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THE
BRITISH AMERICAN JOURNAL
 OF
MEDICAL & PHYSICAL SCIENCE.

EDITED BY

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

Lecturer on Chemistry, University of McGill College; Member of the Medical Board of Examiners for the District of Montreal; one of the Physicians to the Montreal General Hospital; one of the Consulting Physicians to the University Lying-in-Hospital, &c.

VOL. V.]

JULY, 1849.

[No. 3.

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MONTREAL:

PRINTED AND PUBLISHED BY J. C. BECKET, 211½ ST. PAUL STREET.

Agents for the United States, Messrs. R. & G. S. Wood, 261 Pearl Street, New York.

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THE
BRITISH AMERICAN JOURNAL
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[Vol. V.]

MONTREAL, JULY, 1849.

[No. 3.]

ART. XII.—ACUTE PERICARDITIS.

By FRANCIS BADGLEY, M. D.

The quarter just ended, and which was devoted to medical clinical instruction, in the Montreal General Hospital, has furnished to the students attending that noble institution, many most interesting and highly instructive cases for study—not cases, be it observed, in which the wonderful efficacy of remedial agents in averting death was proclaimable, but in which, on the contrary, from their very nature, no other prognosis could be hazarded, but that of death sooner or later. The chronic or time requiring character of these diseases, in reference to their issue, enabled the gentlemen composing the clinical class in particular, and all who frequented the wards in general, to observe and study the progress daily and steadily made by disease upon the affected tissues, and finally upon the *vitability* of the patients; to obtain explanations for the modification of symptoms thereby produced; to watch the efficiency or otherwise of the remedies employed, becoming familiarized with their *modus operandi*, and their adaptation to fulfil the indications proposed; and lastly, by post mortem examination to verify or correct the diagnosis furnished at the commencement of the management of the case. To shew the description of cases from which matter for my clinical lectures was derived, and from among which I propose, with your permission, to publish in these pages the histories of a few of the most striking, as recorded by Mr. A. S. Bristoll and Mr. M. Callum, both students of McGill College, I may mention—disease of the heart and pericardium—phthisis—hydro-pneumothorax—peri-pneumonia notha—congestive pneumonia—chronic laryngitis, and with outward fistula—typhus, with cerebral complication; typhus, with pulmonary complication—hysterical mania—secondary syphilis—neuralgia, terminating in myelitis—cases of hysteria simulating white swelling of the knee, hip joint disease, asthma, pleurisy, and peritonitis—erysipelas—rheumatic gout—albuminuria—disease of the bladder from spinal injury—tuberculosis—scurrhosis—and hypochondriasis. By an arrangement entered into with my friend Dr. Arnoldi, and for the especial benefit of the class, I received during the quarter no surgical cases whatever, selecting from among *all* the inmates in the institution those purely medical cases which I considered as likely to be most instructive. Ninety-three cases were treated by me during that period, of whom were in the hospital on the 1st February, 36; admitted during the quarter, 57. There were discharged cured, 59; died, 15; remaining on the 1st May, 20. Of the deaths, there were from phthisis 5; disease of the heart and pericardium 4; scirrhus 1; albuminuria 1; marasmus after scarlet fever. 1; peripneumonia notha 1; congestive pneu-

monia succeeded at the end of six weeks by purpura 1; tuberculosis with caries of the sternum and ribs and pulmonary fistula, also caries of the sacrum 1.

CASE 1.—*Acute Pericarditis*.—James Larkin, aged 50, an Irishman, admitted on the 23rd November, 1848; of ordinary height, muscular, has a well developed chest; although a laborer, never suffered from any sickness until a month before admission, when he “took a severe cold, from which he could not get clear;” professes temperate habits, never had rheumatism; complained on admission of dyspnoea and cough, with slight watery expectoration. Since admission he has been blistered, purged, and had diuretics, and various other remedies, with but little relief of symptoms.

On the 5th February, the following note was made: Great oppression on his left side, much cough, attended by little watery expectoration, disparition of the intercostal spaces, turgescence and pulsation of the jugular veins, anasarca of the lower extremities, principally of the left; duskiness of the face; complains of disturbed sleep, from dreams and startings; the pulse is small and irregular, 80–82, that on the right side much smaller in volume than that on the left, scarcely appreciable for days together.

