; vomited once or twice, and had two stools. Took Magnes. sulph. ʒi early in the morning, which has produced three dark stools; his skin is still hot but moist; pulse 114, weak and soft, but fuller than last night. No pain even on full inspiration; some when he coughs hard, which he assigns to the situation of the pectoral muscle. Expectorates a thick viscid mucus.—Tongue dry and furred; some vomiting. *Gums assume a white appearance.*

Reptr. pilul. i, 6 tis. horis. cum haust. spt. æther. nitros. ʒj.

17th.—Passed a good night; breathing free; no pain even when he coughs; cough less frequent; skin hot, but moist; tongue moist and cleaner at the edge; *mouth and lips very sore but no flow of saliva*; pulse 108, full but still fluttering.

Reptr. pilul et haust. ut heri.

Evening.—Vomited frequently during the day; four dark viscid stools; otherwise much the same.

℞ Hydrarg. Submur. gr. ss. Opii gr. j. H. S. S.

18th.—Slept tolerably well, and was free of pain during greater part of the night; little cough; two dark viscid stools. The pain returned this morning, and is now very acute. It is in the same situation as before, and the pectoral muscle is much affected; the pressure of the flat hand gives him relief; the breathing is short and difficult; cough frequent and very painful; pulse 90, regular, but without force; mouth dry and parched; skin hot; no headache.

Venæ sect. (in the horizontal position) ad deliq. animi ʒxiv.

℞ Ol. Ricin. ʒi. Tinct. Opii. gr. xxv. ft. haust. st. s.

Evening. — Much relieved by the bleeding; blood very much cupped and buffed; little pain or cough now; pulse 100; tongue cleaner and moist; two stools.

℞ Hydrarg. Submur. gr. v. Opii. gr. ss. M. et ft. pil. 6 tis. hor. sumda. c. haust. ex. mist. salina ʒiss. Spt. æther nitros 3i.

Applic. emp. lyttæ pectori.

19th.—Restless in the night from the blister; no pain to-day; breathing free and less cough; tongue clean and moist at the edges; skin moist and cool; stomach quiet; pulse 90 and better; mouth as before; one dark stool; continue medicines.

20th.—No pain and little cough; breathing free and without pain; tongue and skin as yesterday; pulse 94, small and soft; 2 copious dark *feculent* stools from a dose of oil.

21st.—Improves; tongue cleaning; stools a more natural colour. Cont. haust. et habeat. pil. cathart. ij, H. S.

22nd.—Tongue nearly clean; stools still dark and feculent; still improving.

℞ Mist. cathart. ʒij. stat. and rep. haust. salin. ut antea bis die.

23rd.—4 stools from the cathartic: in other respects doing well.

He was obliged to take cathartics every two or three days, to prevent a relapse; but under the use of these and the infusion of gentian he was soon restored to health, and resumed his duty on the 4th of November.

The white appearance of the gums, noticed in the report of the 10th, and the state of the mouth and lips on the 17th, are the effect of calomel; but not healthy ptyalism:—it is a state almost the reverse of this, and showing that that peculiar effect of the mineral, with which active inflammation, and the peculiar state of the secretions in malarious diseases can scarcely exist, is not likely to be brought about, to whatever extent it may be given. It is decidedly an unfavourable symptom. I have often left patients at night in a state of convalescence, under the operation of a perfect ptyalism, and found them in the morning with a relapse—the ptyalism gone, the gums white and contracted, the lips and tongue exceedingly red and sore, but the mouth dry, and the flow of saliva suppressed. The object in giving calomel in this case being to restore healthy secretions, and equalise the circulation, it will be found to have been abandoned suddenly, with the appearance of feculent stools; and those who dread the purgative and irritative effect of this remedy when freely given in fevers, will here see how little they have to fear from such, and that a use of purgatives will often be required to keep the bowels even tolerably free. That peculiar affection of the head in fevers, in which fits of mad delirium and coma show themselves with the paroxysms, as well as that state where the three stages rapidly alternate, or may all be present at the same time, seem also to depend, in a great measure, on the state of the secretions. The first is usually found where the inflammatory type prevails, and the latter, either with or without coma, in the new world, where such symptoms are more rare. It is at present in many of the milder cases of Mariegalante fever, and is frequently to be seen in Canada, where it is often fatal: but recoveries will take place in the most apparently hopeless cases, and in a manner showing the dependence of the state on some temporary cause. I once visited a family in this neighbourhood with two cases of this form of fever. A man was in a perfect state of collapse: his case I looked on as hopeless, though I got him to swallow a purgative dose. A woman had rather a severe fever, though I looked on her as safe for that attack, and took the usual means to prevent a return. On my visit next day I found the man walking about, nearly perfectly well, and the woman dead. Collapse had come on about half an hour after I left her, and proved fatal

in a short time. There was no diarrhœa in either case. The peculiar constitutional effect of diffused inflammation of the mucous lining of the intestines and air passages, in lowering the vital functions, as indicated by the state of the pulse and skin, and prostration of strength, is well known. It is often manifested in malarious fevers, when accompanied, as they often are, by such affections, and generally increased by the peculiar state of the secretions. The combination exhibits many of the appearances of congestion worthy of particular attention, which will be noticed when speaking of hepatic flux, and the combination of epidemic influenza with malarious fevers either of an inflammatory or intermittent character.

Every day's experience must convince the observant physician of the truth of the maxim, that it is his duty to treat, and not to cure, fevers; and though in those of a malarious origin the effects of remedies be more certain and immediately apparent, than in the exanthemata or typhus, he will, even in them, find that he can only assist nature in her efforts, and can by no means control the disease at his pleasure.

The first effects of malaria on the human constitution, I look on to be those described by Dr. Johnson; and as fluxes and fevers of various grades develop themselves, we find the intestinal secretions and the discharges from the bowels and stomach to depart further and further from a natural state; while the only symptoms of improvement, at all to be relied on, are the return of natural discharges from the bowels, and the function of digestion, with a desire for food.

With these views of such diseases, my indications of cure must be very few. 1st, to restore the secretions to their natural state; 2nd, to prevent local inflammation, and suppress it when it does appear; and, 3rd, to meet those affections included in the congestive variety of fevers, in the manner experience has shown to be most advisable in individual cases; still keeping in view that the great cause of the symptoms is the alteration of the secretions from their natural state, and that it is only in a return to this state that perfect health can consist.

To counteract any change in the system, or repair any accident to the human body, we have the Vis Medicatrix Naturæ at work; and, if not counteracted, possessed of great restorative powers. Many of these fevers, if left to themselves, will, after a time, get well: the art of medicine consisting in finding out the mode in which nature acts, in aiding her efforts, and consequently shortening the disease, and lessening its shock to the constitution.

We have many febrifuge remedies, calculated to relieve particular symptoms as they arise; but those having a direct control over the intestinal seretions, and capable of lessening their deleterious effects on particular organs and the general constitution by their entering the blood, and of assisting nature to recover her usual tone and action, are exceedingly few, and may be included under the heads of Purgatives, Mercury, and Peruvian Bark; in the proper understanding of the effects of which remedies, and the mode of administering them, would seem to consist the proper mode of treating malarious fevers, so far as the exhibition of medicines is concerned.

The effect of calomel on malarious fever, and complaints of the bowels attended with increased discharges, is, at last, too obvious to be denied by the most prejudiced. It relieves the symptoms of fevers even when its peculiar

constitutional affection is not manifested; and as a general occurrence, healthy ptyalism and fever, and acute inflammation, cannot exist together, the most hopeless cases of disease instantly giving way when it appears. It is still the remedy most trusted in cholera; while in those minor derangements of the bowels, if properly exhibited, it stops the pain and discharges almost instantly, and by bringing about a complete change in the nature of the secretions, leads to a speedy return of health.

The effect of Bark on paroxysmal fevers and pernicious diseases is still more apparent; and as these paroxysms and periodical attacks must depend on some cause, we will afterwards endeavour to show in what this consists, and the mode in which Quinine may be supposed to act in curing them.

ART. XXI.—*Cyanopuon, or Cyanuret of Iron, in the purulent discharge, in a case of Chronic Disease of the Left Breast, with a summary of cases published. By* GEORGE D. GIBB, M.D., *Licentiate Royal College of Surgeons in Ireland, Physician to the Montreal Dispensary, Secretary to the Medico-Chirurgical and Pathological Societies of Montreal, &c.*

Through the kindness of Dr. Munroe, Physician to the Hotel Dieu in this City, I am indebted for the details of the following case.

Sophrosine M———, ætat 23, a native of Canada, of weak constitution and delicate health, was admitted into the wards of the Hotel Dieu on the 13th Feb., 1850, for a disease of the left breast. She has been a married woman for three years, and is the mother of two children. For the last three years, in fact ever since her marriage, she has been suffering from pain and swelling in the left breast. Sometimes the pain was severe and acute, and at others of a dull aching character. Catamenia has always been perfectly regular, excepting the periods of her pregnancy. About six weeks before admission into the Hospital an abscess formed in the upper and left part of the left breast, which burst, and gave exit to a large quantity of pus, in which the patient recognised milk. The physician who attended her at that time, at first doubted its presence, but on minute examination he was convinced of the mixture of the two fluids. Her health was very bad, and as her breast was becoming daily worse, she sought entrance into the Hospital.

On admission, the patient looked very pale and exsanguine, was much emaciated, and appeared to suffer from debility induced by disease. On examining the left breast, an irregular fistulous opening presented itself upon its upper margin, from which was discharging healthy-looking pus. This opening communicated with several sinuses leading in different directions, one towards the axilla, another towards the clavicle, and many exceedingly deep. The general substance of the mammary gland did not seem much involved. Some days after, the two former of these sinuses were slit up with the knife, and, as the discharge was a little fœtid, a lotion of the sol. of chloride of lime was ordered.

On the fourth day from this period the dressings were, for the first time, noticed to be stained of a bluish green colour. At this time also the patient was taking the carb. of iron internally; and, under the supposition that the colour of the discharge might be owing to it, Dr. Munroe stopped its use and the chloride of lime lotion, and ordered simple water dressings only.

Up to the period of the 27th March, and the fifth day of the blue pus, when Dr. Munroe showed me the case, the discoloration was the same, and the wound was looking healthy. I took home with me some pieces of the stained linen and subjected them to experiment as follows:—

The colour was a light bluish-green. Caustic potass removed the colour, which it will also do with Prussian blue. The

colour was not restored by dilute muriatic acid, which would restore that of Prussian blue, except when in small quantity. Muriatic acid removed the blue colour, but without producing a pink solution. Immersion of a piece of the stained linen in dilute nitric acid removed the colour.

1st April.—The secretion of pus has diminished in quantity, but the linen is stained as before. The microscope revealed corpuscules and granular matter, monads in abundance and absence of milk globules. The pus possessed a fœtid odour.

6th.—The wound is fast closing, but a deep sinus, about 3 inches long, still remains. Dry lint has been applied for the last three days, and the bluish-green discharge continues.

11th.—For the last two days the discoloration was not so marked, and to-day it has entirely ceased, although the discharge of pus has not diminished since the 6th.

4th May.—The bluish discoloration has again appeared. She has not been upon any medicine internally.

30th July.—The discoloration ceased before her discharge from Hospital at the end of May. She presented herself a few weeks after as an out-patient, and stated that it had re-appeared, continuing a short time before it again ceased. She then returned to the country, whence we learned that an abscess had formed higher up and nearer the axilla than the last, which had been opened by a surgeon. Three fistulous openings still remain, which, from the suspicious appearance of two or three large granulations, most probably communicate with a carious rib, in which opinion I am supported by my friend Dr. Peltier, who has watched the progress of the case. On a future occasion, however, I may bring forward the result of the case, as to the accuracy of our diagnosis.

Some months ago, I read, in the London Lancet, the details of a case of compound comminuted fracture of both bones of the forearm, which were subsequently brought before the notice of the Surgical Society of Ireland by Mr. Butcher,* with the interesting and remarkable fact of the presence of Cyanuret of Iron in the purulent discharge. The case has been most accurately detailed and described by its talented author, and was brought to a successful termination.

The patient was a healthy labourer, admitted into Mercer's Hospital, Dublin. A good deal of inflammation followed the accident, which was subdued by active treatment, and suppuration was quickly established. The case progressed favourably, with, however, profuse suppuration; and on the twenty-seventh day, for the first time, the dressings were coloured of a bluish-green. Next day the edges of the wound were tinged of the same colour, as well as the soft dressings and bandage; the sponge and also the splint were similarly affected. Every precaution was taken that no foreign matters should come near the limb, and the wound was dressed with dry lint. Up to the seventh day of the blueish discharge, the day on which the case was reported, the progress towards the healing of the wound was very rapid, and two ounces of pus were secreted in the twenty-four hours; the patient was enabled to leave his bed on the same day. No internal remedies whatever, such as iron or other metal, likely to produce such a discharge, had been administered throughout the progress of the case.

Mr. Butcher submitted some of the bandages and dressings, where deepest stained, together with the squeezings of the sponge collected in a bottle, to Professor Apjohn for analysis, whose experiments were as follow, and based upon which were my own in the case heading this paper.

"First, the colour of the stains could be discharged by caustic potass. The same effect would be produced on Prussian blue. The colour was not restored by dilute muriatic acid, which would restore the colour of Prussian blue, *except* when the quantity is very small.

* Dublin Medical Press, 1849.

Treated directly with muriatic acid, the stains were discharged, and the solution acquired a pink appearance. An exceedingly minute portion of Prussian blue suspended in water was similarly affected with muriatic acid.

A portion of the washings squeezed from the sponge, which exhibited a greenish colour, evaporated to dryness and ignited, left a calx, which, acted upon with ferrocyanide of potassium, gave a distinct precipitate of Prussian blue. On the whole, Professor Apjohn considers the preceding experiments render it most probable, indeed, that the balance is in favour of the stains examined being Prussian blue."

The last experiment by Professor Apjohn I was unable to perform, as I could not procure any of the pus itself in sufficient quantity. But an additional test presented itself in an accidental manner. Some portions of the stained linen which had been preserved in a glass jar and placed in my private museum, were found after the lapse of some weeks to be very much faded in colour. The same effect was produced on a rag, which had been steeped in a strong solution (or mixture) of Prussian blue.

As to the truth of this bluish-green discharge in these two cases being Prussian blue, perhaps few will dispute, inasmuch as nearly all the experiments were positive in their results. When Mr. Butcher's case was under discussion before the Surgical Society, Mr. Macnamara stated "that he had never yet found an instance of a Prussian blue stain which had been discharged by caustic potass fail to be restored on the addition of hydrochloric acid as in the present one." It must be remembered, however, in reply to that assertion, that the quantity of Prussian blue must be exceedingly minute in these cases, and we cannot expect *all* our results to be quite satisfactory.

In a case noticed by Dr. Benson, before the Surgical Society of Ireland, and recorded in the Dublin Journal of Medical Science by Dr. Croker, there was a discharge of an inky-coloured fluid, from the fistulous openings of a seton, ove the stomach of a woman labouring under chronic gastritis, with all the external characters of Prussian blue. M. Bouchardat, on analysing the pus from a case in M. Maisonneuves' wards, found in it an *organic colouring matter of unknown nature*, but no other principle capable of explaining the colour. MM. Persoz and Dumas conjectured that in certain ill-conditioned suppurations, hydrocyanic acid might be generated, and subsequently a compound analagous to Prussian blue formed. In some researches which M. Conté made concerning the composition of this pus, he also found it conaining a *peculiar organic colonring matter.**

Reasoning from analogy would favour the opinion of this blue colour being due to the presence of cyanuret of iron, as in some observations by M. Drantz on *blue urine.*† He found, on examining a small quantity, passed by a young man afflicted with influenza, that it was of a deep blue colour, and deposited, upon standing, a blue matter, which had all the properties of hydroferrocyanate of iron. Deprived of the colouring matter by means of filtration, it gave, upon analyzation, a large quantity of albumen, gelatin, salts, and some traces of urea. The patient was not making use of any ferruginous preparation at the time. M. Braconnot, in analyzing some blue urine, obtained, by simple filtration, a matter of the same colour, to which he has given the name of cyanourine. MM. Julia de Fontenelle, Mojon and Cantu have announced that they have ascertained that this colour was due to hydroferrocyanate of iron (Prussian blue.)

Mr. Butcher accounts for the presence of Prussian blue in pus in the following manner:—"The elements of this compound, viz., carbon, nitrogen, and iron, are present in animal principles, and the organic molecules are evidently in such cases assuredly new arrangements.—

* Gazette Médicale, 1842, p. 534. See also Gazette des Hopitaux, and Brit. & For. Med. Chir. Rev. July, 1849.

† Journal de Chimie Médicale, June 1837.

Cyanogen (the bi-carburet of nitrogen) is, as is well known, always found when azotised matters are exposed to an elevated heat, particularly in the presence of energetic bases, and traces of this principle are sometimes found to be produced as a consequence of the putrefactive process. Building, then, on this fact, and on the well known facility with which purulent matters undergo spontaneous decomposition, we can, he says, feel no difficulty in accounting for the occasional discharge from wounds of a minute quantity of Prussian blue."*

Unhealthy pus frequently exerts a chemical action on the surrounding parts, sometimes containing free acids, *carbonate of ammonia*, or other constituents which chemically exert an injurious effect.†

According to Dumas, even *hydrocyanic acid* may be formed in the process of suppuration.‡

In the report on the progress of chemistry, published in the first volume of that extensively circulated and excellent work, Ranking's Abstract, are detailed three, selected from several, analyses of pus made by Dr. Wright. In one, the pus from a vomica, he detected a *trace of iron.*

In South's translation of Chelius.§ the latter author states, that this fluid (pus) contains,besides other constituents which he details, *hydrochlorate of ammonia* (Bonnet) and a *trace of iron.*

Thus we see that the actual constituents of cyanuret of iron, namely, carbon, nitrogen, and iron, may be furnished from the pus itself, and very possibly in these cases of blue pus, there may be an excess of the latter element, which from the decomposition of the pus on its immediate formation, generating carbonic acid, ammonia, hydrocyanic acid, and other compounds, would very readily form a distinct compound, possessing the characters of Prussian blue.

