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THE  
**BRITISH AMERICAN JOURNAL**  
 OF  
**MEDICAL & PHYSICAL SCIENCE.**

EDITED BY

**ARCHIBALD HALL, M.D., L.R.C.S.E.,**

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VOL. IV.]

JANUARY, 1849.

[No. 9.

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Theory and Practice of Medicine, . . . . .	by A. F. Holmes, M.D.
Principles and Practice of Surgery, . . . . .	" G. W. Campbell, M.D.
Chemistry, . . . . .	" A. Hall, M.D.
Midwifery and Diseases of Women and Children, . . . . .	" M. McCulloch, M.D.
Anatomy (General and Descriptive), . . . . .	" O. T. Bruneau, M. D.
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Institutes of Medicine, (Physiology, &c.), . . . . .	" R. L. Macdonnell, M.D.
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The Medical Library, which is furnished not only with books of reference, but the usual elementary works, will be open to matriculated students, without charge, under the necessary regulations. Access to the Museum will be allowed at certain hours. The Demonstrator of Anatomy will be daily in the Dissecting Rooms to oversee and Direct the students.

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Botany, . . . . .	" Dr. Papineau.
	A. F. HOLMES, MD. & P.
	Secretary Med. Fac.

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Chemistry, . . . . .	Dr. Sutherland.	Midwifery, . . . . .	Dr. Arnoldi.
Materia Medica, . . . . .	Dr. Coderre.	Institutes of Medicine, . . . . .	Dr. Peltier.
Surgery, . . . . .	Dr. Monro.	Medical Jurisprudence, . . . . .	Dr. Boyer.

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[No. 9.]

**ART. LXII.—OBSERVATIONS ON THE CLIMATE OF BARBADOES, AND ITS INFLUENCE ON DISEASE: TOGETHER WITH REMARKS ON ANGIOLEUCITIS OR BARBADOES LEG.**

By JAMES BOVELL, M.D.,

Member of the Royal College of Physicians, London,—late Junior Physician to the Barbadoes General Hospital,—Junior Physician to the Toronto General Dispensary and Lying in Charity.

(Continued from page 201.)

CASE 12th.—*Great emaciation and debility, extensive ulcer on ankle, inability to move the joint—amputation—recovery.*—Joyce Bradshaw, aged 16, a native white female, residing in the parish of Saint John, one of the healthiest places in the island, but having a white pauper population living in great wretchedness. This girl was admitted into Samaritan Ward, 18th November, under the care of Dr. Cutting. A few months ago she observed a small pimple on the inner ankle, which at first gave her little or no concern, but being obliged to walk about a great deal it gradually enlarged, forming an ulcer the size of a crown piece; at this period she applied to a surgeon in her neighbourhood, who took her under his care. Finding that there was no improvement, but that on the contrary the ulcer was rapidly becoming worse, her admission into hospital was recommended.

Her present appearance is chlorotic, auburn hair, light hazel eye, lips pale and bloodless, countenance haggard and expressive of great anxiety and suffering body very much emaciated. She says that for the last three days her bowels have been loose, the dejections clay coloured and thin. She has no cough nor evidence of disease of the lungs or heart.

On the inner ankle of left foot there is an extensive ulcer, the edges of which are raised, having the centre much depressed, with a soft brown coloured unhealthy surface, discharging a coffee coloured, ill-scented matter. All power of voluntary motion over the foot is lost, and when an attempt is made to move the ankle joint by manipulation, it is easy to produce dislocation of the tibia on the tarsus.

The patient was put to bed, and the leg placed on an inclined plane supported by the foot rest, and the limb padded to prevent motion, the object being to endeavour to establish ankylosis; and every means carried into operation for the improvement of her health. Finding, after a month's perseverance, that no improvement had taken place, but that, on the contrary, she appeared to be getting worse, it was determined to give her the only chance of saving her life, and to sacrifice the limb; and indeed it was at best a doubtful chance, since she was in that condition as to render it not at all improbable that death would overtake her on the operating table.

On the 26th December, Dr. Cutting operated, removing the limb by circular incision below the knee. There was scarcely any hæmorrhage. The stump was lightly dressed, and the flaps very lightly and carefully strapped with adhesive plaister. In the evening she seemed comfortable, the stump was easy, and she had no spasm. She was ordered,

Liq. Opii. Sed. 25 drops, with Camphor mixture, half an ounce.

27th.—Had some sleep during the night; bowels moved once towards the morning; she has had a good deal of spasin in the limb; skin comfortable, has passed urine of very good colour and quantity. The stump looks well, not much oozing; is rather low, and although in no pain, complains of exhaustion; pulse 96, small.

To have an ounce of sherry wine in water, and repeated if necessary.

28th.—Did not sleep so well last night; is peevish and fretful, and does not like to be spoken to; bowels rather free; the evacuations yellow coloured and thin; skin cool, hands and foot below the natural temperature; pulse 96, small and easily obliterated; urine of good colour, but not in such quantity as before. The stump looks well, discharging a thin pale coloured pus.

To have Carbonate Lime, ℥ j.

“ Ammonia, ℥ j.

Aromatic Confection, ℥ ij.

Infusion Columbæ, ℥ viij.

Tincture of Opium, ℥ iij.

Two table spoonsful every fourth hour.

30th.—Has rested pretty well; bowels not so troublesome, is still very restless and peevish; temperature of hands and foot still below par, although swathed in flannel; there is some redness about the stump; tongue furred, without any redness of its edges; pulse 96; urine passed of sufficient quantity and good colour.

To continue the mixture.

January 10th.—Has improved much in appearance, but for the last few days the stump had not a healthy appearance, and the edges of the flaps have commenced to slough; bowels are again loose; diet last few days milk and arrow-root; there is no pain on pressure in any part of the abdomen; spirits better than heretofore, and she asks earnestly for a little meat diet. The warm bottles which had been put to the extremities gave great comfort.

To have Mist. Creta. Comp., five ounces.

Creasote, twenty minims.

Mist. Camph. five ounces.

Two table spoonsful every fourth hour.

13th.—Has somewhat improved; appetite good; bowels still very irregular, complains of heat in the sto-

mach after taking the medicine; temperature of body comfortable, there is not much discharge from the ulcerated surface of the stump; the granulations are coarse and pale.

To repeat the chalk mixture without the creasote.

To have lint placed on the granulations.

February 7th.—Very much improved in general health and appearance; the stump is healing, the ends of the bones project outwards, but are surrounded by granulations; sleeps well, has a good appetite, and the bowels are moved comfortably.

R̄ Hydr. Subnit., half a drachm.

Axung. Porcin, half an ounce.

To be applied to the ulcerated stump.

She ultimately regained perfect health, and went into the country where she remained some time; it was, however, at last necessary to remove the projecting bone, when all irritation ceased, and the stump healed perfectly.

REMARKS.—We have frequently had occasion to lament the injudicious application of ointments which are frequently too indiscriminately applied to ulcers, either rendering them much more irritable or otherwise encouraging the destructive process, instead of allaying irritation and promoting the restoration of parts. The harshest applications are frequently chosen—and, as a consequence, the ulcer enlarges, and either passes at once into the chronic state, condensing the tissues, or a low destructive process is set up, which affects the deeper seated parts, and, as in this case, producing irrecoverable disease of the ankle joint. Persons can scarcely yet be persuaded that cleanliness, rest, mild simple diet, and cold water dressing will, in most instances, heal an ulcer; yet this is daily passing before their eyes in our hospitals, and allowed by the patients themselves to be not only more comfortable, but much more effectual than greasy salves. In a tropical climate the water-dressing can be applied with much greater facility than in Europe, or other cold climates, because the temperature of the water is always to be easily obtained, naturally with the atmosphere about 70°, whereas in Europe all this has to be regulated for the patient. Most of our worst cases of ulcers have undoubtedly arisen from bad treatment and neglect on the part of the patient, and there are few cases in which amputation was rendered necessary, where a cure might not have been effected, and a limb saved—if common care and cleanliness had been observed.

CASE 13.—*Compound fracture of fore-arm—broken by Machinery—Limb saved—Recovery.*—Wm. Mason, a black native, aged 45 years, of very sober and temperate habits, admitted into hospital on 17th July, Stott's Ward, under the care of Dr. King. He states, that a week previous to his admission he was, as usual, attending to the working of the machinery attached to the vacuum pan on the sugar estate of James Maycock, Esq. In consequence of his own incaution, the iron chain working on a wheel caught his hand, breaking both bones of the fore-arm; the ulna was comminuted, and the carpal end protruded through an irregular jagged wound. He applied for assistance to an unlicensed apothecary who, unfortunately being in the way, dressed

the wound, stuffing tow soaked in spirits of turpentine and some ointment into the wound. The consequence was extensive inflammation and formations of matter which opened in different parts of the arm and hand.

On admission the whole fore-arm and hand were much swollen and firm to the touch. There was a profuse discharge from the openings, of a dirty coloured, ill scented pus, and the cuticle on the back of the hand was peeling off: he states that pieces of bone had come away. There was no attempt at union, and the fracture was readily detected.

Dr. King determined to endeavour to save the limb, thinking it very improbable that at the distance of time from the receipt of the injury, there would be a super-vention of tetanus. The hand was carefully cleansed and placed on a single broad splint, and he was placed comfortably in bed, being put in such a position as to ensure perfect rest, and the limb so put up as to permit the frequent washing or cleansing of the wound.

It would be uninteresting to give a daily report of the case—it is sufficient to state, that by the continuance of the most simple treatment, the limb was saved, and he left the hospital quite well in health, on the 19th Aug.

REMARKS.—At no very distant period this patient would have been submitted to the knife, as he would have been considered an easy and certain prey to tetanus, as no surgeon would have been bold enough to have a patient under such circumstances unoperated on; and certainly, if the tendency to that disease existed now, in all its former certainty and intensity, the improper treatment pursued in the first instance, was by no means calculated to avert its appearance.

Dr. King had lately witnessed the propriety of trusting to the powers of nature, in good sound, unabused constitutions, in the case of the chief workman employed in building the hospital, who, falling from the scaffolding, received a compound comminuted fracture of the leg, the projecting end of the tibia was sawed off, and the shaft returned, and by care and rest the man recovered, having a useful limb, and he is at this time scarcely lame. The saving of a limb is a matter of immense consequence, and now that experience has clearly proved the propriety of trusting to nature, even in the climate of Barbadoes, we shall hear of fewer cases of amputation, after severe injury, than heretofore. In 1817, I saw Mason working at the vacuum pan, his arm as useful as ever.

CASE 14th.—*Ulcerated Leg—Subject to Glandular Disease—General Health suffering—Operation—Death.*—Thomas Connell, a black native, aged 50, admitted into Upper Bishop's Ward, as a patient, under the care of Dr. King. He states that he has for many years been subject to attacks of angioleucitis, which affect more especially the left leg; from repeated attacks the limb had very much enlarged, and the integuments were becoming in places tuberculated. Two years ago, an ulcer formed on the lower part of the leg, giving out an offensive serous discharge. From the condition of the limb, rendering laborious exertion difficult, he has been unable to procure proper attention and nutriment, consequently his general health is very bad. The skin feels loose, flabby and cold, circulation languid, and

there are alternations of febrile erethism and coldness of the hands and feet, almost amounting to hectic. Has had occasional attacks of diarrhoea. Dr. King ordered him a simple and well regulated diet, and with the use of vegetable tonics, an amendment was soon manifest; he still continued, however, to have a recurrence of diarrhoea, and the ulcerated limb was considered to be the source of irritation, and no disposition towards a healing process being manifested in it, amputation was determined on, and performed by Dr. King, by circular incision below the knee.

REMARKS.—An examination of the limb shewed that the vessels generally were much diseased. The tibial artery was much enlarged and encrusted with long plates. The vein was *patulous enough to admit the end of the little finger*. In order to secure the artery effectually, it was necessary to include in the ligature the surrounding cellular tissue, which was only drawn sufficiently tight to prevent hæmorrhage and compass the mouth of the vessel. He bore the operation well, and lost but little blood. The stump was carefully and lightly dressed—and, after being put to bed, he seemed easy and comfortable. On being visited on the following morning, the nurse reported that he had had some sound sleep during the night—had not much spasm, notwithstanding he did not have a satisfactory expression of countenance, looking about with a restless anxious eye, and drawing the bed-clothes over him, as if he was chilly; the temperature of the body was, however, warm. In the afternoon he was decidedly chilly, and the temperature of the body reduced; hands and foot being cold, and the tip of the nose. There was no pain about the stump, nor was there any secretion.

He was ordered to have

Wine and Water.

Mist. Camph. c Carb. Ammon.

He never rallied, and died on the third day after the amputation.

It came to the knowledge of Dr. King, after this man's death, that the nurse allowed *five hours* to elapse without administering the stimulants or medicine ordered, a negligence which probably accelerated, if it did not cause, death. It is, however, to be observed, that he never appeared to have any reaction after the operation, and there was no attempt at reparation in the stump—*there was no lymph thrown out*. There was a gradual, an unceasing prostration of the powers of life, and at the same time perfect consciousness of his state and approaching dissolution. There were no discoverable traces of inflammation of the veins of the leg or thigh after death, nor were there any indications of diseased action in the brain. The organs of the body seemed sound.

CASE 15th.—*Ulcerated Leg, Enlarged by Angioleucitis—Amputation below the Knee—Recovery.*—Jacob Armstrong, aged 55 years, a black native, admitted into Lower Bishop's Ward, on the 4th November, under the care of Dr. King. States that he has been many years suffering from glandular disease affecting the right leg, on which there is a large chronic ulcer; he has not lately had any acute attack of glandular disease. The discharge from the ulcer is, as usual, very peculiarly of-

fensive and serous. Amputation being deemed necessary, Dr. King operated by circular incision below the knee. There was little hæmorrhage, although the vessels were exceedingly weak, rendering much caution necessary in securing them.

15th.—Has had but little sleep—slumbering unsoundly, being very easily roused. There was some oozing of blood during the night; towards morning severe spasm. Skin rather cool; pulse 96; tongue slightly furred; passed urine; ordered to have

Mist. Camph. c Lig. Opii Sed.

16th.—Has had but little sleep, is very low and languid. Pulse 96, feeble; bowels have been moved; no thirst or desire for food, but at the request of the matron, he drank a tea cup of chicken broth. Passes his urine freely, but in no great quantity.

To have Carb. Ammon., two scruples.

Tinct. Opii, half a drachm.

Spt. Ammon. Aromt., two drachms.

Mist. Camph., eight ounces.

A mixture.

To have Wine and Water.

17th.—Yesterday evening talked incoherently, pulling off the bed-clothes as fast as put on; last night got some refreshing sleep, and although low, he does not seem worse, being more tranquil and rational. The stump looks well; he is disposed to sleep; skin comfortably warm; passed urine this morning in quantity and not very high coloured. Whenever the matron takes him diet or medicine he drinks it, but never asks for anything.

21st.—Is much better; skin warm and comfortable; has had very good nights' rest since last report. The stump has been dressed, and looks well. Bowels are acting healthily. He was placed on full diet, and being in good health, was dismissed on the 17th February.

CASE 16.—*Ulcer nearly surrounding the Calf of Leg—Bone diseased—Amputation below the Knee—Recovery.*—Mary Jane —, aged 43, a black native, by occupation a field labourer, admitted into Samaritan Ward, under the care of Dr. Clarke, on the 8th December. She has a large chronic ulcer on the right leg, which nearly encircles the calf, the tibia is softened and diseased. She states that she has been under the care of various medical men, but never could get the ulcer healed. On the 26th December, Dr. Clarke amputated the leg below the knee; there was but little hæmorrhage, and the patient did well, being discharged on the 3rd February in good health.

Third Quarterly Return, from 1st January to 31st March, 1845. By D. Martindale, Esq., Secretary.

Shewing the number of Patients admitted, died, and discharged, from the 1st January to 31st March, 1845.

Admitted in January, . . . . .	30	Died, . . . . .	2
“ in February, . . . . .	36	“ . . . . .	2
“ in March, . . . . .	28	“ . . . . .	2
	—		—
	94		6

Classification with regard to sex:—

Males, . . . 65 Females, . . . 29 Total, . . . 94

Classification with regard to colour:—

Whites, . . . 32 Coloured, . . . 11 Black, . . . 51 Total, . . . 94

From what Parish and other Parts:—

St. Michael,.....	44	St. Peter,.....	1
St. Joseph,.....	8	St. John,.....	9
St. George,.....	1	St. James,.....	1
Christ Church,.....	3	Foreign,.....	19
St. Thomas,.....	1		
St. Philip,.....	7	Total,.....	94
Number of Patients admitted between the ages of—			
11 to 20.....	22	50 to 60.....	7
20 to 30.....	26	60 to 70.....	2
30 to 40.....	19		
40 to 50.....	18		94

Deaths:—

Male,..... 3 Female,..... 3 Total,..... 6

Five Surgical operations were performed during the Quarter.

**CASE 17.—Ulceration of Toes, Fistulous openings on the side of Foot, disease of Metatarsal Bones—Partial Amputation—Recovery.**—Anne Hardy, aged 40 years, a black native, by occupation a field labourer, admitted into Samaritan Ward, on 6th January, 1845. Suffering from ulceration of the toes and fistulous openings on the side of the foot, her general appearance is delicate and excitable. She states that three years ago an abscess formed between the first and second metatarsal bones, which, after being poulticed, burst, and healed without any difficulty. Shortly after, a second formed between the third and fourth, which also healed easily; and lastly, one formed on the outer side and hollow of the foot, from which a purulent discharge has continued to flow ever since—under the toes there are several small ulcerated openings. She says that she has been for some time under the care of Professor Thomas, Codrington, Col., who recommended her removal to Hospital. After an unavailing endeavour to save the limb, and being satisfied from examinations that there was no probability of the limb being saved, amputation at the tarso-metatarsal joint was performed. She bore the operation well, and was discharged, having a very useful leg to walk on.

**CASE 18.—Contraction of Knee-joint—Chronic Ulcer on Leg, said to have been from Bite of Dog twelve years ago—Amputation below the Knee—Recovery.**—James Branch, aged 30 years, a native black labourer, admitted into Lower Bishop's Ward, on 16th September. His general health seems good. He states that twelve years ago he was bitten by a dog, on the calf of the leg; the bite was a severe one, and it was dressed with turpentine and poulticed,—it did not heal, but formed an ulcer, for the cure of which, a great variety of different remedies were tried. For the last five years he has been compelled to walk with crutches, and to sling the leg, keeping the limb constantly flexed—permanent contraction of the knee-joint followed, and it is now impossible, by any legitimate force, to strengthen the leg. The ulcer is of great extent, cup shaped, with small pale red granulations, and horny edges; when cut, the bottom of the ulcer is found cartilagenous. After remaining in hospital for a month, with the view of endeavouring to save the leg, he became exceedingly impatient, demanding its removal, or his discharge; finding that no improvement had taken place, amputation was determined on, and performed below the knee, on the 11th

December. His recovery was rapid and very satisfactory. He is now able to perform a good day's work, and enjoys excellent health.

**CASE 19.—Glandular disease of Leg, ulcerated—Amputation—Recovery.**—J. R. Jarvis, aged 38 years, a native coloured man, by occupation a cabinet-maker, admitted into hospital 26th February, under the care of Dr. King, having a very large ulcer on the left leg. He has been for some years the subject of glandular disease, which has resulted in permanent enlargement of the limb to a very great size, although he thinks that since the formation of the ulcer, the leg is less painful and not so intense. When he rests the limb, the swelling subsides a little, but does not disappear as it used to do, at the first attacks. The discharge from the ulcer is, at present, watery and offensive. There not being the remotest chance of saving the limb, the leg was amputated below the knee, by Dr. King, on the 20th March. He quickly recovered, and was discharged much improved in health.

**CASE 20.—Chronic ulcer of the Leg—Dissected Bone—Amputation below the Knee—Recovery.**—John Roberts, aged 27 years, a black native, admitted into Lower Bishop's Ward, under the care of Dr. Cutting. His general health appears to be bad, is very thin, and is evidently very deficient in intellect; has never been the subject of glandular disease. He states that some time ago he received a blow on the lower part of the tibia, on which spot an ulcer formed, not having taken any care of it, it enlarged very much, and at length the bone became disorganised. Dr. Cutting performed amputation below the knee, on the 20th March, and he was discharged well on the 20th April.

After his recovery he was tormented with hallucinations, fancying that devils and snakes were constantly crawling about his bed, and on the floor. He has not improved at all, in intelligence, since his discharge, but, on the contrary, is becoming a confirmed lunatic.

(To be concluded in our next.)

#### ART. LIX.—CASES OF GUNSHOT WOUNDS OCCURRING IN THE MONTH OF JUNE, IN PARIS.

No. II.

By GEORGE D. GIBB, M.D.

Licentiate of the Royal College of Surgeons, Ireland.

In continuation of the subject of gunshot wounds, I enclose the following cases, where the chest and abdomen were implicated; they are few in number, but will be found not devoid of interest, and I hope that they will prove acceptable to your readers.

From the immediate fatality frequently attendant upon wounds involving the great cavities of the body, a comparatively small number of them were to be seen in the hospital after the events of June. Of those who survived the primary effects of their injuries, a few were very speedily cured by the most active treatment, whilst, again, others, in the majority of whom the wounds involved the thoracic cavity with lodgment of the balls, are even now to be found, the issue of whose cases is as yet doubtful; my notes of these latter are of course not yet completed, and I refrain, on this account, from forwarding them.

All of the cases which I now send have fallen under my personal observation, but the notes of four I have, as you will perceive, preferred extracting from the *Gazette Medicale*.

20. Case of a soldier of the line, in the *Hotel Dieu*, where a musket ball penetrated the left arm, without fracturing the bone, and entered the chest, fracturing the left edge of the sternum near its middle, and remaining lodged in the anterior mediastinum. On inspiring freely, air bubbled out of the wound, with oozing of blood, and it was supposed, from this circumstance, that there was wound of the lung; the patient, however, never spat blood, but suffered from dyspnoea, cough, and symptoms of pleuritis, for which he was actively treated. Sloughing, to some extent, occurred around the wound, and the beating of the heart against its under surface was very plainly seen. Some weeks afterwards, he was very weak, with hurried breathing, loose cough, and expectoration of frothy mucus; muco-crepitating rales were heard over the anterior surface of the right lung. On coughing, pus and air escaped out of the wound, which then looked healthy. On the sixty-second day, an abscess from within pointed on the right side of the chest near the nipple; it was opened, and permitted of the extraction of the ball with perfect ease, since which time he has been progressing favorably. He now (8 Sept.) is gaining flesh and strength, sleeps well, has a good appetite, and his healthy colour is returning, his pulse is 90, and soft, and his respiration 24 in the minute.

21. Case in the *Hotel Dieu*. A ball had entered the left side of the chest, just below the clavicle, passing outwards near the inferior angle of the scapula; this was a most severe case, hæmorrhage occurring from both wounds, accompanied with distressing cough, and spitting of blood, the physical signs of pneumonia quickly presenting themselves. Although actively treated at the commencement, this case lingered till the tenth week, when it terminated fatally.

22. Case of a woman, in the *Hopital St. Louis*, who had received a wound from a ball, which had entered just above the heart, remaining lodged in the cavity of the chest. She had spitting of blood, &c., was bled eight times, and in 15 days after, she was discharged cured.—*Gaz. Med.*

23. Case of a man in *St. Louis*, wounded by a ball which had penetrated the cavity of the chest, behind the clavicle, passing in an oblique direction from above, downwards towards the middle of the scapula, which it had fractured. The fact of penetration was indicated by the spitting of blood, by the dullness on the same side of the chest, and even, said the surgeon, by the existence of pneumo-thorax. This patient was bled seven times, and, when last seen, his cure was considered complete.—*Gaz. Med.*

24. Case of a lieutenant of the Garde Mobile, also in *St. Louis*, who had been wounded by a ball which entered the chest near the scapula: he had, immediately after, spitting of blood, which continued for several days. He was bled seven times, when, finding himself sufficiently well, he went into the gardens

of the hospital to smoke a cigar. Scarcely had he committed this foolish act, when he was seized with dyspnoea and spitting of blood. A fresh bleeding proved sufficient to restore him completely, and permit of his departure from the hospital.

25. Case of a Garde Mobile, aged 19, in the *Hotel Dieu*. A ball had entered his chest, above the left clavicle, and passed out in the scapular region, fracturing the bone in its course. The patient spat blood in great abundance; he was bled five times; the splinters of the fractured scapula were extracted; he was purged once, and was discharged from the hospital after a stay of only 20 days.—*Gaz. Med.*

26. Case of a young Garde Mobile, who was wounded in the *Clos St. Lazare*, the ball entering near the vertebral column, a little below the scapula, traversing the convexity of the side of the chest, and becoming lodged near the sternum, appearing as if the chest had been penetrated. In this case, the dyspnoea, the distress of the patient, together with the presence of the ball at a point opposed to that of its entrance, naturally led to the supposition of penetration. The ball was extracted shortly after, and the case did well.

27. Case in *St. Louis*, where a ball had entered the external surface of the left arm, three inches below the shoulders, passing behind the humerus and in front of the scapula, making its exit near the spine. Extensive suppuration followed, requiring numerous openings to let out matter, and the patient was quite cured in the early part of August.

28. Case, also in *St. Louis*, where a ball had entered the left side of fifth dorsal vertebra, becoming deeply lodged in its substance, and closing well without suppuration, or any bad effects whatever.