Bronchial respiration was found on the left side, and in an erect position a slight vesicular murmur was audible at the apex of the left lung; this was distinctly heard over the right lung, but was not at all puerile; the sound on percussion was dull over the whole left side, except in the subclavicular region, and extended to the right side of the sternum. Nothing abnormal in the sound of the heart; its impulse against the thoracic parietes was so exceedingly feeble as to appear almost wanting, the rhythm rather faster than usual; during the parietal movements of the heart there was a rumbling or jogging sensation communicated to the cylinder; decubitus on the angles of the left ribs, with his head and shoulders raised; tongue white, not coated; skin rather cold; conjunctivæ rather suffused. The diagnosis then given was the following:—Pericarditis with adhesions, hypertrophy with dilatation, deposits on the mitral valve from endocarditis, accompanied by softening of the walls, giving rise to the irregular pulse; dilatation of the aorta at its origin; hydrothorax. Was ordered a large blister, with pills composed of calomel, squills and digitalis, and compound jalap powder in the morning.

On the 8th, on placing the stethoscope over the mitral valve, a fine rasp bruit was heard, but this was much masked by the bronchial respiration; he breathes more easily, there is rather less dullness on percussion.

R. Pil. Hyd. gr. iij. scillæ. gr. i. ext. conii. gr. ii. ft. pil. meridie et vespere ꝑ.

16th.—Lies more on his back, appears somewhat easier and better in all respects; pulse still irregular, appearing to some intermittent. Mercurial ointment to be rubbed over the chest; 2 oz. whisky per diem. contr. medicament.

March 1.—Urine has increased in quantity to 10 pints, with a slight ammoniacal odour.

6th.—Dyspnoea and cough increased; he attributes them to cold taken in going to the water closet; other symptoms the same; no sleep.

Hab. h. s. tr. opii. gr. + L. Contr. alia.

7th.—Looked better and stated that he felt so.

10th.—Countenance very dusky and anxious, lips and ears rather livid; anasarca increased. Omit all but the ungt. hyd., and let him have hydriod. potass gr. i. in infus. gentian ʒiiss. three times a-day.

From this period until the 23rd sought merely to relieve the cough and oppression, by calomel and elaterium, and a mixture of the Tr. of hyosciamus and paregoric. On the 23rd it was noted that the swelling of the feet and legs had nearly disappeared, the pulse a little more voluminous, other symptoms the same.

April 4th.—Complains very much of his cough and difficulty of breathing, nose, lips and ears livid, risus sardonius, pulse distinctly intermittent, has some difficulty in articulating; looks more depressed than usual. On the morning of the 5th, having returned to bed from the night table, he sank back on his pillow and expired.

Post-mortem examination within 12 hours.

The whole surface very much congested, particularly about the head and neck, the veins quite full, giving a blackish streaked appearance intermingled with purple. The chest, full and symmetrical in form, yielded a clear sound on percussion over the right side as well as the top of the left, the lower and dependent parts dull. The abdomen very much distended. On removing the anterior wall of the thorax, the upper lobe of the left lung was found floating in a quantity of serous fluid of a yellowish red color; upwards of two quarts of this were removed from the left pleural cavity, there was none in the right cavity; the pericardium appearing distended and larger than usual, it was decided to open it at once, presuming that it contained fluid also; but after cutting to the depth of at least five lines, through solid yellow substance, without arriving at any cavity, it was determined to remove the mass, consisting of the pericardium, heart, and right lung entire, which was done and also the arch of the aorta. The right lung was perfectly healthy throughout, the upper lobe of the left one also crepitated when pressed between the finger and thumb, but at the same time, pitted sensibly, shewing that it was to a degree œdematous. The lower lobe was compressed into a solid flat mass, of a dark color externally, and lying along the vertebral column.