Mr. Butcher's explanation of the formation of blue pus is a very rational one, but I sincerely believe that in those cases, in which there is a communication with the bones, they themselves have a certain direct influence in producing these chemical changes. The contact of atmospheric air would seem also to be more or less connected with the developement of the blue colour, as the pus, when freshly secreted and coming in contact with the lint, does not immediately become converted into a greenish blue, this change being gradual, as noticed by myself in the case already reported.

Can this discharge be considered an unhealthy one, or likely to be in any way injurious? The testimony is in favour of its being neither. In a statement of cases which follow, only one that we know of was fatal, and that resulted from internal chronic disease.

The occurrence of these cases of blue pus, or as I shall term them, *Cyanopuon*, Dr. Benson very justly remarks, cannot be considered as a novelty; and doubtless many medical men have witnessed such, although few are recorded. The following summary comprises all I can meet with in the Journals:—

2 cases are recorded in the Gazette Medicale (1831 and 1834) in which the serum of a blister was coloured blue..... 2

M. Olioli's case at Turin, in which, after amputation, blue pus was produced, though only simple dressings were employed..... 1

Case in M. Maisonneuve's wards. Blue pus occurring in the person of a woman who had formerly been operated on for a cancerous breast, and now returned with a reproduction of the disease. Canquoin's caustic was applied, and, after the eschar fell off, the pus discharged was observed to be of a greenish-blue, and that whether medicinal applications were made to the part or not..... 1

Sir Benjamin Brodie has met with some cases,* say..... 3

Case recorded in Dublin Journal of Medical Science, by Dr. Croker.

* Dublin Medical Press, 1849.

† Vogel's Pathological Anatomy, by Day.

‡ Comptes Rendu, 1841. Vol. xiii.

§ Volume i. page 40.

* Dr. Benson in Dub. Med. Press, April 1849.

Proving fatal from chronic disease 1
Case recorded by Mr. Butcher in the Lancet and Dublin Med. Press... 1
Case recorded by Dr. Gibb in the Brit. Amer. Med. and Physical Journal 1

Total.....10

As to the varieties in *colour* assumed by pus, I may mention the following :—

Orange-coloured pus, occurring in two cases which fell under Dr. Geoghegan's observation : one a case of compound fracture of the patella, the other a case of compound fracture of the leg. When examined and spread out this pus proved to be altered cellular membrane.

Slate-coloured pus, mentioned by the same author as a discharge in a case of abscess in the xiphoid cartilage. It was found slightly alkaline, sank in water, exhibited the usual reaction which natural pus always gives rise to on the addition of ammonia, having, in short, all the well known characters of true pus. It resembled the colour and consistency of mercurial liniment, and the precise nature of the colouring matter could not be ascertained.*

Black pus, described by Dr. Bigger,† as a discharge from ulcers, particularly situated in the neighbourhood of the shin bone, appearing six or seven days after treatment, and not produced from external applications, as gutta-percha was used which does not contain lead, like sticking plaster. He has met with a considerable number of cases, and inclines to the opinion "that the bones must have something to do with the production of these (as he would term them) 'carbonised' discharges."

Green pus, produced by chemical changes, the result of decomposition : very common in abscesses of the brain.

Blue pus, already described.

Dark Olive pus, devoid of odour, of creamy consistence, showing under the microscope decomposed pus globules, intermixed with what appeared to be epithelial scales, was evacuated from an encysted tumour of the labium, in a case described by Dr. Macdonnell, in the fourth volume of the Brit. Amer. Jour. of Med. Science.

Drab pus, of a dark shade, from a large dorsal abscess, in a case of external scrofula, under my care in February last. It was inodorous, neutral, sp. gr. 1028, and mixed with cheesy particles of same colour. The microscope presented numerous perfect cells containing granules, which, together with minute spherules, were also free, fat and pus corpuscules, and the same of lymph. No blood discs were to be seen.

Claret pus, in colour resembling the dregs of wine. A discharge in a deep contused wound, in the upper eyelid of a man who had received a kick from a horse. Under the microscope were seen only globules of blood and pus mixed.*

Brownish pus, furnished by certain abscesses in the liver, containing probably, with globules of pus and the colouring matter of the blood, portions of hepatic parenchyma, or of the detritus of organs in which they may be situated.†

Besides these colours, we have *white pus*, as in leucorrhœa, hepatic abscess, &c.‡ ; *pink pus*, from slight admixture with blood ; *greenish white pus*, so common in the ordinary phlegmon, also occurring frequently elsewhere, as in the liver sometimes ; § and many other shades, varying from that of the pale yellowish-white of perfectly healthy pus.

48, Craig street, 1st August, 1850.

* Dublin Medical Press, April 1849.
† Ditto

* Dictionnaire de Médicine. Article Pus, par P. H. Berard.
† Ditto
‡ Budd on the Liver, p. 69.
§ Andral Clin. Med. Translation, p. 961.

ART. XXII.—*Case of ‖Mismenstruation with Sterility. By* WILLIAM MARSDEN, M.D., *Quebec.*

The following case may perhaps be sufficiently interesting to entitle it to a place in your columns. The subject of it is a French Canadian female, the wife of a respectable habitant ; and was

‖ Aphoria Paramenia of Good Cl. 5, Ord. 2, Sp. 2.

presented to my professional notice by her spiritual counsellor, the Curé of the parish, from whom she presented a letter of introduction, explaining the object of her visit, viz., to ascertain whether physical causes existed, that would justify or authorise a separation from her husband by divorce. Her partner, by whom she was accompanied, expressed great sorrow, as did she also, that her condition should have called upon her the especial interference of her pastor; and they both declared that they were contented with their connubial state, and happy in their relations to each other. The reasons for seeking a separation were not theirs, but were entirely prompted by her ghostly adviser, who deemed her, according to the canons of the church, physically disqualified for the objects of marriage—the procreation of children.

For obvious reasons I withhold the names of the parties; but in other respects, report the case exactly as it stands in my case book.

A—— G——, æt. 32, wife of J—— A—— R——, called on me on the 24th of July, 1847, with a letter from the Rev. Messire ———. She is a woman of bilious nervous temperament, intelligent and interesting looking, in short, a rather handsome Brunette, extremely well formed, full chested, mammæ well developed, hips wide, height about five feet one inch. She will have been eight years married on the 28th of the present month. *She has never menstruated.* Up to the age of thirteen years she was perfectly healthy, at which time she began to suffer pain in her back, loins, hips, and abdomen, with occasional headache, nausea, and sickness of the stomach, with vomiting; and lastly, furunculi broke out upon the back, hips, and legs, which continued to heal and break out again, in successive crops, for nearly two years. They then subsided and the mammæ became full, hard, and plump. From this time until her marriage, she was *periodically subject to diarrhœa,** but never since. Her health, strength and appetite are excellent, and she has had no illness since her marriage but toothache; and the only inconvenience she suffers is pain *occasionally* in the abdominal region, during the night, with the globus hystericus. *She enjoys sexual intercourse.* On examination, per vaginam, found all the parts, external as well as internal, natural, healthy, and well formed, excepting that the vaginal canal was perhaps *a little shorter* than usual and the os tincæ *rather* smaller. From all these facts, I arrived at the conclusion, which I communicated to the Curé, that *there were no physical impediments to child-bearing*, since women have been known to bear children who have never menstruated. Professor Frank relates a case in which the menses "never appeared, in married or single life, nor had the patient, at any time, any lochial discharge, though she had produced three healthy children; and Holdefueund mentions a case of tardy menstruation, which occurred for the first time at seventy years of age.

Our knowledge of pathology suggests in this case a morbid condition of the ovaries at least, if not of the uterus also, coeval with the ill health of the patient, between the thirteenth and fifteenth years. The probability therefore is, *that she will have no offspring*, although such a consummation is not impossible, for reasons before stated. Numberless instances are on record, and are, in fact, of daily observation, of married females

* We here perceive the unerring laws of nature beautifully at work, to relieve the redundancy which sympathetic nervous action might otherwise have occasioned, to the great inconvenience or danger of the patient.

being many years without children, and at last bearing families*

In any case, the parties being contented and happy, it is a question whether the worthy Curé's zeal did not exceed his discretion; and, whether his veneration for canon law was not a violation of the principles of the common law. It at least suggests itself to me as a monstrous absurdity, that any cause should warrant interference at all, either ecclesiastical or temporal, where the parties themselves are satisfied with each other, and desirous of perpetuating their union.

Quebec, 22nd July, 1850.

ART. XXIII.—*Case of Popliteal Aneurism: Treatment by Compression and Ligature. By* D. BERGIN, M.D., *Cornwall, C. W.*

Israel Brien dit DuRocher, æt. 27, consulted me on 11th March, 1850. A stout, athletic man: a hewer. No hereditary predisposition to any disease; always enjoyed good health until about two years ago, at which time, after a fast walk of 18 miles, he experienced a sharp pain in the right ham, extending up the thigh and down the leg and foot. On examining, he discovered a small swelling in the ham, very hard, and extremely painful when touched. He suffered dreadfully during four days, not being able to procure any relief. On the fifth day, notwithstanding his sufferings, he walked six miles to see a physician, who prescribed a stimulating liniment, which he applied three times a day, and with some benefit, during seven or eight weeks, at the end of which time the pain had nearly ceased.

He continued in this way without any apparent swelling in the ham, and with but occasional pain, until the month of January last, when he was again attacked with pain in the same situation, and which was so severe as to oblige him to give up hewing for a time; this relieved him for a short period, until he recommenced hewing, when the pain immediately returned, and with greater force than ever. He was of course obliged to relinquish work at once; in fact, his comrades were obliged to carry him back to his shanty, as he was unable, from the severity of the pain, to stand upon his limb. Two days after this he walked seven miles on his way homeward, but his sufferings became so great, as to oblige him to hire a horse to enable him to perform the remainder of his journey.

After his return home he employed frictions, lotions, &c., without any benefit, during three weeks. At the end of this time, the swelling and pain increased so rapidly within a few hours, that he sent for a physician, who on his arrival was obliged to slit open his pantaloons, in order to examine the swelling.—to so great an extent had it proceeded within that short period. The physician prescribed a stimulating liniment; this he applied for a few days without any benefit. He then called in my friend, Dr. William Waggoner, of Osnabruck, who immediately diagnosed his disease, Aneurism, and desired him to consult some one of the medical men in Cornwall. Accordingly, a day or two afterwards (on 11th March) he visited me, and gave me the above history of his case.

Present state.—The tumour has been very rapidly increasing since January last, the time at which he returned home from the shanty. There is now a tremendous swelling or rather pulsating

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* My friend, Dr. Blanchet, the esteemed Vice-President of the College of Physicians and Surgeons for this District, mentions one case of a highly respectable female in his practice who bore a first and only child after eighteen years marriage, and another who had two children after fourteen years marriage. He also has a case in his practice of a healthy female of twenty-eight years old, who has never menstruated.

umour occupying the whole of the lower third and a greater portion of the middle third of the right thigh; the tumour is very hard and firm, more particularly on its inner and inferior aspect; there is no discolouration; there is great pulsation, which is quite evident not only to the touch, on pressing with the fingers, or on laying the hand over it, but also to the eye. Pulsation exists in every part of the tumour, and can be seen and felt in every direction of it. He says that he has always experienced pulsation in it since January. Pulsation now so great as almost to throw stethoscope off the tumour, when applied; it raises the ear very perceptibly. Aneurismal bruit quite distinct. I at once pronounced his case Popliteal Aneurism, and pointed out to him the necessity for immediate treatment. I explained to him that there were two modes of cure I might adopt, viz., by compression first, and, in case of its failure, by the ligature. He expressed his entire willingness to submit to any plan of treatment I might direct. As he resided eighteen miles from this, he was obliged to return home to make some few preparations, before placing himself under my care here. On the following Friday he sent me word that he had returned to town.

Having read in your Journal Dr. Bellingham's paper on "Aneurisms and their cure by Compression," I determined to try its effect in this case, and in the event of its failure to resort to the Ligature. The size of the tumour, however, was such as not to render me very sanguine as to the success of pressure, Dr. Bellingham's assertions to the contrary notwithstanding.

April 16, 8 p.m.—Accompanied by my friend Dr. Roderick M'Donald, who saw the case on Monday last, and by Dr. Dickenson, I visited my patient, and after bandaging him from the toes upwards, applied two tourniquets over the femoral artery, one immediately above the tumour, and the other a short distance above the first, so as to alternate the pressure, and also to follow as closely as possible the method described by Dr. Bellingham. I had forgotten to mention that before applying the instruments, pressure upon the artery by the finger merely moderated the circulation in the tumor, but was not sufficient to arrest it completely.

On application of the tourniquet, the circulation through the tumor immediately ceased; but the pain caused was so intense as to oblige him, although a man of great courage and patience, to change the pressure from one instrument to the other every 8 or 10 minutes.

He says that he has slept very little for some time past; his appetite is bad; his tongue is furred and dark, though moist; his bowels are costive; his urine is natural in quantity and color: pulse 90, full and strong; pulsation in tumor synchronous with pulse at the wrist.

April 17.—Passed a very bad night last night; pain from tourniquets almost intolerable; did not sleep any; tongue dried and furred; cheeks flushed; skin dry and hot; bowels not yet opened. Ordered a black draught, and to remain perfectly quiet. Diet to consist entirely of fluids, or rather slops. Leg and thigh are cold and œdematous from the pressure. No bruit or pulsation discernable in tumor; did not however loosen the tourniquet. 9 p.m.—Seems better than in the morning; tongue cleaner; skin not so harsh; bowels not yet open. V. S. to about ℥xx., and to relax tourniquets slightly, as they produce great pain, in order that he may procure sleep if possible.

April 18th.—Feels better this morning; bowels were well opened during the night; and he slept some this morn-

ing. Pain from tourniquet as great as ever; no bruit or pulsation in tumor; swelling evidently increasing.

April 19th.—As yesterday; slept none since: to take of acet. morphia ¼ gr. at bed-time. Bowels were open again to-day. Complains very much of pain caused by tourniquet. On relaxing instruments, bruit and pulsation returned; on tightening them they again ceased. Says that he cannot possibly suffer the pressure more than two or three days longer.

20th.—Slept well after taking the morphia; passed a comfortable night; feels much easier this morning. As yesterday, when I relieved the tourniquet, bruit and pulsation return in as great force as ever. Compression does not seem to have been productive of the slightest benefit; on the contrary, the tumour is increasing in size. To repeat acet. of morphia again to-night.

21st.—Morphia had no effect: slept none; suffers terrible pain; cannot, evidently, suffer application of instruments much longer. To take 1 grain of morphia to-night. Tumor manifestly larger.

22nd.—Slept about one hour last night; otherwise experienced but little relief from morphia; says that he cannot suffer compression much longer; begs for the operation; and says that death were preferable to his present sufferings,

23rd.—Bowels not open since the 19th; to take a purgative of calomel, scammony, and colocynth; to repeat the morphia at bed time. Tumor still increasing. On relaxing tourniquet, bruit and pulsation as strong as ever; it is quite evident that the only effect produced by the compression has been to increase the man's sufferings; it has not meliorated his disease in the slightest; arrest of circulation through the limb is merely temporary,—the moment the instruments are relaxed the bruit returns. It is quite evident that compression must now be discontinued, else gangrene of the limb, or more probably suppuration and bursting, of the sac will soon take place. I now relaxed the tourniquets, being perfectly satisfied not only of their inutility, but of their absolute hurtfulness. He wishes me to operate immediately, but I have decided not to do so until Monday, the 25th, in order to give my confreres an opportunity of being present, and also to secure their assistance.

24th.—Fell asleep about an hour after I relaxed the tourniquets yesterday; slept well during the whole night; wishes me to operate at once, and not delay until to-morrow; seems excited and nervous. Purgative produced one evacuation only; to repeat it to-day, and if necessary to take 1¼ grains acet. morphia in the evening, if the pain continues very severe.

25th, 8 a.m.—Took the morphine but without much benefit last night; purgative acted well. Seems a little feverish this morning; to lose ℥xx. of blood; is very anxious for the operation. 10 a.m.—Assisted by my friends Drs. Roderick and Æneas M'Donald and Drs. Dickinson and Allan, I took up the superficial femoral artery in the upper third of its course, immediately above where the sartorius and adductor muscles meet, and a short distance below the origin of the profunda. I applied two ligatures: the 1st, being of doubled and twisted silk, could not be tightened sufficiently, so that I was obliged to apply a 2nd of fine single silk, which answered the purpose admirably. In order to avoid disturbance of the vessel in its sheath to any extent, and which I considered of very great moment, I placed it round the vessel immediately beside the first. To this too great dis-

turbance of the vessel in the sheath, is to be attributed, in a great measure, in my opinion, the very frequent failures of the older operations. I left both ends of the ligature hanging from the wound, and brought its edges together with adhesive plaister. Immediately upon the application of the second ligature the pulsation ceased in the tumor. He was in great pain after the operation, and I administered 1½ gr. morphine. 9 p.m.—Feels quite easy; morphine gave him instant relief from pain, though it failed to produce sleep; says he "feels too happy to sleep."

26th.—Was asleep when I paid my visit; his wife says that he has been free from pain during the night, but has slept none until this morning. Limb of the natural heat; no pulsation in the tumor; pulse 85, soft and full; had a slight bleeding from the nose, which lasted, however, only for a few minutes.

27th.—Feels perfectly well, he says; not the slightest pain in the limb; bowels confined, however; to take a purgative of calomel and scammony. From this time he continued to do well; had no pain in the limb since the operation, and slept well at night. On the 9th day from the operation, or 2nd April, the second or fine ligature came away, and without any hœmorrhage; the greater part of the wound had healed, except immediately around the ligatures. Has had a slight epistaxis every day since the operation; thinks he is now well enough to return home; in fact I have great difficulty in persuading him to remain until the remaining ligature shall come away and the wound heal.