29. Case in *La Charité*, of a soldier of the line. A ball had entered near the shoulder, between the scapula and clavicle, and remaining lodged. Great suppuration followed, requiring openings at the inferior angle of the scapula, the anterior surface of the shoulder, and other places; from the two former protruded large slabby granulations. The wound, on 29th July, extended downwards over the whole of the anterior surface of the scapula; it was probed, and there were withdrawn portions of the fringe of his epaulette and pieces of his coat and shirt. From that time the wounds began to close, and were healed by the 17th September, the ball still remaining lodged. He could not then raise his arm, but could move it backwards and forwards.

30. Case, in the *Val de Grace*, of a soldier of the line, who had received a wound in the *abdomen*, the ball entering in the epigastric region, wounding the left lobe of the liver, and passing out over the anterior surfaces of the left inferior ribs, crossing them to its course, which was slightly circuitous: the wound produced an hepatic fistula, with the escape of bile and blood, *noir comme de laudanum*; he had the symptoms of local peritonitis, which were speedily dissipated. The inflammation, however, was sufficient to produce adhesion between the wounded surface of the liver and the peritoneum, closing the fistula, and merely



leaving the open wounds of entrance and exit, which, after some weeks, had perfectly healed, and the soldier was discharged cured.

Another equally interesting case, where the liver was wounded, followed by a perfect cure, occurred in the same hospital, but I have been unable to procure the notes of it.

31. Case, in the *Hopital St. Antoine*, of wound of the abdomen, where the ball had entered the superior part of left iliac region, wounding the intestines. Peritonitis supervened, which, however, yielded to treatment; and the result of the case was, the formation of a fistula communicating with the small intestine, from which escaped, at times, fecal matter, together with a dark greenish fluid, resembling bile.

32. Case, in the *Val de Grace*, of a soldier of the line, who received a wound from a ball which penetrated the left side of the abdomen, remaining lodged in its cavity; there did not appear to be a communication between the opening and any wounded intestine; symptoms of peritonitis quickly showed themselves, but were overcome by active treatment, as in the former case, and the patient, when last seen, was progressing favorably, but the wound had not closed.

33. Case, in *La Charité*, of an officer, who had received a wound in the anterior part of the right side of the abdomen from a ball, which had passed out behind, to the left of the vertebral column; all of the signs were such as to lead to the belief that it had traversed the abdominal cavity. No symptoms of peritonitis followed, and after he had recovered from the primary effects of the shock, he appeared to be about to attain a speedy cure, when an unfortunate accident, a phlebitis falling upon venesection, caused him to succumb, and furnished an opportunity of ascertaining the real track of the projectile.

*Autopsy.*—The ball, after having traversed the integuments of the abdomen, as the pain indicated, was immediately directed from its course—probably by the influence of muscular contraction—and glided along between the skin and the musculo-aponeurotic layer, as far as the spine, where it had become divided into two fragments of unequal size, the larger of which, after passing over the spinous processes, had escaped through the opening to the left of the vertebral column.—*Gaz. Med.*

34. Case of a man, in *La Charité*, who had received a shot on the right side of the abdomen, the ball having passed out on the left at a corresponding point; peritonitis supervened on the second day. Every one believed that the ball had passed completely through the abdominal cavity, but under the influence of general blood-letting, and of the free application of leeches and emollient poultices, the inflammatory symptoms were dissipated as if by enchantment, and it was soon perceived that the wound merely concerned the integuments.

35. Case in the *Hotel Dieu*, where a ball had entered over the lower ribs of left side, traversing the integuments, and escaping just above the anterior superior spinous process of the ilium. Discharged well in August.

36. Case in the *Hotel Dieu*, where a ball had entered midway between the anterior superior spinous process of the ilium, and the trochanter major of right side, making its exit at the very margin of the anus: no bad effects followed, and the man was discharged well in August.

37. Case in *St. Louis*, where a ball had entered the left groin, traversing the perineum, and escaping behind the trochanter major of the right femur; suppuration, to some extent, followed, but the cure was nearly complete by the middle of August.

38. Case in the *Hotel Dieu*, where a ball had entered in the upper part of the umbilical region, taking a course obliquely downwards and outwards, and making its exit an inch above the crest of the ilium, having traversed the integuments. The patient was well by the end of July.

Paris, September 23, 1848.

#### ART. LXIV.—GLOSSITIS.

By GEORGE GRIFFIN, Esq.,

Surgeon, Half-Pay 85th Regiment, Quebec.

Within the last two or three days I have seen in the *Medical Journal* under your superintendence, the very interesting case of Miss M——, as furnished by Dr. Marsden. I am of opinion that it is, in some sort, the duty of every medical man, to lend what aid he can in the investigation of rare and dangerous diseases, more especially, and to specify what experience may have taught him. Therefore, in furtherance of that conviction, I am induced to consider that, perhaps, this communication may not be uninteresting to your readers.

It has been my fortune to see but two of these cases during a service of upwards of 35 years, and they are well impressed on my mind. The first was in the person of a Neapolitan sailor, while I was on detachment in one of the Ionian Islands, in the summer of 1822. The man was landed from a gun-boat, without any history of his state, further than that he complained, for the first time, about 24 hours previously to the vessel making the Island.

I found the tongue enormously enlarged, protruding from between the teeth; breathing hurried, anxious, difficult, performed altogether through the nostrils; suffocation impending; face livid; eyes protruding; moaned incessantly, and very restless. The accompanying fever purely inflammatory; heat of skin intense; a powerful pulse, and strong action of the carotid and temporal vessels; he was sensible, could not articulate, but expressed his distress by signs. Blood was taken from the arm without delay, in no stinted degree; the bowels freely opened by active medicines—but there was scarcely time to carry these remedial measures into effect, before it became abundantly evident that, unless relieved, the man must die, and that shortly. I had no one to advise with, and had never seen or heard of the disease before, however; there was no alternative, and the mode of relief evident; having secured the head from moving, I depressed the lower jaw and tongue, with a strong iron spoon, as much as practicable, and then introduced a scalpel side-

ways or flat, as far back as I could, and made two incisions into the dorsum of the tongue, from behind forwards to the apex, one on each side.

The hæmorrhage was very profuse, but the relief immediate; no purulent matter followed the incision. So rapid was the declension of the swelling, that the next day the place of the incisions could scarcely be detected; those who have witnessed lacerated wounds of the tongue, must have remarked this circumstance. A week or two afterwards, I had a second case under my care, also a foreign sailor. Now aware of the nature of the disease and its danger, I no longer hesitated, but made the incision at once: both these men did well. The after treatment was small doses of some mercurial preparation to affect the mouth. I am writing of occurrences 26 years ago,—I do not know that I should have recourse to mercury now: the result, however, was quick recovery.

The father of the young lady whose case is related by Dr. M——, has been well known to me for many years,—his daughter from childhood. Some time in August last we met accidentally, and he narrated to me his daughter's perilous state, and the circumstances attending it. I went to see her the following day, and she expressed to me the immediate relief she had experienced from "the incision," and her distressed state previously. She was, as might have been expected, in a state of great debility, but recovering. The tongue was, though large, generally soft, and of a dull leaden colour. As well remarked by Dr. Marsden, "The disease is so rare, that it usually takes the surgeon quite by surprise."

Esplanade, Quebec, Nov. 20, 1848.

ART. LXV.—OBSERVATIONS ON THE TREATMENT OF EPILEPSY BY THE *SCUTELLARIA GENICULATA*—THE FORM OF ITS ADMINISTRATION, &c.

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

The treatment and cure of diseases of the nervous system are considered extremely obstinate and often impossible. The mere circumstance of the innumerable remedies which have been lauded, for the removal or cure of epilepsy, will illustrate this point. Of these remedies, some are useless, some, though they sometimes succeed, fail frequently, and few are, doubtless, more generally efficacious. However, I am acquainted with no medicine in the materia medica which can be called a specific for epilepsy, therefore it is our duty to make enquiry after new remedies, with all the zeal and assiduity in our power. When a substance, easy to be procured and harmless in its nature, is introduced to the notice of the profession, does it not deserve a fair trial?

*Scutellaria geniculata*, or skull cap, has been a popular remedy for hydrophobia in the hands of quacks from the earliest date, which causes it to be partially overlooked by medical authors. It is described by Linnæus under the class, Didynamia, order, Gymnospermia. It is to be found in Europe, the United States, and Canada. It has a bitter taste and a slight alliaceous smell.—The calyx is crowned by a concave appendage resembling a saucer; hence the name. The following is

the formula which I employed in the following cases of epilepsy:—

℞ Scutellariæ Geniculatæ, ʒij.  
Aq. Bullientis, ʒ viij.  
Fiat infusio.

The mode of administration is to begin with two table-spoonfuls every eight hours, increasing the dose after the termination of a week to ʒij. with an occasional aperient.

Case 1st.—Miss ——, æt. 26, consulted me in May, 1848. Her mother gave me the following history of her case:—In the year 1838, she observed her fall down suddenly in an epileptic fit, which continued for some minutes. From that period she had repeated attacks every six or seven days; frequently at night in bed, and always about the full of the moon. She consulted the most eminent men in Canada East, and her mother's brother held a consultation of the medical gentlemen in Philadelphia. She had taken, for months, nitrate of silver, iron, zinc, strychnine, digitalis, ammoniuret of copper, valerian, musk, &c., without any benefit. I directed the skull cap, according to the above formula; she continued it daily for six weeks, when a profuse salivation took place, with a slight constriction of the fauces. I ordered the medicine to be discontinued, and prescribed a seidlitz powder; in a few days the ptyalism ceased. Nov. 8.—She has been taking the medicine daily for four months, during which she has not had a single attack. She enjoys excellent health, animated spirits, and good appetite. Her memory seems to improve daily, and is in hopes that the disease will never return.

I have under my care two other cases which seem to manifest the superiority of the medicine. They are, in a manner, almost recovered, with the exception of a violent palpitation of the heart at the expected period of attack, which passes off without any bad result by the timely administration of a few doses of tinct. digitalis, and by keeping the patient free from mental irritation, which is a frequent cause of epileptic palpitation. It is necessary to state, that in order to secure a perfect cure the medicine ought to be continued five or six months.

Should the above medicine be found, by my professional brethren, successful in the cure of epilepsy, I shall be amply rewarded.

I beg leave to send you a specimen of the plant; probably it may elicit something from some of the readers of the *British American Journal*.

Richmond, C. W., Nov. 8, 1848.

ART. LXVI.—AURORAL DISPLAY OF NOV. 17.

By J. H. LEFROY, Esq., Capt. R. A., Magnetical Observatory.

I enclose an account of the Aurora of the 17th November, as visible at Penetanguishene, and should it not occupy too much space, should be glad to see it printed, in connection with the meteorological register. It must have been a display of very uncommon splendour, and is peculiarly interesting, because attended with the greatest disturbance of the magnetical elements ever recorded. The declination exhibited a

change of  $4^{\circ} 5'$ , which has been but once exceeded namely, on the 24th October, 1847, when it ranged  $4^{\circ} 22'$ , but the change of the horizontal component of the force, amounted to not less than one-seventh of its whole amount, or 0.150—a quantity quite without precedent. The change of the inclination exceeded  $2^{\circ}$ . The change of the total force was not less than one-twelfth of its whole amount, or 0.082. Previously to last year, one-half of any of these quantities was regarded as a great extent of disturbance, and had been seldom, if ever, attained in the seven years. The two last years, 1847, 1848, have been remarkable for the number of Auroras recorded, and the extent and frequency of magnetical disturbances, both phenomena being, no doubt, related to peculiarities in the electrical condition of the atmosphere; in what manner, I think philosophers are very far from having decided; but it gives not a little importance to magnetism, that it furnishes in this way a proof of operations or effects not cognizable otherwise, and probably important to a full comprehension of the *physique du globe*, in direct proportion to their remoteness from us. The bearings of the subject upon sanitary questions, particularly the spread of epidemics, is so much more your province than mine, that I need only allude to it.

“H. M. S. V., Mohawk, Penetanguishene, Nov. 17.—Light airs and clear. East. At 8-5, P.M., an auroral arch extending from West, through South, to East; highest at 9-15; very bright; disappeared at 11; reappeared at 11-30; remained until daybreak. There was a most brilliant display of streamers from all parts of the heavens, but least thick from North to East, and brightest from North-west, through South, to E. N. E. Dense mass of bright continuous rose-coloured light to S. E., and very bright streamers from thence, and all round, as above, to a coronal point near Andromeda, about  $10^{\circ}$  S. b. W.  $\frac{1}{2}$  W. from the zenith. The corona appeared as formed of three pointed fleeces of combed wool, with the points crossed. The display was most brilliant from 8-45 to 9-45,\* when it faded very considerably. The distance of the corona from the pole-star was  $55^{\circ}$ .† In the N. E. quadrants were but few straight bright streamers. The sky, when not rose-coloured, was intense blue, and stars even of small magnitude, distinctly visible, . . . ; the material bulk of the display was from S. E. b. E. to S. W. b. S. The corona was lastingly and strongly defined for nearly an hour, and certainly not over  $13^{\circ}$  from the zenith.—Therm.  $22^{\circ}$ .

Toronto, 13th December, 1848.

\* The extremes, both easterly and westerly, of the declination, occurred in this interval. The extremes of horizontal force do not appear to have been attended by any phase of unusual brilliancy. The negative extreme was at 1 a. m. The positive extreme some time before the commencement of the display, (at 4-50, p. m.)

† This position agrees very nearly with the prolongation of the dipping needle, but is somewhat to the west of it.

ART. LXVII.—FURTHER REMARKS ON THE STATE OF EDUCATION IN CANADA.

(Concluded from page 213.)

1. *Report of the Superintendent of Education in Lower Canada, for the Scholastic Year 1846-7. Printed by order of the Legislative Assembly Montreal: 1848. Pp. 178. By Dr. J. B. Meilleur, Chief Superintendent of Education, Lower Canada.*
2. *The Monthly Journal of Education for Upper Canada; eight numbers; commenced in January, 1848. Published at Toronto, and edited by the Rev. Dr. E. Ryerson, D. D., Chief Superintendent of Schools, Upper Canada.*

To return to the Report before us. Our limited space will not permit of our following Dr. M. through the whole of his rather discursive course, but we cannot refrain from quoting his pertinent observations on the alleged unconstitutional proceeding and dreadful hardship of compulsory contributions! which, according to the shameless assertions of certain ignorant or unprincipled demagogues, are so utterly repugnant to the rights, feelings, and habits of the worthy “habitans” of Lower Canada.

“Compulsory contribution, in cases of necessity and for the common good of the inhabitants, has from time immemorial been practised in Lower Canada. It is by this mode of contribution that, under the law of the country, they have, without foreign aid of any kind, built their churches and raised other religious establishments, which testify so honorably to their good feeling and zeal for the advancement of religion. Now, the people have never regarded as ‘taxes’ assessments for these purposes, nor as ‘taxers’ the Trustees appointed by a vote of the majority to impose them upon the assessable property of the parishioners according to value. And what would have been their satisfaction and their gratitude, if the Government had, by an act, come forward and offered them one half of the sum required for any of these purposes, on condition that they should furnish the other half! What then ought, for the same reason, to be the eagerness of the inhabitants to comply with the requirements of the School Law, to obtain the aid of which they stand in need in order to procure for their children the advantages of education, which is above all material advantages.

“The fact is, that the inhabitants of Lower Canada were, before the passing of the late education laws, habituated to contribute by assessments, compulsory or voluntary according to circumstances, towards those objects of common interest most dear to them. Why then should any one take pleasure in exciting among them fear, trouble and alarm on the subject of the School Law?

“The sum required by law for the purposes of education, is not, according to the true meaning of the word, ‘a tax,’ but a mere contribution, since it is only required for the immediate benefit of the children of those who pay it,—since it is expended in the locality itself under the eyes of the parents and parties interested, under the direction of those whom the inhabitants liable to contribution have voluntarily chosen for the management of the schools,—since, instead of being carried out of the locality, this sum has the effect of bringing into it an equal sum, to be therein expended for the same purpose and in the same manner, and has consequently the further effect of distributing money in the locality and making it circulate there (instead of taking it away) to the advantage of the farmers and traders in the midst of whom beside the teachers and their families, who are so many consumers of agricultural and other produce, which they daily purchase with the pay they receive,—since the School Commissioners are responsible and are bound by law to render an account to the parties interested of the application of both the sums in question and of all their proceedings.”

In spite of the foregoing indubitable truths, such is the perverse spirit engendered in various parts of the Lower Province by utterly reckless demagogues, and these not altogether confined to the same race as the

"*confiding Habitans*,"—that the great blessings derivable from even the present highly beneficial, though, of course, still defective, educational law, are either altogether rejected, or made to fall far short of what they otherwise might be; and with sorrow are we compelled to add, that a few isolated spots in the Upper Province seem to be contaminated with the same poisonous leaven; among which we scarcely expected to find the good city of Toronto, or any portion of the loyal men of Gore. Of these, however, more hereafter, should our space permit.\*

But to return to the Report. Not content with discussing the many conflicting topics embraced by his general observations,—Dr. M. next proceeds not only to maintain, for *ten* good reasons, which he gives at length, that the "principles" of the present school law should remain *intact*, though subject to no less than 29 proposed improvements,—but to marshal in a similar formidable *decimal* array, the various defects of that very law. And then, *horribile dictu!*—guided by the same cabalistic number, to enumerate in detail no less than *ten* different conflicting systems of education, which it would seem, have already been proposed to supersede the law at present in operation; but which, fortunately, he immediately afterwards, unceremoniously proceeds to knock down, like nine, or we would rather say like *ten pins*, one after another.

Not doubting that some of the defects, as well as improvements pointed out, will deservedly meet with due attention by the Legislature, when the subject comes before it, we are content to pass them by; and the same might also very well be the case with the greater part of the conflicting and somewhat crude systems that have been suggested, as superior to that at present in operation; but there are some observations, hinging on the eighth and tenth items, which we cannot allow to pass altogether unnoticed.

In rejecting the idea of attempting to simplify the working of a public or National Educational system, (as proposed under the eighth head,) by leaving it more to the arbitrary discretion of a responsible Superintendent, guided by a brief Act embracing only the fundamental principles, Dr. M. justly observes,—as follows:

"It is easy to say that the School Act is diffuse and complicated, obscure and unintelligible; but under the peculiar and difficult circumstances in which the inhabitants of this country are placed with regard to one another, it is not so easy as people think to abridge and simplify this act, and at the same time to leave in it all that is necessary; it is not so easy as people think to render it more clear and intelligible without introducing into it fresh obscurities and ambiguities. It is very easy to destroy a law by abandoning it to be the butt of caprice and bad passions, and handing it over to the mercy of party spirit and the ambitious influence of personal interest which will accelerate its ruin; but it is not so easy as it is supposed, to draw it up better, or really to make it perfect, more especially when so many persons whose business it is not, and who are without experience in the matter, insist upon having a hand in the work.

"The legislation of all enlightened countries shows us that good laws, and more especially good education laws, are the result of calm and persevering experience, acquired by long and continued observation, and profound and unceasing meditation. Nearly three centuries have passed away since the foundations of a system of public education were first laid in France, and yet the law there is still very far from giving perfect satisfaction to all.

An influential portion of the community urgently demand another system of instruction, and it seems that the legislature has not yet done with this important question, since the Minister of Public Instruction has but very lately laid the draft of a new Education Law before the Chambers. The present Common School Law for Upper Canada is the third since 18<sup>th</sup>, and it contains 45 sections, to which 11 others have been since added by way of amendments, under an Act passed for that purpose during the last Session of Parliament. The education law of the State of New York, on which that of Upper Canada is founded, (as our own is also in part,) contains 200 sections, and has been twice amended since 1841.

"We are not, therefore, justified in expecting very soon to have a perfect education law, however succinct and brief it may be; more especially if, as heretofore, so many persons have a hand in it, and if it be got up in too much haste."

And further:

"The people of Lower Canada, still generally possessing but little education, and more particularly but little accustomed to take part in carrying out the laws by which they are governed, are naturally enough afraid of those of which they do not at first thoroughly understand the object and the means proposed for its attainment; witness the opposition which they made to the Road Act, and which has been made to the present School Law in some parts of the country. But it may be truly said that when they are accustomed to the working of a law, they become attached to it as to their household gods. It would therefore be very inadvisable to turn them aside and discourage them by a legislation entirely different, which must necessarily have the effect of losing for them all the fruit of that experience which they have acquired at so great a sacrifice."

Nay, more;

"The inhabitants of Lower Canada, like those of Scotland, where the system of elementary instruction produces such admirable results, will soon contract by practice the habit of paying less attention to the law and to its weak points,—less to the legality of the means and proceedings of those who carry it into execution,—less to the rules and formalities to be observed in the matter of contribution, than to the objects of the law, which they will soon come to feel and know as if by intuition."

We should have been happy to have equally quiesced in Dr. M.'s observations on the tenth head; but, unfortunately, in discussing the merits of this arrangement, as a thing proposed, viz.: "To have but one Law for all cases, and but one system of general Education, with a Superintendent General and local Superintendents, *i. e.*, a Superintendent for each district or county,"

—Dr. M. seems to have lost sight of *the fact*, that there was such a section of our great Province as Upper Canada,—and that the very system to which he alludes, as *in prospectu*, is, in spite of all opposition, now in active operation in that benighted quarter, in near a three-fold more successful degree than that of which he is the directing head.—Nay more, we will even venture to tell the worthy Superintendent, for whose patriotism, zeal, and talents, we have a high respect, that we are disposed to think that he was stepping rather out of his official way, when he ventured upon any observations tending to call in question the merits of any part of the Educational Law of the Upper Province, and more particularly to depreciate the value of the services of that important branch of its machinery, the District Superintendents; and that delicacy should rather have led him to refrain altogether from alluding to the operation of the Upper Canada school law, if he could not do so in terms of commendation; and further, that in thus acting he would have only been following the cautious commendable example of the Superintendent of that section of the Province. Such, however, are the natural fruits

of the impolitic and mischievous, and therefore unwise, growing practice of legislating separately for the two great component divisions of the same British Province,—as if inhabited by races of utterly irreconcilable habits, feelings, and principles.

It being entirely out of our power to quote at length the various arguments adduced by Dr. M. against the introduction of *District Superintendents* in Lower Canada,—we would have preferred referring our readers to the Report itself; but as that might be considered unjust to his writer, we trust they will rest satisfied with the following brief disjointed extracts.

“10th. Of all the faults of the present School law which have been announced by its opponents, that provision which constitutes only one Superintendent of Education is, according to them, the greatest. But the law, new and imperfect as it otherwise is, like its predecessors, operates generally well under the administration of only one Superintendent. In the Lower Provinces, and in several of the United States, where nothing is spared in providing for the education of the children of the people, and where the people are so prosperous, the general working of the School Law is entrusted to a single Superintendent for each State.

“There are, it is true, twenty-two Superintendents of Education in Upper Canada, whose salaries are paid by a special tax, levied for this purpose upon the inhabitants by the Municipal Councils. *But the inhabitants of Upper Canada, live on a soil and in a climate much more favorable for agricultural purposes, are rich in comparison to those of Lower Canada; and yet they complain of this provision in their law; and their Common School Act does not work better than ours does here, although they have no political aspirants to decry the law for the sake of gaining popularity with the inhabitants.*”

And again, continues Dr. M. :—

“With regard to this, if I consulted my personal interest, I should willingly agree to the appointment of a Superintendent for each County, or at least for each Judicial District, as proposed, because the duties they would have to perform would tend greatly to lighten the work and responsibility of the Superintendent-in-chief. But there are general interests which I have no right to sacrifice to any particular interest.

“It would be absolutely necessary that these Superintendents should, as in Upper Canada, be indemnified for their disbursements and travelling expenses, and paid for their time and trouble, by means of an additional tax to be levied on our poor country people. And one or two things would happen; either we must allow a tolerably handsome sum, to ensure the services of educated, fit and zealous men, of independent means, or we should not generally be able to induce men having these qualifications, and an honorable standing in society, to abandon their business for the purpose of taking upon themselves the duties assigned to a County Superintendent. These Superintendents must also have a strong feeling of subordination and of perfect submission to the orders of the Superintendent-in-chief, otherwise it would be impossible to reckon upon that regularity and uniformity so desirable in the working of the law. Now, men, possessing the qualifications above mentioned, and whom the offer of a trifling gain could not tempt, would not generally be willing to accept an office of this kind upon these indispensable conditions; and it cannot be concealed that, as these indispensable qualifications might be wanting in some of the men who would offer themselves for the office, they would be incompetent to perform its duties with advantage, &c.

“From all of which it may be inferred that far from being able to reckon upon useful and efficient co-operation on the part of the local Superintendents, we should have every reason to fear that they would contribute to embarrass the local working of the law, and to occasion an increase of expense without producing any effect or result tending to the advancement of the cause, for each would wish to act upon his own system.”

Dr. M. then proceeds to infer that for *political* reasons it would be equally unsafe to entrust the appointment of these officers to either *the people, or the Govern-*

*ment*; and yet, after, at all hazards, proposing two modifications, viz., either dividing the 36 Counties of Lower Canada into 20 School Districts, or appointing a Superintendent to each of the present great judicial Districts, he at length comes to the conclusion that :

“It is, however, very easy to obtain an equally good result without the co-operation of such Superintendents, by means of the local Visitors provided for by the Act, who without removal from their homes or any travelling expenses whatever, are able to visit the schools in their respective localities with as much zeal, interest, and earnestness, as pleasure.