Having failed to get into the pericardium in the usual way, an incision was made from the arch of the aorta to the apex of the heart, laying open the left ventricle, and with it the arch of the aorta; by this means we obtained a full view of the thickness of the pericardium, the ventricle and the valves. No accurate measurement was made, but it was agreed by all present that the portion of pericardium immediately investing the heart with

the fibrinous deposits upon it, measured in thickness at least *two* lines; the saccular portion, with its organized deposits, *four* lines; and the muscular wall of the ventricle fully *nine* lines; making in all a solid medium between the pleura and the ventricular endocardium of at least *fifteen* lines. The capacity of the left ventricle appeared natural, the muscular tissue of it as well as of the heart generally was *soft*, easily pierced by the tip of the finger, and its usual red color sensibly darkened. At the free margin of the mitral valve, very much in connexion with the chordæ tendineæ, were several deposits of a fibrinous nature, none exceeding the size of a duck shot, some much less; on the endocardium, covered by the mitral valve, were two fibrinous deposits of the size of half dime pieces. The aortic valves, on the contrary, were found much thinner than usual at their free borders, and the corpora aurantii much less prominent and developed than as commonly seen. The aorta, as far as examined, presented its natural appearance, but from the close adhesion of the pericardium and its fibrinous deposit upon the arch, considerable retraction of the artery had resulted, with consequently diminished extent or length of this portion of it.

The right ventricle was next laid open; the thickness of the pericardium was observed to be the same as on the left side, but the muscular tissue was thicker, comparatively, than that on the other side, being fully five lines. The same fibrinous deposit was observed on the tricuspid as on the mitral valve; the pulmonary valves presented nothing peculiar.

The auricles at first sight appeared to be wanting, but on searching more carefully, their cavities were found, and very nearly of the ordinary size, but no accurate estimate of their relative thickness could be come to, owing to the immense deposit of almost perfectly organized fibrine upon them. This new formation was adherent throughout, but varied in firmness, being most so at the base of the heart and running up on the great vessels, more dense or thick as it neared the serous membrane, and finally becoming quite soft towards the cavity, or to speak more correctly, where the pericardial cavity had been. Its color when separated was yellowish buff, becoming gradually darker towards the coronary arteries, where it assumed almost a pale bluish tint. No vessels, however, could be detected throughout it. It is evident, nevertheless, from the foregoing, that this deposit had taken place gradually, or that layer had been laid upon layer.

(The weight of the heart and pericardium, with the intermediate new formation, but freed from the right lung which had been removed with these, was twenty-four ounces and two drachms. The preparation was sent to Dr. G. Fenwick, to be deposited in the Museum of the University of McGill College.)

In the abdominal cavity nothing very striking in a pathological point of view was noticed; there was universal venous congestion of the omentum, stomach, and intestines; the liver was natural in size, but its surface was rather rough or uneven, (slightly hobnailed); its substance showed a dark, brownish red color, on being cut, and disgorged, on very slight pressure, a large quantity of venous or highly carbonized blood; the spleen and kidneys also were much congested, one of the con-

of the right kidney was occupied by a substance much resembling tubercular matter, but there was no deposit of this description detected in any other organ.

The brain was not examined.

Remarks.—It was very satisfactory to find after death proofs of the correctness of the diagnosis first pronounced. The general symptoms, as dyspnoea, faintness, anxiety, lividity, coldness of surface; feeble, irregular, and fluttering pulse, with dropsical effusions, were all evidences of impediment to the free circulation of blood through the heart; whether caused by effusion of serum, lymph, pericardial adhesion, or softening of the muscular structure of the organ; while the physical signs as clearly indicated valvular disease on the left side especially, softening of the muscular tissue of the heart, and more or less general and extensive deposit upon and consequent adhesion between the surfaces of the pericardium.

Montreal, June, 1849.

ART. XIII.—CASE OF ACUTE TRAUMATIC TETANUS
—FREE EXHIBITION OF CHLOROFORM, ETHER,
CANNABIS INDICA, AND ACONITE—DEATH.

By ARCHIBALD HALL, M.D.

Read before the Medico-Chirurgical Society of Montreal, at its May meeting.

George Mount, æt. 10½ years, ran a nail into his nates, about one inch deep, on the 4th of February. Adhesive plaster was in the first instance applied to it, and it gave him no uneasiness for a couple of days. When Dr. Mount, his father, first saw it, he found the wound to be a lacerated one, considerably inflamed, and the nates in its neighborhood much indurated. There was no fever. An emollient cataplasm was applied twice a day, for a period of six or seven days, during which the wound discharged freely. All inflammatory action subsided, and the wound, although not cicatrized, yet appeared healthy. Adhesive plaster was again applied, and the lad went to school as usual. On the 12th he complained of pain in his shoulder and back, which his father attributed to his having taken cold. The Dr., however, observed to his mother, that he hoped it would not turn out locked jaw. A pediluvium was ordered, and 10 grs. of pulv. ipecac. camp., and 5 grs. of hydrarg. submur., were given at bed-time. He passed a good night.