April 5th. — Was called suddenly about 2 p.m. to see him; the messenger said that he was bleeding to death. On my arrival I found that the blood had ceased; from the appearance of the bedding, &c., he must have lost very nearly two pints of blood. He appeared very much alarmed. On inquiry as to the cause of the hœmorrhage, he told me, "that there had been, during the 24 hours previous, a small oozing of pus from around the ligature, and this drying had fastened his shirt and the ligature together; and that on attempting to get out of bed quickly, his shirt had dragged or jerked the ligature, and thus produced the hœmorrhage. I left the tourniquet on the limb, so that if the hœmorrhage should recur, he could arrest it by tightening the tourniquet, and thus allow time to send for assistance. I at the same time placed a small compress of lint over the wound, and brought the edges around the ligature more closely together. 10 p.m.—Has been no hœmorrhage since my last visit. He is very pale, and seems now thoroughly frightened at the effects of his rashness; he is well persuaded of the necessity that exists for the most absolute rest and quiet being observed. I do not anticipate any further difficulty in this way.

April 6th. — Hœmorrhage returned during the night, but on tightening the tourniquet it ceased at once; there was a slight oozing, however, through the edges of the wound. If the hœmorrhage continue in any quantity, will be obliged to take up the external iliac. From the immense number of large glands in the groin, it would be almost impossible to take up the common femoral without wounding some of them, and which might occasion terrible trouble. To reopen the wound and apply another ligature would be out of the question. I intend, however, trying the effects of the tourniquet some time longer, and unless the pressure produce bad effects, will avoid taking up the iliac as long as possible.

April 7th.—There was a very slight

hœmorrhage during the day, not more than ½ oz., and which ceased of itself.

April 8th.—No hœmorrhage since.

April 9th.—Continues to do well.

April 11th.—Feels slight pain in edges of the wound; suppuration evidently about to take place; wound emits a slight odor.

April 16th.—Removed dressings, as the wound smells badly, and suppuration has evidently taken place. The ligature came away with the dressings, and entire; the noose was quite distinct. From this time forward he improved rapidly; by the 30th the wound had entirely healed.

The tumor has now (May 4th) almost entirely disappeared; you can still, however, discover a slight hardness between the hamstrings, and I have this day given him permission to return home. He can now straighten his leg without any difficulty, and can walk well and firmly with the aid of a stick.

There are several points in this case worthy of especial notice; but I have already occupied so much space that I will reserve them for a future number of the Journal, as well also as some Remarks which I intended making upon the relative value of compression and the ligature, and the cases to which they are applicable.

Cornwall, May 6th, 1850.

ART. XXIV.—*Horses and their Diseases: Lamenesses—Exostoses; Splint—Spavin—Ringbone.* By J. B. Turner, V.S.

It appears to be conceded by modern veterinarians that the Horse is peculiarly liable to those morbid growths on the bones, which are scientifically called *exostoses;* at least, three such growths are continually met with, two of which, Spavin and Ringbone, in ninety-nine cases out of a hundred, prove perfectly beyond the reach of any curative process; while the other, Splint, is, in common, more a dis-sight than any positive injury, and from its situation can be removed without difficulty, if the owner of the horse wishes it.

Splint.—On each side of the posterior part of the *cannon*, or shank bone, (*os metacarpi magni*) we find the *splint* bones (*ossa metacarpi parva*) each having a superior articulating surface uniting it with the carpal bones, and also a surface of attachment with the upper extremity of the *cannon* bone, to which they are intimately united by intervening cartilage and ligamentous matter; as the *splint* bones proceed downwards they taper nearly to a point, and are less closely united, terminating at about two-thirds the length of the *cannon*. These small bones are not so closely united but that they have some liberty of motion, and certainly descend when pressed on by the bones of the knee, to the elasticity of which joint it seems their purpose to add, the inner bone sustaining the weight of the *trapezoid*, and the outer nearly all that of the *unciform* bone.

Now, as the horse grows old and hard work begins to tell on him, nature seems to counteract the consequent weakness of the parts, and the aponeurotic substance, which in youth united the *splint* to the *cannon* bone, is converted into an ossific deposit, and the spring-like property is lost. In young horses also, subjected to violent exertions, the same result frequently follows from inflammation; ossific instead of cartilaginous union takes place, and an exostosis is the consequence, and we find this tumor on the inner, instead of the outer, side of the leg, simply because there is naturally, from the conformation, more weight thrown on the

inner *splint* bone, and also sometimes perhaps, because it is usual to raise the outer heel of the shoe higher than the inner, thereby additionally distressing the inner *splint* bone.

It may be said that every old horse dies with splints,—that is with a bony instead of a cartilaginous union of these bones, though the extra deposit known as splint often disappears in aged horses, because with age the process of absorption is greater than that of deposit. Professor Coleman used to say, "a splint once is a splint always," meaning that though the extra deposit might be removed by surgical means, the bony union still remained.

In the majority of cases these splints cause no lameness, and apparently no pain; it often happens that a horse with a very large splint is not lame at all, while another with a very small one is severely inconvenienced. This may be explained by supposing that in one case the growth of the bony tumour is so very gradual that the *periosteum*, or membrane immediately covering the bone, accommodates itself to the increased size of the latter; and that where the growth is more rapid this membrane is painfully stretched, *periostitis* in fact existing.

It was stated above that in the majority of cases, unless from its unsightliness, splint causes no inconvenience. The seat of the tumor is generally about three or four inches below the knee, and more towards the *anterior* than the *posterior* aspect of the *cannon*. When the tumor is higher up than this, it may be inconvenient, by interfering with the action of that joint, and is sometimes complicated with inflammation of the ligaments; when it is situated more on the *posterior* aspect of the *cannon* bone, it may, if it grow to any size, interfere with the suspensory ligament. I do not see how it is possible that it can, as some veterinary writers assert, ever interfere with the *flexor* tendons. In such cases then, surgical assistance is necessary; but it seems to be a rule that when splint is in its ordinary situation, there is little or no occasion to meddle with it; for the lameness caused by the pain attending distention of the *periosteum* disappears, as soon as the tumor has reached its full size.

Treatment.—The old farriers used to employ all sorts of barbarous remedies for these tumors; thumping with hammers, rubbing violently with a hard stick, boring holes into them with gimblets or hot irons, applying violent corrosive substances, and finally making an incision through the skin and knocking off the splint with a chisel and hammer. Against this latter operation many of the modern veterinarians have strongly protested, alleging that it cannot be done without serious after-blemishes. We must confess that we do not see the point as they do. Human surgeons have resorted to this very operation for the removal of bony tumors, and we really cannot see why the veterinary surgeons may not resort to the same practice. We see no reason why blemishes must follow, if the operation is neatly performed—the incision through the skin being made with a sharp knife, and the tumor removed with a fine saw, or, if more convenient from its situation or shape, with a chisel or gouge.

Before resorting to an operation we should however, try to promote absorption, and there are various ways of doing this; either by rubbing in strong mercurial ointment for a couple of days, following it up with an active blister, and then by a second at an interval of a few days; or by the actual cautery, though it is strange that the writers, who recommend the latter practice, seem to

have forgotten that the firing iron certainly leaves the very blemish, and that in a far worse degree, which they object to as the result of the removal by the operation.

But the practice which we prefer is that introduced by Professor Sewell, as more scientific and more certain in its results, and we have seen it so successfully adopted that we should never hesitate to employ it. Professor Sewell makes a small incision transversely above the splint, and another below it, the width of a common seton needle; he then introduces the needle with a blunt point into the upper incision, and forces it on until the point appears through the lower incision; the needle is then withdrawn, and a knife of peculiar construction with a probe point is passed into the wound, its edge being firmly applied in the direction of the long axis of the splint, and drawn up and down until the *periosteum* is divided. The knife is then withdrawn, and the needle again introduced, armed with a piece of lamp-cotton dressed with creasote ointment. This seton is allowed to remain for a week, being moved and re-dressed twice a day, and the wound is then permitted to heal. The Professor states that he has never found this operation to fail.

Spavin and Ringbone will be considered in the next paper.

Montreal, July 26th, 1850.

ART. XXVI.—*A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America, as they appear in the Caucasian, African, Indian, and Esquimaux varieties of its population. By* DANIEL DRAKE, M. D. *Cincinnati. Winthrop B. Smith & Co.* 1850. *8vo. pp.* 878.

In examining into the causes of the many important diseases to which the human frame is incident, while it will be readily conceded that there are a vast number which present the same phases, under what circumstances soever man may be placed, yet attentive observers will also readily admit, that there are also a large number, of equal importance, which appear to suffer a modification in their phenomena, arising out of, or consequent upon, circumstances developed in the localities in which they originate. To trace the varying features of such diseases, as they are evidenced in various sections of the Great North American Valley, is the great object which the author of the volume now before us has attempted. Bringing to his work keen perception, and acute reasoning powers, with an indomitable perseverence, which has led him to travel over nearly the whole of this northern continent, along the large rivers,—the volume presents, as the result of such extended observation, a huge mass or array of facts, in regard to the geological, hydrographical, topographical, and climatic conditions under which the inhabitants are existing, and the influence of all these conditions upon their diseases.

To enter into a critical analysis of the work in its details, we find to be a matter of impossibility; we shall, therefore, confine ourselves to a general statement of the plan which the author has followed, for the purpose of exhibiting the nature or character of the work, and examine the author's remarks more especially with regard to the valley of the St. Lawrence.

The volume is divided into two books, the first of which is devoted to general etiology, and the second to febrile diseases. The subject of general etiology is discussed in the three parts of—1st, Topographical and Hydrographical Etiology; 2nd, Climatic Etiology; and 3rd, Physiological and Social Etiolo-

gy. The first part, constituting nearly one-half of the work, embraces sixteen chapters, eleven of which relate to the Great Southern Hydrographical Basin, which, commencing at the sources of the Alleghany, Gennessee, and Susquehannah Rivers in New York and Pennsylvania, is bounded on the West by the Rocky, and on the East by the Appalachian Mountains. This extensive region is only partly drained by the Mississippi. A very considerable portion of the work is occupied with a description of this basin. The mouth of the Mississippi and its Delta furnishes a prolific theme. The close and intimate relation between continued and yellow fevers and low alluvial and marshy tracts are unequivocally pointed out; and with regard to the "Pine woods," the reason of their comparative salubrity, is rendered equally obvious. In the language of the author—"In the region we are describing, the sweet gum and cypress, with their festoons of moss, are the symbols of deep soil, foul surface, impure water, vegetable decomposition, and fevers; while the long-leafed pine symbolizes steriiity, dryness of surface, gushing springs of pure water, and sound health."

We pass to a consideration of our author's remarks on the Eastern or St. Lawrence Hydrographical Basin, consisting of the Great Lakes and the St. Lawrence, connecting these with the ocean. At Fort William neither continued nor remittent nor intermittent fevers are known. The same observation has been made with regard to River St. Louis and Fond du Lac. In the copper region of the Southern coast of Lake Superior, there appears to be an equal exemption, although "low lands and cedar swamps abound." At Fort Brady, with all the topographical conditions necessary to the production of autumnal fever, yet the author saw none, and was assured by persons resident, that the only cases which occurred developed themselves in persons who came from the South. Military returns shewed that the troops were not wholly exempt. "In 10 years, with a mean strength of 96 men, 37 cases of intermittent and 3 of remittent fever occurred, or about 4 per cent. per annum." (Page 335.) The author observes, "thus we see that on the St. Mary in N. latitude 46° 39' if the climate do not annihilate the topographical conditions producing those diseases, it reduces their effects to a minimum." Lake Michigan is remarkable for a flux and reflux of its waters twice within the 24 hours. Although this may not be due to lunar influence, but as Dr. Drake considers, to the winds sweeping over the water, and driving them over the low alluvial banks, yet from this very circumstance, there is an absence from fevers as marked as instanced on Lake Superior. Fort Dearborn is a military post, and its returns may be assumed as a type of the prevalence of fever in its own section. "For 10 years the annual rate of intermittents was 23 per cent, and of remittents 4 per cent." Chicago is subject to the influence of autumnal and intermittent fevers, in consequence of the peculiar situation of the town, and the coarse subaquatic vegetation abounding in the soil on which the town is built. The disease, however, seems to be disappearing. At Mackinac, on Lake Huron, the conditions necessary to the production of autumnal fever appear at their minimum, and connecting this with its latitude (nearly 46°) and its altitude above the sea (from 600 to 800 feet), it appears to be quite exempt from the disease. On this island Dr. Rankin met with a few remittents which terminated in the continued type; but such obser-

vations, valuable as they may be, are not of such importance as the army returns, according to which, remittent fever occurs at the rate of 1 per cent, and intermittent fever at the rate of 8. This is a large return, and the author explains it by a reference to relapses, thus reducing the original number to less than 3 per cent. (Page 347.) Popular opinion does not regard intermittent fever as an endemic disease of the island; and viewing the position of this island, as in the centre of the hydrographical basin of Lakes Superior, Michigan, and Huron, the author views it as a delightful hot weather asylum, to all invalids requiring an escape from crowded cities, paludal exhalations, sultry climates, and officious medication. From the description given of it, it may become, at some future period, the Madeira of the Canadas. Along the straits between Lake Huron and Lake Erie, intermittents and autumnal fevers prevail. This is particularly manifest at Port Huron and Port Sarnia. At Sandwich, autumnal fever was prevalent in consequence of the marshes abounding in its vicinity. At Windsor, a small village only two miles from the former, and enjoying an exemption from creeks and marshes, the disease is unknown. At Amherstburg and Detroit, autumnal fever, presenting the remittent and intermittent characters, is frequently seen, and in the latter place frequently assuming a malignant form. We pass now through Lake Erie which is not shown to possess any differences distinct from those already noticed, until we come to the basin of Lake Ontario.

Examining this Lake on both its Northern and Southern shores, autumnal fevers, presenting remittent and intermittent types, are found to be prevalent. Oswego appears to be peculiarly affected. In 1828 and 1829 the disease was very prevalent. The whole country was then affected. For the next 15 years it was only sporadic, but from 1844 to 1847 it became more prevalent; the sailors of the port being more subject to the intermittent form—the people of the town to the remittent. At Hamilton, Toronto, and Kingston, intermittents and remittents are frequently observed. Our author observes that the adynamic or malignant form of remittent is common near the mouths of the Humber and Credit Rivers. It is called by the people the *Lake Fever*, and is often confounded with Typhus. It is the most dangerous form of autumnal fever." Cases of this description are frequently met with at Kingston, and the towns and villages on the Northern shore of the Lake, and in regard to treatment frequently prove refractory. Descending the St. Lawrence to the Gulph, fevers are found to decrease in quantity and malignancy. With the exception, at present, of the marshy banks of the Rideau Canal and the Isle aux Noix, there are few localities in Lower Canada which can be said to engender fevers, remittent or intermittent, endemically; and as we approach nearer the Gulph, the observations of Dr. Michaud, of Kamouraska, will be found to be true, that neither remittent not intermittent fever has ever originated in the vicinity of marshes situated between the 47° and 49° degrees of latitude,—that is from Quebec to the Gulph of the St. Lawrence.

The third hydrographical division is called by the author the Arctic and Hudson, of which the name sufficiently indicates the locality, and the consideration of which we pass over to the second division of the author's work.

The second part of the work is comprehended under the name of Climatic Etiology. This is divided into five

chapters: comprising—1st, The nature, dynamics, and elements of climate; 2, The temperature of the Interior Valley; 4, Winds of the Interior Valley and Aqueous Meteors; 5, Electrical phenomena and distribution of plants and animals.

The third part of the work relates to Physiological and Social Etiology. It comprises four chapters—1, relating to population; 2, modes of living; 3, clothing, lodging; and 4, occupation, &c.

The conclusion of the first volume is the second book which relates to febrile diseases, their nature, origin, and treatment, especially those of local origin. Into the various theories proposed, whether meteoric, malarial, or vegeto-animalcular, we do not propose, in consequence of limited space, to follow our author, but would refer our readers to the work itself. We have endeavoured to give an analysis of the work, as far as is commensurate with our space; to review such a work, in the ordinary acceptation of the term, is out of the question. It is a mass of facts—a huge array—defying the attack of a critic from its general impregnability; assailable it may be in a few points, but nevertheless invulnerable as a whole—challenging our admiration in regard to the author's indomitable perseverence in following out his object; his unwearied industry in the accumulation of his facts, and the skill and judgment exhibited in the arrangement, and the conclusions which they furnish. So long as American medical literature lasts, we apprehend that Dr. Drake's work will occupy a prominent position. We regard it as a work of a higher merit than any yet published on this continent: a pioneer in a path yet to be more fully explored, and on a subject, of which future observers will but fill up the outlines, as a student would the unfinished, yet almost perfect picture, of a celebrated master. We certainly have rarely perused a work which has given us more unqualified pleasure.

PRACTICE OF MEDICINE & PATHOLOGY.

Case of Cataleptiform Hysteria, apparently induced by Mesmerism, with Remarks. By William Davies, M.D., Physician to the Bath United Hospital. [Read before the Bath and Bristol Branch of the Association, March, 1850.]—Mr. President and Gentlemen,—I shall take the liberty to occupy your attention this evening with a subject somewhat beside the usual routine of practical medicine; still, however, one not altogether without interest for such a meeting as the present. I think I shall be enabled to show some reasonable grounds for believing that a condition more allied to catalepsy than to any other morbid state that I am acquainted with, has been set up in a young girl now under my care in the United Hospital, in consequence of her having been frequently subjected to the influence of mesmerism, and been kept under that influence for some hours at a time.

In the first place I will give a history of the case; secondly, I will offer such remarks as seem to arise out of its consideration; and, thirdly, I will define the extent of my own belief in the alleged facts of mesmerism.

Case.—Mary Jane Targitt, aged 17 years last Christmas, resides at No. 18, Bridewell Lane, in this city. Her aspect may be denominated nervo-lymphatic; of middle stature, well formed, and fully developed; hair dark auburn; eyes hazel; speaks with diffidence and some hesitation. Her mother reports to me that she always enjoyed good health until within the last two years, about which time she went into service. Three months from that time she was first subjected to the mesmeric influence, to which she seems to have yielded with much facility. During the succeeding four or five months she was frequently (occasionally two or three times a week) put into the mesmeric sleep, and kept in that state during periods of time varying from two to three and four hours each. While in this condition she was made the subject of exhibition to seve-

ral of the admirers of mesmeric phenomena in this city. On one occasion she was taken over to Bristol for exhibition.