“Let the present system then have a trial of two or three years, and if the visitors fail in their duty, the clergy and the people will have no reason to be surprised, or cause to complain, if the Legislature should assign them *masters*, for the sake of the welfare of our youth.”

Now, with every disposition to do justice to so valuable and influential a class of honorary officers as local and general visitors, whether civil, judicial, or ecclesiastical—without whose active and enlivening, as well as wholesome co-operation and supervision no public Educational system can be regarded as complete, we would look upon the *substitution* of such *irresponsible* Inspectors for *paid* District Superintendents, as preposterous and absurd, independent of their duties being altogether separate and distinct.

But setting aside our own particular predilections or prejudices, let us unhesitatingly refer to the results in the neighbouring States, and among these, to that of New-York in particular,—regarding which, by the by, Dr. M. is in error in inferring (p. 37,) that the Educational Department is there managed solely by the Secretary of State, (as State Superintendent), with the aid of an assistant, there having, for the last seven years, been Superintendents to every County, who have proved the very life and soul of the Educational system.\*

But if we would contemplate popular Education among our American neighbours, in its most extended and satisfactory light, let us at once turn to the transcendantly laudable example set by the New England States,—where, under the powerful impulse of that best of all National arrangements, the *Free School System*, it has been in successful, yet gradually improving, operation for near two centuries; and among which, we believe, at least four, out of the six States, have lately been led to adopt the same improved plan of *Superintendence* as that of New-York, viz., a State Superintendent, with one or more County Superintendents, (yet retaining even a Superintendent to each Township,) and Trustees to every School District.

In fact, such is the general confidence in this recent improvement, that the Board of Education of the State of

\* Dr. Potter of N. Y., in his Prize Essay on “The School and Schoolmaster,” well observes that, “it was to supply that lamentable deficiency on the part of *trustees, town-inspectors, and parents*, that the office of *county Superintendent* was created;—that the creation of this office seemed to be loudly called for from all parts of the State: that the law was framed nearly on the model of that which is considered the best for securing school inspection that the world has yet seen, (that of *Holland*); and that it is now regarded by the most enlightened friends of popular instruction throughout the country, and he might add throughout the world, as *the one measure* without which the State system must have remained comparatively inert; but with which it must, if properly sustained, rise to excellence and cover itself with honor.”

Massachusetts, have been justly led to observe, that "five of the New England States are now zealously engaged in the promotion of a cause, from which posterity will receive ampler and more precious blessings than if they were to inherit from their ancestors the richest mines of silver and gold, imbedded in a soil spontaneously teeming with the choicest productions of the earth!"

But to return to the Report before us. After devoting ten pages to the rather unnecessary and possibly rather mischievous discussion of the merits of this single debatable point, the worthy Superintendent is led to regard as a preferable proceeding:

"Moreover, it is not mere superintendence over the schools and those to whom they are entrusted, however necessary and successful this may be, which will procure us good teachers, or will even most contribute to crown their labours with success, if they are not themselves sufficiently educated; this must be done by providing means for training and instructing them, and for paying them adequately for their services. The most important point, then, is first to find out what these means are, and then to put them in practice for this double object. I am therefore of opinion that any one of the sums mentioned in the former part of this head, whether it come out of the pockets of the people or of the Government, would be much more profitably employed if, instead of paying the local Superintendents, it were applied to the training of Teachers, by means of Normal Schools, and to their instruction by means of a Journal of Education, and the Public Libraries to be established in each Municipality, as well as by means of *travelling writing masters*,—and also to the proper remuneration of the teachers, more especially of those who are placed at the head of model or superior schools."

Now, with respect to, and considering the sinister bearing of parts of the above quotation, we feel ourselves justified in hinting to Dr. M. that as far as Upper Canada is concerned, "the means" alluded to by him, are there, not only clearly defined, but actually realized; and that, therefore, Lower Canada has only, "to do likewise;" that the whole of the evidence adduced by us—and we could marshal much more—in favour of County Superintendents, goes to prove that such "means" cannot be more eligibly or profitably employed than in paying these valuable local inspectors; and that, if, instead of continuing to fish in troubled waters, the worthy Dr. had left the discussion of debatable points in the Lower Canada Education Law to the wretched demagogues whom he so justly condemns and despises, and struggled even harder with "the powers that be," in favour of a few essential and indubitable improvements in the Act, he might happily, have, ere this, not only succeeded in establishing a Central Normal School, and District or County and Model Schools, combined with a Provincial Board of Education, but, like his energetic brother Superintendent in the West, been, ere this, actively engaged in superintending a "*Monthly Journal*," and giving those "*Lectures on Education*" in the different districts, which he has for so many years been regarding as so very desirable. Let this much be accomplished, and that great spur to the diffusion of useful knowledge, the establishment of *Township Libraries*, will sooner or later follow:—and then, indeed, all that would remain to be desired, would be the proposed wonder-working engines—*itinerating writing masters!* But, we humbly trust, that these novel "*flourishing*" adjuncts to our Common School System will continue to be dispensed with, till an Act

of Parliament shall clearly and expressly define that teachers in Lower Canada will be expected to be able to *read*,—but not to *write!*

Much more might be extracted and commented on; but as we propose devoting as much of our remaining space as we can afford, to the very useful and interesting, as well as valuable contents of the *Journal of Education*, for Upper Canada, coupled with a few farther allusions to those two important desiderata, in Lower Canada,—the institution of a Provincial Board of Education, coupled with the organization of Normal and Model Schools, and the imperative necessity of making far more substantial emolumentary provision for teachers throughout the Province at large, to encourage a truly competent and respectable class of individuals to engage in that arduous and (ought to be) honourable profession;—we shall, for the present, only observe, that Dr. M., after getting through the ten conflicting rival systems, proceeds to the still longer, though less formidable, array of his 29 proposed amendments in the present act—already alluded to—followed by additional remarks thereon; and then, somewhat in inverse order, quotes from his official report for 1845-6, various supplementary suggestions "on the subject of legislation for public instruction, (the state of things being now in every respect precisely the same as it then was,)"—embracing county academies, normal schools, a deaf and dumb school, uniformity of school books, elementary schools for agriculture, and, though last, not least, a Journal of Education:—all, as we have admitted, doubtlessly desirable and important,—but not expected to be so often recurred to,—unless to remind our Legislators of their persevering inattention to such proper and well weighed suggestions by a zealous and anxious friend of the people, and conscientious responsible servant of the Government. In taking leave, however, of Dr. M., we cannot help adverting to one of his many observations in favour of the existing Law,—in one part of which we cordially concur,—while in the other, we do not recognise the usual calm good sense, due appreciation of facts, or dispassionate language which generally characterise the worthy Dr.'s writings. We allude to the close of the following rather extraordinary passages in p. 89, 90,—the italics in which, are, of course, our own:

"It is not surprising that men should think that some other system of public instruction would have been better adapted to the wants of the people of Lower Canada and to the peculiar circumstances in which they are placed, or that the present law is imperfect and needs amendment; for it is difficult, not to say impossible, for all the friends of popular education to be exactly of one mind upon a subject of common interest, and of such vital importance to all as the subject of public instruction;—but to say that the law works well nowhere, that there is not under its operation one good school, and that "if the *Man-God* came again among us, we should not have a single good school to offer him; these are mere assertions which must surprise and astonish every one, bold and hazardous allegations, which can never meet with general assent, because to the personal knowledge of every one they are unfounded, and absolutely contrary to the real facts. I say, and I say it with a feeling of satisfaction mingled with pride, and because I know it to be true, that the present law works generally well, and better than any of the preceding laws have done; so that if *Christ should come again visibly into the world as a child, he might in Lower Canada select one good school from among a thousand such, in which the teaching and discipline are*

perfectly in accordance with the moral and intellectual wants of humanity."

How far such language is either advisable or appropriate, we leave to others to decide.

It affords us no small relief to turn from the foregoing discordant view of the workings of our Educational system, to a subject most intimately connected with its success, on which there will be little difference of feeling—namely the proffer of a hearty welcome, and wishes for a long literary life to the useful and interesting, as well as valuable, Periodical named at the head of this article,—as likely to do more real good to the cause of Education,

"Holding as 'twere the mirror up to nature,"

by the progressive registry of *convincing facts*, than all the theoretical writings in the world.

Let us then commence by, at once, observing that what Dr. M. has, with the best *intentions* been, year after year, wishing for, and writing about—namely, the establishment of a *Journal of Education*, his brother Superintendent in the West had contrived to carry into successful practice, at his own *pecuniary risk and personal and mental labour*, in January last, and has ever since, been not only furnishing the public monthly, with a choice miscellaneous mess of useful and instructive matter on the subject of Education, as far as the *general reader* is concerned, but also conveying to municipal councils, teachers, trustees, and other officials, more immediately concerned, in the most convenient, and, as regards the public, cheapest possible mode, every variety of information and explanation on whatever parts of the Law might be deemed obscure, contradictory, or ill understood.

Did our remaining circumscribed space permit, we should be disposed to draw largely upon the many valuable original articles, as well as apposite extracts from public writers and documents, confirmatory of our own humble views on so important a subject, to be found interspersed throughout the eight numbers of the *Journal* now before us, but we are forced to forego that pleasure, and to content ourselves with referring to a few of the most prominent articles, and assuring our patriotic readers that a leisure reference to the work itself, will prove highly satisfactory, and well repay the trifling expense of \$1, per annum.\* That, however, they may have something more than our mere word to encourage them, we beg to state that, with the appropriate introductory article in the January number will be found incorporated an instructive letter from the chief Superintendent to Wardens of Districts, on a variety of subjects requiring the attention of Municipal Councils—the hardships of school Trustees, and that only true principle of universal Education,—supporting schools according to property; together with an article on the system of schools for cities and incorporated

towns, embodying a circular from the Superintendent to the heads of city and town corporations. In that for February, is a letter to the Provincial Secretary, expounding and recommending the original draft of the present School Bill, published by special permission of the Governor General; and in that of March, a comparative view of the powers of the Superintendents of schools in the United States and Canada. In the April number is given a reprint of an admirable article from the *London Quarterly Journal of Education*, on the excellent system of "*Free Schools*," in the New England States, but more particularly in that of Connecticut, which we would most earnestly recommend to the perusal of every patriotic Canadian, of whatever origin, as placing popular Education in its only true and proper light, opposed to the miserable *ignis fatuus* doctrines with which wicked demagogues would attempt to mislead a portion of our ignorant compatriots, whether among the proverbially "*too confiding Habitans*" on the one hand, or the more *self-relying* Anglo-Saxon settlers on the other.\* Nor would we pass by unnoticed in the same number, the commencement of a series of interesting papers, (continued in subsequent numbers,) on Agricultural Education, by H. Y. Hind, Esq., mathematical master, Normal School; or an instructive article in the editorial department, on the system of Free Schools in cities and towns in the United States and Upper Canada, containing tables shewing the comparative rate of the cost of schools, and salaries of teachers in various cities and towns in the former. In that of May, will also be found a most gratifying account of the first *Normal School Examination*, giving a general view of the highly favourable notices by the whole of the Toronto press of that interesting ceremony, and of the appropriate addresses delivered on the occasion. In the June number, in addition to a portion of an able address delivered by the chief Superintendent before the Senate and Students of Victoria College, on the 2d of May, "*On the obligations of educated men*,"—and a continuation of Mr. Hind's paper on "*Agricultural Education*," will be found in the editorial department, a strong appeal to the Canadian public in behalf of "*The Journal*," itself, from which we cannot refrain from making the following short extracts,—as not only deserving of serious public attention, but highly creditable to its talented and public spirited, yet in some quarters, much maligned conductor.

"Six numbers of the *Journal of Education* having now been issued, the public are sufficiently apprised of its character and objects; and it now remains for all friendly to those objects to say, whether the undertaking shall entail a heavy pecuniary loss, in addition to imposing much mental labour upon the conductors of it.

"It is the first undertaking of the kind in Upper Canada, to diffuse useful mental information on educational subjects. The labours of the conductors of the *Journal of Education* is merely voluntary and gratuitous. Every shilling of subscription which has been or may be received, has been and shall be expended to defray the mechanical expenses of the work. Those expenses very considerably exceed the amount of subscriptions. The issue

\* It is but justice to add, that this discreditable opposition to the spread of education, among the latter race, has been chiefly manifested in *parts* of the counties of Beauharnois, Shefford, Sherbrooke, Stanstead, Drummond, Lotbiniere, Megantic, Ota, wa, and Two Mountains.

\* We would even go further, and maintain that no better "*manual*" can be put into the hands of our Members of Parliament,—to prepare them for thoroughly understanding the merits of the Common School Question, than the "*U. C. Journal of Education*," as far as published,—it containing a most valuable and instructive mass of information on every subject connected with the workings of different systems of public instruction, as now in operation in every part of the world.

ing of each number inflicts a serious loss upon the editors in addition to their personal labours. At whatever sacrifices, however, and under any circumstances, their engagements with the public will be honourably fulfilled in continuing the publication through the year. At the close of the volume a copious alphabetical index to the subjects of it will be furnished, so that it may serve as a convenient manual of references on all the principal subjects of popular education, as applicable both to Canada and other countries."

The Rev. Editor, then very appropriately proceeds to shew that of the numerous Educational periodicals which have appeared in the neighbouring States, scarcely one has survived for any considerable time, that has not received more or less legislative aid; and, to prove how difficult it is to sustain an *Educational Journal*, and the consequent necessity of extensive and active co-operation to be able to do so, he gives a summary account of the various School Journals which have from time to time been issued in the neighbouring States, from which it would appear, that out of 14 Educational periodicals set on foot in various parts of the Union since 1831—only three now survive,—and that these, to their honour be it stated, are published in New England and New-York; viz., the *Common School Journal* of Massachusetts, commenced in 1838, the *New-York District School Journal*, commenced in 1842, and the *Syracuse Teacher's Advocate* (issued weekly), commenced in 1845. It is, however, due to that noble pioneer of the cause of knowledge, the *American Journal of Education* of Boston, to state that, though now no more, it led the way to them all,—it having been commenced so far back as 1826, and merged in the *Annals of Education and Instruction* in 1831,—in which form it survived till 1839, when it finally gave place to the existing *Common School Journal*.

May it be long before we shall have to regret the demise of the Upper Canada *Journal of Education*; and may it not be long before we shall be able to congratulate the Lower Province on the appearance of a similar periodical there also. But we are, nevertheless, still disposed to think that the sooner two distinct and separate Educational Laws for the two Provinces are considered unnecessary, inconvenient, and even mischievous, the better; and that, in that case, one well conducted Journal, under the joint direction of the two Superintendents would suffice;—and if so, we see no reason why the mass of useful and instructive information it would contain, should not consist of the same articles in French and English, in opposite columns, like the old Lower Canada Acts of Parliament,—the strange and unaccountable example of the *Lower Canada Agricultural Journal* to the contrary notwithstanding.\*

\* That our readers may thoroughly understand this rather pointed allusion, it may be as well to state, that taking a deep interest in *Agriculture* as well as *Education*, we hailed with delight the late establishment of the Lower-Canada Provincial Agricultural Society—and still more the advent of so well conducted and highly promising an agricultural periodical as the *Lower Canada Agricultural Journal*—as not only an excellent vehicle for disseminating useful agricultural information, but as, next to school's, one of the most powerful means of promoting a bland amalgamated feeling between our two "rival races." We could not, therefore, help enjoying, even in fancy, the pleasing scene of a *Jean Baptiste* and a *John Bull* met in friendly discussion of some debatable point in farming, or some new view of that awful pest, the *potato disease*, mooted in the *Agricultural Journal*;—when, lo!

We would, however, at the same time, take the liberty of suggesting one or two improvements in the Upper Canada Journal, as not only likely to prolong its existence, but to add to its general interest, without diminishing its usefulness as an Educational Miscellany, viz., that instead of being issued monthly, it should appear Quarterly, and that instead of its being so exclusively devoted to what the general reader may be disposed to regard as *dry school subjects*, the bill of fare should be varied by the insertion in each number of one or more select historical or biographical articles, relating more particularly to individuals of humble origin who have risen to eminence in life,—whether as statesmen, philosophers, or men of letters—in the pulpit, or at the bar,—as warriors, merchants, or agriculturists; all equally tending to give a spur to a genial spirit of emulation among the rising generation, as well as to inspire with continued perseverance those who have already entered upon the busy stage of adult life.

But to proceed with the remaining numbers of the Journal. In that of July, under the editorial head will be found some very pertinent observations on the subject of Teacher's Conventions or Institutes, which, in the neighbouring States, have been found very useful *substitutes* for Normal Schools, but which in Canada, if properly conducted, will happily prove only *adjuncts* to the invaluable Normal Institution already there in full operation. But we trust that even *they* will long continue among the things "to be," if likely to emulate the strange example of certain wise pedagogues of the Gore District, who no sooner found themselves in dignified being as a "*Teacher's Association*" than they, in the plenitude of their reforming wisdom, set about voting the existing School Act a miserable abortion, the chief Superintendent an *ignoramus* and a bore, and his labours, past, present, and prospective, utterly worthless. Far different, however, will be found the spirit pervading another article descriptive of the creditable feelings and doings of the inhabitants of London: and in the August number, besides other interesting matter, will be found a similar opportune contrast to the late "extinguisher" proceedings of the ultra-wary worshipful fathers of the great city of Toronto, in the far more considerate, if not more *enlightened* conduct of the corporate authorities of the little town of Niagara.\*

on accidentally referring to the French copy, instead of its being *alter et idem*, except in language, we found it differ *toto caelo* in its contents, and, in fact, having nothing in common, save the general subject, and the word *agriculture*!—What can be the cause let wiser heads than ours determine.

\* To enable our readers to comprehend the application of the above remark, it is necessary to mention, that in July last a few members of a Teachers Association, in the Gore District, taking it into their heads to be displeased with the Chief Superintendent, met at Dundas, and in defiance of every rule of *Responsible Government*, as well as official subordination, chose to vent their spleen a series of resolutions, declaring,—1st, The present School Bill not to be adapted to the state of the country; and inefficient from its unwieldy and cumbrous machinery, (though containing less than one-fourth of that of the neighbouring State of New York.—*Ex. gr.*, "The School Bill of New York contains 200 sections;" that of Upper Canada only 45!) 2d, That this has arisen from the framing of the Act having been entrusted to a party (the Chief Superintendent) possessing no previous experience, &c., (though his whole previous life had been devoted, either directly



Having so far done justice to this well conducted, useful and instructive Periodical, we would heartily wish it continued "*God speed*;" and cannot, therefore, refrain from again earnestly inviting every patriotic friend of education to contribute his annual mite towards its permanent success; and we do so the more anxiously because we feel conscious,—judging from the fate of similar journals in other countries,—that without very general patronage, it must either gradually pine away, and, ere long, become extinct, or entail a heavy pecuniary loss on its talented, and public spirited conductor,—or, as elsewhere, be mainly dependent on the State purse for support.\*

It being now full time to bring our desultory remarks to a close, we would willingly proceed to the redemption of our pledge, of recurring to those two prominent desiderata.—the immediate institution, in Lower Canada, of a Provincial Board of Education, combined with the establishment of Normal and Model Schools, and the extension of far greater pecuniary encouragement to well qualified teachers throughout the Province at large: but in addition to our allotted space being already exhausted, we are constrained to avow that there is one other all-important, because fundamental improvement, to which we feel bound to devote a few words, in preference. We allude to the great impolicy, if not folly, of continuing to have separate and distinct Education

or indirectly, to the promotion of education!) and yet,—3d. That such an enactment is not attainable without the assistance of individuals having a theoretical and practical experimental knowledge of the business of Education! &c. 4th, That they, therefore, considered it *their* duty to represent their views on so very important a subject, and to suggest that a committee should be appointed to examine into the state of Education. 5th, (in which we most heartily coincide) That a fostering government cannot reasonably be expected to succeed in so Herculean a task, *unless assured by the hearty co-operation of the people!* And 6th and lastly; *but not numbered or avowed*, though it ought to have ranked first, as evidently the *primum mobile* of their whole proceedings,—that the District Superintendent ought not to be subordinate to his Chief, but set him and the School Law at defiance, and decide on all matters occurring in his district according to his wisdom, special party feeling, and discretion!—So much for the wise men of "*Goshen*." But our readers will not, perhaps, be much surprised at this, when they are reminded that it was in the same District that (as noticed in our former Remarks) it was suggested that in the selection of teachers, a preference should be given to persons whose physical constitutions and decaying energies rendered them unfit for other pursuits!

With regard to the contrast between the good people of Toronto and Niagara, it is sufficient to state, that it would appear that in April or May last, the worshipful City Fathers of the former, stumbling upon a small blunder or misarrangement in the technical language of the new Act, placing the humbler school Trustees in rather too authoritative a position in the carrying out of the levying of the school assessment on the free school principle, chose to shut up the whole of the common schools in the city, rather than compromise one atom of their civic dignity, or undertake one ounce of doubtful responsibility, even though in behalf of the best interests of the great body of the inhabitants. Whereas, the humbler corporation of Niagara, like the worthy folks in the London District, regarding the great blessing placed within their reach as too precious to be trifled with,—instead of shutting up their schools, on the same pretext, nobly provided for the education of *all* the children of the town; and, to promote the exertions of both teachers and pupils, opened their Town-hall for a public general examination, and distribution of prizes to the most meritorious scholars of the different schools!

\* See addendum at the end of this article.

Laws for each of the two great sections of the Province, and the consequent evident expediency of our Legislature retracing their steps, and setting about the laying of the foundation of whatever permanent Scholastic System may be proposed, in the wary conciliatory spirit of the first Union School Bill of 1841, by at once framing one well digested general Education Law, adapted to the wants of the inhabitants of both divisions of the Province, and having it well understood, that, should Lower Canada not yet be considered quite prepared to adopt every part of that law, whatever special substitutes may be there found advisable, are to be regarded as merely temporary, and liable to be hereafter dispensed with, as soon as the people shall be disposed to adopt the liberal "*self-governing*" Municipal Institutions so long placed at their option.

Should this politic course be adopted, we are persuaded that no better model of a general school law can be adopted than, with a few modifications and improvements, the existing Upper Canada Bill; and then the only alterations necessary in the Lower Province, in addition to the introduction of a Central Board of Education, and Normal and Model Schools, would be the appointment of *County Superintendents*, and the foundation of respectable County Grammar Schools, wherever necessary,\* and that until the establishment of Municipal Councils, there shall be County Boards of *educated* School Commissioners, (composed of a Representative from each of its Townships, deputed by their fellow Commissioners,) with which shall rest the power of regulating all assessments for school purposes, as now possessed by Municipal Councils in the sister Province. Keeping these leading points in view, the Legislature may be assured of one great fact, that the nearer the revised Education Law approaches the "*Free School System*," in its purest form,†—the less will be the pe-

\* The above being the first allusion to Grammar Schools in this Article, we think it right to note, that having entered rather fully into the merits of that important branch of our subject in our former "*Remarks*," we had intentionally abstained from recurring to it; but the opportunity having offered we cannot refrain from reiterating our earnest hope, that any revision of the long neglected Grammar School system of Upper Canada, will be discussed by Parliament, altogether independent of and *prior* to, the introduction of that hateful sectarian and political party bone of contention,—the *University Question*; and that, whatever other improvements may be contemplated, these seminaries will be extricated from their present anomalous isolated management, by distinct and separate Trustees, and placed under the direct joint supervision of the Chief Superintendent and the Board of Education; and their masters subjected to a regular Normal School training, &c., the same as the rest of our Educational system.

As sincere practical Reformers, we are also not without hope that a searching investigation into the past results of the defective Grammar School arrangements, will lead to a far more judicious and beneficial outlay of the funds devoted to the support of these seminaries than has often been the case in some parts of the country, where, as hitherto conducted, the District Grammar School has, *as such*, sometimes exhibited an *empty farce*; and the £100 annually granted to the Teachers been, therefore, a downright waste of the public money.

† The following excellent sketch of the Scottish system is given in the Report of a Select Committee of the House of Assembly of Nova Scotia, in 1836. See Young, on Col. Lit., p. 153:—

"The plan of these schools is easily sketched and detailed. In every parish one of them must be of necessity founded; and besides the house or apartment, for teaching, a suitable dwelling under the same roof, or a distinct dwelling, must be provided for

cular sacrifice by the wealthy, as well as by the humbler classes, and the greater will be the general blessing conferred upon a free and independent spirited people;—and that, in this respect, no model can, with a few modifications, be more worthy of adoption than the liberal example set by the New England States.\*

Deeply impressed with this conviction, we are content to allow our, perhaps crude, yet heartfelt opinions, to go forth to the public in company with the able writer in the British Journal, already alluded to, who has so clearly demonstrated that, under the auspices of such an *alma mater*, among a population (in New England) of two millions of souls, not less than from 10,000 to 12,000 schools are open every year,—or, on an average, one school for every 100 souls;—all arising from the operation of a liberal system of *Free Schools*, directed and promoted by *Law*, and founded on a *tax on property*.