13th. The calomel had caused free action on the bowels. He still complained of the pain. Pulse 80; skin hot and dry. 10 grs. of Dover's powder were given, with 2 grs. of tartar emetic. No apparent effect resulted from this dose. At about 11, a. m., he was seized with a spasm when on the easy chair in an adjoining room. He called for assistance, and was carried to and laid upon the sofa, where he remained until his father's arrival, who was out at the time; the spasms, meanwhile, increased in intensity and frequency, occurring every 30 or 40 minutes. On the Dr.'s return, he asked him if he felt any pain in his back or neck. He replied, "Yes, but not so painful as I had them before you came in." The Dr. was not long in the room before he called him to raise him up, and at the same instant to lay him down again. He

became perfectly stiff with tetanic spasms, and rigidity of the jaw;—these symptoms supervened on the 10th day after the accident. The whole surface of his head and face were bathed in perspiration. The muscles of his back and neck were chiefly affected by the spasms, and he complained of the pain shooting between the sternum and the back as dreadful. Dr. Mount called upon me, and requested me to see him.

14th, 4 p. m.—Have just seen George Mount. Find him sensible, complaining of pain in umbilical region, and at eniform cartilage, back of neck and between shoulders; no headache, nor fever; pulse 160, small, and rather jerking; countenance, with the peculiar tetanic expression, expressive of considerable anxiety, as well as indicative of spasm affecting the muscles of the face; stated to have had a severe spasmodic affection of the back of the neck about every 15 minutes; lower jaw moveable at the apex for about half an inch; opisthotonos marked; abdominal muscles rigid; during my presence had several spasms; he requested to be elevated; and during the attack, the face became suffused, almost livid—he cried with agony; in the course of a couple of minutes the spasms ceased, and he was laid on his bed, his forehead and face bathed in perspiration. Feeling sensible of the general inefficiency of all the ordinary modes of treatment, I prescribed an immediate warm bath, and a blister to the spine. I felt disposed, also, to exhibit a powerful emetic, as a revulsive, and to take advantage of its subsequent sedative effects to follow it up with a full dose of opium,—a full dose of calomel, and a turpentine enema, to be administered before the exhibition of the opium. Having other engagements, his father took upon himself to fulfil the directions. Some chloroform was also procured, to be used in case of emergency. Returning in the evening at 6½ o'clock, Dr. Mount had prescribed the tartar emetic to the extent of 8 grains, in two grain doses each, with scarcely any effect, as far as the vomiting was concerned. The pulse had become reduced in force, and was rather diminished in frequency; the spasms had not mitigated, in any marked degree, in severity. Perceiving the case to be an exceedingly hazardous one, I suggested the propriety of an immediate consultation. Dr. Holmes was accordingly sent for; I was not present when he arrived. He recommended the turpentine enema, and ʒiij. of turpentine by the mouth, to be followed afterwards by ʒi. of solut. mur. morphia. These directions were implicitly fulfilled. The little patient felt much relieved by the warm bath, and, after the exhibition of the morphia, fell into a comparatively tranquil slumber, which lasted throughout the night.

15th, 10, a. m.—Met Drs. Holmes and Campbell in consultation. Countenance with same expression, and the general symptoms not improved; opisthotonos marked; spasms recurring every quarter hour or twenty minutes; pulse 160, small, and presenting evidence of irritability; determined to use the chloroform freely, keeping him continually under its influence; 40 minims were accordingly poured into a napkin, folded in funnel-form, and inhaled; in the course of a couple of minutes he was under its influence, and complete relaxation of the muscles of the face, jaw, and back followed. The

spastic rigidity returned in the course of half an hour, when the chloroform was re-applied, with the same apparently beneficial results. After both these exhibitions of this agent, the pulse fell from 160 to 140, and became softer and less jerking.

12½ p.m.—Little variation in the symptoms; pulse, now under the influence of the chloroform, 140. I made two free incisions on each side the wound on the nates, to which a poultice was applied; very little bleeding followed.