About twelve months ago she left the service of the person at whose house these proceedings took place, since which she has not been mesmerised. From this time she enjoyed good health, and nothing remarkable occurred until about three months ago, when the catamenia first made their appearance. This was about nine months after she was last mesmerised. When unwell she had two fits on two succeeding days. While in those fits she was quite unconscious; lay motionless, as one dead; continued so from four to five hours, when the condition gradually passed off, and she returned to her usual health. Her mother described the fits as having been just like those produced by mesmerism; this was without the question having been put to her in that form. She had six of these attacks previous to her admission into the hospital.

On Friday the 8th of this month (March) I admitted her an in-patient of the hospital, her appearance corresponded with what I have already described. At five o'clock in the afternoon of the same day she was seized with one of her attacks; I did not see her on that occasion, but her condition was described to me by our highly intelligent resident medical officer Mr. George Clarke. She lay perfectly motionless and unconscious, the pupils widely dilated, and the application of a strong light produced slight contraction. She gave no indication of pain on the infliction of severe pinches, or on a lancet being thrust into her arm so as to draw blood. She resisted all attempts at rousing until nine o'clock, when she gradually awoke to the full use of all her faculties; before doing so she gave indications of returning consciousness by several deep-drawn breaths, and by motions of the body. On the following Monday evening she had another attack, and again on Tuesday morning, which latter I in part witnessed. I saw her at half-past twelve o'clock, and was informed by the nurse that she had lain in the condition in which I found her since nine o'clock in the morning. The pulse was of normal frequency; the breathing quiet and natural, without any remarkable heaving of the chest; the eyes were closed, on raising the lids the pupils were observed widely dilated, but the strong light from a window caused them to contract slightly; on lifting one of her limbs and releasing it, it fell as a dead weight. After I had stood by the bed for some time, she drew two or three deep breaths, and shed some tears, unaccompanied by any action of the facial muscles, such as usually goes along with crying; she then relapsed into her former state, and I was unable to await her return to consciousness. The nurse told me that she had not shed tears during either of the two former attacks which she had had in the hospital.

Now, under what category are we to place these attacks? They have clearly nothing epileptiform in them; they present none of the muscular rigidity of fully-developed catalepsy; there is none of that exaltation which characterises sleep-waking or ecstasy. These latter —catalepsy, sleep-waking, and ecstasy—all no doubt partake more or less of the hysteric element. The phenomena of sleep-waking or double-consciousness are profoundly interesting with reference to nervous pathology. To this I shall refer again. In all hysterical affections there is an intimate blending of the real and the pretended. Every hysterical person is more or less an actor as well as a sufferer, still there is a substratum of reality in almost every case. Some reaction (of the nature of which we are quite ignorant) exerted by the uterine on the nervous system is probably the cause of hysteria in nine cases out of ten; this influence acting on persons untrained in self-controul, has for them an actuality to which their feeble and ill-regulated wills offer but little resistance, and they become the prey of their sensations. In the case detailed there is a strongly marked hysterical aspect; the tears and deep-drawn breaths which sometimes precede the return of consciousness are elements of hysteria. Perhaps the most correct categorical answer to the question,—What are the attacks?—would be, cataleptiform hysteria.

In the next place, what is the evidence of any connexion between the induction of the mesmeric state and the attacks under which the patient now

labours? At first sight the long interval (nine months) which elapsed between the last mesmeric act and the first non-mesmeric fit, would seem to militate against any such connexion as I am maintaining; further consideration will, however, I think, show that this circumstance properly belongs to my side of the argument. Hysterical phenomena are not common before the age of puberty. In this girl analagous symptoms were artificially produced at an earlier period. From the time this practice ceased until menstruation began, nothing occurred to excite in her morbidly irritable brain the established train of anormal action. On the occurrence of menstruation for the first time —a period when hysterical affections are always liable to occur, this anormal state, which had been artificially produced formerly, returned of its own accord, and be it observed, by no means an ordinary form of hysterical disease, but on the contrary a very rare one, and moreover the same form which had previously been set up artificially. The subsequent attacks have not shown any connexion as regards time with the catamenial function.

I have no wish to overstate the evidence on this question: to my mind it certainly does appear in a very high degree probable, that the mesmeric trances into which this girl was formerly put, bear a causative relation to the fits under which she now suffers; at any rate there is enough of probability furnished by the evidence here adduced, to render it worthy of the consideration of the dabblers in mesmerism, as to how far they are justified, in order to the gratification of an idle curiosity, and a love of the marvellous, in subjecting a young girl, unfitted by her acquirements and her position in life to judge correctly as to the propriety of submitting herself for their purposes, to the influence of mesmerism. Apart from any special injury to her health, which I believe to have taken place in this instance, I can conceive no training less adapted to the healthy development of the mind of a young girl, just entering on a life of toil, than the false excitement attendant on being made the centre of a wondering circle. How tame and uninteresting must seem to her, for the future, the routine duties of a menial station. It is no answer to say that she submitted to all this of her own free will. It would be easy to persuade a girl of 16 to submit to many things which would be injurious to her. It should always be understood as a matter of social right, that in entering on service a young girl should be subjected to no influences inimical to her future well-being. Let those who wish to study the phenomena of mesmerism, select their subjects from among such as are arrived at years of discretion, or if not, who are still under the care of their natural guardians.

Now, in the third place, I have to define the extent of my own belief in the alledged facts of mesmerism. It is probable that some of those whom I address may consider that mesmerism has no foundation in fact, and that hence the effects which I have attempted to trace thereto are equally unsubstantial. I have two motives for offering the following explanation,—firstly, in order to give a reason for what I do believe; and, secondly, to give a reason for what I do not believe. The phenomena of mesmerism admit of division into two parts, which may be denominated the ordinary and the extraordinary. By the ordinary, I understand the production by artificial means, of such mental states or conditions as may arise from natural causes:—1st, a state of semi-conscious sleep; 2nd, catalepsy; 3rd, sleep-waking or double consciousness,—"where the mind passes by alternation from one state to another, each having the perception of external impressions and appropriate trains of thought, but not linked together by the ordinary gradations, or by mutual memory." There are on record several well-attested examples of this condition arising from natural causes; and they are of extreme physiological as well as pathological interest with reference to a subject, I believe, first distinctly propounded by Dr. Holland in his "Medical Notes and Reflections," in the chapter on the brain as a double organ; subsequently elaborated into a somewhat too dogmatic treatise by Dr. Wigan on the duality of the mind. By these authors the brain is conceived of as an organ divided into two symmetrical halves, a unity of action in the healthy state being kept up between them by means of certain intermediate masses of white matter termed com-

missures. If then, we consider the brain in this double aspect, each half perfect in itself as an organ of the mind, it is easy to understand that one side shall be healthy and the other diseased; and that mental manifestations shall take place under the alternating influence of either side. This idea furnishes a comprehensive view, and one sanctioned by anatomy, of the pathology of double consciousness. It is probably also applicable to other anormal conditions of the mind, such as constitute insanity. Now this seems to me the extreme limit to which we are entitled, by the sanction of any natural occurrence, to credit the assertions of the mesmerists. What I mean is, that it being once admitted as a fact that the power exists of producing at will, in certain individuals, the least remarkable phenomenon of mesmerism—a state of semi-conscious sleep—the same evidence, in kind, ought to be sufficient for the proof of the artificial production of such other mental states as involve no new principle. It is not unreasonable to infer that what will produce in one person a state of semi-conscious sleep may produce in another catalepsy, and in a third sleep-waking, the peculiarity in the latter case depending on the different degrees of excitability existing in the two sides of the brain. To this extent, then—namely, the artificial production of a state of semi-conscious sleep, of a state of catalepsy, and of the condition of sleep-waking, we ought to be prepared to admit the statements of the mesmerists, provided they are able to adduce such an amount of evidence as the establishment of any new fact requires. In as far as regards my own mind, I am bound to say that this condition has been fulfilled. The evidence in favour of a belief in the ordinary facts of mesmerism is sufficiently strong to overcome in my mind any scepticism founded on their inherent improbability.

I will trouble you with one quotation, although somewhat lengthy, on account of the interest of the facts stated and the high position, as a man of science, of him who states them; it refers to the personal experience of Professor Agassiz, given in the appendix to Mr. Townshend's work, and quoted in Blackwood's Magazine for February, 1845, from which I extract the passage, the former work not being at hand. The Professor says:—"Desirous to know what to think of mesmerism, I for a long time sought for an opportunity of making some experiments in regard to it upon myself, so as to avoid the doubts which might arise on the nature of the sensations which we have heard described by mesmerised persons. M. Desor, yesterday, in a visit which he made to Berne, invited Mr. Townshend, who had previously mesmerised him, to accompany him to Neufchatel, and try to mesmerise me. These gentlemen arrived here with the evening courier, and informed me of their arrival. At eight o'clock I went to them. We continued at supper till half-past nine o'clock; and about ten o'clock Mr. Townshend commenced operating upon me. While we sat opposite to one another, he, in the first place, only took hold of my hands, and looked at me fixedly. I was firmly resolved to arrive at a knowledge of the truth, whatever it might be; and therefore, the moment I saw him endeavouring to exert an action upon me, I silently addressed the Author of all things, beseeching him to give me power to resist the influence, and to be conscientious in regard to myself, as well as in regard to the facts. I then fixed my eyes upon Mr. Townshend, attentive to whatever passed. I was in very suitable circumstances; the hour being early, and one at which I was in the habit of studying, was far from disposing me to sleep. I was sufficiently master of myself to experience no emotion, and to repress all flights of imagination, even if I had been less calm; accordingly it was a long time before I felt any effect from the presence of Mr. Townshend opposite me. However, after at least a quarter of an hour, I felt a sensation of a current through all my limbs, and from that moment my eyelids grew heavy. I then saw Mr. Townshend extend his hand before my eyes, as if he were about to plunge his fingers into them; and then make different circular movements around my eyes, which caused my eye-lids to become still heavier. I had the idea that he was endeavouring to make me close my eyes; and yet it was not as if some one had threatened my eyes, and, in the waking state I had closed them to prevent him. It was an irresistible

heaviness of the lids, which compelled me to shut them, and by degrees I found that I had no longer the power of keeping them open; but did not the less retain my consciousness of what was going on around me; so that I heard M. Desor speak to Mr. Townshend, understood what they said, and heard what questions they asked me, just as if I had been awake; but I had not the power of answering. I endeavoured in vain several times to do so; and when I succeeded, I perceived that I was passing out of the state of torpor in which I had been, and which was rather agreeable than painful.

"In this state I heard the watchman cry ten o'clock; then I heard it strike a quarter past; but afterwards I fell into a deeper sleep, although I never entirely lost my consciousness. It appeared to me that Mr. Townshend was endeavouring to put me into a sound sleep; my movements seemed under his control, for I wished several times to change the position of my arms, but had not sufficient power to do it, or even really to will it; while I felt my head carried to the right or left shoulder, and backwards and forwards without wishing it; and, indeed, in spite of the resistance which I endeavoured to oppose; and this happened several times.

"I experienced at the same time a feeling of great pleasure in giving way to the attraction, which dragged me sometimes to one side, sometimes to the other; then a kind of surprise on feeling my head fall into Mr. Townshend's hand, who appeared to me from that time to be the cause of the attraction. To his enquiry if I were well, and what I felt? I found I could not answer, but I smiled; I felt that my features expanded in spite of my resistance; I was inwardly confused at experiencing pleasure from an influence which was mysterious to me. From this moment I wished to wake, and was less at my ease; and yet on Mr. Townshend asking me, whether I wished to be awakened, I made a hesitating movement with my shoulders. Mr. Townshend then repeated some frictions, which increased my sleep; yet I was always conscious of what was passing around me. He then asked me if I wished to become lucid, at the same time continuing, as I felt, the frictions from the face to the arms. I then experienced an indescribable sensation of delight, and for an instant saw before me rays of dazzling light, which instantly disappeared. I was then inwardly sorrowful at this state being prolonged—it appeared to me that enough had been done with me; I wished to awake, but could not, yet when Mr. Townshend and M. Desor spoke, I heard them. I also heard the clock, and the watchman cry, but I did not know what hour he cried. Mr. Townshend then presented his watch to me, and asked if I could see the time: and if I saw him, but I could distinguish nothing. I heard the clock strike the quarter, but could not get out of my sleepy state. Mr. Townshend then woke me with some rapid transverse movements from the middle of the face outwards, which instantly caused my eyes to open, and at the same time I got up, saying to him, 'I thank you.' It was a quarter past eleven. He then told me, and M. Desor repeated the same thing, that the only fact which had satisfied them that I was in a state of mesmeric sleep, was the facility with which my head followed all the movements of his hand, although he did not touch me, and the pleasure which I appeared to feel at the moment when, after several repetitions of friction, he thus moved my head at pleasure in all directions."

This is undoubtedly a very interesting and important relation, coming, as it does, from a philosopher accustomed to physical research, and by no means likely to allow his imagination to blind his judgment. The frame of mind in which he set about the experiment was just such a one as is most fit for undertaking any investigation when truth is the end sought for. While I think this document of great value as evidence of a power of inducing sleep in certain persons by means of "the passes," I cannot agree with all the deductions which the writer of the article in "Blackwood" draws from it. The article, as a whole, is very judicious; but I think the more remarkable phenomena of the Professor's experience are explicable on a far simpler principle than those involved in the writer's deductions. Most persons will be sensible of having carried with them into the sleeping state more or less of the

consciousness of circumstances which had impressed their minds strongly, just before sleep came on. Those who have slept on the top of a coach, or in a theatre, will be aware of this. Now, the state of mind of Professor Agassiz, while under the mesmeric influence, I believe to have been analogous to the condition of half-conscious dreaming, which takes place in persons who fall asleep under the influence of strong feelings. To enter fully into this subject would lead me too far, and would be beside the object of the present paper.

There is nothing that I have either seen or read which favours the idea of any mesmeric fluid or animal magnetism. As far as I know, all the established phenomena of mesmerism are explicable by means of the monotony and consequent exhaustive agency of "the passes." This is a very important point, as it removes all mystery from the subject, and brings it within the sphere of our ordinary and every-day experience.

As regards the so-called higher phenomena of mesmerism—lucidity, phreno-mesmerism, &c.—I can scarcely imagine any kind or degree of human testimony sufficient for their establishment as facts. And certainly all the evidence heretofore adduced has not been sufficient to remove one particle of that profound improbability which overlies the subject. Every professing clairvoyant who has been subjected to close scrutiny, has entirely failed in his attempt, and has proved nothing except that he is himself an impostor. This holds of every case tested by the committee of the French Academy, to whom science owes much for the care with which they investigated the matter. It holds likewise in the case of Alexis tested by Dr. Forbes; also of one which was exhibited in this city, and was exposed by Dr. Fergusson and others; also of a case tested at Manchester in 1844. The result of all the cases here mentioned has been published, and is well known, so that clairvoyance stands in the predicament of being inherently absurd, opposed to the fundamental principles of human belief, and at the same time utterly unsupported by any evidence. As regards phreno-mesmerism, it is enough to say that it presents an example of an ingenious but very unphilosophical mode of reasoning namely, supporting one very improbable hypothesis by the aid of another almost equally so.

In these—the flourishing days of empiricism in every form, I conceive it to be no less the duty than the interest of the legitimist in medicine, to make himself acquainted with the doctrines of the leading quackeries afloat, so as to enable him to give a reason for their rejection to those who inquire of him concerning them. It is neither wise nor in good taste to be always thrusting our denunciations of this or that empiridal system into the teeth of those who believe in them: by so doing we add strength to the delusion. Unless we are appealed to for an opinion, all that is demanded of us is a calm indifference; and if our opinion is asked, as so frequently happens, I believe we shall best consult the interest of legitimate medicine by admitting frankly whatever of truth the particular system under discussion may appear to us to contain, and by pointing out dispassionately where we consider truth to terminate and fiction to commence. By so doing we shall let it appear that our rejection of the system has not arisen from prejudice, or from a want of attention to its claims, but because it presents along with a less or greater substratum of truth, a huge superstructure of assumption and of falsehood.—*Provincial Med. & Sur. Journal.*

Pneumonia from Cod-Liver Oil.—The value of cod-liver oil as a remedial agent, and its many characteristics, are so well understood at present by the profession and so generally recognized, that it appears a little superfluous to allude to them at any length. A point not long since mooted, however, by Dr. Benson, with respect to its exhibition, and not suspected very generally, is of considerable interest. The oil has long been a favourite medicine in Dublin, so that ample opportunities have been afforded of comparing the experience of the different practitioners who have used it. As early as the year '44, Dr. Graves tried it, with the most marked benefit, in some cases of cachexia; and Mr. Wilde, who had seen it used previously in Germany, tried it extensively too in cases of pannus, long-continued

ophthalmia, granular lids, and analogous eye-cases. The other chief medical men, too, have had reason to be satisfied with it; and the indefatigable Donovan has given us its history and various properties and modes of preparation, with which every one now is quite familiar.

Nearly a year ago, it seems, Dr. Benson prepared a paper on the uses of the oil, but press of other business prevented his making it public. Possessed of such powers of invigorating the system, it did not appear to him very extraordinary if, under particular circumstances, the oil might undo the very thing it was intended for; in other words, might induce a congested condition of the lung, and induce pneumonia. Accordingly, in almost every patient dying of phthisis, taking the oil, which he has examined, he has found a congested state of the lungs, as he expected, not only near the tubercles, but through the entire of both lungs. Three marked cases are cited, in which he began with drachm doses, carrying it up, however, to an ounce and a half in the day. Dr. Benson, with the majority of practitioners, considers the oil quite invaluable in these cases; and perhaps the caution which he suggests will be of use, though it is, perhaps, questionable what part the oil really bears in the phenomenon. At the Surgical Society where the paper was read, Dr. Bagot corroborated, to a certain extent Dr. Benson's views, and Dr. Spear said he had met pneumonia of both lungs traceable to the same cause; hæmoptysis, too, is remarked by Dr. Kennedy, being not unfrequent also.