Let us then, at once, close our protracted remarks, in the appropriate language of the judicious writer referred to, and confidently leave the rest,—untrammelled by paltry party politics,—to the dispassionate good *common sense* of a patriotic Legislature, and a discerning British hearted public, such as, in spite of all our party feuds, we trust, will ever be found the great body of the people of highly favoured Canada.

the master. No part of his income is derived from the public funds; but the freeholders in every parish are bound to furnish him with an annual sum called his salary, and to keep the school and his dwelling house in ordinary repair. The salary varies considerably, according to the size and worth of the parish; being in some as low as £20, and in others rising above this, by various gradations, according as landholders are desirous of attracting men of the first talent to the instruction of their youth; but the salary alone is the sum which the law compels the inhabitants to provide: and the other emoluments, growing out of fees or wages, are paid by the parents who send their children thither for instruction. The parish then merely gives a partial contribution to the support of the teacher, to enable him to accept a lower rate of wages from all without distinction; and also to extend his care, gratis, to such children and orphans as would not otherwise be educated. The freeholders, many of whom never had families, or have families grown up and settled, are not burthened with the whole cost of maintaining their schools, but only with a certain portion of it, so as to lower the rate of tuition and to make learning more acceptable to the middle and poorer classes; and, accordingly, whenever their own sons and daughters are placed under the superintendence of the master, they have to pay him the customary fees exacted from the rest of the community. Whenever a vacancy occurs in a parochial school, candidates, by public advertisement, are invited to offer themselves, and a day of public examination is fixed, when such as appear undergo a comparative scrutiny touching their qualifications and proficiency; and the teacher best qualified is forthwith installed into the situation, not liable to be dismissed afterwards, except for misconduct. *For half a century past none have been allowed to enter into competition who were not capable of teaching the higher branches: and a thorough knowledge of the Latin tongue, with a moderate share of the Greek, is regarded as indispensable.* In towns or villages which rise within the bounds of the parish, either from the introduction of manufactories or the natural growth of population, schools of all kinds, and many of them taught by females, spring up, which all are left to their own field; having no support other than the fees of tuition. With these the law in no way interferes, but confines its requisition to one public school, with a master of suitable attainments, in some central part of the parish."

\* By this, however, we do not mean to interfere with every child attending school, making a trifling monthly payment to the teacher.

"But the introduction of such a system, . . . must, in order to produce all its good effects, be gradual, as must any change intended to reach and affect the character of a whole people; for such a change cannot be brought about by the enactment of a statute, or the providing of a fund. *It can be brought about only by gradually interesting the whole population in it; by making each town, each village, each neighbourhood assist in it, contribute to it, and superintend and watch it, as a private interest of their own, which they will not trust out of their own hands.* They must feel, too, that it is not a charity, or a favour granted to them by others, or sent down from their ancestors, but a right, purchased and paid for by themselves, to which they have as dear a claim, as they have to the protection of the laws, or the offices of religion. This is, of course, the work of time, of habit, and of experience. The statute book can no more do it, than it can compel a man to manage his own business skillfully, or regulate his household with discretion. It is, therefore, only where popular education has been the anxious care of the people, until it has become to them as a personal interest, or a domestic want, that we can expect from it the wide practical results in the character and condition of a country, which it is, at last, able to produce." L.

## ADDENDUM.

As the great length of our Remarks precluded their appearance in a single number of this Journal, we avail ourselves of the opportunity afforded by the postponement of the above concluding portion, to add, that in the interval we have had the pleasure of receiving the numbers of the *Journal of Education* for September and October, but too late to avail ourselves of the many useful and instructive articles with which they abound. We cannot, however, refrain from directing the attention of our readers to the former, as containing an able lecture, by the chief Superintendent, on "*the importance of Education to an agricultural people*;" a short editorial notice of the contents of the forthcoming "*Report of the Normal, Model and Common Schools, in Upper Canada, for 1847*;" and some interesting extracts of the "*14th Report of the Commissioners of National Education in Ireland*;" and to that for October, as giving another lecture by the Superintendent on "*the importance of Education to a manufacturing and free people*." It is also but justice to add, with regard to the announced School Report for Upper Canada, compared with that for the Lower Province, that it is described as containing 270 manuscript pages, of which 240 appear to be devoted to matter directly connected with the actual working of the system during the year, including 130 pages of appropriate statistical tables,—(which, if published earlier, would, doubtless, have thrown much additional light upon our twilight path;) and that the rest is devoted to an appendix, containing copies of various instructive or explanatory circular letters, and rules and regulations for the better guidance of all connected with the working of our Educational System.

We are also happy to perceive from the same Number, that the appeal of the worthy Editor has not proved in vain,—many districts of Upper Canada having come liberally forward to the support of the Work; so that we may now confidently look forward to its useful existence being prolonged for, at least, another year.

Having so far done a well merited act of justice in one quarter, we trust we may be pardoned for venturing on a few valedictory words in our own behalf; and these are, to express an anxious hope, that whatever

may be the defects of our humble advocacy of the noble cause espoused by us,—our Remarks, however desultory, will, at such a juncture, not be found altogether undeserving of favourable attention by the public, and more especially by the members of our Legislature,—as having emanated from a single-hearted, disinterested, patriotic source, alike independent of sectarian or political party motives on the one hand, and unbiassed by private personal feeling on the other; but guided solely, as far as the writer can be a judge, by the honest, fearless endeavour “Naught to extenuate, or set down aught in malice.” Proudly conscious of this impartial moving principle, we are content to bid our readers farewell, in the same words as formed the concluding paragraph of our first appeal to the public in behalf of Educational reform. “Should our efforts be crowned with the success, which so great and excellent an object deserves, we shall ever look back with satisfaction, at having humbly led the way in so good a cause. Should we, after all, be destined to fail, we shall still indulge the hope that we have not struggled altogether in vain; and, even at the worst, we may be allowed to assume as our motto—that we have failed in a laudable effort;—or, in more classical phrase,—

Magnis tamen excidit ausis.”

L.

ART. LXVIII.—*Medical Chemistry, for the use of Students and the Profession, being a Manual of the Science, with its application to Toxicology, Physiology, Therapeutics, Hygiene, &c.* By D. P. GARDNER, M.D. Philadelphia: Lea & Blanchard, 1848. Svo., pp. 396.

The character, plan, and objects of this work are sufficiently explained by its title. It owes its origin to the difficulties which the author has met with as a public teacher, from the want of a text-book adapted to the use of medical students. The recent researches in vital chemistry with which the German and French physiological chemists have enriched the science, were scarcely to be found embodied in a condensed form, accessible to this class of students, while their bearing is so important upon physiology and therapeutics, that they should form a part of the education of every medical man. Feeling this, and feeling, also, that a treatise on medical chemistry should be one practical, rather than elevated to the abstract portions of the science, and should give the therapeutical rather than the hypothetical relations of bodies, the author has been led to the preparation of the above mentioned book.

In many respects it is a work well calculated for the end; the relations of light, heat, and electricity, to the vital structure, are pointed out in a very succinct manner; we would hope that the consideration of these may lead the minds of the profession to re-enquiry. This fact they seem too often to overlook, that

it is possible to operate upon the vital principle by other than ponderable material agencies, as if the body were only a laboratory in which we were to mix various salts and acids, forgetting that around all, and superior to all, there is a great unknown power which laughs at our laws of composition and decomposition, and directly inverts the strongest affinities.

The descriptions of mineral combinations, although brief, are sufficient for general purposes, and much useful and important matter is introduced which pertains to toxicology, the antidotes and proper means of detecting poisons, particularly with reference to medico-legal investigations. A gross error, however, appears in treating of the tests for sulphuric acid in cases of suspected poisoning; he directs to distil the organic tissues with water, and treat the distillate with a baryta salt.

As to the theories of the science, it is to be wished, that in his praise-worthy desire to exclude whatever was superfluous, he had set aside some of those antiquated notions, which, under the head of illustrations of “the law of multiple proportions,” have disfigured in common with this, nearly all our text-books for the last half-century. Unfortunately, however, Dr. Gardner, familiar as he appears to be with the recent progress of chemico-physiology, has apparently neglected to keep pace with the rapid advances in chemistry proper, and particularly in organic chemistry, during the same time. It would, indeed, be a tedious and an ungrateful task to point out the number of mistakes and antiquated ideas which have found their way into this, in many regards, valuable book; for instance, Dumas’ doctrine of mechanical types, which have really no foundation in nature, except as an accidental consequence of that of chemical types; while the recent admirable researches of Laurent in the composition of the azotized bodies, and the laws which he and Gerhardt have shown to govern the constitution of all organic substances are passed over unnoticed. To these we must add many errors in the descriptions of the properties and composition of many organic compounds, such as the fats, alkaloids, and oils; errors that have been corrected by several researches which our author seems to have overlooked.

The chemistry of the fluids of the body and of the vital processes is treated of in a somewhat extended manner, and the late researches of Liebig and Mulder are freely quoted. As has already been remarked, these portions of the work show a familiarity with the subject, which is a guarantee for the value and authority of the statements. We should, however, have wished something more definite with regard to urine.

particularly as to the character of hippuric acid, and its relation to benzoic and uric acids, and considered with reference to calculi.

While we have thus pointed out the errors and deficiencies of the work, we would not fail to acknowledge its merits, and would only hope that our hints may not be lost upon any others who may attempt the preparation of a similar book.

ART. LXIX.—*On Bandaging, and other Operations of Minor Surgery.* By F. W. SARGENT, M.D. Philadelphia: Lea & Blanchard. 1848. 8vo., pp. 379.

We are perfectly persuaded that hundreds of young men are admitted to practice, who, however well versed they may be in the theory and practice of surgery, as far as relates to the performance of the major operations, are yet profoundly ignorant of a vast number of the minor operations, and in which one of the chief excellencies of a surgeon consists. If the student seeks for information on these points in systematic lectures on surgery, he will scarcely find them alluded to at all; and, on numerous points, the generally received standard works on this branch are equally silent: or, if noticed, the subjects are so lightly treated of, as to afford but a very superficial information; and unless the student has served as a dresser at an hospital, and taken an active practical part in such matters, either there or in the office of his preceptor, he enters upon his professional life ignorant of practical details, in which his skill as a surgeon is, in all probability, most likely to be first tested. To the student, then, the work before us is eminently valuable, and to the professional beginner it is also not without its great advantage; for, however much we may admire the dexterity of a surgeon in a neatly performed amputation, or other operation, yet his work is, at best, but imperfectly conducted, and it detracts from his merit, if the after dressing be slovenly executed, or injudiciously managed.

There are few works in the English language in which this subject is treated more lucidly or concisely. The author considers his subject under five heads. The first treats of the instruments and materials in ordinary use by the surgeon: the second treats of bandages, their varieties, their regional application, and their objects: the third treats of fractures, with the necessary apparatus for their management; it enters into the particulars of each kind of fracture, detailing its specific treatment: the fourth, of dislocations, on the mechanical means for their reduction, and their after treatment; and the fifth relates to the operations of

bleeding, counter-irritation, catheterism, enemata, &c. &c., with remarks on anæsthetic agents. The work is illustrated by one hundred and twenty-seven wood cuts, which are very neatly executed.

This publication should have reception in the library of every practitioner, who will find in it valuable information in the time of need, and we think that Dr. Sargent has rendered the profession a service by its publication.

ART. LXX.—*A Dispensatory or Commentary on the Pharmacopeias of Great Britain and the United States, comprising the Natural History, Description, Chemistry, Pharmacy, Actions, Uses, and Doses of the Articles of the Materia Medica.* By ROBERT CHRISTISON, M. D., V.P.R.S.E., &c. Second Edition, revised and improved, with a Supplement, containing the most important new Remedies, with copious additions, and two hundred and thirteen illustrations. By R. EGLESFELD GRIFFITH, M.D. Philadelphia: Lea & Blanchard. 1848. Royal 8vo., pp. 1008.

The last edition of Dr. Duncan's new Edinburgh Dispensatory was published in 1826; and Dr. Christison's Dispensatory was first brought to the notice of the profession in 1842; a new edition has been published this year, bringing its contents up to the existing state of our knowledge of the materia medica. The work before us is an American edition, edited by Dr. Griffith, incorporating with the pharmacopeias of Great Britain that of the United States; and, to practitioners in this Province and the United States, thus materially adding to its value. The American editor has added a supplement, containing the most important of the new remedies employed in medicine since 1841; among which we notice the Bebe-rina, Donovan's solution, cannabis, chloroform, matico, cod liver oil, etc. etc. This addition considerably enhances the value of the publication. The original work, by Dr. Christison, is so favorably known to the profession, as not to require at our hands any special notice; and the additions made by Dr. Griffith have added most materially to its value. The work abounds with observations of the most valuable character, both to the apothecary and the physician.

#### PRACTICE OF MEDICINE AND PATHOLOGY.

*Œdema of the Glottis.*—Dr. Jameson, in the *Dublin Journal of Medical Science*, for February, 1848, reports thirteen cases of this affection produced by boiling water. The operation of bronchotomy was performed in ten, three of which recovered, and seven died, four of bronchitis and pneumonia, one from the shock of the operation, and one from an accident while on the table. In two cases, antiphlogistic treatment was resorted to—one recovered, and one died. Dr. J. makes the following remarks:

In all cases where boiling water is taken, or attempted to have been taken into the mouth, the danger at all times is imminent; for although the little patients seem to suffer comparatively very little for the first two hours, still symptoms of grave importance set in sooner or later, which, if not combated by appropriate treatment, will either kill the patient or call for the operation of tracheotomy. The operation is, therefore, I think, imperatively called for, when the usual remedies, such as emetics, leeches, and the application of heat to the surface, &c., fail in allaying the urgent symptoms. But when the breathing becomes stridulous and croupy, or amounting to a mere pant, from spasm of the glottis, the pulse quick and small, the temperature of the body diminished, the head drawn back, face congested, eyes half open, inclination to coma, and difficult deglutition, I should, on the first accession of these symptoms, at once be inclined to operate; but when these have lasted a sufficient length of time to cause complete coma, or if bronchitis or laryngitis has set in, then, I think, it will be found useless; for when patients under such circumstances die after operation, provided it is not produced by the shock inflicted on the nervous system, it is from the accession of bronchitis, laryngitis, or pneumonia; consequently, if any of these exist before we operate, we can entertain but small hopes of recovery.

The following cautions, Dr. J. thinks should be observed in cases where the operation is resorted to:

1st. The operator should bear in mind that his cutaneous incision be in the median line, otherwise the opening into the trachea will not correspond to it, a valvular opening being the result.

2d. Great caution is required in avoiding the thyroid veins, which, as well as the middle thyroid artery, constantly encroach on the median line.

3d. Great caution is required that the incision be not carried too low in the neck, thereby opening the fascia that is attached to the sternum, which helps to close the upper opening of the thorax, like a lesser diaphragm, whereby there is not only danger of wounding the vena innominata, but also great annoyance may be experienced in the subsequent steps of the operation, by the elevation and depression of the thymus gland.

4th. We should never open the trachea till we are certain that we have laid open the deep fascia that covers it, or we will surely have a valvular opening.

5th. The operator should be prepared, in case of the supervention of spasm, when the trachea is seized by the hook, to cut the piece out rapidly; or should the patient not breathe instantly after this has been done, the surgeon must lose no time in passing a gum elastic catheter into the trachea and inflating the lungs.

6th. We should never enlarge the wound in the soft parts after the trachea has been opened, lest a flow of blood should pass into it, and cause the instant death of the patient.

7th. Blood may pass into the trachea the instant the opening is made into it, thereby producing violent cough, or even to such an amount as to asphyxiate the patient. In either case, the elastic catheter must be had recourse to, and life may be saved.

8th. Should a lymphatic gland present itself along the course of the incision, and tend to obstruct the passage of air into the trachea, it may be removed without danger.—*New York Journal of Medicine.*

*Case of Hydrophobia, treated by Chloroform*—By H. HARTS. HORNE, M. D.—Thomas Rogers, aged between twelve and thirteen years, was bitten by a strange dog on the 27th of 6th month, while attempting to prevent him from worrying some geese. The same dog, within a few hours, bit a young man named M'—, without the slightest provocation. After running hither and thither, quarrelling incessantly with other dogs about town, he was pursued by a crowd and killed in the street. M'— had the wounded part immediately excised. On the 29th I saw T. Rogers' wound, which was upon the wrist of the left arm, consisting of one deep tooth puncture, which had bled largely, and a scratch, which had scarcely bled at all. I urged upon his father the propriety of excision, even at that time, the second day after the injury; but he obstinately refused consent. He then proposed applying a blister, which I encouraged, and left the case.

About three weeks after, I called to inquire after him. The

wounds had healed perfectly; the boy was in excellent health and spirits.

On the 17th of 8th month, I was sent for, and Dr. Spackman was also called. We were told that he had been sick for several days; had been drooping on Saturday; on Sunday had pains in his back, then in his sides, then his arms and legs, and his head—flying from part to part; had fever on Sunday night. Then, on Monday, he asked for a drink; but when it was brought, refused it. His mother threatened a whipping, and he swallowed some, though with difficulty, having "a catch in his throat." This difficulty was now observed repeatedly, and his mother, "thinking it was a caper," scolded him for it. He burst out crying, and said, "Mother, I can't help it." He had burning fever on Monday. The next day, in fanning away the flies, they noticed that he gasped or sobbed spasmodically when the air was thus moved over his face. He complained of pain in the left arm, above the elbow, and his mother found a "kernel" in the axilla. Now the dog-bite was remembered, and a quack, agent for one "Dr. Stoy," was sent for. He brought his "certain cure" decoction, and it was administered. On Wednesday night the boy had raging delirium; he was never entirely rational, I gathered, since Tuesday, if not from a still earlier time. I should have mentioned that on Sunday he took six grains of calomel, followed by castor oil, which operated well.

We found him delirious though not violent; with a feverish pulse and hot skin, though covered with sweat; decidedly salivated, and some swelling of the soft parts about the jaw, and a tongue covered with a yellowish brown fur. His state was one of stupidity, with open and watery, though heavy eyes, somewhat like the expression of the excited stage of intoxication. The most striking type, however, of his physiognomy, was that of a kitten which I had seen poisoned with a decoction of kalmia.

Unwilling yet to believe it hydrophobia, I supposed the existence of remittent fever, with salivation by medicine. I offered him cold water in a teaspoon, and he swallowed it without noticeable difficulty, whilst lying on his back. Dr. Spackman had seen hydrophobia before. He fanned the boy with his hat, and the sobbing spasm was produced. This excited his suspicions, from its similarity to the symptom he had observed in two other cases.

As he was costive for some days, an anema and a dose of cream of tartar and jalap were directed in the afternoon. His father now sat him up in bed, and offered him a bowl of water. He began to gasp at once, and after two or three forced swallows, gave it up, and sank back convulsively on the pillow. He can still drink with less difficulty from a spoon and on his back. We see, therefore, no urgent symptoms but those of fever. Spiritus mindieri was prescribed, the hair cut short, and the room aired, avoiding an immediate draught on him, which would bring on the spasmodic breathing at once.

In the evening, rather more actively delirious. At midnight he complained to me of pain in his left arm, from the elbow to the wrist, "like cramp." He spoke of this two or three times afterwards, in the course of his illness, but it did not seem to be permanently predominant. The pulse increases in rapidity, and loses in force. The next morning there was no important change. The bowels not being acted on, a dose of salts was given. I also had a cataplasm of tobacco put around his throat, and left there all day.

The principal peculiarity, considering it as hydrophobia, was that the symptoms were not mortally pressing, after an illness of four or five days. But it happens that nearly all the detailed cases have been in adults. Might not age modify the duration of the disease, as youth appears to have more vital resistance than mature age; for instance, under surgical injuries?

A dose of castor oil was required before defecation was produced. The tobacco did not make him sick. In the afternoon he was more talkative. The spasms, as before, on drinking or being fanned. A piece of lint, wet with strongest tinct. rad. aconit. and chloroform, was put over the throat, covered with oiled silk. Mr. Nunneley has made a plausible suggestion of the locally anæsthetic effects of this latter agent, (See *Med. News*, Aug. 1847.) I also began the internal use of chloroform in mucilage, my impression, from other trials, being that it simply reduces the vividness and force of all sensation. Half a dozen leeches were ordered behind each ear, to relieve the turgescence indicated by the dark flush of the face, throbbing, full temporals, and delirium.

At eight in the evening, I found he had been worse from the time of the leeching, which had been only in part effected, on account of his struggles. He now fights, curses, and threatens us constantly; is *raging mad*. Once he declared he would bite me; but mostly throwing stones, using his nails—which he did once on one of his attendants—and setting his dog on us, were his fancied modes of combat. And it is a popular error to suppose that biting is a peculiar propensity in the disease: angry, furious delirium is present, but it shews itself in the use of means and weapons customary and natural to the individual. His father persuaded him several times to try to drink. We succeeded in getting swallowed, with great difficulty, a few tablespoonfuls of chloroform mixture, and then the spasm increased to such a painful extent, that it was impossible to get him to drink at all. Not only the muscles of respiration, including the diaphragm, but all the muscles of the neck were spasmodically contracted, throwing the head back for the moment as in tetanus: but, unlike tetanus, in the repidity instantly disappearing when at rest. From the beginning to the end of the case there has been nothing which the shallowest observer could mistake for tetanus. He could at any time open his mouth wide and put out the tongue, and move his neck when not attempting to drink, or any limb or other part of the body, as readily as in health.

I now tried the inhalation of ether. The coldness caused by its evaporation near his lip, started the spasm every time it was freely applied; and this finally caused him to resist it so obstreperously, that I was forced to give it up. He had, however, been considerably tranquilized by it. Dr. R. P. Harris was present this evening. The acetonite and chloroform were renewed to his throat, and I left him, expecting to find him worse the next time.

I went at eleven o'clock, with a y brother, Dr. E. Hartshorne, prepared to attempt the introduction of a stomach-tube, as recommended from the experience of my father, to preserve a means of supplying liquid and nourishment. We found him, however, *asleep*, and he had been so almost since the last visit; but he could be easily roused. Gruel was offered him in a spoon, which at once excited the spasms and furious resistance. Fanning also produced the usual effect. But he had the appearance of being to some extent narcotized. An enema of tinct. opii ʒss was ordered in case a return of excitement.

He remained tranquil all night. At seven next morning he appeared decidedly better; pulse softer and less rapid, skin warm, now also dry, which has not been the case before. He is tractable, though wandering; and can drink gruel. I am reminded of the "deceptive remissions," occurring in cases described by authors.

He became worse again at ten o'clock; not so much with violence as suffering. "It was *horrors* this time," his nurses said. I asked him if he was sleepy; "no, but I'm frightened; those bullocks are chasing me!" He cried bitterly, and had almost constantly the most distressed contortion of the features possible. The pulse is more frequent than last night. The pupil, now and at all stages of the disease, even to the last day, was *natural* in its contraction and dilatation. He can swallow small quantities at a time, to-day; gruel, water and chloroform mixture were given from time to time. Two injections of ʒss laudanum each were used within two hours. No effect was produced by them, and at four o'clock he was still extremely restless, suffering terrors of apprehension. He cannot now be made to swallow. I began then the inhalation of chloroform, from a handkerchief. He was almost instantly quieted. In a few minutes the lips became slightly blue, and respiration lessened in force; it was then withdrawn, and colour returned. By repeating this whenever the struggling was renewed, I kept him under its influence, most of the time sleeping quietly, for about two hours. The same treatment was continued by an attendant, and another injection of ʒi laudanum was used in the return of uneasiness. He swallows no better, however, and ligh spasmodically every few minutes. But it is a great end gained to be able thus to control his horrors and violence; if any agency promised hope of cure, it must be one which produces such mitigation and relief, not afforded, I believe, by any other remedial means. The tinct. rad. aconit. was again renewed to his throat.

In the evening he appeared still to be under narcotic influence; but the sighing is perhaps more frequent. Pulse 160. Able to swallow very little indeed. This state continued till near three the next morning, when he became wakeful, but tranquil and more rational than yesterday. Now, however, commenced a rattling in

his throat, from the accumulation of thick ropy mucus in the fauces and trachea, which threatens to check respiration. Finding the pulse still capable, and that the deglutition was improved, for the time, I obtained the presence of Dr. J. W. Wallace, Dr. Spackman, and Dr. E. Hartshorne, to consider the possibility of tracheotomy being called for. In the meantime, however, carbonate of ammonia and brandy-punch were given, and partial expectoration took place; Dr. Wallace was able to remove more of the obstruction by a sponge and forceps, and the operation was given up. The stimulation seemed for a while to improve his condition decidedly. In a few hours the throat was quite clear, after vomiting. But in the afternoon, with a still more rapid and feeble circulation, his violence and misery returned. He vomited repeatedly, and had two or three very offensive passages from the bowels. The chloroform was now longer in producing any effect; and then it did not so thoroughly control his restlessness as before. It was assisted by laudanum injections of ʒi at a time.

8½ p.m. He is in a profound sleep, pulse 175 in the minute, and feeble. He has been so since five o'clock, when he had, during my absence, an injection of ʒss laudanum, being then restless. He also breathed a little chloroform about that time. Fanning him now hardly excites any spasm; but occasionally he opens his eyes with a distressed expression; several times also stretching out the litten arm, and holding it for some moments at full length.

At midnight my brother found the extreme sensitiveness to cold decided as before; a drop of water on the face causing a violent sob. This is satisfactory evidence that the narcotism has not been *excessive*; for who ever saw a person under the influence of opium evince *any* sensibility at all?

Dr. Spackman had observed this evening a new phenomenon, which was now very striking; it was *emphysema* of the cellular tissue around the throat.\* It was swelled considerably, and crackled very distinctly under the finger. We had laid him on his side on the occurrence of vomiting to prevent the ejection from passing into the larynx; and on account of the swelling of the throat, the head was now thrown backwards. But the muscles of the neck were repeatedly and carefully examined; and not the slightest rigidity was found.