4½ p.m.—Met in consultation. Pulse smaller and weaker, 140. He appears evidently worse. The spasms recur more frequently; the effects of the chloroform have become more evanescent; it has been necessary to apply it almost every ten minutes. The opisthotonos more marked, and the abdominal muscles more rigid. Still sensible during the interval of anæsthesia. Has made no water to-day. Replied in the affirmative to a request to make it, and desired to be raised for the purpose. He passed it in quantity and of normal appearance. Finding the chloroform, of which ℥iiss. had been used, of now but doubtful efficacy, ether was substituted for it, and 1½ grains of the Alcoholic Extract of Cannabis Indica ordered to be given every half hour. Feeling considerable relief after the warm bath of yesterday evening, he requested another. It was accordingly administered. The left arm was now noticed to be spasmodically affected, although not to the same extent as the back or jaw.

8½ p.m.—In consultation. The ether has been assiduously applied; the anæsthesia *pro tempore* not so complete as in the case of the chloroform. The patient is still sensible; he appears calmer, and the spasms less frequent. Pulse 168, fuller and stronger. A spasm coming on, the ether was administered, and the pulse immediately fell to 138, but was more jerking. The relaxation appeared equally as perfect as with the chloroform.

16th, 9 a.m.—In consultation. Has passed a bad night. The symptoms not altered in character or intensity. During the night the pulse ranged between 132 and 140. The chloroform and ether were both exhibited alternately every half hour, according to the recurrence of the spasms. The Indian hemp has been faithfully persevered in. To this period he has taken 36 grains of this medicine, and has used ℥i½ of chloroform, and ℥ij. of sulphuric ether, the former in 40m doses, the latter in ℥ij. doses. During the night he micturated freely again; and about 4 a.m., at his own request, was put into a warm bath, from which he stated that he derived considerable comfort on a previous occasion. He still complains of pain at the ensiform cartilage, nape of neck, and between shoulders. The pulse is now variable, ranging between 160 and 172. After the inhalation of ether, *pro re nata*, no reduction in the frequency of the pulse, appeared to be effected. The Cannabis was ordered to be continued, and to be alternated every half hour with the Alcoholic Extract of Aconite, in doses of 1½ grains. The ether to be discontinued, and chloroform to be alone used as before. Brandy punch was ordered also *ad libitum*, and an injection of beef tea for the double purpose of nutrition and alvine evacuation.

12, noon.—Pulse 144, small and weak. The blistered surface was now dressed with the Ungt. Hyd. Biniod, (gr. xx @ ℥i.)

1 p.m.—In consultation. Pulse 144, variable but maintaining same character; ℥ij. of brandy mixed with warm water were introduced into the stomach by an esophagus tube. The tube was allowed to remain, and an injection of strong beef tea was given per anum. In the course of three quarters of an hour the pulse becoming smaller, weaker and more irregular, with every appearance of sinking, ℥ij. more of brandy, with water, were introduced into the stomach, and the tube was withdrawn.

3 p.m.—The patient appears to be in a state of narcotism, occasioned probably by the brandy, some of which was rejected. He looks more composed. The pulse continues the same.

5 p.m.—Pulse 140; the same character; the effects of the brandy being observed to be going off, chloroform had been administered about half an hour previously; an enema of beef tea had also been given. On examining the back, no effect was perceptible from the Iodide of Mercury ointment. As before, when the anæsthetic influence of the chloroform went off, the spasm of the neck returned, together with the opisthotonos. Between 9 a.m. and 1½ p.m., he has taken three pills of the Cannabis, and three of the Aconite. They were discontinued in consequence of the supervention of the narcotic symptoms after the exhibition of the brandy. At 5hrs. 40min., the spasms returned, with moaning, and the chloroform was again administered.

From about 9 o'clock to 4 a.m., the little patient continued in much the same state, although more tranquil; sensibility continued unimpaired to the last. He died about 4½ o'clock, a.m.

The above case is placed on record for the double purpose of exhibiting the intractability of the disease, and the unsuccessful employment of powerful sedatives, most freely and faithfully administered. In the short space of about thirty hours, the little patient had inhaled about ℥ij. of chloroform, and as much of sulphuric ether; and had taken internally, 41 grains of the cannabis, and 4½ grains of the extract of aconite. There could be no question of the genuineness of the extracts administered, or of the fidelity with which the remedial measures were applied. This case is an additional one to the long catalogue of fatal issues under the disease in question, and is chiefly valuable as indicating the futility of the line of practice adopted.

Montreal, May 1, 1849.

ART. XIV.—ON MINERALOGICAL SYSTEMS.