It seems a matter of no uninteresting discussion, (if the facts be as suspected by Dr. Benson,) what part the action of the oil bears in inducing this inflammatory state of the lung. It is, perhaps, too much a custom when a patient is made to take the oil to look on it as a last resource, to the neglect of all other means; and, as well remarked by Dr. Benson himself, the apparent symptoms improve much quicker than the physical signs; in other words, the tubercular irritation and inflammation are allowed to go on, under the false show of returning health. In such a state of things it is not difficult to imagine even the sound parts of the lung getting one homogeneous appearance of engorgement, independent of the normal action of the oil, which every practitioner must confess is most beneficial. The observation of Benson is one of deep practical value, and may be the means of taking this medicine out of that *terra incognita* that divides mere empiricism from true practical medicine, and lead to a true study of its real action on the animal economy.—*Medical Times, Feb.* 2. [What will the Homœopaths say to this?—Ed. *B. A. J.*]

MIDWIFERY.

The Diagnosis of Ovarian Dropsy.

A paper on this subject was read by Mr. Brown, at a recent meeting of the Westminster Medical Society. He observed:—Amongst the general signs of ovarian dropsy, we must place emaciation of the neck and shoulders, and a peculiar expression of the countenance, indicating, in a marked manner, the presence of this disease. The face is elongated, thin, and partially shrivelled; anxiety and care are strongly depicted on it; the angles of the nose are drawn downwards; the lips are thinned; the mouth loses its curves, the angle being drawn downwards; the cheeks are furrowed; the eyes are remarkably defined, owing often to the sunken space between the eyelids and the bony margin of the orbit; the skin is thin and pale; in short, the whole of the cellular tissue of the face is atrophied; but, unless the disease be malignant, the skin has not the peculiar aspect which it acquires in malignant disease. The extremities are seldom swollen, as in ascites, and, consequently, the patient can walk about with comparative ease. There is generally, also, but little disturbance to digestion, and usually adequate action of the liver. Respiration, and the action of the heart, are less disturbed than in ascites, but the heart's action is feeble, owing to the diminution in the whole mass of the blood. The special signs are—First, we can generally trace the commencement of this disease from one of the ovaries deep down in the iliac fossa; a tumour pressing between the rectum and the vagina may be felt, either through the walls of the vagina or the rectum, not excessively painful, but elastic; on firmly pressing it, especially if at the commencement of the formation

of the tumour, you can get it between the thumb in the rectum, and the middle finger in the vagina; but you can also frequently feel an egg-like enlargment around the ovary, through the abdominal parietes, especially if you flex the thighs on the abdomen, so as to relax the muscles. The tumour, gradually and definitely increases, still maintaining a rounded outline, and ascends from the pelvic cavity to the abdominal, rising in the front of the bowels, and distending the abdominal parietes; it sometimes reaches the ensiform cartilage, pressing up the liver, stomach, pancreas, and spleen, so as to elevate the diaphragm, and thus contract very considerably the thoracic space. This tumour, which, as it ascends, becomes more fluctuating, occupies the side from which it originates; but whilst it throughout retains a preponderance towards that side, it gradually extends to the opposite. The veins of the abdomen are generally much increased in number and size. The sac containing the fluid being circumscribed, the indications afforded by percussion are also circumscribed, and the sounds on percussion are of course dull over the sac and resonant over the surrounding intestines. On examination per vaginam, fluctuation can be generally felt through its walls, and the vagina itself is elongated and drawn up, sometimes even under the arch of the pubis; the uterus is also either drawn up or pressed back on the rectum; the cyst is generally round and smooth on feeling it through the parietes of the abdomen, and moveable from side to side, and is not materially altered by change of position, either recumbent or upright. These special signs apply more particularly to unilocular ovarian dropsy. In multilocular, we almost invariably have an uneven and irregular surface of the cyst, and generally one or more solid tumours, which appear inelastic and without fluid; but in very many cases these tumours will be found to be additional cysts, containing fluid, tense, owing to the pressure of the fluid in the larger one. Mr. Brown had frequently found this to be the case; and this was proved by evacuating the contents of the larger cyst, and again introducing the trocar through the canula still in the opening, thrusting it into the apparently solid tumour, and finding immediately an escape of fluid. On examining a multilocular cyst, fluctuation is not very distinct, if you examine the entire cyst; but if you tap over any one of the sacs fluctuation is apparent, but only over that one, not being at all communicated to the adjoining cyst or cysts; where, however, the fluid is gelatinous or albuminous, fluctuation cannot be so readily felt. The same observation applies to these cases containing thick, cheesy matter, mixed with pus, and sometimes also with hair. But we have also distinct solid tumours in connexion with these fluid ones; and then there is no sense of fluctuation. This observation applies both before and after evacuating the contents of the fluid cysts. Having ascertained the nature of the tumour, so far as to say whether it is unilocular or multilocular, the next important subject is as to the presence of adhesions. In examining for adhesions, Mr. Brown directs that the patient should be laid in the horizontal posture, and be made to flex the thighs on the abdomen so as to relax the abdominal parietes; he then moves the cyst from side to side. If this is readily done, he knows there are adhesions. Again, he places his hand firmly on the relaxed parietes, and moves them over the cyst. If they move readily, he knows there are no adhesions on the upper and lateral surfaces of the cyst.—Again, as the parietes are thin in this disease, he grasps and puckers them up, and then moves them over the cyst, and also observes whether they gather up readily, without raising the cyst itself.—If he found these three indications, Mr. Brown determined there were no adhesions. Another plan, for which he was indebted to his friend Dr. Sibson, is based on the extent to which the contents of the abdomen are forced downwards during a deep inspiration, by the descent of the diaphragm. If there be no adhesions in front, the upper boundry of the ovarian tumour descends to the extent of an inch during a deep inspiration, the place previously occupied by the tumour being now taken up by the intestines; consequently, if you percuss over the upper part of the tumour, a dull sound is elicited during ordinary respiration; but when the patient takes a deep inspiration, an intestinal resonance is there perceptible. Mr. Brown then alluded to those diseases which may be mistaken for ovarian dropsy, and slightly remarked on their peculiar signs. They were—1st, retroflexion and retroversion of the

uterus; 2ndly, tumours of the uterus; 3rdly, cystic tumours of the abdomen; 4thly, ascites; 5thly, pregnancy; 6thly, distended bladder; 7thly, distended bowels from flatus; 8thly, fæces in the intestines; 9thly, diseased viscera of the abdomen.—*Medical Gazette*

ANATOMY.

The true nature of the Pneumogastric Nerves. By M. LONGET.—M. Longet (*Archives Générales*) endeavours to prove that the pneumogastric, at its origin, is a purely sensitive nerve, and that its motor properties are derived from subsequent anastomoses.

One of the reasons for the opinion that the pneumogastric has a double function is, that the only spinal branch which joins it is not sufficient for the various movements over which this nerve appears to preside. But, in fact, there are several other nerves which send filaments of communication to it, namely:—1. The facial. 2. The hypoglossal. 3. The first and second cervical. 4. Other branches which come indirectly from the anterior branches of the cervical, and six upper dorsal. These, in their transit, pass through the ganglia of the sympathetic. Considered then, at its origin, and above the upper jugular ganglia, the pneumogastric is exceedingly sensitive. Excitation of its fibres have chiefly the effect of developing impressions which are followed by the reflex movements which accomplish the actions of deglutition and chymification, circulation, and respiration. But these reflex movements are not solely due to the pneumogastric. The other nerves, such as the glosso-pharyngeal and the trifacial, are equally capable of transmitting such impressions. This is seen in the ordinary practice of dashing cold water on the face in syncope.

The anastomotic branch of the spinal accessory nerve, which presides over the movements of the larynx, represents only one, and a partial motor root, as does the masticatory nerve in the case of the fifth pair, which possesses also additional motor filaments derived from other sources.—*Prov. Med. & Sur. Journal.*

Anatomy of a Monster of the Genus Rhinocephalus. By MM. ROBIN and DAVAINE.—The following chief particulars were pointed out by MM. Robin and Davaine to the Société de Biologie, in a case which they had had an opportunity of examining:—1st. Two eyes were united in one orbit, and possessed only one common optic nerve. 2nd, There was a complete absence of the inferior maxilla. 3d. The mouth formed a *cul-de-sac*, and contained no tongue. 4th. The absence of cerebral hemispheres, which were replaced by a single lobe, not covering the optic thalami or corpora quadrigemina.—*London Medical Gazette.*

MEDICAL JURISPRUDENCE.

Case of Poisoning by Bromine.—The village of Greenport, L. I. was thrown into quite an excitement on Tuesday by the intelligence of the death of Andrew J. Hawks, by suicide. He was unmarried, about 25 years of age, of good appearance, affable, and liked by all who knew him. He committed suicide by taking an ounce of bromine, a chemical used in the Daguerreotype. The quantity he took was enough to kill twenty men. He took it about 6 A.M. of Tuesday, and was found in spasms a few minutes afterwards; and although ammonia, hyposulphite of soda and lime water were administered to counteract the influence of the bromine. yet he lingered in the greatest agony till 3 P.M.—his stomach being literally destroyed by the chemical, in some places nearly burnt through. He thought it would kill him instantly. It would probably have killed him very soon if the alkalies had not been administered, which only prolonged his suffering. He was sensible to the last, and expressed contrition and desired to live. This is the first case of suicide by taking bromine.—*New York paper.* [In the administration of antidotes in this case there appears to have been most admired confusion. Starch, it strikes us, would have been the proper antidote, the bromide of starch being comparatively inert.—ED. *B. A. J.*]

MISCELLANEOUS.

Practical Views on Medical Education, submitted to the Members of the American Medical Association, by the

Medical Faculty of Harvard University.—The undecided state of public opinion in regard to some of the fundamental points in a course of medical education, including among other things the portion of the term pupilage proper to be spent in attendance on lectures, is thought, by the undersigned, to justify a further consideration of the subject. In some of its relations, this subject has already been discussed, in the Transactions of the American Medical Association for 1849, in two reports, pages 352 and 359, to which the reader is particularly referred. The following condensed, but more general view of the subject of medical education, is now respectfully submitted to the members of the Association.

1. Medical instruction shoud be adapted to the power of students to receive or retain what is communicated to them, and should be confined to what is important to them in their subsequent life.

2. In modern times the constituent branches of medical science are so expanded, that they are not acquired by any physician in a life-time, and still less by a student during his pupilage. The same is true even of many individual branches. It is not, therefore, to be conceded that "a scheme of scientific instruction should embrace the whole science, and no part should be omitted;" nor that "a well-digested plan of lectures embraces all that is to be known and taught." Medical science has at this day become so unwieldy, and contains so much that is unnecessary, at least to beginners, that the attempt to explain to students the whole, is likely to involve the result of their learning but little.

3, In Chemistry, at the present time, a thorough adept is unknown. No man living knows all the recorded facts, or all that is to be known and taught, in that science. Organic chemistry alone fills large volumes, though yet in its infancy.

4. In Materia Medica there are some thousands of substances and their compounds, which possess what is called a medicinal power. Yet it is not probable that any physician effectively reads the one half, or remembers one quarter, or employs in his yearly practice one tenth, of the contents of the common dispensatories.

5. In Pathology, so complicated and various are the conditions attendant on the individual forms of disease, and their relations with idiosyncracy, temporary condition and external agency, with organic lesions and functional disturbances, that few of the most experienced pathologists can be said to understand their whole science, or to be always competent to its successful application.

6. In Etiology, the theoretical literature of causes has spread itself out to an extent which is burdensome and unprofitable. It is true, that "man, from his nature, is subject to suffering. disease and death:"—but it is not equally apparent, that "the causes by which these conditions are produced, are ascertainable." We know nothing of the vehicle of cholera or influenza, nor is it probably in the power of any physician, by any art or application of his knowledge, to produce in a given healthy man, a case of common pneumonia, or of acute rheumatism,—of diabetes or Bright's kidney,—of hypertrophy or of cancer,—or even of a common boil or wart.

7. In Therapeutics, many hundred volumes exist, such as would not have existed, could a knowledge of the cure of diseases be made so easily tangible, that it could be spread before the student in the three or five years of his pupilage.

8. In Anatomy, general and special, microscopic and transcendental;—in Physiology, with its intricate ramifications;—in Surgery, of which several subordinate specialities constitute distinct living professions; it is not to be admitted that the means or time of any ordinary course of lectures, can furnish full and complete instruction. Certainly it must be difficult to arrange a course of lectures on any of the extensive sciences which now constitute medicine, if it be indeed true, that "the teachers are not justifiable in suppressing any portion."

9. It is the business of lecturers in medical schools, to condense and abridge the sciences which they respectively teach, to distinguish their essential and elementary principles, to sift carefully the useful from the superfluous, and to confine the scope of their teachings, as far as possible, to what is true and profitable, and likely to be remembered and used by their hearers. It is unfor-

tunately too true that "in an extended system of instruction, there is much that the student will not master, much that will have escaped his attention, much which he ought to know, that he has not learned." The remedy appears to be, to teach him well what he can and should master, and briefly to point out to him the sources, fortunately abundant, from which he may obtain the rest.

10. Much injury is done to the cause of true learning by medical assumption, amplification and exaggeration, by premature adoption of novelties, and by tenacity of theories, personal or espoused. Students, in all former years, have expended much time in learning what it afterwards cost them both time and trouble to unlearn;—in acquiring, not merely the truths of science, but the crude announcements and plausible doctrines of sanguine or ingenious men. How much time has been wasted in some of our distinguished seminaries, in acquiring the visionary, and now neglected, theories of Rush and Broussais!

11. The most commonly exaggerated branch of medical science is therapeutics. Enlightened physicians well know that many diseases are incurable, and that others are subject to laws of duration, which cannot be interrupted by art. Yet students sometimes return from medical schools persuaded that their instructers know how to cure a large part of these diseases, and that if others are less fortunate, it is attributable to their own fault.

12. Medical teachers should keep pace with the progress of their respective sciences. Yet in their haste for the promulgation of novelties, they should not omit to give the proper consideration to the older and more settled principles of science. Medical men are liable to commit the error of adopting premature opinions, unsound practice and inconvenient changes of language and nomenclature, sometimes from a love of display, and sometimes from a want of self-reliance, and a fear of being thought behind the literature of their time.

13. The length of a course of lectures is not the measure of its value to the student. A course of lectures should not outlast the curiosity of its hearers, nor their average pecuniary ability to attend. Custom in this country has generally fixed the limits of these things at about four months. A comprehensive and judicious course, confined to the enforcing of necessary points, is far more profitable than a more discursive course to a wearied and diminishing audience.

14. Lectures are chiefly wanted to impress by demonstration the practical branches of science, and they are most effective in places where the facilities for such demonstrations can be commanded. Anatomy requires extensive exhibitions by the teacher, and personal dissections by the student. Chemistry and Materia Medica require illustrations by specimens and experiments. Pathology needs the aid of autopsies, museums, and the clinical demonstrations of large hospitals. A knowledge of Obstetrics is not perfected without apparatus and practice. Surgery is acquired by witnessing numerous operations, surgical diseases, illustrated explanations, and by personal practice on the dead body. Physical exploration is wholly demonstrative. A knowledge of auscultation can no more be acquired from books, or abstract lectures, than a knowledge of music, or of individual physiognomy.

15. The intermediate period between lectures should be spent by students in active and original study, approved and confirmed by regular recitations, and by such opportunities as can be commanded for practical, personal experience. Private schools for small classes, and the private teachings of individuals, who are suitably qualified and situated, are more advantageous for two-thirds of the year, than either the fatiguing jostle of over-crowded rooms, or the listless routine kept up by the survivors of a passive class.

16. The usefulness of a medical school depends not so much on the length of its session, as upon the amount of education, preliminary and ultimate, which it requires, the fidelity with which it exacts its own professed requisitions, and the train of healthy exertion, active inquiry, and rigid, methodical, self-regulating study, to which it introduces its pupils. The longest lectures are of little use to students who want a common education, and whose medical education does not qualify them afterwards to observe, to inquire, and to dis-

criminate. The exacted evidence of three years of well conducted study, is better than the exhibited ticket of a six months' course.

17. The subjects most important to be well taught in medical schools, are the elementary principles which constitute the frame-work of medical sciences, and the mode of thought and inquiry which leads to just reasoning upon them. After these, most attention should be given to selecting and enforcing such practical truths, as will most certainly be wanted by the young practitioner in his future career of responsibility.

18. The things to be avoided by medical teachers, are technicalities which are unintelligible to beginners,—gratuitous assumptions and citations of doubtful authorities,—prolix dissertations on speculative topics,—excessive minuteness in regard to subjects which are intricate and but little used, and therefore destined to be speedily forgotten. To these may be added controversies, superfluous personal eulogiums and criminations, and all self-exaggeration, personal or local.

JACOB BIGELOW,
Prof. of Materia Medica and Clinical Medicine.
WALTER CHANNING,
Prof. of Midwifery and Med. Jurisprudence.
JOHN WARE,
Prof. of Theory and Practice of Medicine.
JOHN B. S. JACKSON,
Prof. of Pathological Anatomy.
OLIVER W. HOLMES,
Prof. of Anatomy and Physiology.
HENRY J. BIGELOW,
Prof. of Surgery.
E. N. HORSFORD,
Prof. of Chemistry.

Boston, July 10, 1850.