He sank away quietly, and died without further spasm, at about half-past two on the morning of the 21st, having lived at least seven days since the commencement of hydrophobic symptoms. Like most or all of the cases described by Watson and others, it was not asphyxia, but asthenia which destroyed him; asthenia in this case was the direct effect of the peculiar poison; as the exhausting fatigue of spasms and violence was prevented to a great extent by chloroform, and he was able to swallow some liquid not many hours before death. I saw the corpse a few minutes after he expired, and found it nearly or quite as warm as in health; so that I requested delay in moving it. No post-mortem examination could be obtained.

The case had been seen by Drs. Spackman, W. Harris, R. P. Harris, E. Pease, E. Hartshorne, R. S. Woddrop, C. Wister, J. W. Wallace, and W. D. Stroud; most of them, however, while under the influence of chloroform.

To resume. The boy was thirteen years old. Was taken sick about six weeks after being bitten by a dog proved to behave as if rabid. Had high fever, which had no remission, and yet no characteristics of typhus or typhoid fever; he was not deaf; had no tympanitis; no petechiæ; but had throughout, excessive sensibility to impressions, particularly those of cold, and about the face; had a difficulty, at times incapability of swallowing, caused by a spasm, which made a violent respiration simultaneous with the attempt to swallow, and thus impeded the latter and endangered the passage of liquid into the windpipe; which symptom was constant, and belongs to no ordinary type of disease; had injections of laudanum, ʒss or ʒi repeated again and again with no effect; and breathed chloroform for hours, with only short intermissions, with no more effect than to tranquilize him, and produce natural sleep, from which he was, once at least, roused by a return of wild delirium; and yet had no sign whatever of tetanus; no possibility of mania-a-poti; and very little, and only occasional complaints of pain; which pain, when it occurred, except in the first stage, was

\* In the autopsy of a previous case, Dr. Spackman had observed the existence of globules of air in the veins of the neck, and in those of the brain. Might this not suggest the hypothesis that the materies morbi is a gas-generating poison?

in the arm which had been bitten by the dog; had also salivation, constant watering of the eyes, and finally vomiting; and whose delirium was, until quelled, of a malicious and furious character, or one of dread, horror, and distress; ending fatally at the end of the seventh day.

What name should be given to such a case? "Hydrophobia" is not appropriate, because in this and other cases they *desire* drink, but are incapable of benefiting by it; would not *dyspotia*, or rabies dyspotia (from *δύς*, and *ποτός*, drink), be more correct?

It is a highly important fact, that the inhalation of chloroform, persevered in at intervals, did master the violent delirium and horror of the case. Dr. Smiley of Philadelphia, and Dr. Stout of Easton, have already noticed the same effect; although their cases also were fatal. This removes at least one element of evil from the disease. And if any remedial agency can ever give hope of cure, it must be, when aided by other means, one which has such control over the symptoms, attained hitherto by no other medicine.

We were deterred from depletion by the lancet by the supposed analogy to tetanus, in which stimulation is mostly requisite and useful. But free bleeding is said to have effected one or two recoveries; and has *a priori* plausibility in its favour, as the disease is inflammatory both in symptoms and post-mortem appearances. We were unwilling to use counter-irritation to the spine, from the idea that death was certain, and that those means only were, therefore, justifiable, which lessened or did not increase suffering. And the early resort to chloroform was prevented by respect for the doubts of those who at first were inclined to regard it as a case of fever.

With a distinct diagnosis, should another case present, in recollection of the mitigation already obtained—would not the practitioner be justified in commencing with venesection; using chloroform, with discretion, from an early period; and applying some powerful revulsive, aided by a narcotic to the nucha? Dr. R. S. Woodrop proposed vesication, followed by the free application of a salt of morphia. Perhaps *acupuncturation with aconitina* might prove more powerful. This treatment has been found successful in obstinate neuralgia. I used a sort of cataplasm of tinct. rad. aconit. to the throat in the above case. An excessive sensitiveness to incident impressions, and consequently excessive motor action of particular muscles, including the diaphragm obviously in this case, as well as those of the throat, seems to be present. Remedies which lessen sensation are the ones, then, which may mitigate the disorder at least. In France, the vapour bath is asserted to have wrought a cure; its efficacy should be tried, and might be aided, as was contemplated in our case, by medication with such articles as tobacco, chloroform, aconite, to produce a powerfully antispasmodic fumi-gation of the whole surface of the body. Prof. S. Jackson advises bathing in warm oil. When swallowing is impossible, the stomach tube might be inserted through the nostril, as done by Dr. Joseph Hartshorne a number of years since, in the hospital; and life also supported by nutritious enemata.

But careful reflection will only deeply impress the conclusion, that with all the means that man can devise, the malady is one which affords less hope of cure, decidedly, than phthisis; and that prevention by immediate excision (or cauterization?) of the bitten part, is the only safeguard against its result.—*American Journal of Medical Science.*

**Directions relative to the Prevention and Treatment of Cholera.**—The Royal College of Physicians of London, feeling that, on the re-appearance of epidemic cholera in England, the public may naturally look to them for advice and guidance, have deemed it proper to appoint a cholera committee, composed of physicians who hold important offices in the metropolitan hospitals, or who had extensive experience of the disease at its last visitation, to consider what measures it is expedient to adopt, with a view of preventing the spread of the disease, and of otherwise mitigating its evils.

The committee thus formed have, in compliance with the wish of the college, drawn up the following remarks and instructions, for the information of the public:

1st. Cholera appears to have been very rarely communicated by personal intercourse; and all attempts to stay its progress by cordons or quarantine have failed. From these circumstances, the committee, without expressing any positive opinion with respect to its contagious or non-contagious nature, agree in drawing this practical conclusion: that in a district where cholera prevails,

no appreciable increase of danger is incurred by ministering to persons affected with it; and no safety afforded to the community by the isolation of the sick.

2d. The disease has almost invariably been most destructive in the dampest and filthiest parts of the town it has visited. The committee would therefore urge on the public authorities the propriety of taking immediate steps to improve the state of sewers and drains;—to cover those which are open;—and to remove all collections of decaying vegetable and animal matter from the vicinity of dwellings. They would also impress on individuals, especially of the poorer classes, the great importance of well airing their rooms, and of cleanliness in both their dwellings and persons.

3d. A state of debility or exhaustion, however produced, increases the liability to cholera. The committee, therefore, recommend all persons, during its prevalence, to live in the manner they have hitherto found most conducive to their health; avoiding intemperance of all kinds, and especially the intemperate use of ardent spirits and other intoxicating liquors. A sufficiency of nourishing food; warm clothing, and speedy change of damp garments; regular and sufficient sleep; and avoidance of excessive fatigue, of long fasting, and of exposure to wet and cold, more particularly at night, are important means of promoting or maintaining good health, and thereby afford protection against the cholera.

The committee do not recommend that the public should abstain from the moderate use of well-cooked green vegetables, and of ripe or preserved fruits. A certain proportion of these articles of diet is, with most persons, necessary for the maintenance of health; and there is reason to fear, that if they be generally abstained from, now that the potato-crop has in a great measure failed, many persons, especially amongst the poor in large towns, will fall into that ill condition, which in its highest degree is known as scurvy, and that they will in consequence be the readier victims of cholera. The committee likewise think it not advisable to prohibit the use of pork or bacon; or of salted, dried, or smoked meat or fish; which have not been proved to exert any direct influence in causing this disease. Nothing promotes the spread of epidemic diseases so much as want of nourishment; and the poor will necessarily suffer this want, if they are led to abstain from those articles of food on which, from their comparative cheapness, they mainly depend for subsistence.

On the whole, the committee advise persons living in districts in which cholera prevails, to adhere to that plan of diet which they have generally found to agree with them; avoiding merely such articles of food as experience may have taught them to be likely to disorder the stomach and bowels.

4th. The committee are unable to recommend an uniform plan of treatment to be adopted by the public in all cases of looseness of the bowels, supposed to be premonitory of cholera. It is, doubtless, very important that such ailments should be promptly attended to; but since they may arise from various causes, of which a medical man can alone judge, the committee deem it safer that persons affected with them should apply at once for medical assistance, than that they should indiscriminately use, of their own accord, or on the suggestion of unprofessional persons, powerful medicines, in large and frequently repeated doses. Should the looseness of the bowels be attended with feelings of great exhaustion and chilliness, the person should, of course, be placed in a warm bed, and the usual means of restoring warmth to the body be assiduously employed, until professional advice can be obtained.

5th. In order that the poor may have the means of obtaining such assistance promptly, the committee recommend that the proper authorities should at once establish dispensaries in those parts of the town which are remote from the existing medical institutions; and that they should also take steps to provide distinct cholera hospitals, which it will require some time to organize, and which they believe will be found to be absolutely necessary, should the epidemic prevail in this metropolis with a severity at all approaching that which it manifested on its first appearance in England. The committee wish it to be clearly understood, that they do not recommend the establishment of such cholera hospitals, on the ground of effecting the separation of the sick from the healthy, and of thus preventing the spread of the disease; but solely in order that, should the epidemic prove severe, proper attendance and prompt treatment may be ensured for the sufferers from cholera among the poorest and most destitute.

tute class. The existing hospitals, even if the authorities should consent to the admission of persons ill of cholera, could not furnish the requisite accommodation, unless they were shut against persons labouring under other severe diseases—a measure which, at the approach of winter especially, would add much to the distress of the poor.

6th. In conclusion, the committee would urge on the rich, who have comparatively little to fear for themselves, the great duty of generously and actively ministering to the relief of the poor, while the epidemic prevails; bearing in mind, that fuel, and warm clothing, and sufficient nourishment, are powerful safeguards against the disease.

They deem it most desirable that the parish authorities should at once improve the diet, and increase the comforts of the poor under their charge; and that the wealthy should form societies for the supply of food, clothing, and fuel, to those who, though not paupers, still need charitable assistance in the present emergency.

Such measures, which it is the duty of those possessed of power and wealth to adopt, would, the committee believe, if liberally carried out, deprive the cholera of half its victims.

JOHN AYRTON PARIS, President.  
FRANCIS HAWKINS, Registrar.

College of Physicians, October 28, 1848.  
—*Prov. Med. and Surg. Journal.*

*Lecture on the Nature and Treatment of Cholera, considered with reference to its Analogy with Congestive Agues of Quotidian Type*, by CHARLES W. BELL, M.D., K.L.S. (Read before the Medical Staff of the Manchester Royal Infirmary, and the Members of the Medical Profession in Manchester, October 27th 1848.)—Gentlemen,—Both as students of the science of medicine, and as professors of the healing art, we are all at present peculiarly interested in investigating the nature of cholera. Thirty two years have now elapsed since that fatal disease first became known to our countrymen in India, and through them to the inhabitants of other countries; but it was long regarded by the nations of Europe and America, as belonging rather to another world, than as ever likely to become personally interesting to themselves.

It was only on its actual appearance among us in 1832 that we became convinced of our mistake, and were thrown into all the consternation that attends a mysterious and unexpected object of terror. At that time every human attempt made to arrest its progress proved in vain, and, setting almost every variety of climate at defiance, cholera completed the wide circuit of the world.

No sooner, however, was the danger past, than we relapsed into our false notion of security, until this was again dispelled by appalling accounts of its renewed progress through Asia, and of its having again passed the boundary of the Caucasus, invading Europe by the identical route which it had followed seventeen years before, with no other difference than that its front was now more extended. It might reasonably have been expected that after the disease had extended itself over nearly the whole globe, and the press of every country had absolutely teemed with essays upon the subject, some definite agreement would have been arrived at by the profession with regard to its essential nature, and to the principles upon which its treatment should be conducted. It is, then, little flattering to our professional pride, to be obliged to acknowledge that this expectation has been disappointed.

The medical press gives almost daily evidence, that little information of importance has been added to that which had been collected by the earliest observers of the disease; our practice is still almost entirely empirical, the principles on which it should be conducted are as little determined, and the opinions of the profession as little settled as they were on its first visitation.

Even the great question of the capability of cholera being communicated by contagion, is still a moot point, and all the evidence collected on the subject is insufficient to convince our legislature that quarantine regulations in regard to it, are only a useless and cruel grievance. Under such circumstances, and after many of the first medical authorities of the past and present generation have failed to elucidate its nature, it is only natural that every new attempt to throw light upon the subject should be received with distrust, and that any one who now ventures on the discussion, will do so at considerable risk to his professional reputation; I cannot, therefore, but feel much diffidence in doing so, and that

much apology is due to you for requesting your attendance here for that purpose.

My reason for making the attempt is, simply that I believe the circumstances under which I have had an opportunity of studying the disease have been peculiar, and such as to lead to the conclusions of great importance, and that I should be acting little in unison with the spirit of our profession, and be neglecting a great duty, if I failed in laying that information which chance has accorded me, before its members. I may, it is true, have over-rated the value of my opportunities (this is for you to judge,) but believing, as I do, that what I have witnessed, if fairly set forth, will lead to the determination of a principle, rather than a rule of practice, I have felt it imperative on me to submit the subject to your consideration in the same light in which it had appeared to myself.

After becoming acquainted with cholera, under very favourable circumstances, in Edinburgh, in 1832-3, and in London, in 1843-4 it was my lot to be stationed for several years in Persia, a country situated both geographically, and in point of climate, midway between India and Europe, and there I had the opportunity of observing closely the first approaches of the identical cholera which is now sweeping irresistibly towards us.

The disease was there ushered in by a regular succession of epidemics, commencing in a fever apparently continued, but by and by assuming more the character of a remittent, and this very gradually changed to an intermittent of quotidian type; of this the cold stage gradually became prolonged, and assumed all the appearances of an attack of cholera, and then came the cholera, as it has everywhere been known, without any obvious stages or intermission. This again in its turn disappeared, and the epidemic resumed the character of remittent and continued fever for a time. These various changes occupied a period of eighteen months.

Having thus witnessed the disease analysed and dissected as it were, into its component parts, and seen continued fever gradually resolve itself into cholera, and cholera into continued fever, by slow gradations, in a manner which does not appear to have ever been presented with the same perspicuity to any author, having, too, been obliged to follow each varying type of that epidemic with appropriate treatment, I have been led insensibly to those views of the nature and treatment of cholera, which I shall endeavour to submit to you, as shortly as may consist with my intention of leading you into the same train of reasoning which I myself pursued.

By considering this fatal disease rather as an exaggerated example of others better known, and whose treatment is more familiar to us, than as something anomalous, and unlike every other disease, we shall, I trust, escape the necessity for vainly searching for some principle capable of reconciling modes of treatment so much at variance as hot-air baths and warm stimulant potations on the one hand, and snow baths and iced drinks on the other. Ether, alcohol, tartar emetic, calomel, lead, lunar caustic, croton oil, naphtha, assafetida, quinine, opium, peppermint, bleeding, blistering, and the actual cautery, are only a few of the remedies that have been proposed for the same stage of the same disease, all equally failing—all equally recommended as infallible.

Still, there is one valuable conclusion to be drawn from the very contrariety of the means employed, viz., that almost all have felt that the more obvious indications (which the well marked symptoms of cholera would lead us to follow,) are not to be trusted as guides in the treatment of the disease; that some broader principle is necessary to direct our practice than the fallacious one of opposing the cold of the body by external heat, the collapse and sinking of the vital powers by stimulants, or the purging and muscular spasms. Indeed, the abandonment of this method of treating symptoms, and loss of faith in heat and stimulants, are what chiefly distinguish the more recent works of experienced authors from those of more ancient date, and of less practical acquaintance with the disease.

In concluding these prefatory observations, I beg to remark, that I have endeavoured to avoid discussing the opinions of others because this is unnecessary to the audience I am addressing, who are not only well acquainted with the works of the best authors on the subject, but also possess a large amount of unpublished knowledge of the disease from their own practical experience.

The similarity of cholera to the cold stage of ague is too obvious not to have occurred to many, but there were, unfortunately,



two circumstances which contributed much to prevent this analogy from being pursued to its full extent—the first being the want of any obvious stage of reaction, relaxation or intermission; the other, that quinine and arsenic were not found effectual in the treatment.

It was observed that recovery from the cold stage of cholera in this country, was not unfrequently followed by a low form of continued—I should rather say remittent fever, and this instead of being regarded as one of the modifications of the disease, induced by climate, or, as a secondary effect of primary disorder, was considered by too many as the hot fit which belonged to the protracted cold stage that had preceded it.

I shall endeavour to point out that this form of fever not unfrequently precedes and follows cholera as an epidemic, even at long periods, before or after the appearance of the major malady, and sometimes occurs as its substitute; and that while it prevails in a country, the “epidemic constitution” to which it belongs, more or less influences the course of almost every other form of disease by producing a greater than usual tendency to venous congestion and diminished or irregular action in the capillary circulation; and that the type of sporadic fever in this country has for several years approached very nearly to this, especially in the last few weeks;—as also in Edinburgh in 1843, in Liverpool in 1844-5, and has been more particularly displayed in those cases of fever that have arisen spontaneously from putrid vegetable matter.

Finally, I hope to convince you that the alliance of cholera with other diseases, of which quotidian periodicity is a marked characteristic gives us reason to believe that even when apparently most destitute of regularly recurring periods, it is not utterly so in reality. That it is, in fact, by considering cholera as an aggravated congestive ague of quotidian type, that we shall most nearly arrive at just principles on which to conduct its treatment and that the means by which cure is effected in the one, are both theoretically and practically those which are most appropriate to the other.

#### *Distinction between Malarious and Contagious Fevers.*

Before we enter on the consideration of those diseases, with which cholera is allied, and of which class it may be considered one of the extremes, it will be well to devote a few minutes to consider the broader points of distinction between this class and those diseases which are communicable by contagion.

By active disease, we mean either the direct effects of toxic or mechanical injury to some portion of the system, or the indirect effects produced by the resistance opposed by the vital powers to the operation of such causes—or, lastly, the effects of the struggle between the noxious influence, and the vis medicatrix.

Fever is the most obvious and most frequent evidence of the activity of the vital power to resist a noxious influence, and of the attempts of the powers of life to repair the effects, and remove the cause of injury; but in considering fever in general it is usual to limit the term from its wider sense to that condition which follows the absorption of certain poisons into the blood. When, therefore, we find fever to be the consequence of absorbed poison, it is of the utmost importance to endeavour at the outset to ascertain, as nearly as we can, upon what part of the system, and in what manner the effect is produced, and what are the actions by which its influence is resisted.

That the cause of both contagious and sporadic fever is introduced into the system by the blood, few indeed doubt; but the important question is, does the cause produce its effects directly on the blood itself by essentially changing its constitution, or is it only conveyed by the blood, like digitalis, aconite, opium, &c., and without causing any essential change upon the blood, operate by affecting the nervous system?

In an admirable essay on “Spotted Typhus,” read before the Provincial Medical Association in August, 1848. Dr. Davies, of Bath, drew a broad distinction between the two classes of poisons which are known to produce fever, viz., animal poison, and malaria. There is one kind of poison, he said, which, arising in the blood, and finding the elements of its reproduction in the blood of another, produces a fever capable of being propagated from man to man; and there is another class of poisons, which arising in elements extraneous to the blood, does not find its elements there, and though it produces fever, cannot reproduce itself, and is not capable of being propagated from one to another.

The second class is that which is now to occupy our attention, at least that portion of it which embraces fevers produced by ma-

laria, whose characteristic is periodicity,\* and I shall venture to enunciate the proposition with regard to these even more broadly:—That although the first class of poisons—that, viz., which produces the exanthemata,—operates on the blood and changes its constitution, the second operates not on, but through, the blood, and produces its effects by its agency on the sympathetic system.

Both classes no doubt produce effects on the sympathetic, but the first, (the animal poison,) acting by a continuous irritation, produces a persistent effort of the emunctories to remove the poison from the blood, or continued fever; the second (malaria,) acting solely by nervous impression on the sympathetic, produces merely a struggle between the impression which is opposed to vitality, and those sensations and actions that are provided for the maintenance of animal life. This struggle is what we observe to take place in the intermitting and congestive fever, &c.

If malarious poison actually changed the constitution of the blood, it would be as impossible to cut short a fit of ague as an attack of small-pox or scarlatina; but it is possible to cut short an ague, by means which (as we shall see when we consider the treatment of intermitting,) are not one of them calculated to produce an essential change on the blood itself. There would, too, in all probability, be some evidence of an elimination of the poison by the fit, as by the skin in the exanthemata, which there is not; or some difference in the blood drawn several hours before and after the fit; but in both cases it is equally incapable of propagating the disease by inoculation. Besides, it appears scarcely possible to account for the leading characteristic of the whole class of these fevers—their periodicity—on any principle but by the law of nervous impressions,—viz., that long-continued impression of an object upon a nerve of sensation impairs its sensibility, but that a change of impression restores it; as the eye long fixed upon a point becomes insensible to the impression of light, but recovers its sensibility on being turned to other objects.

So the continued impression of the poison on the sympathetic subdues its sensibility to its appropriate stimuli,—viz., that excitability which resides in the vital organs, whose action the sympathetic governs and regulates, but its irritability becomes re-excited, and its energies are restored by the new impression caused by change from a natural to a disturbed condition of the organs, which is the consequence of the withdrawal of the influence that combines and regulates their functions. Like the eye, restored to a sensibility to light by change of object, where the energy of the sympathetic is thus restored by the new impression, the recovery of its natural sensibilities would be permanent, were it not again submitted to the same influence by which it had been paralysed at first; but as the optic nerve will again become insensible when the gaze is again fixed as before, and this sooner or later, as the object is more or less illuminated, so does the sympathetic require to be again undisturbedly submitted to the noxious impression after recovery of its sensibilities before the effect is again produced, and that for a longer or shorter time, according to the power of that impression.

If we shall see reason to believe that the effects of the malaria under consideration are not caused by actual change operating on the blood, it will be evident that they can only be produced through the agency of the sympathetic, for we shall have frequent examples of malaria, affecting at one time the circulation merely as in ordinary ague; at another only the bowels, as by diarrhoea or nervous constipation; at another the cerebro-spinal system, with convulsion, paralysis, or neuralgia; or, again, we have either two combined, or all three, as in cholera; and we know that with the exception of the blood, there is no other element in the system but the sympathetic, which is in such intimate contact or connection with the organs of circulation, or digestion, and with the cerebro-spinal nerves, as to be capable of producing these effects.

We find, too, that what we should expect from our acquaintance with anatomy, really is the case,—viz., that the capillary circulation is the part of the system which most frequently, most

\* Some malarious poisons do undoubtedly contaminate the blood itself, and require special action for their elimination, as the Egyptian plague by boils; but these form a distinct genus of contagion, and do not fall under our immediate consideration. Those now to be discussed are all characterized by intermitting action till they reach their climax in cholera.

easily, and most completely, submits to the influence of malaria acting through the sympathetic, because almost every other part of the system,—the heart, stomach, lungs, viscera, &c., are all supplied by other nerves, the capillaries alone depending entirely on the agency of the sympathetic, whose branches are distributed to every, (even the minutest,) vessel in which our instruments enable us to trace it. This view is further borne out by considering the change from the healthy functions of this part of the system that are manifested when influenced by the morbid impression. In a state of health we know that certain chemical reactions take place between the blood and the terminal structures of the capillaries, by which perpetual slow absorption and deposition of the tissues, is effected, certain secretions are produced, and animal heat is evolved, and that while those actions go on undisturbed, the blood flows freely and unimpeded through the gently distended, but still very minute, veins, without exhibiting the least tendency to adhere to them, as would be the case in inanimate capillary tubes of equal diameter; neither does the contained blood exhibit any tendency to coagulate. We know that this property of preventing capillary adhesion, of the blood to the coats of the vessels, and of preserving the fluidity of the blood, is peculiar to the living inner coat, and not to living structures generally, for extravasated blood, in whatever part of the body, immediately coagulates. We are also aware that the capillary circulation possesses local excitability, (independent of the heart,) and the power to resist injury or repair its effect, and that excitability is a reflex action, commencing in sensibility, therefore that this latter quality depends upon the nerves of the vessels.

To prove that all these qualities are bestowed by the sympathetic nerve would lead us too far from our present object; suffice it to remark, that the first stage of ague and cholera is marked by diminution, or cessation of all these qualities and actions. Of the effect of this on the change of the tissues we have little evidence, but we see secretion stopped and converted into exudation, which physiology teaches is directly the opposite of the vital action; the evolution of animal heat ceases; the veins contract like those of the dead body; the blood returns from the terminal structures in a condition very different from that of health—not coursing freely through the vessels, but slowly, and as if adhering to their coats, and in a half coagulated state; and, lastly, by the application of stimuli, which would produce immediate reaction in the healthy skin, we find it almost impossible to excite these vessels in cholera. The direct conclusion from all this is, that impaired excitability, nervous energy, and vitality of the capillary circulation, is the first and most essential effect which we perceive of the impression of ague or cholera, and that the change produced upon the blood is more probably the secondary effect of the cessation or diminution of those changes which are produced upon it in the capillaries of the lungs, and of the system in health, than in any way attributable to direct influence of the poison on the blood. In the whole class of diseases now under consideration, we shall find evidence of disorder of the sympathetic system in one or more of its vital functions, displayed either in the capillary circulation, the digestive, or in the cerebro-spinal system; but in not one of them is any conclusive evidence to be found of a poison eliminated from the system by the fit, in any way resembling that which is thrown off from the blood in fevers produced by animal poisons of the class exanthemata, nor can we conceive any source of constant and universal irritation to the constitution, such as would result from essentially diseased condition of the blood, to be characterized by intermissions, or to be capable of cure by means addressed to the mere interruption of periodicity. In such a case, on the contrary, we should expect only a continued and persistent action, till the end to be accomplished by the elimination of the poison is attained. Moreover, if it be granted that continued fever is the effect of a constant source of irritation existing in the blood, it would appear to be a corollary to the proposition that intermittent, as opposed to continued reaction, is direct evidence of the absence of a source of irritation in the blood, and produced by means diametrically opposite, which we have fair grounds for concluding to be the absence of that irritability in the very structures which become excited by a source of irritation existing in the blood in continued fever, or by their natural stimulant in health, viz., distension by the *vis a tergo* of the heart.\*

On these grounds, considering simple ague as the type of the whole class of diseases which we are about to study, we shall proceed to examine its symptoms and the indications for treatment.