Translated from the German of BERZELIUS, by HENRY CROFT, Esq., Prof. Chemistry, King's College, Toronto.

In the following paper I will endeavor to bring forward certain considerations which appear to me to be deserving of attention in constructing a system of mineralogy, more especially as the different opinions respecting the basis on which such a system must be founded have not yet enabled us to arrive at any conclusion as to which of the various groundworks that

may be chosen is scientifically the most correct. We shall therefore receive from time to time new *historical* systems, which, like the natural history or classification of the organic kingdom, will be founded on external similarity—geometrical systems in which the crystalline form is taken as far as possible as the basis, and chemical systems founded on the composition of the minerals. The object of most of these systems is rather the order in which the minerals may be arranged in a collection, than the systematic series in which they may be described in a scientific treatise.

In acquiring a rational knowledge of the products of the mineral kingdom, the first question that presents itself is, "What determines the idea of a mineral?" It is scarcely necessary at the present day to prove that this idea cannot consist in the geometrical form, the degree of hardness, the specific gravity, the color, &c., &c., because supposing that all these points were accurately determined, we should yet be utterly ignorant of what the mineral was, as long as its composition remained unascertained. It is this that determines what the mineral really is, and it seems, therefore, sufficiently evident that in a scientific system the products of the mineral kingdom must be arranged according to *what they are*, and not according to *how they look*. A time will come when we shall have some difficulty in conceiving how any other opinion with regard to a method of classification could have been either proposed or defended.

There has, however, been a time, and that not so far distant, when mineralogy consisted in nothing more than finding and collecting minerals, in an accurate observation and determination of their external properties, and in a distinctive appellation of those which were not entirely similar, whereby principles were adopted analogous to those already used in the histories of the animal and vegetable kingdoms. This was the only plan that could then be adopted, and it was good enough for its time. But even at that period, and before any attempts at a systematic arrangement had been made, it had been discovered that silver, copper, tin, lead, iron, &c., &c., could be extracted from certain stones; and this naturally caused the introduction into the first systems of the idea of ores of these several metals. It was a kind of involuntary testimony to the fact, that the principal constituents of a mineral must determine what that mineral is.

When by means of Klaproth's and Vauquelin's exertions, the composition of a large number of minerals became known, and more light was thrown on their chemical nature, the knowledge thus obtained began to be of more importance, although it could not be used in forming any system of mineralogy, because such a large number of minerals remained unexamined; and indeed it is not much more than forty years since Klaproth made the unexpected discovery, that potash exists in some kinds of stones, and forms an important ingredient in Felspar.

The greatest mineralogists of that period were no chemists, and they did not need to be so. Their scholars also were in the same position, although chemistry was then beginning to make itself felt as an

important element in the science of mineralogy. It is quite natural that those who had become mineralogists without the aid of chemistry, and among whom many were celebrated for their extensive acquaintance with the habits, names and localities of minerals, should wish to retain their own science independent of one with which they were totally unacquainted; and from this arose an opposition to the introduction of chemical views into mineralogy; and it does not seem probable that chemistry will be received as the sole foundation of this science, until those who were opposed to the introduction of chemistry as likely to exert an influence on mineralogy as an independent science, shall have left the arena.

It is well known that Werner's pupils determined the external appearances of minerals with characteristic precision; and no mineralogist reared in that school will ever give up the idea which he has formed of the *species* of a mineral, founded on such examinations.

Hauy's scholars, on the contrary, paid far greater attention to the crystalline forms; and the progress which was made by crystallography through their endeavors, was indeed extraordinary. But they were almost as little chemists as the followers of Werner, although Hauy was decidedly of opinion, that the composition should be employed as one of the foundations for the classification of minerals.

The crystalline forms were gradually systematically arranged, and these were used by Mohs as the basis of a peculiar system, in which the crystallized minerals were classed according to their forms, while the amorphous ones were grouped together in an appendix. Mohs merely regards the crystalline form, the hardness the specific gravity and external appearance, and rejects all aid from chemistry; in fact he maintains that everything that alters the form of a mineral is foreign to mineralogy as an independent science. This system, although it obtained at the time a number of supporters, who, however, did not go to such lengths as Mohs himself, could not last for any great length of time, and fell to the ground when the support of the founder was wanting.

The opinion seems to be becoming more general, that the true principle for the classification of minerals must be sought for in their chemical composition.