Human Ovum.—M. Martin Magron presented to the Biological Society of Paris, a human ovum, of the size of an ordinary fowl's egg, and with its membranes intact. On opening the amniotic cavity, no fœtus could be found, but it was filled by a transparent liquid. M. Cazeaux remarked that he had found similar ova on five or six different occasions. Sometimes the amniotic liquid was oily and coloured; at other times it was more fluid and transparent. In certain cases, he found the remains of the umbilical vesical and of the cord; in others, these vestiges had entirely disappeared. M. Follin, who had seen similar ova, added, that the colour and consistence of the liquid varied according to the period at which the human embryo had entered into dissolution.—*Gazette Médicale.*

Brooke's Microscope.—At one of Lord Rosse's recent scientific soirees, Mr. Brooke showed his new method of viewing opaque objects under the highest powers of the microscope (the 1-8th and 1-12th inch object glasses). This is reflected by two reflexions. The rays from a lamp rendered parallel by a condensing lens, are received on an elliptic reflector, the end of which is cut off a little beyond the focus; the rays of light converging from this surface are reflected down on the object by a plane mirror attached to the object-glass, and on a level with the outer surface. By these means the structure of the scale of the podura and the different character of the inner and outer surfaces are rendered distinctly visible.—*Athenæum.*

Register Hygrometer.—On the same occasion, Mr. Appold exhibited his curious Register Hygrometer for keeping the atmosphere of the house at one regular moisture. The instrument, with a variation of one degree in the moisture of the atmosphere, opens a valve capable of supplying ten quarts of water per hour; delivering it to pipes covered with blotting-paper heated by a gas sieve, by which the water is evaporated until the atmosphere is sufficiently saturated and the valve thereby closed. A lead pencil is attached to register the distance the hygrometer travels: and thus a sheet of paper moved by clock-work shows the difference between the wet and dry bulbs of the thermometer at any period of time.—*Ibid.*

Homœopathy and the Cholera.—In deference to the assertions and large claims of the advocates of homœopathy, and in consideration of the comparatively small success obtained over the mortality of cholera by any method of treatment, the administration of the hospitals Salpétrière and St. Louis submitted a few cases to the homœopathic modes of practice, but the result did not warrant its continuance. The physicians report that *all* the cases proved fatal.—*L'Union Medicale.*

Compensation of Physicians for Post-mortem examinations before Coroner's Inquests.—[We beg to direct the attention of our Legislators to the following, and then let them contrast it with the miserable pittance doled out in U. Canada to the Profession, in their act of last session.—Ed. B. A. J.]—Until a short time since, we have had no opportunity to examine the Act, passed at the last session of the Legislature of Georgia, which provides for the compensation of medical men who may be required to attend professionally upon Coroner's inquests. This act provides that "it shall be lawful for every Physician or Surgeon who shall be summoned by the Coroner or Sheriff of the county to make a post-mortem examination for the information of juries of inquest, to charge and receive from the Treasurer of the county, the sums following, to wit:—For each post-mortem examination, when death has resulted from external violence, where no dissection is required, the sum of ten dollars; for the same, where dissection is necessary, and where no interment of the body has been made, twenty dollars; for the same, after one or more days interment, thirty dollars; for the same, when any chemical analysis is required, the sum of fifty dollars, and the expense of such analysis: Provided, that the compensation allowed in this act, shall not extend to more than one physician, for each post-mortem examination."

We are pleased that this tardy act of justice to the medical profession has been done; but at the same time we are constrained to say that the compensation for post-mortem examinations, where chemical analysis is required, is entirely inadequate. In almost every case of this kind, the entire responsibility is thrown upon the physician. Upon the correctness of his analysis, the reputation and life of the accused depends. His opinion alone determines the question whether or not a crime has been committed. To place a man under such a weight of responsibility, and then to offer to compensate him for fifty dollars, shows a very low appreciation of the profession, or a very extravagant estimate of the value of money. We hope that this part of the law will be hereafter amended, and a more adequate compensation allowed. We are, however, much gratified that the obligation of the community to compensate physicians for services rendered the public has been thus recognised. The recognition is doubtless due to the organization of the profession, which has been going on throughout this country for the last three or four years. The same means, if properly used, will procure a further recognition of the obligations which the public are under to physicians.—*Southern Medical and Surgical Journal.*

British American Journal.

MONTREAL, SEPTEMBER 1, 1850.

The Medical Bills.—The short Parliamentary reports, which will be found on another page, speak for themselves. Dr. Laterriere's Bill, Mr. Sanborn's Bill, and Dr. Davignon's Bill have all been disposed of—i.e., sent to the tomb of the Capulets. A similar fate has also overtaken the Bill for Incorporating the Medical Profession of Upper Canada. This is certainly to be regretted, but we hope that our Upper Canada brethren will not relax their efforts, but on the contrary, use their utmost efforts to be more successful next session. We are pleased to observe that a Bill regulating Coroner's Inquests, and the fees of medical witnesses, has been carried, through the exertions of the Honble. Mr. Cameron, of Cornwall. This Bill, being one of importance, we will publish in our next.

Our readers will find also, in another page, the answers to the question of the Special Committee on the Montreal School of Medicine Bill. To these documents we beg to call, in an especial manner, their attention, as exhibiting the grounds upon which the members of the School have based their application to the Legislature. The documents require no comment from us at the pre-

sent moment, although we may make use of them at a future period.

REPORTS TO THE SPECIAL COMMITTEE OF THE LEGISLATIVE ASSEMBLY ON THE MONTREAL SCHOOL OF MEDICINE BILL, OF AMENDMENTS; BY DRS. PELTIER, BIBAUD, ARNOLDI, & HALL.

To A. Hall, Esq., M.D.

SIR,—You are requested to state, for the information of the Committee, as concisely as possible, your objections against, or reasons in support of, the Bill which has been referred to this Committee, with such general observations as you may judge necessary to communicate on the subject of the Bill.

J. P. LEPROHON,
Clerk to Committee on Montreal Medical School Bill.

Toronto, 19th June, 1850.

To the Members of the Committee on the Montreal School of Medicine Bill.

GENTLEMEN,—In accordance with the terms of the letter of Mr. Leprohon, clerk of your Committee, conveyed to me yesterday, I beg to submit the following reply, and to bespeak for it your attentive consideration.

I have the honor to be,
Gentlemen
Your obedt. Servant,
A. HALL, M. D.

Toronto, Ellah's Hotel,
June 20th, 1850.

I object to the proposed Bill of Amendments, both as regards the principle involved, and the details, as specially set forth in the second and third clauses; and as my reasons for objecting to the latter will clearly exhibit my grounds of opposition to the former, I will take the liberty of stating them first.

First, then, with reference to clause 2nd. The provision of Act 8 Vic. Chap. 81 sought hereby to be repealed, provided in substance that the corporation of the school of Medicine shall yearly cause to be delivered, 120 lectures of at least one hour each, in the English language, and the same in the French language on the following subjects. First, Anatomy and Physiology; 2. Chemistry & Pharmacy; 3. Materia Medica; 4. Practice of Physic; 5. Surgery; 6. Midwifery. The portion of the clause obliging the lecturers to lecture in both languages, was repealed by a proviso attached to clause 12 of 10 & 11 Vic. chap. 26, giving to the corporation the power of lecturing in either language, at their discretion, but still limiting the number of lectures in each course to 120, the number given at McGill College in the same branches.

This amendment was I think judicious. But the present amendment goes to influence the duration of the courses themselves, or using the words of the clause itself, that "the Corporation shall cause to be delivered so many lectures as to the said Corporation may seem meet, in the several branches of medical science above mentioned." This I conceive to be highly objectionable. If, as I take it, it be a matter of moment, in a science such as Medicine is, to ordain a preparatory training or system of education for those who select it as the avocation of their future life, it is of equal moment to prescribe the mode by which that system shall be carried out, and to place it as far as possible beyond the control of all, who might feel disposed to tamper with it, as their *convenience* or their *interest* might dictate. Such an object has been effectually secured in the 12th clause of 10 and 11 Vic. chap. 26, the Act incorporating the College of Physicians and Surgeons of Lower Canada; and this clause of the now proposed Bill of Amendments not only repeals *professedly* the proviso of the 12th clause of the 10 and 11 Vic. chap. 26, previously alluded to, but strikes a *covert* blow at the system of education prescribed in the previous portion of the same clause, and thus places at the mercy of the School of Medicine, and subverts, the whole system of the medical education of the Province.

To the third clause, objections of an equally grave character present themselves. This clause seeks the privilege for the School of granting diplomas or certificates of qualification, and in asking for the repeal of "any act or law to the contrary notwithstanding," at once places the School of Medicine above the existing law, and permits them to deal with medical education, and the licensing of individuals, in the most arbitrary manner. I object to this clause, in all its details, in the most emphatic manner, and upon these grounds:—

1st. Certain ruin to the Profession of the whole Province. This may be exemplified by the present condition of the Profession in the United States, in which this very system, the multiplication of licensing boards, has been for years in active operation, and which is now deplored by the best of the Profession there, and to remedy which, or check the growing evils, proposals are now entertained by the American Medical Association.

2nd. There is nothing to prohibit the School of Medicine from granting their certificates to persons, after the fulfilment of any curriculum of their own appointment; and this,—for there is nothing contained in the proposed amendments to the contrary,--may be *inferior to the most inferior of the American Colleges*. There is, for example, nothing in their Act of Incorporation, which entails upon their students, hospital attendance, or clinical instruction, or practical anatomy, or medical jurisprudence, or botany, or institutes of medicine, all of which are enforced by the Act 10 & 11 Vic. chap. 26:—The curriculum is placed so completely at the mercy of the School, that they have but to exercise the *sic volo sic jubeo* power to effect any thing in regard to education pleasing to the members thereof; and when I observe that this question involves interests of a *pecuniary* character, the standard of education is *almost certain not to be placed so high* as that required at M'Gill College, the Toronto University, or the Incorporated College of Physicians and Surgeons.

3rd. I object to the delegation of any such power, because of the *irresponsibility of the parties who seek to be invested with it*. At M'Gill College and the University of Toronto, the only two Institutions in this Province which possess the power of graduating in medicine, there exist authorities exercising judicial controul over the acts of the medical departments, consisting of Caputs, whose acts are themselves sustained or rejected in a general convocation of all the members of the Universities: and this very responsibility is a striking characteristic of all the British Universities, to which in practical working the Canadian ones have been as much as possible assimilated. In the School of Medicine there exists no controlling power over the proceedings of the members of the School.

4th. I object to the delegation of any such powers, and the mode in which it is to be exercised, because it virtually annuls the 10 and 11 Vic. chap. 26, and 12 Vic. chap 52, respecting all the educational enactments of the said bills, which are approved of, and considered a great boon, by a very large majority of the Profession of Lower Canada.

5th. I oppose the said bill because I consider it detrimental to the *best interests* of the French Canadians of Lower Canada, who, by virtue of an agreement entered into in 1847, between the Medical Faculty of M'Gill College and the Montreal School of Medicine, are admitted to the honors and privileges of the University upon highly favourable conditions, as will be apparent by reference to copy of a paper marked "A" herewith annexed. The arrangement, thus entered into, having been determined mainly by the fact that the lectures of the University, being delivered in the English language, Canadians, unacquainted with that language, could not profit by them. The French Canadians are *now*, therefore, in the possession of a higher privilege, than that which would be accorded, if the Bill of Amendments passed the Legislature.

6th, and lastly, Because, seeing no substantial reason why the power sought for should be granted, I can recognise in the proposal of the School of Medicine a proceeding, considering all the premises which I have submitted, calculated to inflict a most serious injury on the Profession of the Province in regard to its usefulness, and the professional qualification of its future members.

Having thus assigned some most important objections against the details of the proposed Bill of Amendments to the Act of Incorporation of the School of Medicine of Montreal, the principle of the bill founded upon such objectionable premises becomes objectionable also. The bill granted, the same power must be extended to every incorporated School of Medicine in the Province, existing and to exist. Indeed, the Quebec School of Medicine has already sent in to the Legislature a petition requesting a similar power. The effect of delegating such unlimited power to a number of such

irresponsible boards must be injurious to a high degree; it is a blow struck, in the most vital manner, at the integrity of the Profession, and subverts the existing condition of medical matters in the Province; and repealing, as it inevitably would, every portion of the Act, incorporating the Profession of the Lower Province, in regard to medical education, would leave to that Incorporation but a name, or worse, its mere shadow, without any of that substance which has called forth the admiration of our American neighbours, and is deemed worthy of imitation by our brethren of the Upper Province in their Bill which is now before the Legislature.

A. HALL, M.D.

A

[COPY.]

"The Medical Faculty of M'Gill College, and the Incorporated School of Medicine, being impressed with the conviction that much benefit to the cause of medical education in this Province would be secured by united effort, while their own interests would be at the same time advanced, have agreed upon the following terms as a basis of union, viz.:—

"1st. That inasmuch as the School of Medicine is bound to deliver a course of lectures in both the French and the English language, the Medical Faculty shall be considered the English department of the School, so far as appertains to the duty of lecturing in the English language; the members of the School of Medicine restricting themselves to delivering the usual courses in the French language.

"3rd. That the students of the School of Medicine shall be entitled to become candidates for graduation at M'Gill College, fulfilling only the requirements necessary to bring them within the class of students of the University, which are —1st, matriculation of one session; 2nd, during that session, having taken out of any two of the six months courses the tickets required by the curriculum—which together form an *annus medicus*.

"4th. That the examinations of the students of the School of Medicine for the degrees, shall be conducted by the lecturers in that School, but shall be held within the College and in the presence of the Medical Faculty, and generally be in accordance with the statutes of the Medical Faculty.

"5th. The students of the School of Medicine thus obtaining the privilege of becoming candidates for the degree, the School of Medicine will cease to grant certificates of qualification.

"6th. The English lectures required by the Act of Incorporation of the School of Medicine being to be delivered by the lecturers of M'Gill College, by which the College becomes, *pro tanto*, half of the School, it is conceded, that the Medical Faculty shall be entitled to the use of the library of the School of Medicine.

"7th. That as a consequence of the last clause, the fees arising from the graduation of the Students of the School of Medicine shall be paid over by the Registrar of the Medical Faculty for the use and augmentation of the Library of the School of Medicine, deducting the Registrar's fee and incidental expenses.

"8th. That the class fees shall be the same in both Schools, being those directed by the statutes of the Medical Faculty; and the Medical Faculty shall cease to issue extra-academical tickets."

I declare that the stipulations on the foregoing pages are those under which an arrangement or union took place between the Medical Faculty of M'Gill College and the Montreal School of Medicine and Surgery, in May, 1847. the foregoing being the original rough draft.

A. F. HOLMES, M.D.
Secy. M. F. M'Gill College.

June 14th, 1850.

The above is a faithful copy of the original handed me by Dr. Holmes.

A. HALL, M.D.
Registrar M. F. M'Gill College.

Toronto, June 20th, 1850.

Answer of Dr. Peltier to the questions submitted to him by the Committee.

[TRANSLATION.]

The following are the reasons which prompted the School of Medicine to petition the House:—

1st. The French Canadian population has shown frequently, and in several places, that it was not without concern that it beheld the oldest Medical School in the Country deprived of an entire latitude in giving its Instruction, and of an effective and necessary protection against

any foreign or hostile influence which might be brought to bear against it.

2nd. The fact that the Institution which teaches Medicine in the English Language, that M'Gill College, has alone the right of granting to students a certificate, the scientific value whereof is legal, and which cannot be contested nor set aside by the Provincial Medical Board, peremptorily proves, that the Medical School is subjected to its controul. The School, therefore, requires the means above mentioned.

3dly. As M'Gill College enjoys exclusive privileges, the students of Medicine from among the French Canadian population, often attend the lectures of that Institution, even though they have to study in a language that is not familiar to them. They are certain, in fact, that with a diploma from M'Gill College, they will not be required to submit to a second test, to obtain a license from the Provincial Board of Examiners. It was this fact, that prompted the School of Medicine to sacrifice the price of one year's instruction in both branches of Medicine, in order to acquire for its pupils the above mentioned privilege. For this purpose, a compromise between the School of Medicine and M'Gill College was necessary; for the latter has the right of requiring a similar concession, on the part of any other Medical School, in return for the diploma which it grants.

4th. But, we will perhaps be told, that society has a better guarantee when a student has graduated at M'Gill College, than when he has been admitted at the Medical School. By no means. While the Diploma which we are obliged to purchase for the student, nullifies the existence of the School, and limits its pecuniary resources, it adds nothing to the Students' qualifications. He is examined by us, we are the sole judges of his merits, and Mc'Gill College admits or rejects him according to the decision we come to. Instruction therefore, is equally as good in the one as in the other Institution. Besides, every one is aware that M'Gill College implicitly acknowledges it to be so.

5thly. Since the foundation of the School of Medicine, it numbers more than three hundred pupils, who have come thither to receive instruction, all with the exception of about twenty, are French Canadians from Lower Canada. Now, if M'Gill College has been able to number as many within the same period, which, I doubt very much, nearly one-half of them belong to the Upper Province. The Toronto School of Medicine, which is in a situation similar to ours, loses a great many of its pupils, who come to study at M'Gill College. They, therefore, cannot oppose our petition without injuring their own interest, inasmuch as they would thereby, deprive themselves of coming before the House hereafter, with a similar request. As to the Toronto University, it may have convinced itself, that it is not always the best plan to allow an Institution to enjoy uncontrolled power and influence. Many young men who ought to follow their studies there, go nevertheless to M'Gill College, which does not require them to be Bachelors of Letters as the Toronto University does.

6thly. But here we have the formidable opposition of M'Gill College, which fancies it has obtained from England, such privileges as to enable it to paralyse the action of the House, and forbid its passing any law which may indirectly affect its Charter. This, is certainly a pretension of a very moderate character. But we do not wish to attack it, for it must be remembered that we do not pray for the privilege of granting Diplomas, that is, conferring the title of M. D., but merely a certificate which will be recognized by the Provincial Board.

7thly. The influence of the School of Medicine with the Board of Examiners, is very little, compared with that of M'Gill College; and although it cannot be supposed, that the members of M'Gill College would take advantage of this to act with greater severity towards our pupils, however, for a person acquainted with the secrets of the human heart, it is easy to understand, that this circumstance is one, that would act upon the mind of students, and give rise to prejudices, which it would be difficult to overcome; and which, by diminishing their confidence, would be detrimental to their examination.

The whole is respectfully submitted to the Committe appointed on the above subject.

HECTOR PELTIER, M. D.,
Professor of Institutes of Medicine at the Montreal Medical School and deputed, by the said School to the Legislative Assembly.

Toronto, 25th June, 1850.
Beard's Hotel.

Answer of Dr. Arnoldi before the Committee.

Question.—You are requested to state, for the information of the Committee, as succinctly as possibly, your objections against, or reasons in support of, the Bill which has been referred to this Committee, with such general observations as you may judge necessary to communicate on the subject of the Bill.

Dr. Arnoldi answered as follows to the preceding question:—

If members of the Corporation may reside where they please, let it be compulsory on them to lecture within the walls of the Institution, which Institution must be within the boundaries of the city; and contain, *bona fide*, a library and museum, subject to the use of the students, and to the usual laws of other institutions in such matters, allowing, nevertheless, the privilege to all members of the Corporation of the College of Medicine, to reside wherever they may think proper; and moreover, that no lecturer in the said School shall be allowed to lecture on more than one branch of the science of medicine and surgery, save and except, Medical Jurisprudence Clinical Medicine, Clinical Surgery, and Botany.