#### Symptoms and Treatment of Intermittents.

Intermittent fever has been generally described as consisting of a cold stage, with shivering; a hot or febrile stage; and a stage of perspiration and relaxation, followed by intermission. This description cannot, however, be received as a definition, because of these stages there is only one that is constant,—viz., periodical return of the cold stage, while the febrile and sweating stages are only the consequences of subsequent reaction and relaxation, and sometimes they are altogether absent. But shivering is by no means an essential to the cold stage; on the contrary, in the most dangerous forms of ague, shivering is often absent, as it is in cholera, because the disturbance of the circulation in the cold stage is such as to overpower this symptom.

Shivering may practically be considered not so much a symptom of the impression of cold on the body in health, or of the cold stage of ague, as an evidence that reaction is taking place in the system, and that the heart possesses the power to overcome the obstruction opposed to its action; it is, in fact, the first step of the febrile stage, and in the more malignant forms of ague, is the surest harbinger of recovery, and the best evidence of reaction.

In the medical treatment of ague, little is generally attempted in the cold stage beyond giving a stimulant diaphoretic, or in the febrile cooling diluents. It is customary to trust entirely to the means of prolonging and confirming the intermission by the use of antiperiodic medicines. But this routine method of treatment is not applicable in all agues, for these differ materially in the urgency of their symptoms, according to their various types, and the duration of their period of intermission.

Thus, both in quartan and in tertian ague, febrile reaction generally runs so high as to cause this stage to be most dreaded by the patient, and the congestive stage is of comparatively little moment, being accompanied with shivering almost from the first; but in quotidian the case is very different, the fever, where it exists, being slight and of short duration, and both this and the sweating stages often absent or imperceptible, and the interval between the fits is sometimes so short as to be insufficient to restore natural irritability to the system by repose. The congestive or cold stage is, on the other hand, extremely severe, and such as to endanger the vital organs, and even to give rise to the dread that the attack may prove fatal before it reaches the stage of reaction. In such a case, then,—and such it will appear is cholera,—not fever, but the opposite condition, is to be feared, and all our efforts must be directed to obviate or relieve congestion.

There cannot be a doubt that this is the most essential part of cholera, and the great source of danger in congestive ague; we shall, therefore, devote the remaining portion of this lecture to the consideration of the congestive stage in its cause, course, symptoms, and effects, and to the mechanical means of relieving and curing it, whether natural or artificial, reserving what we have to say on the medical part of the treatment for a future lecture.

It is customary to date the commencement of a fit of ague from the commencement of shivering, and of cholera from the first purging, but this is an important error, for long before this symptom comes on, a certain shrivelled appearance of the skin may be observed; the expression of the eyes changes; there is a feeling of malaise and confusion in the head; the nails look blue and bloodless, and are marked with a red and white streak, and there is a tendency to yawn, and a feeling of oppression about the heart, accompanied with sighing.

The essential part of ague has begun, perhaps, as much as two hours before the shivering occurs; the blood is gradually forsaking the extremities, and is driven in upon the heart more quickly than it can be sent through the pulmonary circulation, whose capillaries also resist the free transmission of blood; it therefore accumulates in the great veins, so that a great part of that fluid which a short time before was circulating in the extremities, be-

physiologists,—whether circulation of the blood by successive pulsations of the heart instead of by a continuous action, may not be a wise provision of nature to avoid the exhaustion of nervous sensibility in the capillaries by continued impression.

\* The above reflections may serve to suggest the question to

ing now rejected by the capillaries, is forced to find room in the venous reservoirs, and great vascular organs of the chest and abdomen, while the arterial system is left comparatively empty.

The consequence of this congested condition of the great veins is the disturbance of the circulation in the thoracic and abdominal viscera, and oppression of the action of the heart. This disturbance of function produces an excitement in the organs themselves (that is, upon and through the sympathetic nerves,) to resist oppression, by increased efforts to preserve life, or what is called reaction. When this effect is felt, the whole frame partakes of the influence, and manifests it by convulsive shivering. The struggle of the powers of life against the disturbed or oppressed action of those organs whose office it is to sustain life continues, till at length the highly-excited powers of the heart and arteries overcome the inertia of the capillary circulation, and the blood once more courses freely through the veins. But this excess of action does not immediately cease with its victory, a period of fever succeeds, till at length, exhausted, the capillary circulation becomes relaxed, perspiration bursts from every pore, the excitement of the heart subsides, and the circulation returns to its natural condition for a time. This period of repose is not, however, permanent; by and by the capillaries again succumb to the effects of renewed impression, the same effects are produced as before, and the same struggle ensues. The duration of the cold fit depends upon the susceptibility of the sympathetic, to be sooner or later roused to perception of the disturbance of the vital functions which is taking place, and on its ability to excite the organs of circulation to more healthy action, for according to this will the struggle be more or less severe and protracted, and in like manner the severity of the congestion and abridgement of the period of intermission will be in proportion to the power of the impression to produce the paralytic condition of the capillary vessels by its agency on their nerves, till the climax is reached in cholera where intermission is either wanting, and consequently fatal, or very imperfect.

If, then, the cold stage commences in disturbed capillary action, and contraction of the veins of the extremities, by which the blood is forced into the interior sinuses of the chest and abdomen, distending the spleen, oppressing the heart's action, and disturbing the circulation and functions of all the viscera, it is evident that to prevent or remove this disordered capillary action before it produces the above effects, will be to prevent or cut short the fit.

If again capillary disturbance have taken place, but blood from the extremities be prevented from reaching the interior in great excess, and from producing more than mere disturbance in the circulation and action of the vital organs, the symptoms of congestion, or the fit, will be prevented, or so far mitigated that reaction will take place with comparative ease.

Of, thirdly, congestion and oppression to the heart having taken place so severely as to prevent reaction from being evinced by shivering, the removal of some part of the blood which is producing it will enable reaction to take place, and this last is the use of bleeding in cholera, as well as in the cold stage of ague. In the cure of ague, therefore, the three intentions we have to fulfil by treatment are—

1st. To prevent disturbance of, or restore natural action to, the capillary circulation.

2nd. To prevent excessive congestion, by anticipation.

3rd. To relieve this if it have taken place.

The first has been accomplished sometimes by producing a sudden general impression on the nervous system,—as for example, by unexpectedly plunging the patient into cold water; but the more usual method is to give those medicines which possess a peculiar power in preventing periodicity, such as arsenic, and quinine, or if we consider their *modus operandi*, we might say those which possess a peculiar tonic effect upon the capillary circulation, or upon the sympathetic nerve in that part of its functions, and which, by producing an effect directly opposed to that of malarious poison, act as antidotes to it; in the same manner as diffusible stimulants will oppose the depressing effect of digitalis or aconite on the action of the heart.

The first, then, is chiefly the medicinal part of the treatment, which shall be considered hereafter; the second and third rather mechanical than medicinal, for the second intention is attempted to be fulfilled by the application of tourniquets to the limbs in such a manner as to retain as large a quantity of venous blood in

the extremities as possible, but is still better effected by the early use of venesection before the more prominent evidences of congestion have been manifested. The third is, after the congestion has taken place, to draw blood rapidly from both arms, in order to relieve the congestion.

The mechanical treatment of ague by bleeding, therefore resolves itself into this, that if we can bleed after disordered action in the capillaries has commenced, and as yet has only disturbed but not oppressed the action of the heart, but before the great struggle of the system which ensues on established congestion has begun, the abstraction of blood is easy, safe, and effectual in preventing congestion and producing immediate cure; but after shivering has begun, bleeding is unnecessary and may be injurious, because it will then disturb the healthy reaction of which this is an indication. If practised after the commencement of shivering, the first effect of bleeding will be to bring back the congestive stage with tendency to collapse, and afterwards to relieve it; but this is done at unnecessary expense of blood, and although generally successful in cutting short the ague, is practically neither so safe nor so effectual as bleeding just before shivering begins, and therefore it is better to delay till the next antecedent period.

When, however, the evidences of extreme congestion exist without shivering, shewing that it is becoming dangerous, and that due reaction is prevented by the mechanical obstruction offered to the heart by excess of blood, bleeding from the veins cannot be had recourse to too promptly, in order to relieve it and the other organs from the pressure. But although in an early stage these are perfectly good and intelligible reasons for bleeding where congestion is severe, the practice is not to be recommended after it has existed for a long time, and the reason is this,—

Experience has proved, that often in cholera, where scarcely any external evidence is given of reaction, or restoration to a more natural condition of the circulation, such restorative action is nevertheless really taking place, and if the powers of life can only support the oppression without utterly failing, for a certain period, the disturbed circulation of the capillaries will by and by cease, the heart be freed from obstruction, and the general circulation be more or less restored. Practically, therefore, it is better and safer not to use the lancet if congestion have existed for several hours, lest by bleeding we disturb the natural tendency to recover, so far as to reach a second period of relief at last, if not of reaction: and lest instead of relieving oppression, we should thereby produce syncope. Under such circumstances it is more advisable to trust to medicine and to nature, until the 18th or 20th hour in quotidian disease, or till an hour or two before the next anticipated fit in other forms, shall afford us a safer and more advantageous opportunity of pursuing the same practice with a view to arrest the congestion in its renewed accession. The case, however, is very different when early called to a patient in whom this condition has existed but a short time, and when there is reason to believe the heart to be in full possession of its energies and only in want of mechanical relief to enable it to resume its powers. In such circumstances there is not only no danger from bleeding, but its effect is little short of miraculous, and in the course of a few minutes, the patient arises from a bed of death and torture, to the full enjoyment of life and health.

In a case like this, no mistake is so fatal as delay, which is unfortunately the most generous one, for here the timid practitioner fears to bleed when he can hardly feel the pulse; he hesitates and waits until he observes it rise a little, and then acting on the rule, rather than on the reason of the practice, he opens a vein, cuts short the feeble attempt at reaction, and kills his patient in the attempt to cure him. Some have even carried culpable ignorance of the intention of bleeding in cholera so far, as failing to obtain blood from a vein, to open an artery, little thinking how much reduced is the quantity of properly arterialized blood that amid the disorder reaches the left side of the heart, and that upon the capability of that little to sustain life through the struggle depends the life itself. By taking arterial blood he takes the life of his patient, produces syncope, and having removed the feeble resistance to death which still existed, his patient sinks at once and invariably into complete collapse. Of this fact there is no want of examples on record. Be assured that the rising of the pulse after it had been lower, in cholera, as in congestive ague, is positive reason against bleeding, and the best evidence that the constitution possesses the power to carry the patient over that day's

attack, to enable him to reach a second, if only let alone, and not worried to death with over-treatment.

When, however, we decline to bleed after the patient has been labouring under severe congestion for five or six hours, we must search for the practical reasons against doing so, in the effects produced by bleeding in the hot stage of intermission. This is a subject on which I can speak from sad experience, and one on which unintentional evidence is borne by many cases reported in various works on cholera, where bleeding has been practised in a late, but yet too early, period of the attack.

In ague, when the period of congestion is over, and the febrile marks the progress towards a return to natural action, but where the impression which produced the cold stage is as yet only partially recovered from, it is evident, if the theory be correct, that the effect will as readily be renewed as light upon the half glazed eye, which, having been fixed on an object till insensibility is produced, and only half restored to its sensation by removal, is again subjected to the impression, without sufficient interval fully to regain its powers, it becomes almost immediately reaffected as before, and insensibility is nearly instantaneous. So it is with bleeding in the hot stage of ague; syncope and return of the congestion are the immediate consequence; or in less severe cases, or later in the hot fit, the intermission is in danger of being converted into remittent fever of a low, irritable, and dangerous character. Much more might be urged on this subject to show that, independently of the above considerations, that period which immediately succeeds to a long and exhausting struggle of the heart and arteries is not the most favourable time to expect a greatly increased effort, but that on the contrary, when the tone of the exhausted vessels, now long accustomed to an overcharge of blood, has become impaired, syncope should be a more probable consequence of venesection than relief and reaction.

If then we have reason to believe that there is a natural tendency to recover from this condition, and to dread and expect its renewal at a certain future period, we must be exceedingly careful not to run into the dangers we have indicated by mistimed bleeding, but rather trust to medicine alone, and await that more favourable period, which, with proper care, will arrive with certainty in by far the greater proportion of cases of congestive ague, and also, I feel assured, from my own observation, in cholera.

We shall have occasion again to return to this subject, but were I called on to give a rule for bleeding in the congestive stage, it would be to bleed early and boldly in the first, or even the second, hour, but no later, till the eighteenth or twentieth, after its first manifestation, when the same rule will again apply after the twenty-fourth.

The above remarks have been addressed chiefly to the consideration of the cold stage of intermission fever, and their application to cholera has been only incidental; nevertheless I have stated, that I believe cholera to partake also of this character,—viz., a tendency to intermission, however slight and imperfect. I am unwilling to state a fact of this importance on my own observation only, and prefer to rest the argument on the near relation of cholera to quotidian ague, and on its connection with diseases of an intermitting character, with which it was associated in its first onset in Persia, in 1842-3. This will form the next part of our enquiry. For the present I shall content myself with stating that the perusal of cases by a great variety of authors, has not tended to change this opinion; and I conceive, that if read in the same spirit with which I perused them, this will also become your opinion of the disease, both as it has appeared elsewhere, and as it will probably appear here. In the usual form of cholera I must allow that the symptoms of this condition are very slight indeed, and I cannot expect them to be conclusive with most, because only to be recognized, if recognized at all, on being sought for with the desire to find them, which undoubtedly is not good evidence. The obvious and external signs of its existence, merely amount to this—that in most cases of cholera, not rapidly fatal, if visited about the eighteenth or twentieth hours after the commencement, the patient will be found lying in a sort of lethargic condition, apparently more sunk and more resigned than he had been for several hours before; but on examining the action of the heart with the stethoscope, you find it more natural and less excited; you find the warmth a little more extended on the chest, and the patient rather sulky than insensible. If, finding him in this condition, you sit down

by him, and watch what takes place, you observe this apparent lethargy cease, he again becomes agitated, throws off the bed-clothes that he had lately permitted to remain upon him, the action of the heart again becomes tumultuous, and the previous signs of suffering are increased. This certainly is but small evidence of intermission, nevertheless it is some, and considering it as such, the efficacy of bleeding in this stage of repose, or just as the agitation is beginning, has been such in my own practice, as to my mind, to corroborate the opinion; whereas the result of the practice of bleeding as the pulse begins to rise very slightly previous to the period when this kind of repose might be expected, (as I have seen practised by others, and which you will find recorded in many published cases,) is very much the reverse. I can only endeavour to reason on this subject, which must be left to the general experience of others to decide. I am satisfied, however, that as far as my own has gone, the rule I would attempt to impress, with regard to the most favourable times for bleeding, is correct.

There are, however, other objections to this belief, as, for instance.—Why should not a man recovered from cholera be subject to continued daily accessions? This I confess myself unable to explain, but such is the case with many other diseases, such as ague cured by bleeding; and it is not always the case in cholera, though the character of the accession may differ. It would be too much to attempt to explain everything of what is confessedly so obscure, that even the smallest contribution to its history is looked for with anxiety; but while upon this subject, I may merely mention one point of observation, which, if more extended experience tend to confirm it, may aid in explaining the natural mode of cure in cholera. This is, that in all forms of quotidian ague with which I am acquainted, there appears a marked tendency to run a course of three days; and you will find many recorded cases of cholera which will bear this interpretation, where, after three accessions, or, if you please, three days' continuance, of the symptoms of cholera, the coldness and purging cease. Thus, a man has purging one day and gets better; next day he is attacked with algid cholera, he struggles through this, and there is imperfect attempt at reaction, but the purging, cramps and coldness, again become severe on the third; if this day's accession be not fatal, he goes on into the stage of consecutive fever on the fourth day. Many cases appear to confirm this view, and many to oppose it, as may very naturally be expected for it is by no means easy to distinguish the effects of the very active treatment pursued, from those of a very active disease.

In treating of cholera, one of the greatest difficulties arises from its unfortunate and most inappropriate name, which would seem to point to the diarrhoea and disturbance of the bowels as the essential part of the disease; and if we look merely to popular opinion, and to that countenanced by documents issued by authority, it would appear as if no room were left for doubt upon this subject, and that the great matter to be attended to in the cure, is the arrest of diarrhoea, as if that were an invariable symptom, and the most imminent source of danger. It is undoubtedly very right in popular treatises and directions, to fix public attention on this symptom, because in the epidemics best known, this has been one of the most frequent early effects, and it is well that it should be looked upon as most dangerous, and as a good reason for applying for medical aid before worse follows; but it does not become the professors of medicine, as a science, to adopt such an opinion without examination. We have endeavoured to shew, that, according to particular circumstances, of which we are ignorant, a very considerable derangement of a part may exist without that general disturbance of the whole capillary system, which we observe in the cold stage of ague or a confirmed attack of cholera,—that exudation may at one time take place from the bowels; at another into the cellular texture of the body generally or locally; at another, that this peculiar condition may chiefly effect the cerebral system, with extremely little or no evidence of the capillary circulation of the extremities partaking of the influence,—that in fact, the force of the disease may at one time be directed on one class of organs, at another on another, just as we witness the fever of one year to be attended with ulceration of the ileum,—of another in the colon,—of another with pneumonia,—and yet, another with cerebral affection, &c. So when we come to consider the different modes in which the system may be and is affected by the impression of a choleric influence, we shall find it producing the same effect on the general capillary circulation, and the same

consequent congestion of the interior organs; but we shall observe that this oppression does not always seek the same mode of relief, although the end attained is still the same—viz., diminished quantity of the venous blood; and that it does not uniformly expend its force by the exudation into the intestines, which is the form we are most familiar with, but that in like manner exudation will take place into the serous tissues and from the skin. These are my reasons for not insisting so much as is usual on the diarrhoea of cholera. Even those authors who lay much stress on this symptom, constantly inform us that the most malignant cases are those in which there is neither vomiting nor purging; such, for instance, as those extreme cases which almost always occur on the first arrival of cholera in a district, where the patient is seized with sudden pain in the epigastrium and expires in a few minutes, with the word "water" on his lips, but without either vomiting or purging,—that is to say, without the more ordinary means of relief to the congestion having come to the aid of the vital powers. Thus, Mr. Parkes, who is one of the most recent authorities in cholera, but whose views are very different from those now advocated, says:—"There is no one who has seen much of cholera who does not know that, exclusive of the mildest forms of the disease, a case with little vomiting and purging is more malignant and more rapidly fatal than one in which these are prominent symptoms;" in other words, this might be expressed, that where natural relief to the congestion does not take place, the congestion proves more fatal. Premising then, that we do not look upon purging as essential to cholera, but only as the most common mode of relief to the circulation, and that it takes place earlier or later in the stage of congestion, according to the peculiar tendency of the epidemic and condition of the individual attacked, we shall trace the ordinary course of the first stage of cholera up to this point, passing over those cases of diarrhoea in which it would appear that the relaxed condition of the enteric vessels proceeds *so pari passu* with the general tendency to congestion, as to prevent any serious amount of internal congestion from occurring, such as is very frequent in the first day's attack of cholera, and from which many recover without passing into the algid stage.

When a man is attacked with cholera there is something in his appearance, which another, who has had experience, may recognize, even before the patient himself is aware of it; there is a sunken clay-coloured cast in his features; he looks stupid; perhaps has slight dimness of vision, or dullness of hearing; his hands look shrivelled, the nails blue, and veins on the back of the hand are dark and contracted, like lines traced with ink upon the skin; it is cold and damp to the touch; if you look at the tongue you find it clean, pale, and watery, as if macerated till deprived of blood, and the conjunctiva is bloodless. He, perhaps, now feels a sudden but slight pain dart occasionally through the left breast and arm, and if you press against the epigastrium, especially over the spleen, he complains of pain; he has then sudden call to stool, perhaps vomiting, or according to the character or type of the disease, there may be intense pain and sense of burning in the stomach, &c. Let it suffice for the present to trace the course of these symptoms up to this point.

The shrunken condition of the skin indicates the state of the peripheral capillary circulation, and when the minute vessels reject their blood, it accumulates in the vena cava, overcharges the right auricle and ventricle, and interferes with their action; it distends the spleen to its utmost capacity as the reservoir provided by nature to relieve the circulation when oppressed by too great accumulation of venous blood. Hence pain referable to the heart, and that produced by pressure on the spleen; the pulmonary capillaries partake of the inaction, and resist the passage of blood through them, the accumulation of blood continues from the exterior, and the inferior vena is so distended that it is impossible for blood to enter it by the renal veins; the circulation of the kidneys being thus suspended, their secretion is arrested, hence suppression of urine. Still blood accumulates which cannot revert through the well-valved veins of the extremities, and it must go somewhere. The portal circulation already oppressed, so as to prevent the secretion of bile, now yields still further, and the blood is forced back in a retrograde course along the mesenteric veins till their minutest terminations on the villous coat of the intestines are injected as with a syringe, and their natural action is at an end; a little more blood suffices to make the watery particles filter through the membrane, carrying with it the mucous epithe-

lium which gives that peculiar character to the cholera-evacuation that has been so aptly described as the rice-water purging. No sooner, however, has a large evacuation of this kind been produced, than immediate relief is, in the great majority of cases, experienced by the heart which had been struggling with the load of blood that oppressed it; the same effect is produced directly which we endeavored to produce indirectly, by opening the external veins, and the heart is thereby enabled to overcome the resistance of the capillaries (already, as I think disposed to relax,) thus a natural cure is often effected, which the well-timed administration of a stimulant may hasten and confirm. If, however, this first evacuation of the fluid particles of the blood does not suffice to give relief, the same effect of increased congestion and attempted relief by purging takes place again and again, till the power of reaction ceases, and the patient dies in the stage of collapse. Perhaps, however, he is more fortunate, and though ineffectual to produce complete relief, and restore the power of the circulation, these frequent drainings of the interior veins may suffice so far to relieve him, that the congestion does not destroy life, and there may yet be sufficient blood pass through the pulmonary capillaries to maintain life through this emergency, and so far to restore more natural action, as to permit of something approaching to repose to the patient from his sufferings, and partial return of the organs to their natural functions. This would doubtless proceed gradually to reaction, and sometimes does when there is no fresh accession of capillary disturbance to renew the congestion, and the consequence is the low form of fever alluded to; but unfortunately there appears to be a tendency to relax, which my observation leads me to believe occurs just twenty-four hours after the first commencement of capillary disturbance, the weakened powers now more readily yield to the oppression, and about the twenty-sixth or twenty-eighth hour is one of the most frequent periods of death in those who have escaped during the first eight hours. After this the period of death must be uncertain. I find that Mr. Parkes gives the average period of death in forty-one cases as twenty-seven and a half hours from the commencement.

Having now considered the subject of congestion at great length, —first, in its probable origin; secondly, in the effects on the peripheral circulation; thirdly, in the effects and symptoms of the distension of the thoracic and abdominal veins and viscera; and fourthly, the artificial and natural means of mechanical relief and cure, we have now, I think, only to consider the symptoms of recovery and of death in cholera, and of the post mortem appearances, before we proceed to the medical part of the treatment.

The symptoms of the disease, if traced in their natural order of succession, are as follow, and those of recovery these reversed:—

1st, Constriction and bloodlessness of the capillaries—of the skin first, and afterwards of other organs, with coldness of surface.

2nd, Oppression of the heart and pain in the epigastrium.

3rd, Suppression of urine.

4th, Suppression of bile.

5th, Vomiting or purging—one or both, or neither.

6th, Muscular spasms in connection with spasmodically contracted colon, and with the state of the bowels.

7th, Especially where the purging has been absent or scanty, tetanic convulsion of the whole body, from the influence which at first was confined to the circulating system, proceeding onwards to attack the nervous system, as the circulation of arterial blood ceases.

8th, Death by mere cessation of action of the heart, &c., or by affection of the nervous system in tetanus, or both combined.

9th, Returning warmth to the skin after death, which in life had been icy cold. This, as far as my own experience goes, is always the case, commencing in the extremities, but, perhaps, does not occur so remarkably when purging has been very long continued, and the disease much prolonged. Of this I cannot speak with certainty. Partial return of warmth to an isolated part of the body is mentioned by several authors as a sign of extreme malignancy in the attack, and a certain forerunner of death. In all the cases where I have witnessed death from a rapid attack of cholera, whether in this country or in Persia, where there was either no purging, or where it had soon ceased, I observed the feet begin to get warm some minutes before death, and sometimes the warmth spread even above the knee, while the thighs and body remained cold, and the patient yet lived. This I look upon

as a sign of death, beginning in the extremities, and I have invariably observed, that after the occurrence of this symptom, the least interference was apt to induce tetanic convulsion. I have twice attempted to draw blood under these circumstances, but am now convinced that this symptom always is a sign of death, whether the patient appear to live or no, and I feel much inclined to consider that hope exists so long as this symptom is absent. We shall again allude to the subject in speaking of the treatment by heat and cold.

*Post mortem* spasms in the muscles not unfrequently occur, even some hours after death. These do not appear to be the mere effect of relaxation of spasmodically contracted muscles, but rather resemble the jerking spasms produced by galvanism on an animal recently killed, and are probably intimately connected with the cause of warmth returning to the corpse, which in life had felt icy cold, and afford some reason to believe that the condition of the capillaries produced in life by cholera is not a mere cessation of vitality in them, as we have considered it; for the cold, where purging is scanty, exceeds that of any dead body, inasmuch as to suggest a question, whether the chemical or electrical actions in the capillaries which belong to health may not be not only impaired, but actually reversed in the disease, and heat absorbed instead of being evolved.

On opening the body after death, the appearances are exactly such as we should expect from the symptoms. The right side of the heart is found gorged and dilated, the dilatation and softness of the coats being greater as the case has been more protracted. The superior and inferior cavæ, and all their larger branches, are loaded with dark, tarry, half-conglobated blood. The minute vessels of the lungs are empty, and the parenchyma often shrivelled and contracted, being pale on the surface, while the pulmonary artery is quite full of blood. The left side of the heart is contracted, and either empty or contains firm coagula, indicating a greater amount of life in the arterial than venous blood, which forms no solid conglumum; and the contraction of its auricle and ventricle a less amount of exhaustion of the muscular fibre on the left than on the right side of the heart, which is flabby and distended. The amount of congestion of the portal circulation, &c., is always considerable in the large vessels, but the smaller ones are more pale and bloodless in cases in which there has been much exudation. The gall bladder generally contains bile. The spleen is commonly congested, but sometimes found empty, which is, probably, a *post-mortem* effect of its peculiarly elastic structure; when death takes place from consecutive fever, however, it is soft and friable, an almost invariable condition in death from malarious poisoning by tropical fever, &c. The intestines present a peculiar appearance, the colon much contracted and empty, the small intestines containing fluid similar to that passed in life, mixed with a denser material, probably the fibrin and albumen, in peculiar chemical combination from which, the more fluid part of the blood had been drained off, the sub-mucous coat is distended in different places with the same material, sometimes mixed with broken-down red globules. The kidney is nearly normal, and the bladder contracted; the brain seldom presents anything peculiar. These appearances require no comment beyond that which has preceded their description in relation to the symptoms.

It would appear, then, that congestion and oppression to the circulation is always the cause of death, and that congestion is a consequence of disordered capillary circulation. We have sufficiently discussed the modes, both natural and artificial, of relieving this congestion, but as yet we have left the means of removing its *cause* in the capillary circulation altogether unconsidered, although it is perfectly evident that this must be the main object of medical treatment. The patient is cold, nothing can be more natural than to try to warm him; and the circulation being nearly at a stand, what is more natural than to rouse it with a stimulant? But then he is cold only to our sensations, not to his own; he is burning and suffocating, and cannot bear even clothing, much less external heat; he is craving for ice and cold water, and the hot stimulant draught which we force upon him is torture; he is vomiting, yet anxious to drink.

Are we then to treat him according to our sensation or to his?—to torture him or indulge cravings that appear to us so opposite to what his condition requires?—or are we to disregard alike his sensations and our own impressions, and seek for the means of removing the cause of this anomalous condition?

These are questions of which we shall defer the consideration till our next meeting.—*Prov. Medical and Surgical Journal.*

## SURGERY.

*Description of a Simple Truss in Congenital Hernia.*—Mr. Coates, after noticing the difficulty in maintaining a truss or bandage in position, in the case of infants, mentions a simple contrivance, from which he has experienced uniformly good results.

It consists of a skein of Berlin wool, which is made to encircle the pelvis, one end passing through the other at a point corresponding with the inguinal ring; the end thus passed through is then carried between the thighs, and fastened to the cincture behind. This can be worn at all times, and replaced and cleaned with little trouble, and, moreover, is not likely to gall the tender skin of the little patient.—*Medical Gazette*, Sept. 29.

*Catheterism of the Œsophagus in Cases of Stricture.* By M. TROUSSEAU.—This mode of treatment, which was revived by M. Gendron (*Retrospect*, p. 69), is highly recommended also by M. Trousseau, who has seen several cases successfully treated by M. Bretonneau, and publishes two cases from his own practice. He uses a delicate whalebone rod not more than a line in diameter, and from twelve to sixteen inches in length; at either end of this is fixed an olive-shaped dilator, somewhat straitened in the middle, so as to permit of being surrounded by a piece of dry sponge, which is fixed on with sealing-wax, and is made very slightly greater in diameter than the stricture. The sponge is further secured by a thread, the ends of which are left eight inches in length, for a purpose to be presently mentioned. After moistening the sponge with yolk of egg, it is passed beyond the isthmus of the fauces. Traction is then made on the threads, by which means the end of the instrument is made to take the direction of the œsophagus instead of striking the back of the pharynx. So soon as the stricture (which is generally at the level of the larynx) is felt, the instrument is pushed onward, with some force and a rotatory motion, the left hand being used to support the larynx, which would otherwise be pushed down, and would carry the œsophagus with it. It is of importance to pass the obstacle as quickly as possible, otherwise the presence of the foreign body is apt to induce suffocation. When once the passage has been effected, the sponge is again retracted; and this is repeated a second, and perhaps a third time, before finishing the operation. The operations may be repeated twice a-day, gradually increasing the size of the sponge; and, when the passage is so large as readily to admit a sponge of the size of an ordinary bolus of food, the intervals may be much longer. The treatment should be kept up in cases of long standing for several months, or a year; in more recent cases a few weeks are sufficient. M. Trousseau has tried in one case the cauterization by nitrate of silver, as recommended by M. Gendron; but he does not recommend this measure, believing it to be in the œsophagus, as in the case of the urethra, seldom required.—*Revue Médico-Chir.*, March, 1848.

It is worthy of remark, that almost all the cases of strictured œsophagus in which this mode of treatment has been of service, have been traceable to diphtheritic. This may explain the invariably high seat of the stricture. In strictures with loss of substance, as also in many other cases mentioned by Sédillot (*Retrospect*, p. 69), catheterism would be unavailing; and cauterization in such cases would be a very unsafe proceeding.—*Monthly Jour. Med. Science.*

*Iodide of Potassium in Tertiary Syphilis.*—Dr. Flagg, in the *Charleston Medical Journal and Review*, for May, 1848, has published some observations, principally taken from notes of M. Ricord, during the summers of 1846-7. Dr. Flagg remarks;

Iodide of potassium is the remedy specially applicable to tertiary syphilis in all its phases. Its administration may be commenced by a dose of about seven grains, given three times a day. Should neither beneficial nor injurious effects

result, the dose\* may be increased by seven grains, every three days, until it amounts to four scruples, beyond which it is seldom necessary to go.

When, however, the symptoms are urgent, tending rapidly to the destruction of important parts, or to material interference with their functions, much larger doses are requisite in the beginning. We should, under such circumstances, commence with a scruple three times a day, and may be obliged very much to increase even this. It has been necessary to give as much as an ounce and a quarter in the course of twenty-four hours, before a curative action could be obtained; and even twice the quantity has been given in the same time.

As adjuvants, bitters are very useful, and the patient should be kept on a highly nutritious diet.

It is a very serious error into which some have fallen, in supposing that a patient laboring under tertiary syphilis should be subjected to a mercurial treatment before the administration of iodide of potassium. Tertiary symptoms appearing, the immediate use of iodide of potassium is peremptorily indicated. When, however, secondary symptoms co-exist with the tertiary, mercury should be administered simultaneously with it, and thus often, when neither of these medicines separately avail, the two may be combined with the happiest effect.

The patient should be kept on the use of iodide of potassium during from three to six months, according to circumstances, even though the venereal symptoms should have disappeared; the object being to guard, as far as possible, against a re-appearance of the disease."

The following are some of the pathological effects observed occasionally from its administration. And which require for their alleviation the suspension of the medicine for a while, and such palliative treatment as the symptoms, from time to time, may indicate.

1. Tumefaction of the gums—an increased flow of saliva, and a saline taste in the mouth—subsequently giving place to that of iodine; in short, a species of salivation, not unlike that of puerperal women, and unaccompanied by the copious taste, erythematous inflammation, and tendency to ulceration, belonging to salivation by mercury.

2. After large doses, pain in the cardiac portion of the stomach.

3. Scarcely diarrhoea, unattended by febrile action.

4. Excessive secretion of urine, and sometimes pain in the kidneys.

5. Symptoms of severe coryza, running at the nose, pain in the frontal sinuses, &c.

6. All the symptoms of bronchitis, with the exception of fever and muco-purulent expectoration.

7. Different forms of cutaneous disease, among which we shall notice but three:

(a.) A species of acne, more acute than the ordinary kind, and not confining itself, like the latter, to the face, chest, shoulders, and upper part of the back, but found even on the thighs, where, indeed, it seems at times to develop itself by preference.

(b.) Eczema sometimes of a very grave type. M. Ricord relates a very interesting case, in which he was unable to continue the treatment by iodide of potassium long enough to subdue the venereal symptoms, before the appearance of severe eczema would render its immediate suspension necessary; the eczema always subsiding, and the venereal symptoms, which, up to that time, would decline, making fresh progress whenever the medicine was discontinued. The brain was at length attacked, and the unfortunate patient succumbed, after many vibrations between the two forms of disease.

(c.) Purpura.—M. Ricord supposes iodide of potassium to

exert on the blood a defibrinizing influence, favorable to the hemorrhagic condition, of which influence he regards purpura as an indication.\*

8. A condition of the eyes resembling catarrhal ophthalmia, the lids becoming œdematous, and the ocular conjunctive elevated by serous effusion in the cellular tissue beneath it.

9. Augmentation of the secretive action of the mucous membranes, never terminating, however, in the formation of purulent or muco-purulent matter, unless a predisposition to inflammation exist in the part. A discharge of purulent matter thus occasioned is met with oftentimes in the mucous passages of the genital organs.

10. Cerebral excitement, evinced by a species of intoxication, and sometimes cerebral congestion.—*New York Journal of Medicine.*

## MIDWIFERY.

*Use of Chloroform in Midwifery.*—Dr. Edward W. Murphy, of University College, London, has recently published a pamphlet entitled, "Chloroform in the Practice of Midwifery," from which we extract the following conclusions:

"1st. It does not interfere with the action of the uterus, unless it be given in very large doses, which is never necessary.

2d. It causes a greater relaxation in the passages and perineum; the mucous secretion from the vagina is also increased.

3d. It subdues the nervous irritation caused by severe pain, and restores nervous energy.

4th. It secures the patient perfect repose for some hours after her delivery. These three last effects consequently render an operation much easier to perform, and the recovery of the patient afterwards much more favorable.

5th. The order of its effects on the vital functions seem to be—loss of sensation—partial loss of voluntary motion—loss of consciousness—complete loss of voluntary motion—stertorous respiration—loss of involuntary motion—cessation of the action of the uterus—of respiration—of the action of the heart.

6th. Its injurious effects, when an ordinary dose is given, seem to depend on constitutional peculiarities, or on improper management. Much excitement about the patient may render her violent. Catalepsy has occurred in some; clonic contractions in others. Some patients are slow in recovering from the effect of a large dose; they remain giddy during the day, and sometimes faint when they stand upright.—*New York Jour. Med.*

*Letheon in Puerperal Convulsions*, by S. N. HARRIS, M. D., Savannah, Georgia.—On the 17th of April last, I was requested to visit Mrs. S——, said to be in labour, attended with convulsions. Dr. Morel, happening to be in my office at the time, suggested a trial of the ether, and kindly accompanied me to assist in its administration.

Two days previous, according to the statement of her friends, the patient had experienced some hemorrhage in appearance and quantity similar to the menstrual evacuation, for which she had been bled with the effect of arresting it. It was not until the night of the 16th, however, that her pains came on, and then but feebly and at long intervals. At about two o'clock, p. m. the next day, she was seized with convulsions, and a messenger was despatched for medical aid. The distance being seven miles from the city, we did not arrive until five p. m.

Mrs. S—— is twenty four years of age, stout, and of ple-

\*This property, however, accords so little with others which it is known to possess, that one may well be excused for remaining skeptical as to its existence, under any thing less than a rigorous demonstration.

\*The dose given three times a day; not the quantity given daily.

thoric habit; the labour is a first one, and she is believed to have arrived at the full period of utero-gestation; she has had three convulsions since two o'clock, each of which has been preceded by vomiting of bilious matter; os uteri dilated to about the size of a shilling, somewhat yielding, with a vertex presentation.

A few moments after my arrival she was seized with the fourth convulsion—of the epileptic variety. A fine sponge upon which about an ounce of the ether had been poured, was instantly applied to her mouth and nostrils; and in less than a minute the short, convulsive, sputtering respiration peculiar to epilepsy was completely arrested, and immediately followed by full, long, and deep inspirations, with a total cessation of all muscular agitation. The inhalation was continued a few moments longer, and the sponge withdrawn. Half an hour afterwards the vomiting was renewed and I immediately bled her to the extent of thirty two ounces; but the orifice was not fairly closed before her frame was agitated by another fit. Etherization was immediately renewed with the same success as before, but from the fact of their having been a smaller quantity of ether poured upon the sponge, its influence was not quite so promptly manifested—sufficiently so, however, to indicate its remedial powers.

An examination of per-vaginam now discovered the os uteri more dilated and yielding; the membranes were ruptured, but only an ounce or two of fluid escaped. After waiting half an hour, and finding the contractile powers of the uterus still feeble, I administered twenty grains of ergot, and in fifteen minutes repeated the dose. Strong contractions now came on, and in a short time the patient was delivered of a healthy female child.

Etherization in this case was attempted in the absence of convulsions, but was imperfectly effected, in consequence of the ether having been hastily washed, and thus irritating the lungs; but during the fits it was freely, may eagerly, inhaled; and with the fifth convulsion, all her greater difficulties terminated. Some ten or fifteen days after, she was attacked with fever of an intermittent kind, together with severe headache, but was easily relieved by bleeding, a blister to the occiput, light purgatives and quinine. All are now doing well.

*Remarks.*—The foregoing case has been reported chiefly with a view to illustrate the effects of etherization in convulsions. Nothing could have been more entirely satisfactory; and its power and promptness in arresting the paroxysms were perfectly admirable, hence, in cases where all our hopes of successful termination are based upon the control we have over the violence and duration of a paroxysm, its value as a therapeutical agent must be almost incalculable. In neither of the fits which occurred after our arrival was the duration more than three or four minutes, whereas in each of the preceding it was from twenty to thirty minutes.

The general anaesthetic effects of the vapour of ether are too well known to require comment; but its application to the alleviation of the pains of parturition—particularly in preternatural and instrumental delivery—does not appear to have been as extensive in this country as the writer is convinced it deserves to be. In this city it has been applied to this purpose in a few instances, and, as I am informed, with the most material mitigation of suffering without any suspension of the contractile force of the uterus. It is obvious, however that the remark of Professor Simpson in reference to chloroform may be equally applicable to ether, viz: that there is a point beyond which the inhalation cannot be carried without suspending uterine contraction. I presume through the extension of its influence to the centre of reflex actions, the spinal marrow. In convulsions, therefore, it would be necessary to approximate this point more nearly than in simple uncomplicated labour, (supposing convulsions as well as uterine contractions to have their origin, directly

or indirectly at the centre of reflex actions;) and in the case detailed above, it was my impression that some retarding influence was exerted upon the contractility of the uterus. Of this however, I cannot be certain.

I may remark further, that I am of opinion that in every form of spasm, tonic or clonic, the inhalation of ether may be considered as indicated, and believe that it is entitled to a place among our most valuable therapeutical agents.—*Charleston Medical Journal.*

## MATERIA-MEDICA AND CHEMISTRY.

*Death from Inhalation of Chloroform.*—The case which seems to have made great impression upon the public mind, is that of Samuel Badger, Esq., Solicitor of Rotherham, Yorkshire. It appears from the evidence given before the inquest, that this gentleman applied to Mr. Robinson, one of the most skillful dentists in London, and who has had the most extensive experience in the administration of anaesthetic agents, (he stated in his evidence that he had administered anaesthetic agents in at least three thousand cases,) to have some teeth extracted. Mr. Robinson put only a drachm and a half on the sponge of the inhaler. The instrument was not held close to the mouth or face—the deceased had not inhaled it more than a minute, when it appeared to have so slight an effect, that he requested to have the vapour made stronger. Before this could be done, however, the head and hand of the deceased dropped—i. e., in one second after he had spoken to the operator. A period of about five minutes elapsed from the time at which the deceased entered the surgery to his death. When seen by Dr. Waters, who had been sent for immediately afterwards, the face was livid, the pupils dilated, and the temperature of the body lower than natural. The following were the post-mortem appearances:—

“The body was well formed and muscular; the neck plethoric and rather short; countenance of a bluish livid appearance; eyes [pupils?] dilated, particularly the left; chest well formed, but generally dull all over on percussion, particularly the right side; parietes less resonant over the heart's region than in the natural state. Abdomen prominent, from a deposition of fat; dullness on percussion, extending into the right iliac region; lower extremities not œdematous. On dividing the scalp there was observed some turgescence of the vessels. The membranes presented a congested appearance all over the cerebral mass; there was nothing abnormal in the cerebrum, nor any effusion into either ventricle; the surfaces of the corpora striata and optic thalami were slightly congested; the cerebellum and pons Varolii offered nothing remarkable. On raising the sternum, observation was made of the very small diameter to which the chest was reduced, for it was found that the lungs and heart were pushed upwards to a line extending between the third and fourth ribs; the lungs were healthy and crepitant throughout their entire extent; there were some adhesions on the right side of long standing, but no marked congestion.\* On dividing the pericardium, no undue effusion of serous fluid was found. The heart looked of a paler colour than usual, and was flaccid, but was not in a hypertrophied or dilated condition; some spots of adipose matter were observed here and there on its surface. On dividing the left ventricle, its walls were found thinner than natural, and its tissue was interspersed with ‘fatty’ degeneration; this morbid state was particularly observable at the apex, where the muscular tissue only measured about two lines, and the abnormal deposition was very evident at this point; the right ventricle and septum offered nothing remarkable, but the lesion of secretion already observed; both ventricles contained clots of dark grumous blood. The inner surface of the aorta felt rather rough, and the mitral valves were unequal at their edges, with some slight regurgity; on dividing their base, the tissue was hard, and made a grating noise under the scalpel. Abdomen: The omentum was loaded with fat; stomach not distended by gases; liver preternaturally enlarged, and extending upwards in a line between the third and fourth ribs; it was of a pale brownish colour, and in some parts almost approaching to a dirty white; this was

\* In his evidence at the inquest, Dr. Waters stated that the lungs presented a little sign of congestion.



particularly observable in the Spigelian lobe, where the fatty degeneration was very evident; there appeared to be no other change of structure. It weighed *eight pounds*. The other organs of the abdomen were healthy."

The editor of the *London Medical Gazette*, in commenting on this case, remarks: "The unfortunate case of Mr. Badger is sufficient to show that even they who are most experienced in the use of this agent, are not always able to discriminate those cases in which the inhalation of the vapour is likely to be attended with fatal effects. The deceased was a healthy, muscular young man, who, according to the testimony of his father, had suffered from no difficulty in breathing, or any other apparent disease. The inspection of the body, however, revealed a diseased state of the heart and liver, although not sufficient to account for sudden death. Hence we arrive at the conclusion that a young and healthy-looking person, whose appearance and previous habits of life would create no suspicion of latent organic disease, may still be in such a condition of body that the respiration of the vapour will operate upon him like a fatal poison. It is not here as with a liquid or solid taken into the stomach—the poison enters at once into the circulation, and penetrates through the whole of the system; and but a few minutes elapse between apparently perfect health and the death of the patient. The circumstances under which the poison is administered, do not, in these unfavourable cases, admit of the application of any remedy. The attempt to abstract blood has uniformly failed. Art is powerless in dealing with the poisonous effects of this vapour. It may be said, and we doubt not the truth of the statement, that hundreds, nay thousands, of persons, young and healthy-looking like the deceased, have inhaled this vapour without any such disastrous effects following. We have, however, heard of a very narrow escapes, even where precaution and skill of the best kind had been employed in its administration; and doubtless the experience of many of our readers will furnish them with cases corroborative of this remark. But the death of one person in a thousand, when the vapour has been skilfully administered—and there was nothing in the patient's aspect or account of himself to induce the operator to withhold his consent to its employment—becomes a most serious matter. There should be some extraordinary advantage or benefit to the individual to justify such fearful risk; but the advantage, if any, in reference to the dental art, is the alleviation of pain merely for a few minutes; and the naked question now to be considered is, will any operator feel himself justified, after the case of Mr. Badger, in employing this dangerous vapour for the annulling of pain in the extraction of teeth? If latent disease of the heart or liver could always be clearly diagnosed in a patient, we should not be called upon to put this question; but as Mr. Badger's case proves that a most experienced man, like Mr. Robinson, saw nothing about the deceased to justify his refusal to employ chloroform, it is clear that the most skilful dentist may be working in the dark, and thus unconsciously be the means of sacrificing life for the sake of humouring a patient by annulling a degree of pain which every healthy adult should be able to bear. The facts of this case have, however, a bearing far beyond dentistry. We consider that our remarks apply to all the minor operations of surgery."—*London Med. Gaz.*, July 14, 1848.

**Death from Chloroform in India.**—The following case occurred at Hyderabad, India, and is related in the words of the operating surgeon.

"A young woman presented herself this morning with disease of the distal phalanx of the middle finger of the left hand, requiring amputation at the middle joint. As she appeared of timid disposition, and exhibited more than usual reluctance to submit to the little operation, I administered a drachm of chloroform in the usual way, namely, by sprinkling it on a pocket-handkerchief and causing her to inhale the vapour. She coughed a little, and then gave a few convulsive movements. When these subsided, I performed the necessary incisions, which, of course did not occupy more than a few seconds. Scarcely a drop of blood escaped. The patient was then put into the recumbent posture with the head low. Active means were taken to bring her out of the state of coma, into which she had apparently fallen. But although these means, including artificial respiration, were perseveringly employed for five hours, the *unfortunate woman never breathed again*. I am inclined to think that death was almost instantane-

ous; for after the convulsive movement above described, she never moved, nor exhibited the smallest sign of life. No opportunity was afforded me of making a post-mortem examination; so that it must forever remain a secret whether or no there were any special circumstances, such as aneurism of one of the great vessels, or disease of the heart."

[The chloroform was supplied by Messrs. Twemlow & Co., Bombay. It required a drachm and a half of the same chloroform in another case to produce a slight effect.]—*London Med. Gaz.*, July 14, 1848.

**Fatal effects from Chloroform.**—Mr. R. O. Johnston states, (*Prov. Med. & Surg. Journ.*, July 26th.) that he has "seen two deaths from chloroform; one man was in convulsions for forty-eight hours after the operation, and afterwards expired."

**Adulterated Medicines.**—Extract from Dr. Edward's Report on Imported Adulterated Drugs, Medicines, &c., read before the House of Representatives, June 2d, 1848.—Composed, as is your committee, of a majority of men who have made the study and practice of medicine the chief purpose of their lives, they feel no hesitation in admitting that the facts they are about to submit were but partially known to them, individually, until a very recent period. They have had before them specimens of the adulterations of which they speak, and ask a generous confidence in their statements.

In consequence of the stringent laws now in force in most parts of Europe, regulating the trade in drugs, and the dispensing of Medicines, none but genuine articles, and those of acknowledged strength and purity, are allowed to be used or purchased. All inferior and deteriorated drugs in a crude state, as well as adulterated medicinal and chemical preparations must, therefore, as a matter of necessity, find a market elsewhere; and that market, unfortunately for the people of this country, has long been and still is found in these United States.

For a long series of years this base traffic has been constantly increasing, until it has become frightfully enormous. It would be presumed, from the immense quantities, and the great variety of inferior drugs that pass our custom-house at New York, in the course of a single year, that this country had become the grand mart and receptacle of all the refuse merchandise of that description, not only from the European warehouses, but from the whole eastern world.

On reference had, not long since, to the custom-house books in New York, it was found that 7,000 lbs. of rhubarb-root had passed within ninety days, not one pound of which was fit, or even safe, for medicinal purposes. Much of it had become greatly deteriorated by age, was worm eaten and decayed, while other portions, notwithstanding they showed a somewhat fair appearance externally, (the colour, &c., having been brightened by artificial means for the purpose of deception,) gave internal, unmistakable evidence of the virtue of the root having been extracted by previous decoction, for the purpose of making what is sold as the "extract of rhubarb," and thereby rendering it of no further value for medicinal use. This article was invoiced at from 2½ pence sterling, (5 cents) to 7 pence (14 cents) per lb. The price of good rhubarb at the place of production, has been, for several years past, about as follows:—The East India, from 35 to 45 cents per lb., according to circumstances; the Turkey or Russian, from \$1 25 to \$2 50 per lb., exhibiting a very wide difference in price, as will be perceived, between the good and refuse article.

Another of our more important articles of medicine, particularly in the newly-settled portions of our country, comes to us in large quantities entirely unfit for medicinal purposes; but like the worthless rhubarb root, is eagerly bought up at auction sales by unprincipled drug dealers, and sent to the drug mills, where it is ground and powdered, the colour, smell, and natural taste imitated, and afterwards sold to country dealers and others as a good article.—The result of this is, that it is finally dispensed to the sick, at the sacrifice, doubtless, of many valuable lives every year; we mean the Peruvian bark.