Cl. 2. Gives the power to the school to reduce the number of lectures to any amount; which power would ultimately nullify any act or law as expressed at the end of the third clause. Substitute Cl. 12, Vic 10 & 11.

Cl. 3. The repealing of the 6th section of said act would give to students, following the school of medicine, the advantage of obtaining a certificate to procure a licence, without adhering to the requirements of the act which incorporates the College of Physicians and Surgeons, and also the reduction of the number of lectures as laid down by said act, to any frivolous number they may please.

Cl.4. Any certificate, emanating from a School, whether incorporated or otherwise, any one or more members of which are known to be in the habit or actual practice of grinding, (in other words, preparing students for examination) shall not, under any pretext, be admitted or received by the College.

5. And that nevertheless, notwithstanding what is contained in the above clauses of amendment, every and any incorporated, or hereafter to be incorporated, school of medicine in the Province of Canada, shall in virtue of this act enjoy all the rights and privileges required or asked for by the School of Medicine of Montreal.

Remarks of Dr. Bibaud, Montreal, on the above Bill, handed over by Dr. Davignon to the Committee.

[TRANSLATION.]

On the afternoon of Friday, the 14th June, 1850, I attended a meeting of a certain number of the Members of the Provincial Medical Board, called together, as I had been told, with a view of coming to an understanding, respecting the choice to be made of the members of the College of Physicians and Surgeons of Lower Canada, who would be proposed at the election to take place at the triennial meeting at Three Rivers, on the 10th July next. But quite a different subject was taken up: a strong opposition was got up against the members of the Montreal School of Medicine, who pray, principally in the interests of the French Canadians, that they may enjoy that liberty and independence in the instruction of the medical sciences, which are enjoyed by the College professing in the English language. I had understood this meeting to be private and preliminary, and that nothing would be done thereat by authority of the College of Physicians and Surgeons of Lower Canada, as it had not been called together in conformity with its statutes. It was, however, pretended to legalise its proceedings, and resolutions were passed, contrary to law, to send up Dr. Arnoldi, at the expense of the Medical Board, to oppose openly, and by every possible means, the patriotic intentions and just claim of the School of Medicine. I have since heard from a source which may be relied on, that Dr. Hall had accompanied that gentleman. It will be known hereafter, whether he, also, has gone up at the expense of the Board. On this occasion it is evident that the College made use of the Medical School (or, what is the same thing, of the Provincial Medical Board), to forward its ambitious and anti-Canadian views. Indeed, almost all the members of M'Gill College were present at the meeting. There were Drs. Arnoldi,

Badgley, Hall, M'Culloch, Sutherland, and Holmes; Dr. Nelson, who had been deluded into joining the party—(for before and after the meeting he spoke to us in quite a different manner), and Dr. David, who followed the maxim that "union is strength." A day or two before the meeting, Dr. Kimber had been requested to attend: I am inclined to think that from the well known kindness and affability of this gentleman, it was hoped that he would be induced to act against the School of Medicine. But when he perceived that the object of the meeting was anything but the question, on which he had been sent for, he withdrew; giving as a reason, that he was not sufficiently acquainted with the affairs of the two Institutions, nor with the nature of our claim to take a part in the discussion. Dr. Kimber acted, doubtless, through prudence and delicacy; nevertheless if he had remained, I think I could have given him sufficient information to acquaint him with the motives of our adversaries.

Dr. Valois was not present. Can it be that he was purposely left in the dark as to the meeting; because the firmness and uprightness which have always marked the conduct of this gentleman, wherever it has been necessary to defend the interests and honor of the profession, would not be liked?

I was then alone to combat the opposition got up against our measure. If all had not been interested in misunderstanding me, my remarks were sufficient to prove, that the objections advanced were without foundation, and brought forward on purpose to justify the plan which had been arranged and adopted before hand. The intentions of the School of Medicine were falsely interpreted; the meaning of the Bill of Amendments we had before us were perverted. At the end of the discussion however, no one had modified his views; that is, the Members of M'Gill College persisted in wishing that the School of Medicine should remain their vassal, while I remained not the less convinced, that the school should be independent, and protected by law against any foreign or hostile influence which might arise against it. It was objected,

1st. That the School of Medicine is desirous of withdrawing itself from the operation of the Bill regulating the Medical Profession, as respects the *curriculum* of students, and the number of lectures on each branch. This it never intended to do, and the corrections which we have made in writing in the copy of the Bill sent back by us to the Committee, are a sufficient answer to this objection.

2dly. That we want our Bill of Amendments to be in force, any law to the contrary notwithstanding. Such must indeed be the case as far as regards the last section, in which we ask for the right of granting a certificate; this is what is most essential to the School of Medicine, and the existing law does not grant that right.

3dly. That by not limiting the number of Professors we might give lectures any where out of Montreal. This is not correct. The Act of Incorporation of the School of Medicine does not allow it to give instruction out of the limits of the city, and that part of the Act is not amended. But moreover, Dr. Hall repeated at the meeting the more or less inconsiderate observations and arguments which he had inserted in the last number of his paper. If such a privilege, he said, is granted to the School of Medicine (that is to the French Canadians, who form the greater part of the Society of Lower Canada) where will these concessions stop in future?—when will they have an end? So Dr. Hall pretends that the House of Assembly, in rendering the School of Medicine independent of M'Gill College, and granting it the protection to which it is entitled, as well as the latter, against certain restrictions of the Medical Bill, which paralize its influence,—he pretends, I say, that it opens a door to abuses of every description; he concludes that it will be necessary at once to grant an Act of Incorporation and the right of giving a certificate to every school which would be got up in the town and country parts and every where! These are his words; and in support of his argument he establishes a comparison between Lower Canada, which prays through the members of the profession that two schools be authorised to grant diplomas because there are two populations differing in their language, and the State of New York, which, after having allowed a great many small institutions to enjoy these powers, now wishes to restrict their number. I would agree with Dr.

Hall, that medicine would become a trade, if, as he would have it understood, Canadian legislatures were blind enough to follow the example of the United States. But there is a vast difference between this and the establishment of two Colleges, one of which is to counterbalance the other. On the contrary, it is easy to prove,—if not to that gentleman, at any rate to those who are not interested, like himself, in denying what is proved,—first, that the measure we pray for is of general interest, and purely Canadian, without distinction of origin; secondly, that the only way to prevent M'Gill College from making its diploma monopoly and an article of merchandize; in a word, from lowering the profession if it took it into its head to do so, is to place the School of Medicine in such a state as to counterbalance its authority. Now, I shall prove what I have advanced in the following manner:—Since the sanctioning of the Medical Bill (28th July, 1847) every student of medicine in this Province, is obliged to go through the same clerical studies, to follow the curriculum by law established, whatever be the institution he adopts. Now, what does he obtain from M'Gill College?—a diploma; and in presenting this diploma to the medical board, a license, without any further formalities. What does the School of Medicine give him? Nothing: it is not competent to admit him to practice. He presents himself before the College of Physicians and Surgeons, who for the most part are strangers to him; for, as we have seen, the influence of the School of Medicine with the Board of Examiners is very little, compared with that of M'Gill College. To a man acquainted with the secrets of the human heart, these circumstances will appear such as to act upon the minds of the student, and give rise in him to prejudices difficult to overcome, and, by diminishing his confidence, be also detrimental to his examination. Indeed, on reflection, his choice will soon be made: he will go to the College which offers him every honor and every guarantee which can be desired; and he will the more willingly do so, from the fact, that the law requires him to learn English if he does not know it. But I will be told that M'Gill College allows the students of the School of Medicine to take out a diploma from it on certain conditions. Yes; but these conditions diminish the pecuniary resources of the School, and nullify its political and social existence; and what is still more unsatisfactory, the understanding can cease at the pleasure of these gentlemen. Now if their intentions towards us were to change for one reason or another (which is very possible), what law is there to prevent their acting in a spirit of propagandism and monopoly, by making concessions of every description in favor of the Canadian students. We should only have their honesty, their good faith, and their disinterestedness as a guarantee. But on this head I boldly state that it would be stupidity to trust to them, when we have constantly seen them carrying on an active and violent opposition, whenever we have asked for any measure advantageous to general education, and whenever we have desired to lighten the burthen which weighs upon us: especially, I again repeat, when we see them at this very moment, by an unjustifiable and unprecedented conduct, openly violating the law which governs the practice of medicine, calling together an extraordinary meeting of some of the members of the College of Physicians and Surgeons in a manner contrary to its statutes, passing resolutions thereat, to send up members of that College out of the funds in its possession to oppose our demands, and make use of that body, as an instrument of their ambition and egotism, at the same time that they trample it beneath their feet. How can Dr. Hall, after this, dare to say in his paper, and repeat elsewhere, that we will ruin the profession. The shameful action he has been guilty of is an evident and palpable proof, that we have everything to fear in this respect from him and his imitators.

(Signed) J. G. Bibaud, M.D.

LEGISLATIVE ASSEMBLY.

Tuesday, 30th July.

The Order of the Day for the second reading of the Bill to amend the "Act incorporating the members of the Medical Profession in Lower Canada, and to regulate the study and practice of Physic and Surgery therein," to afford relief to

certain persons who were in practice as Physicians and Surgeons in this Province at the time whin the Act became law, was discharged.

Hon. Mr. Laterriere moved that the Bill to amend the Act to incorporate the members of the Medical Profession in Lower Canada, and to regulate the study and practice of Physic and Surgery therein, be now read a second time.

Hon. Mr. Badgley moved, in amendment. That the Bill be read a second time this day six months.

YEAS—Messieurs Badgley, Cameron of Cornwall, Cameron of Kent, Cartier, Christie, Crysler, Fergusson, Flint, Fournier, Gugy, Holmes, Hopkins, Johnson, Lyon, Macdonald of Kingston, Malloch, McConnel, McLean, Notman, Perry, Scott of Two Mountains, Seymour, Sherwood of Brockville, Smith of Frontenac, Stevenson, and Wilson.—27.

NAYS—Messieurs Armstrong, Burritt, Cauchon, Chabot, Chauveau, DeWitt, Solicitor General Drummond, Dumas, Fortier, Fourquin, Guillet, Lacost, La-Terriere, Laurin, Lemieux, Methot, Mongenais, Polette, Sauvageau, Smith, of Durham, Smith of Wentworth, Tache, Viger, and Watts,—24.

TORONTO, August 3, 1850.

On the motion of Mr. J. H. Cameron the House went into Committee on the Bill to incorporate the Medical Profession of Upper Canada.

A desultory discussion arose on the Bill; the same in effect as that which took place at the second reading.

Mr. J. H. Cameron and some other hon. gentlemen urged the necessity of the Bill to protect the people from quacks and imposters; and for the protection of the Medical profession.

Mr. Richards strongly opposed the Bill and would do so in all its stages. He was quite satisfied that the great majority of Upper Canadians would regard it as obnoxious. It might do in towns, but the state of things was different in the country parts.

Mr. B. Flint followed to the same effect. He thought that there were many quacks among the licensed practitioners. They heard a great deal about the few deaths caused by those who were not licensed; but nothing about the hundreds of thousands of deaths, the consequence of the ignorance of the licensed practitioners. He condemned the magistracy, as at present constituted. They were not fit to try the cases that came up under the law; being appointed by every administration for violent political partizanship.

Mr. Gugy followed, ridiculing the hon. member's bad grammar. He did not understand the meaning of such a phrase as "using a thousand." He censured the hon. member severely for being a defender of quacks; and his views were diametrically opposed to those of the hon. member.

Mr Flint did not pretend to the grammatical elegance and correctness of expression of the hon. member from the Town of Sherbrooke; which the hon. member was so fond of displaying on all occasions. The hon. member was also, always schooling the House. He (Mr. Flint) had never studied grammar in his life. But he did pretend to know some things; and to possess as correct a judgment of them as the hon. member for the Town of Sherbrooke. The hon. member (Mr. Gugy) had stated that his views were "diametrically opposed" to his (Mr. F's). He (Mr. F.) was as much opposed to quacks as any man, and the hon. member must be in favor of quacks. He (Mr. F.) hated quacks of all kinds, both those who were licensed, and those who were not. There were other quacks besides those who practised medicine. There were quacks among lawyers. (Loud laughter.) And the lawyer quacks went up and down the country, and did as much mischief as any other quacks, besides being more ridiculous. (Continued Laughter.)

Mr. Gugy thought that it was praiseworthy in the hon. member modestly to confess his ignorance; but then he should not pretend to judge of matters which wanted learning and information to understand.

Mr. Flint would yield the palm for modesty to the hon. member from the Town of Sherbrooke. (Cheers and loud and continued laughter, in which the galleries joined.)

After some further discussion the penalty clause inflicting a fine was

struck out; and the law left as it at present stands in this respect.

Monday, August 5, 1850.

The amendments made in the Committee, on Saturday last, to the bill to incorporate the members of the Medical Profession of Upper Canada, and to regulate the practice of Physic and Surgery therein, were reported.

Hon. Mr. Cameron (Cornwall) moved, That the amendments be now read a second time.

Mr. Richards moved, in amendment, That the said amendments be read a second time this day three months;—Yeas 14; Nays 34.

Hon. Mr. Boulton then moved in amendment, That the Bill be recommitted, in order to add the following at the last clause of the said Bill, "And be it enacted, That nothing in this Act shall be taken or construed to interfere with the existing privileges of the School commonly called the Toronto School of Medicine, the tickets of which, certified in the different Courses, or any of them in this Act required or hereafter in any way required, shall be good and valid for the purposes and provisions of this Act."

Yeas 26; Nays 30.

The main motion was then agreed to; and the amendments were read a second time, and agreed to, and the Bill ordered to be engrossed, and read the third time to-morrow.

Toronto, Wednesday, Aug. 7.

Honble. Mr. Cameron, of Cornwall, moved that the engrossed Bill to Incorporate the Members of the Medical Profession in Upper Canada, and to regulate the study and practice of Physic therein, be now read a third time.

Mr. Morrison moved in amendment, that the following proviso be added to the 11th clause of the Bill by way of rider, and do form part thereof—"Provided always, that for the purpose of this clause, candidates for examination who shall have attended the courses aforesaid, at the Medical School known as the 'Toronto Medical School,' shall be entitled to the like privileges as candidates who shall have attended any incorporated School of Medicine as aforesaid." Yeas, 19; Nays, 20.

Mr. Morrison then moved in amendment that the Bill be read a third time this day six months. Yeas, 31; Nays, 23.

CORRESPONDENCE.

To the Editor of the British American Journal.

Dear Sir,—I perceive that the "Country Practitioner" has attempted a rejoinder to my reply to his first epistle. I shall not take up much time or space, but merely point out some undeniable propositions.

His account of the proceedings of the Convocation alluded to, is "garbled and falsified."

His assertion of the artful manœuvering of the medical aspirants is a "foul falsehood."

The statement of the Colonist of the 9th of July is not worthy of notice, because it is obviously partizan, and imputes motives and draws inferences, altogether unjustified by the facts.

The assertion that the "composition of Senate is at present identical with that of the Convocation" is so utterly *opposed to the fact*, that it at once places the "Country Practitioner" on the horns of an awkward dilemma; he must hold either ignorance or *falsehood*—I believe he may very safely plead the former. He can very easily obtain lists of both bodies, and my veracity or knowledge may be easily tested thereby.

"The *only members available for the Senate* are those domiciled about Toronto or its neighbourhood, who are *always members* of Convocation." What does the man mean? Are Messrs. J. Cameron, J. H. Cameron, Morrison, M'Murrich, M'Donald, Hallinan, &c., members of Convocation?

"A member of Convocation, and *therefore* one of the Senate."

Another illustration of the same ignorance if of nothing worse. Are Messrs. Barron, Hodder, Stennett, Draper, Helliwell, Wedd, Cruickshank, Dr. Lundy, &c., members of the Senate?

It seems perfect folly to continue argument with an individual who makes such confident assertions, (whether through ignorance or not,) in the boldest defiance of truth. I will therefore allude to but one point more.

He denies that the "functionaries of the University have not openly arrayed themselves against *us* in all *our* endeavours to obtain an Act of Incorporation."

Now, Sir, I reiterate, that they have not and never did. *One*, or perhaps, *two* individuals among these functionaries may have interfered with these endeavours, but to say that such was the endeavour, wish or desire, either open or concealed, expressed or understood of them as a body, or of the majority of them as individuals, deserves an epithet which can only be avoided by an acknowledgement of thorough ignorance of the ideas of the individuals in question.

I do deny in the most unqualified tone the "Practitioner's" assertion, that the "High Church party have been guilty of the shameless inconsistency ascribed to them;" and I defy him to shew even a shadow of proof for it.

As to the remarks on Mr. Smith, I fancy there is more truth in designating him as having a well shaved "muzzle" than as "a beardless boy."

There are several other matters in your correspondent's letter equally worthy of notice, i.e., equally contemptible, but enough has been said already.

As I said in my former letter, I am willing to meet your correspondent on "facts"; but when I find these grossly "garbled and falsified," not only in words, but in spirit and substance, I cannot be sorry to terminate a conflict with an individual, who, if he really is a Country Practitioner in the Home District, can obtain a knowledge of the truth, if he will only take the trouble to make the proper enquiries.

I have the honor to be, dear Sir,
Your obedt. Servant,
Toronto, August 12, 1850. VERAX.

BOOKS, &c., RECEIVED.

Annual Report of the Trustees of the State Library of the State of New York. 1850. Do. do. 1849.

Sixty-third Annual Report of the Regents of the University of the State of New York. Albany. 1850.

Transactions of the Medical Society of the State of New York. Albany. 1850.

Do. do. do. do. do. 1850.

Minutes of Proceedings of the South Carolina Medical Association. Charleston. 1850.

Twenty-fourth Report of the Board of Managers of the Prison Discipline Society. Boston. May, 1849.

Catalogue and Circular of Medical College. 1850.

Do do. of Medical Department University of Buffalo. 1850.

"Enfin en terminant, notre libelliste a le soin de mettre ceux qui le liront en garde contre le danger de mal interpréter les figures oratoïres, le langage ironique dont il s'est servi devant le comité pour faire sensation, et d'assurer les membres de la Chambre que ses injures contre l'école de médecine *expriment les sentiments de la majorite des medecins du Bas-Canada!* Cela est si touchant, si généreux, que tout le monde devra l'en croire sur parole. Puis si le bill que nous demandons à la législature ne passe pas à cette session, les trois ou quatre cents médecins qui, à la prochaine, signeront la requête de l'école de médecine prouveront combien son témoignage est digne de foi.

"J. G. BIBAUD, M.D.
"*Prof. d'Anatomie, Ecole de Med.*"

The above terminates a lengthy epistle from Dr. Bibaud to Dr. Arnoldi, published in the Avenir of the 2nd ult., and is worthy of notice, simply as indicating that the School of Medicine by no means intends to relinquish its position with regard to the best interests of the Profession at large; but designs to back them, by the signatures of some three or four hundred (!) physicians. We doubt if *there are* four hundred physicians in Lower Canada; and, if there are, we are satisfied that *a majority would condemn* the proceedings of the School of which Dr. Bidaud thus professes himself the champion.

Professor Webster suffered the extreme penalty of the law on Friday morning last, at half-past nine o'clock. The proceedings, which excited the most intense interest, were, it appears, conducted with dignity and decorum. Nearly three hundred persons, including the witnesses whose presence is required by law, were admitted within the jail yard, and the roofs and windows of the adjoining houses were crowded with spectators, as were also the streets adjoining the jail, although nothing but its walls could be seen from them. The demeanor of the condemned man was calm and subdued. It is affirmed that no further confession has been left by him.—*Montreal Witness.*

TO SUBSCRIBERS.

We are most unwillingly compelled, in consequence of the press of matter in our original and editorial department, to postpone the publication of the names of those of our friends who have liquidated their liabilities to the former series of this Journal. The list, with the amounts remitted, will be positively published next month, by which time, our Parliamentary news will have been disposed of; and, in the mean time, we earnestly request those still in arrears, and the number is by no means small, to forward to Mr. Becket the amounts they severally owe, with as little delay as possible.

The Biographical Sketch of the late Dr. Arnoldi, although in type, is unavoidably postponed to the next number.

TO CORRESPONDENTS.

Communications have been received from Dr. Mayrand, of St. Andrews. This refers to a controversy which appeared lately in the Montreal Gazette. Dr. M.'s paper relates the symptoms, treatment, and autopsical appearances in the case the subject of dispute. As Mr. F., the father, has strongly requested, in a letter to Dr. M., that the matter should be permitted to drop, we cannot do violence to his feelings by permitting its insertion in the Journal. Mr. F.'s letter expresses entire confidence in Dr. M.'s management of the case. We write upon the facts submitted, and are unwilling to drag this Journal into a controversy, which can result in no good to any of the parties concerned.

Letters have also been received from Dr. Jukes, Port Robinson; Dr. Yates, Kingston; Dr. Lord, Lacolle; Dr Watts, New York; Dr. Marmette, St. Thomas, l'Islet.

The following papers are on hand: Is Hydropholia Epizootic in its origin or not? by C. S. Sewell, M.D., Montreal; Case of Rupture of the Spleen, by Theophilus Mack, M.D., St. Catherines; and the continuation of Dr. Jarron's paper.

METEOROLOGICAL REGISTER at MONTREAL, for the Month of JULY, 1850.

Date.	Thermometer.				Barometer.				Wind.			Weather.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M	3 P.M	10 P.M	Mean	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.
1	+62	+71	+62	+66.5	29.62	29.63	29.67	29.64	N	N by E	N by E	Clo'dy	O'rc'st	Fair
2	" 64	" 79	" 65	" 71.5	29.69	29.59	29.58	29.62	N by E	E	S E	Fair	Fair	Rain
3	" 68	" 73	" 68	" 70.5	29.68	29.33	29.52	29.51	S E	S E	S S E	Rain	T'd'r	Rain
4	" 72	" 84	" 73	" 78.-	29.59	29.62	29.56	29.59	S W	S W	S W	Fair	Fair	Fair
5	" 75	" 91	" 80	" 83.-	29.37	29.43	29.29	29.43	W	W S W	W S W	Fair	Fair	Clo'dy
6	" 66	" 78	" 66	" 72.-	29.44	29.49	29.57	29.50	N	N N W	N N W	Fair	Fair	Fair
7	" 64	" 80	" 62	" 72.-	29.65	29.54	29.56	29.58	N W	N W	N W	Fair	Fair	Fair
8	" 62	" 78	" 67	" 70.-	29.64	29.69	29.72	29.68	N W	E	E	Fair	Fair	Clo'dy
9	" 65	" 79	" 68	" 72.-	29.80	29.79	29.81	29.80	E S E	E S E	E S E	Fair	Fair	Fair
10	" 70	" 83	" 73	" 76.5	29.90	29.88	29.87	29.88	S E	S E	S E	Fair	Fair	Fair
11	" 74	" 89	" 76	" 81.5	29.93	29.84	29.74	29.84	E	E	E S E	Fair	Fair	Fair
12	" 76	" 93	" 77	" 84.5	29.81	29.73	29.66	29.73	E S E	S	S	Fair	Fair	Fair
13	" 73	" 82	" 72	" 77.5	29.60	29.63	29.68	29 62	N E	N E	N E	O'rcs't	O'rc'st	Rain
14	" 64	" 72	" 71	" 68.-	29.54	29.52	29.56	29.54	N N E	E	S	Rain	Rain	Clo'dy
15	" 74	" 86	" 74	" 80.-	29.60	29.62	29.58	29.63	S W	S W	S W	Clo'dy	Th Rn	Fair
16	" 76	" 90	" 79	" 83.-	29.77	29.74	29.72	29.74	W	W	W	Fair	Shw'y	Fair
17	" 83	" 92	" 75	" 87.5	29.69	29.62	29.63	29.65	W	W S W	W S W	Fair	Fair	Th Rn
18	" 72	" 78	" 66	" 75.-	29.67	29.73	29.77	29.72	N by W	N by W	N by W	Rain	Clo'dy	Clo'dy
19	" 63	" 64	" 63	" 63.5	29.76	29.65	29.48	29.63	N by W	N N E	N N E	Clo'dy	Rain	O'rc'st
20	" 67	" 78	" 71	" 72.5	29.39	29.38	29.53	29.43	E N E	E N E	W	Rain	Rain	Clo'dy
21	" 71	" 88	" 69	" 79.5	29.55	29.57	29.70	29.61	W	W	N E	Fair	Clo'dy	Fair
22	" 72	" 87	" 75	" 79.5	29.76	29.75	29.76	29.76	W N W	W N W	W N W	Fair	Fair	Fair
23	" 74	" 86	" 74	" 80.-	29.86	29.84	29.74	30.81	W	W	W	Fair	Fair	Fair
24	" 73	" 87	" 78	" 80.-	29.75	29.64	29.58	29.66	S	S W	W	Fair	Fair	Shw's
25	" 62	" 75	" 59	" 68.5	29.73	29.73	29.80	29.75	W N W	N	N	Fair	Fair	Fair
26	" 55	" 73	" 61	" 64.-	29.86	29.86	29.77	29.82	N	W	S by W	Fair	Fair	Fair
27	" 60	" 76	" 61	" 68.-	29.80	29.75	29.69	29.75	S by W	S by W	S by W	Fair	Fair	Fair
28	" 64	" 80	" 68	" 72.-	29.68	29.60	29.55	29.61	S S E	S by E	S by E	Fair	O'rc'st	Clo'dy
29	" 70	" 88	" 65	" 79.-	29.48	29.36	29.51	29.45	S by E	S W	S W	Clo'dy	Wndy	Th Rn
30	" 68	" 75	" 66	" 71.5	29.70	29.68	29.64	29.67	N	N N E	N N E	Fair	Fair	Fair
31	" 64	" 84	" 72	" 74.-	29.71	29.66	29.67	29.68	S	S W	W	Fair	Fair	Clo'dy

Therm. { Maximum +93° on the 12th, at 3 P.M.
Minimum, +55° " 26th, at 7 A.M.
Mean of the Month, +71.87

Barom. { Maximum, 29.93 in, on the 11th, at 7 A.M.
Minimum, 29.29 " " 5th, at 10 P.M
Mean of the Month, 29.656 inches

MONTHLY METEOROLOGICAL REGISTER, AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.—JULY, 1850.

Latitude 43°. 39'.4 *N. Longitude*, 79°. 21'.5 *W. Elevation above Lake Ontario*, 108 *feet.*—*(For the British American Medical and Physical Journal.*

Day.	Barometer at Temp. of 32°				Temperature of the Air.				Tension of Vapour.				Humidity of the Air.				Wind.			Ins. of	Weather.
	7 A.M.	3 P.M.	10 P.M.	MEAN.	7 A.M.	3 P.M.	10 P.M.	MEAN.	7 A.M.	3 P.M.	10 P.M.	MEAN	7 A.M.	3 P.M.	10 P.M.	MEAN.	7 A.M.	3 P.M.	10 P.M.	Rain.	
1	29.538	29.512	29 504	29.487	67.1	70.7	65.8	68.4	.583	.606	.553	.574	90	84	89	85	N N E	E S E	E by N	.290	Cldy ; rn at intervals, th ltng pm
2	29.381	29 352	29.376	29.374	65.7	76.5	68 2	69.0	.591	.752	.617	.635	97	85	92	92	E by N	S E by E	S S W	—	Light clouds gen, drops of rain
3	29.400	29.424	29 518	29.465	69 0	81 0	66.1	70 6	.583	.625	.523	.586	85	60	84	81	S S W	S W bW	W by S	.005	Gen clr ; fine day; ft aur lt at 11
4	29.591	29.482	29 502	29.510	70 0	72.2	68 6	70.8	.649	.679	.642	.655	91	87	95	89	Calm.	S W	S W by S	.530	Cldy day ' clr ngt; th & rn 1 pm
5	29.472	29 303	29 377	29.396	69.2	79.9	70.4	70.6	.667	.808	.491	.635	97	82	68	85	S S W	S W by S	W N W	.090	Thstm rn 5 am and 5 to 7 pm
6	29 596	29.621	29.664	29.629	66.2	75.0	61.8	66.8	.488	.356	.360	.406	77	41	66	65	N W	N N W	N N W	—	Passing clds , gen clear ; fine day
7	29.726	29.654	—	—	66.4	72 8	—	—	.496	.446	—	—	78	57	—	—	N by W	S by W	E N E	—	Gen overcast ; a few clr spaces
8	29.671	29 658	29.662	29 671	65.0	70.5	60 4	63.9	.495	.503	.480	.429	82	70	94	74	NE by E	S E by S	S	—	Few lt clds ; hazy ; fine
9	29.720	29.711	29.709	29.724	63.6	70.9	64.2	64.4	.350	.476	.432	.415	61	65	82	70	N	E by S	E	—	Few passg clds ; very fn ; aur lt 9
10	29.784	29.780	29.752	29.770	67 8	73.3	69 8	66.3	.427	.468	.367	.498	65	59	73	68	NE by N	E	NE by E	—	Lt clds dis ; hazy; fine; ft aur lt 9
11	29.742	29.698	29.631	29 679	69 8	76.0	66.4	70.0	.522	.601	.519	.553	74	69	82	78	NE by N	E by S	E by N	—	Unclouded ; hazy ; fine; aur 9 pm
12	29.643	29.559	29.508	29.557	74 2	74.2	69.6	73.4	.617	.634	.597	.635	75	77	85	79	S E by E	E S E	calm	.085	Gen ovrcst ; slight rn 3 p.m
13	29.498	29.410	29.351	29.433	70.2	71.7	69.6	69.9	.677	.691	.681	.670	95	91	98	94	S E	E by S	S	.190	Densely ovrcst ; rning fm 5 to 6
14	29.413	29.439	—	—	75.0	77 8	—	—	.695	.845	—	—	73	92	—	—	N W	S by W	S by W	—	Dnsly cld'd a.m ; oc clr spaces pm
15	29.512	29 569	29.647	29.592	70.2	82 6	71.8	74.1	.651	.811	.572	.659	91	75	76	80	calm	S	N by E	—	Lt detach'd clds gen; aur lt 9 pm
16	29.675	29 625	29 562	29.610	67 0	79.6	70.2	73.9	.540	.716	.686	.656	84	73	96	81	N N E	E by S	N E	—	Gen clr ; few lt clds; fine
17	29 540	29 512	29.582	29 547	78 0	72.6	68.2	72.4	.773	.710	.628	.666	83	92	93	85	S S W	W N W	Calm.	2.750	Thstm hvy rn fm 1 pm & 6 pm
18	29.677	29.654	29.659	29.665	62.8	74 0	61.9	65.1	.493	.609	.494	.493	88	75	94	82	N by W	N by E	E N E	—	Gen clr ; psg clds; halo rnd moon
19	29.591	29.503	29.435	29 485	60 6	69 8	64.8	66.4	.439	.621	.457	.505	85	88	76	79	N N E	E by S	N	—	Am Cloudy; Pm and ngt clr & fn
20	29.498	29.485	29.547	29 512	65.6	76.2	67 6	70.0	.424	.583	.478	.482	69	67	73	69	N W	S S W	N N W	—	Gen clear ; fine
21	29.621	29.606	—	—	71.4	78 0	—	—	.546	.600	—	—	73	64	—	—	N N W	S by W	N by E	—	Mostly clouded am ; gen c r pm
22	29 707	29.703	29.715	29.715	70.2	78.8	66 2	70.7	.540	705	.528	.582	76	74	84	80	N by E	S E by S	E S E	—	Fw lt clds rnd hor; zeu clr; fn nt
23	29.777	29.741	29.732	29.749	72.4	79 0	62.6	70 0	.580	.578	.480	.542	75	60	87	76	N N E	E S E	E by S	—	Rnge clds nr hor; clr; fn day & nt
24	29.743	29.637	29.620	29.652	69 2	85.2	75 0	75.6	.504	.704	608	.619	72	59	72	72	calm.	S	S W bW	—	Unclouded ; very fine
25	29 639	29.715	29 750	29.721	7.12	70 2	61.0	66.4	.648	.608	.448	.516	87	85	35	80	calm.	NE by N	E by S	.280	Cldy am ; clear pm; slt rn fm 11
26	29.832	29.772	29.732	29.754	57.4	61.2	58.1	60.1	.324	.455	.415	.409	70	86	87	81	N E	E N E	N E	.045	Drops of rn am & fm 2 p.m; cldy
27	29.692	29 585	29.535	29.558	58 4	62.6	61.7	64.8	.411	.602	.509	.523	86	90	93	87	NE by N	E by N	N E	.220	Slight rain oc all day; sht lgthng
28	29.516	29.428	—	—	70.1	81 2	—	—	.682	.824	—	—	96	79	—	—	NE by N	S	W S W	.075	Shwrs am ; mostly ovrcst; det clds
29	29.380	29.333	29.512	29.430	72 2	75.4	69.6	72 1	.798	.694	605	.668	95	81	86	87	S S W	W	N by W	Inaplc.	Mostly clded ; drops rn 3 to 4 pm
30	29 685	29 591	29 671	29.583	66 0	73.8	66 6	68.6	.528	.655	.600	.587	85	80	94	87	NE by N	SE by S	Calm.	—	Am Cloudy; gen clear pm
31	29.603	29.550	29 536	29.572	69.0	77.4	65 4	69.4	604	.664	.548	.617'	88	72	88	88	Calm.	S	Calm.	.710	Cloudy, *thstrm*, in fm 1 to 6 pm
Mn	29.611	29.573	29.581	29.5878	67.7	74.5	65 9	69 01	549	.627	530	.561	82	75	85	81	3 85mtles	7.04 mls	3.04miles	5 270	

Highest Barometer,.....29 832 at 7 a.m. on 26th } Monthly
Lowest do, ...29.273 at 5 p.m. on 5th } Range, 0.559.
Highest obs. Temperature...86.92 p.m. on 17th } Monthly
Lowest do. do. ...51 °6 a.m. on 8th } Range, 34.6.
Mean Max. Therm.....78.°37 }
Mean Min. do. .....60.°15 } Mean Daily range,.....18.°22
Greatest Daily range,.....27.°0 from 2 p.m. on 5th to 4 a.m. on 6th.
Warmest Day, 24th—*Mean temperature*, 75.58 } Difference, 15.48.
Coldest Day, 26th— Do. do. 60.10 }
Warmest hour, 1 p m.—Mean temperature, 75.35 } Mean Diurnal va-
Coldest hour, 4 a.m.— Do. do. 61 68 } riation, 13,67.

Sum of the Atmospheric Currents in miles resolved into the fo r Cardinal directions.

North	West	South	East
1203.9,	732.8,	1135 7,	1169.1.

Mean velocity of the wind, 4 56 miles per hour.
Greatest velocity, 17.5 miles from 10 to 11 a m., on the 17th
Most Windy day, 6th: mean velocity per hour, 8.05 miles
Least do, 4th, do. do. 2,84 miles
Most Windy hour, 3 p.m., mean velocity, 7.04 miles per hour
Least do., 9 p.m., do. 2.86 do. do.
Diurnal variation, 4.18 miles per hour.

Year	Temperature.				Rain.		Snow.	
	Mean.	Max.	Min.	Rnge.	No of days	Inches	Days.	Inches
1840...	66.30	82.3	47.0	35.3	6	5 270	0	—
1841...	65.50	89.0	39.9	49.1	10	8.150	0	—
1842...	64.70	91.0	42.5	48.5	4	3.050	0	—
1843...	64.58	86.8	38.7	48.1	8	4.605	0	—
1844...	66.08	86.6	40.1	46 5	12	2 815	0	—
1845...	66.74	95.0	45.7	49 3	7	2.195	0	—
1846...	68.32	94 6	44.5	50.1	9	2.895	0	—
1847...	67.62	87.0	43.2	43.8	8	3.355	0	—
1848...	65 37	82.2	44.1	38.1	10	1.690	0	—
1849...	67.82	88.6	47.3	41.3	4	3.415	0	—
1850	69.04	86.3	51.6	34 6	12	5.270	0	—