Several varieties of this bark are used in medicine, viz., the "yellow," the "pale," the "red," &c., but either variety can scarcely ever be obtained, at the place of production, of good quality, and in good condition, at a less rate than from 30 to 40 cents per pound; and the quality generally used for the manu-

facture of sulphate of quinine, or the salts of Peruvian bark, has not for years been obtained from those parts of South America where it is produced, at a less price than from \$60 to \$80 per quintal of 100 pounds. The worthless article, particularly referred to above, comes principally from Europe, and seems to be made up of the different varieties already named, as well as to be in a greatly deteriorated condition from age, or from having had its medicinal virtues extracted, for the purpose of making the extract of Peruvian bark—a valuable medicine.

From appearances, it consists mainly of refuse material collected together, in foreign warehouses, for exportation. It is invoiced from 2 to 7 cents per pound. Thousands of pounds of this trash have passed through the New York custom-house, at the above price, during the past year, and may justly be considered very dear even at those rates.

Columbo and Gentian roots, and many more of the important crude drugs, come to us in a similar worthless condition.—*New York Journal of Medicine.*

*Liquid India-Rubber as Sticking Plaster.* By Mr. DOUGLAS FOX.—If liquid India-rubber, spread upon calico, or other material, by a stiff brush, or by a knife, be used as adhesive plaster, it will be found to answer far better, in almost every case, than any other adhesive material, as it sticks firmly, is pliant, produces no irritation to the skin, and will bear lotions, or washing over it. It is also most valuable in cases where the skin requires a soft plaster of an unirritating nature for its defence, as in old persons, or others long confined to bed. In such cases, it is better to use either soft leather or the vulcanized India-rubber, made in thin sheets; the latter, from its elasticity, is often the best, as it stretches with the skin on every movement of the body. To many kinds of wounds, from operations or otherwise, strips of thin vulcanized India-rubber, spread with the liquid, will be found invaluable as elastic adhesive plasters, as they become firmly attached to the skin, and give way to all its movements. But should any wounded part require a portion of the plaster to be non-elastic, as in the case of operation for hare-lip, &c., then, in order to secure such part from being stretched, a short piece of calico, about an inch in length should be stuck upon the middle of the elastic plaster, by which means that portion would become stationary.

If a circular piece of thin vulcanized India-rubber, about two inches in diameter, be spread with the liquid, and applied on the abdomen of an infant having umbilical hernia, and a common bandage, such as is generally used for infants, be passed lightly round the body, the profusion will be instantly checked; and if the same plaster be again spread with the liquid and re-applied, when it comes off from time to time, no trouble will be experienced by the infant. It is not necessary to use any pad or compress.

The above statement will give a general idea of the subject the materials may of course be used in a vast variety of form.—*Lancet*, Feb. 7.

*On Muriate of Opium.*—By J. G. NICHOL.—During the last ten or twelve years I have made and prescribed a solution of opium, which I think is not mentioned in any work on Materia Medica with which I am acquainted. I use powdered Turkey opium and water, pretty strongly acidulated with muriatic acid. I have found, by experience, that this is the best anodyne I am acquainted with. I see, by Dr. Percia's *Materia Medica*, that mention is made of Dr. Porter's solution of opium in citric acid. I made and used the same sort of preparation ten years ago; but it did not answer. It caused a great deal of headache, and other unpleasant symptoms: moreover it became muddy, and appeared to be decomposed; therefore, I gave up using it. I have called this preparation of mine Muriatic of opium, but perhaps it is not a very correct name. I may mention that I prepared solutions of opium with acetic, nitric, sulphuric, citric, tartaric, and muriatic acids, and also prescribed them, but the muriatic solution was vastly superior to any one in every respect. All of them produced headache except the *muriatic*. I prefer muriate of opium to the tincture, wine, or powder of opium, and also to the muriate and acetate of morphia; in fact, to any other preparation of opium. It never makes any headache, but all the other preparations do.

My preparation is made according to the following formula:

Take of the best Powdered Opium, oz. j.  
Muriatic Acid, oz. j.  
Distilled Water, oz. xx. Mix.

Shake this mixture very frequently every day, during fourteen days, then strain and filter. The dose is from twenty to forty drops, according to circumstances. Many of my medical friends have tried this preparation, and they highly approve of it.—*Dublin Medical Press.*

THE  
**British American Journal.**

MONTREAL, JANUARY 1, 1849.

THE CHOLERA, AND MEASURES OF PRECAUTION.

In pursuance of our subject, we will now indicate the precautionary measures which should be adopted. This matter of enquiry, naturally resolves itself into two sections—the one of a general nature, the other special; the one having reference to general sanitary measures, the other to those appertaining to individuals.

And first, with reference to the *general sanitary precautions*. As it has been demonstrated, in the most ample manner, by repeated and widely spread observation, that the disease will manifest itself with greatest virulence, and will predominate to the greatest extent, in close, ill-ventilated places, and wherever impurities, whether of animal or vegetable origin, exist, it follows that the utmost solicitude should be exhibited in regard to drainage and cleanliness. Public authorities, therefore, wherever they exist, should direct early attention to the state of the sewers and drains, to improve their condition, if necessary; to ascertain that they are pervious; and to enclose in a proper manner, those which are open and exposed, with the intention of checking the escape of noxious effluvia. Not only should the strictest attention be directed to these matters, but it becomes an equally imperative duty to prevent the deposit of decaying or decayed animal and vegetable matter within the city limits, during the winter season; and not only this, but to cause the removal of all such accumulations, wherever they may be found to exist within the limits specified, and in the neighbourhood of dwellings. And there is a third duty which especially devolves upon the civic authorities, attention to a thorough system of drainage. Wherever accumulations of water are to be found, there malarious exhalations must, to a greater or less extent, prevail, whenever the summer's sun produces its usual effect upon them. Doubtful as the dependence of the disease may be upon malaria, as effect and cause, yet there can be no question that the moist atmosphere which invests such situations, is highly favourable not only to its development, but to its propa-

gation; and, consequently, a system of drainage, efficiently and scientifically carried out, becomes at this moment, an object of critical importance.

Irrespective of these duties which devolve upon the local authorities, there is another of not less general moment—the enforcing of cleanliness in dwellings and houses, generally. The lower classes are proverbially negligent, in this respect. Their dwellings are, very generally, in the most filthy condition, apt receptacles for the poison, and apter places to increase its virulence and aid in its dissemination. It is not too much to say, that the police, or other parties, to whom the power should be delegated, should be instructed to inspect all such dwellings, and insist upon the due observance of cleanliness, causing them all to be thoroughly whitewashed, under penalties in the event of disobedience. With these necessary and proper precautions, we hesitate not to affirm, that the disease will be divested of much of its virulence, and its contagious character, almost, if not entirely annihilated.

2d. With reference to *personal sanitary precautions*. Intemperance both in eating and drinking should be avoided. The benefits derivable from the use of spirituous liquors, even in moderate quantities, is very questionable at any time, but becomes especially so, during the prevalence of cholera. All malt liquors, more especially when tart, and ginger beer, as well as other summer beverages of an acid nature should be avoided. We would advise no abrupt or sudden alteration of habits, but we would especially enjoin temperance. Diets should be plain, nutritious, and easily digestible. The use of unripe vegetables should be avoided, such as melons, cucumbers, &c.; but there are some with whom the moderate use of green vegetables is essential to the maintenance of health, and to whom the use of them, when well cooked, may be safely permitted. As far as diet is concerned, this rule may be safely acted upon, to live in that manner which has previously been found most conducive to health. Severe fatigue, and long fasting, with irregular sleep, are to be shunned as likely to induce exhaustion which would predispose to an attack. The clothing should be comfortable and warm, and if at any time, or in any part damp, should be immediately changed. Personal cleanliness is at all times desirable, but is especially so during the prevalence of cholera. Such are the simple measures which we would recommend for general adoption; and their main object is to preserve the body in a state of as perfect health as possible, avoiding excesses of all kinds, and abstaining from every thing likely to derange or impair healthy digestion.

Cholera most usually manifests itself by premonitory signs, of which diarrhœa is one of the most prominent. This may exist even for days before the disease is developed in all its intensity. To such a fact, would we invite especial attention, and it becomes invested also with the greater importance, when it is recollected that the disease is in a very large majority of cases perfectly manageable in this its early stage. It is not our intention to lay down rules of treatment. Unprofessional persons are the worst possible judges of proper remedial measures in their own cases. We think that the published detail of prescriptions in an indiscriminate manner, especially when they contain opium, calculated to do more harm than good; and taking this view of the case, we would rather advise an immediate consultation with a physician:—this is by far the best method, and in the end will prove the most satisfactory to the patient.

Thus far, have we written for the public. A word now to our professional brethren. Our pages will contain, for their information, the treatment adopted in the disease by the profession elsewhere; but we believe there is no record of what has proved during the visitations of 1832 and 1834, the most successful practice in this country. The treatment by calomel and opium, which proved so successful in this city, appears to have been as unsuccessful in Great Britain, and this whether the former was given in large or in small doses. The results of experience have here confirmed the utility of such practice. One medical gentleman of this city pushed it, and successfully, to the extent of 100 grs. in five hours—the first dose only being combined with opium. Others again, were successful with smaller quantities of the two exhibited in the form of pill, in both cases conjoined with proper collateral treatment. We have no means of determining the relative value of the lines of practice, but the statement is worthy of the most anxious consideration.

#### CORRESPONDENCE.

REPLY TO DR. WORTHINGTON.

To the Editor of the British American Journal.

SIR,—I have taken the trouble to make particular enquiry into the charges made against the Board of Governors of the College of Physicians and Surgeons, of Lower Canada, by Dr. E. Worthington, of Sherbrooke, in the last number of your Journal; and I deem it necessary, that notice be taken of the said charges, for the satisfaction of the profession at large,—else, I presume, many may be induced to believe all the Dr. has said, and, by listening to his inuendoes, they may be tempted to entertain suspicions to the detriment of the institu-

tion. In the first place, with regard to the reason assigned for the non-election of Dr. Gilbert, to fill up the vacancy created by the removal of Dr. Marsden from the District of Three Rivers, there is a *prima facie* evidence of truth, inasmuch, that the Secretary intimated the same officially to Dr. Gilbert, as being the resolution the Board had come to; but, in fact, no such resolution was passed, although such happened to be minuted in the hurry of the moment. But the conversation was to this effect—"That, inasmuch as other candidates had come forward who were well known to the majority of the Board, (Dr. Johnson especially,) for their respectable standing in the profession, and for their seniority to Dr. Gilbert, the Board resolved to consider them more entitled to their suffrages." Accordingly, the election was proceeded with, and Dr. Gilbert was not elected—not owing to his ineligibility, nor from any want of respect towards the signers to his memorial, but, simply, because the other nominees were his seniors; and, moreover, because the principle was one which had been adopted on all former occasions—and had never been objected to, not even at the celebrated uproarious first-meeting, convened by Executive authority for the election of Governors.

Dr. Gilbert may rest assured that his is not a malicious case, for the principle upon which the Board acted was based on the spirit of the bill, which, although it positively says, that every member is at once eligible as Governor, goes on to say that from and after the passing of the act, none shall be eligible as *member* unless he possess a Provincial license of at least four years date. If, therefore, it be deemed advisable to restrict memberships to Provincial licentiates of four years standing; surely it is equally necessary that the same rule should apply to a candidate for Governorship; and, in the face of an entire absence of any clause in the bill, providing for such a condition, surely the Board must be admitted to have acted with most perfect consistency in adopting this principle, especially, when, as in this very case, perfectly respectable and competent persons were elected, and these from among the very Districts which before had not been represented.

In every other respect, Mr. Editor, I quite approve of your laconic allusion to Dr. Worthington's communication, which was evidently written for the purpose of creating bad feeling, but which is, withal, so silly, that it carries its own antidote. In one part he says, "at the gathering of the clans on the 10th of May, at Quebec, there was no election, for some sapient reason, no doubt;" then further on (quoting from Dr. Gilbert), in alluding to the subsequent October meeting, held at

Montreal, "the election did not take place on the first day as, owing to the By-Laws being unsanctioned by the Governor General, no vacancy actually existed." It would certainly have been more sapient in Dr. Worthington, had he revised his sapient production before enclosing it to you for publication, as he might have thereby discovered he was acting counsel to plaintiff and defendant at the same time. But what in my estimation, stigmatises the production of Dr. W. as contemptible, is his assertion "that Dr. Gilbert was asked by the Montreallers how he would vote, in a way, indicating, that if pliable, his election would be probable." To this, I give the most formal contradiction, and defy either Dr. Worthington or Dr. Gilbert to name even one Governor who, it is asserted, put Dr. Gilbert such a question. The very position of the affairs of the College renders such a supposition truly ridiculous. What have the Governors to canvass for? Is it to support the College against the opposition of certain parties? Surely no one in his senses could be induced to suppose that a person accepting office would join the opposition. For what other object canvassing could be required, I am at a loss to conceive.

Communications such as Dr. Worthington's, would tend to do much harm, were they to be always treated even by merited silent contempt; but when they contain remarks affecting the judgment and integrity of the College, I deem it a duty towards the College and the profession at large, that immediate and candid explanations be given; consequently, I have taken the trouble of making this attempt to that effect—trusting that it will convince all around, that the College of Physicians and Surgeons was not got up for any other purpose than that of placing the profession on a footing of respectability and good understanding; and that it therefore ill becomes any one to throw impediments in the way of so desirable an object.

I have the honour to be,  
Your most obedient servant,

FRANCIS C. T. ARNOLD, M. D.

Montreal, December 26, 1848.

UNJUST TREATMENT OF MEDICAL MEN, C. W.

To the Editor of the British American Journal.

SIR,—The anomalous position in which the medical practitioner often stands with regard to the administration of justice, is constantly being exhibited in Canada West, and, I think, demands the attention of the Profession, and some combined mode of action to obviate it; as I think the following cases will abundantly prove:—

During the summer, a drunken fight took place between Roman Catholics and Protestants, which resulted in a severe injury to one of the number. A non-medical practitioner was called to attend the man, and a warrant was issued for the apprehension of the offending parties. The injured man could not appear, consequently the magistrate could not decide as to his state and condition, and required that a licensed practitioner should see the individual, and report to him his condition. On the order of the magistrate, the medical man travelled eleven or twelve miles, visited the patient, attended the justice, and gave his evidence, and, upon the trial, was subpoenaed to Court, had to attend at considerable loss, and was afterwards denied all remuneration for his services. He applied to the Magistrates in Quarter Session; they declared they could not pay him, and that he should have refused to go at the order of the magistrate. The Commissioners for examining District accounts declared that the Government had nothing to do with the matter;—so there the matter rests.

Not long since, a medical man was called by the magistrates, medically to examine some individuals. The case was one in which rape had been alleged to have been committed; he did so, and suffered considerable inconvenience, loss of time, and annoyance, and was also denied all remuneration for his services.

I might mention to you a case that occurred at the Hamilton Assizes. A husband killed his wife; a non-licensed practitioner was called to see the woman. The magistrate took the statements of the man, and did not require the evidence of a properly-qualified medical man, but committed the prisoner on the evidence of that individual. Upon the trial, it was proved that he was unqualified to treat the case, or give evidence as to its nature; so that the man was discharged for want of sufficient medical evidence, it being impossible to prove in Court if the wounds received were the cause of her death. In this case, the magistrate was severely reprimanded by the Judge, for not doing his duty in requiring proper medical evidence, so that the ends of justice might be fulfilled.

I have also heard that a medical man complained to one of the Judges at the Niagara Assizes, that he was refused payment for similar services; and his Lordship boldly told him, that he should be too proud of the honor of serving his country, to complain of such treatment. Now, it seems to me that some steps should be taken in this matter—for its injustice must be apparent to all—either that application should be made to the Governor in Council to sanction the payment of medical accounts necessary for the administration of justice, or that the medical practitioner should know in what position he is liable to stand with regard to its administration—that he can refuse attention to the order of the magistrate, if he pleases, but that the magistrate will be blamed if he does not do his duty—a pleasant position, certainly, and greatly conducive to the ends of justice.

I remain, Sir, yours truly,

MEDICS.

*Cholera in New York.*—On Friday, December 2d, the ship "New York" arrived at New York, from Havre, 22 days out, with 330 passengers. The first case of sickness was reported to the captain when off Cape Sable, on the previous Tuesday morning—a child, taken ill at 3, p.m., and dying at 8, p.m.; a second child died with similar symptoms. On the following Wednesday and Thursday four men were reported sick, two of whom died suddenly with symptoms of cholera. A third died from what was regarded as a case of dysentery. Twelve were landed at the quarantine station, Staten Island, of whom three died. The resident physician, Dr. Whiting, refused to report these cases as cholera. A report from the Board of Health stated that 18 cases of a disease resembling cholera had occurred on board the above vessel, of whom seven died. On the 9th, no cases had occurred within the city limits. December 18: Additional cases had occurred among the German passengers of the ship "New York;" at this date 20 cases remained in hospital, with five new ones and two deaths. Dec. 20: four new cases; three among the inmates of the hospital, one proving fatal: this day, two cases occurred in Wellington street, New York. Dec. 27: In hospital, Staten Island, Dr. Whiting reports this day five cases among the inmates of the hospital. A despatch from New Orleans, dated December 26, states the disease to exist in that city. On the 16th, twelve cases occurred at the Charity Hospital, one proving fatal.

New-York, Dec. 27, 6.30, p.m.—A despatch from New Orleans, dated Dec. 24, says, 79 new cases of cholera have occurred at the Charity Hospital since 20th inst., and new cases hourly brought in. Three merchants had died of it in the city. Considerable excitement prevails in consequence of the Board of Works having proclaimed the disease epidemic. At Memphis, 21st, two boats touched there having cholera on board, with two cases among the passengers.

In England, the total number of cases of cholera reported, was 1715, of whom 610 died. 220 recovered, and 375 remained under treatment. This statement comprises the news from England received on the 14th December.

*Medical Referees and Insurance Offices.*—In our last, we published a circular from the Westminster and General Life Assurance Company, of London, to the Profession, stating that the Company would allow a fee of £1 1s; to all medical referees. We perceive, since

then, by our later exchanges, that the following additional offices pursue the same system, "The Medical Invalid Office, 15, Pall Mall. The Britannia, Princes Street, Bank. The Commercial and General Assurance Association, 112, Cheapside." Besides these, there are several offices which have no medical referees of their own, being content with the information obtained from the medical advisers of the assured. This, if it proves any thing, would tend to prove the uselessness of such an office. We think, on the contrary, medical referees are of use in preventing collusion.

*The next Session of the Provincial Parliament.*—The next Session of Parliament promises to produce important results, as far as our Profession is concerned. It meets on the 18th. First comes the Act of incorporation of the Profession of C. W.; next, the Act of Incorporation of the Pharmaceutical Society of C. E.; next comes, the proposed bill of the Hon. Mr. Cameron, to provide for adequate remuneration at Coroners' Inquests, which we would desire to see made a General Provincial measure; and next and above all, come the efforts of our friends of the Repeal Association. These

last we shall narrowly watch; and, they may depend upon it, we shall do ample justice to their advocate in the House.

Mr. R. D. Wadsworth has left on a Tour up the St. Lawrence. He will call on those who are in arrears for the *Medical Journal*, and will receive the names of new Subscribers. Many more should be added to our list. We hope our friends will be prepared for his visit.

TO CORRESPONDENTS.

Letters have been received during the month from Dr. Griffin and Dr. Von Iffland, (Quebec). Dr. Gibb, (Paris) and from Capt. Lefroy, and Dr. Bovell, (Toronto).

A third paper on the Gunshot Wounds, observed in the Parisian Hospitals, by Dr. Gibb, has been received. It will receive early attention. From Dr. Griffin, Quebec, we acknowledge receipt of a paper on the Cholera, as it appeared in Quebec in 1832, and from Dr. Sewell, (Sorel,) a report of a case of a severe Wound of the Thorax. We must delay until next month, in consequence of the crowded state of the Original Department of our columns, the publication of Dr. Reynolds, and Dr. Gilmour's papers, the reception of which we have previously announced.

BOOKS, &c., RECEIVED.

A text book on Practical Anatomy by Robert Harrison, M.D., M.R.J.A. &c., with Additions by an American Physician, with numerous illustrations. New York, Samuel S. & W. Wood, 1848.

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR NOVEMBER, 1848.

DATE.	THERMOMETER.				BAROMETER.				WINDS.			WEATHER.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	Noon.	6 P.M.	7 A.M.	3 P.M.	10 P.M.
1,	+36	+31	+39	+43.5	29.56	29.47	29.51	29.51	S W	S	S W	Fair	Fair	Fair
2,	" 33	" 41	" 36	" 37.	29.59	29.67	29.82	29.67	W S W	W by S	W by S	Fair	Fair	o'erc't
3,	" 34	" 43	" 33	" 38.5	30.03	30.08	30.11	30.07	W	W	W	Fair	Fair	Fair
4,	" 36	" 42	" 46	" 39.	30.09	29.80	29.57	29.82	S S E	S S E	S S E	Cloudy	Rain	o'erc'st
5,	" 48	" 33	" 32	" 40.5	29.57	29.55	29.44	29.52	W S W	N W by W	N W by W	Rain	Snow	Fair
6,	" 33	" 38	" 34	" 35.5	29.49	29.45	29.45	29.46	N W	N W	W	Fair	o'erc'st	Cloudy
7,	" 31	" 34	" 26	" 32.5	29.51	29.60	29.73	29.61	W	W	W	Fair	Fair	Fair
8,	" 20	" 33	" 29	" 26.5	29.96	29.88	29.76	29.85	W	W by N	W N W	Fair	Fair	o'erc'st
9,	" 23	" 27	" 12	" 27.5	29.74	29.78	29.93	29.82	W by S	W	W	Fair	Cloudy	Fair
10,	" 13	" 20	" 18	" 16.5	30.16	30.20	30.24	30.20	W	W	W half N	Fair	o'erc'st	Fair
11,	" 18	" 21	" 16	" 19.5	30.33	30.30	30.27	30.30	W	W by N	N E	Snow	Fair	Fair
12,	" 13	" 25	" 23	" 19.	30.30	30.25	30.22	30.26	N E	N E	N E	Fair	Fair	Fair
13,	" 17	" 25	" 19	" 21.	30.28	30.26	30.25	30.26	N E	N E	N E	Fair	Fair	Fair
14,	" 16	" 32	" 27	" 24.	30.26	29.98	29.77	30.00	N by E	N N E.	S W	Fair	Fair	o'erc'st
15,	" 31	" 36	" 33	" 33.5	29.59	29.52	29.58	29.56	S	S	S	Snow	Sleet	Fair
16,	" 36	" 37	" 36	" 36.5	29.57	29.50	29.51	29.53	S W	S W	S W	Rain	Rain	o'erc'st
17,	" 34	" 38	" 30	" 36.	29.58	29.68	29.77	29.68	W N W	W N W	W N W	Fair	Snow	Fair
18,	" 30	" 36	" 25	" 33.	29.87	29.92	30.01	29.93	W	W	W	Fair	Fair	Fair
19,	" 26	" 29	" 27	" 27.5	30.09	30.09	30.03	30.07	W	W	W	Fair	Fair	Cloudy
20,	" 21	" 31	" 29	" 26.	29.99	29.78	29.70	29.82	N W by W	N W by W	N W	Fair	Fair	Fair
21,	" 28	" 34	" 34	" 31.	29.62	29.69	29.68	29.66	N W	W N W	W N W	Fair	Fair	o'erc'st
22,	" 33	" 35	" 35	" 34.	29.63	29.59	29.71	29.64	W	W	W	Fair	Fair	Cloudy
23,	" 31	" 45	" 34	" 38.	29.72	29.64	29.65	29.67	W	W	W	Fair	Fair	Fair
24,	" 35	" 39	" 38	" 37.	29.68	29.44	29.23	29.45	W	S	S S E	o'erc'st	Rain	Rain
25,	" 44	" 41	" 35	" 42.5	29.10	29.04	29.06	29.07	S W	S W	S W	Fair	Cloudy	Cloudy
26,	" 30	" 31	" 25	" 30.5	29.33	29.49	29.69	29.50	W	W	W	Fair	Fair	Fair
27,	" 21	" 25	" 20	" 23.	29.90	29.97	30.02	29.96	W by N	S	S	Fair	Snow	Fair
28,	" 24	" 32	" 33	" 28.	30.01	29.80	29.72	29.84	W N W	W N W	S W	Cloudy	Fair	Cloudy
29,	" 33	" 34	" 31	" 33.5	29.72	29.63	29.65	29.67	W S W	S by W	S by W	Snow	Cloudy	o'erc'st
30,	" 31	" 36	" 22	" 33.5	29.64	29.57	29.81	29.67	N W	N W	N W by N	Snow	o'erc'st	Snow

Therm. } Max. Temp., +51° on the 1st  
 } Min. " 12° " 9th  
 Mean of the Month, +31.4

Barometer, { Maximum, 30.33 In. on the 11th  
 } Minimum, 29.04 " 25th.  
 Mean of Month, 29.769 Inches.



# MEDICAL JOURNALS.

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FRANCIS C. T. ARNOLDI, M. D.  
Registrar & Treasurer,  
Coll. Ph. & Surg., L. C.

58, CRAIG STREET,  
Montreal, 1st Dec., 1848. }

**MEDICO-CHIRURGICAL SOCIETY.**

**T**HE next Monthly Meeting of this Society will be held at the Rooms of the Mechanics' Institute, on Saturday Evening, Jan. 6, at 8 o'clock P.M.

HECTOR PELTIER, M. D.,

Montreal, Jan. 1, 1849.

Secretary.