More than thirty years ago, I endeavored to arrange minerals according to this plan, and the attempt may be regarded as the first that was made. The chemical composition was considered as the sole basis of the system, and I still remained convinced of the correctness of my original opinion.

This attempt met with great approbation on the one hand, and equally great opposition on the other; numerous attempts were made at improving the system by introducing some of the principles adopted in natural history, and thus arose the mixed systems of mineralogy, none of which, however, seem to have been generally received. Mineralogy has by this means arrived at a state of most perplexing confusion; every writer makes a new system, and chooses principles from the composition, the form, and the similarity in external appearance; and to each of these the

author, according to his individual ideas, ascribes a certain value, which, however, is not always adhered to in the different portions of the system; and yet throughout the whole there reigns an evident attempt to group together those bodies which are externally similar. This proceeding has proved very disadvantageous to the study of mineralogy.

A dozen ephemeral systems, and the consequent alterations of names, must be studied, and the evil increases with every new systematic writer. If we compare the way in which mineralogy was studied at the time when only Werner's and Haüy's arrangements existed, with its present condition, the influence of these numerous systems will become at once apparent.

The object of the above remarks has been to draw the attention of mineralogists to the necessity of agreeing upon certain general principles in the erection of a system, and to the benefit which would result from the formation of one that might be universally adopted. Such a system might have its faults; there can be nothing perfect; but such errors are not removed by a total rejection of the system; faults are much easier seen than mended; and if they be not improved, it is better to leave them alone.

I am far from intending to propose such a system, but I wish to discuss certain questions which would be of importance, should such a classification be attempted.

The first point to be attended to is, "That the composition shall be exclusively employed as the basis of the arrangement." This axiom is the one which will meet with the greatest opposition. The inclination to arrange inorganic bodies according to the same principles as organic ones, has taken such firm root in mineralogy, that it will be with difficulty removed. A consequence of this inclination is the great weight that is laid upon the idea of what is called "a mineralogical species." If I affirm that in mineralogy there is nothing that corresponds to the abstract idea of a "species," I know I shall probably have almost all the mineralogists of the present time against me, because it is generally considered as a great merit in a writer, if he clearly determines what a species is, without unnecessarily dividing it into several, and without including in it what does not properly belong there.

But let us ask, what have we got to arrange in mineralogy? Partly the simple elements, and partly their chemical combinations. What, then, determines their identity or non-identity? Their components, and the various chemical proportions in which they are united, a variation in the nature of the ingredients, or in the manner in which they are combined, at once destroys the identity. This proposition is beyond dispute. But if we examine any mineralogical work we please, and look under the heads of Augite, Hornblende, Garnet, Mica, &c., &c., we shall find many species that have been well determined, that have a similar kind of composition (type?) but in which the components are entirely different: so that under one species we find a number of bodies united which are not chemically identical.

The farther we carry our researches in Chemistry, the more are we convinced that similarity of "type" produces similarity of geometrical form and of external properties; but it is a very great error to unite into one species a number of bodies having analogous typical composition, but containing the most various components. Would it be correct in mineralogy to make one species out of phosphate and arseniate of soda (supposing such salts to exist as minerals) merely because their crystalline forms and external properties are similar, or even identical. Such errors will occur as long as the idea of a mineralogical species is retained; inorganic nature is so entirely different from organic, that the classification adopted in the one, must be absolutely expunged from the other. I believe that I have brought the subject forward too soon to make much impression; but the attempt must one day be made, as Chemistry will sooner or later make good her exclusive right to the classification of inorganic compounds.

If we consider mineralogy so intimately connected with, and dependant on, chemistry, it necessarily follows that a great many plans or systems might be adopted in the former, according to that which is followed in the latter. But the system which is certainly the best in treating of the laws of chemistry, is not by any means necessarily the proper one for a treatise on Mineralogy.

The objects that we have to consider are either purely inorganic, or such as were once organic. For the former, the chemical principle must be exclusively employed; while for the latter, the historical system may for the time be preferable. The members of this latter class are, however, so few in number, compared with those of the first, that they form merely an appendix.

The inorganic minerals are either elements or their compounds; the elements that have been found in an isolated state in the mineral kingdom, are but few in number; but a perfect system must of course embrace them all.

In treating of the elements chemically, we arrange them in several groups; but this would be of no advantage in mineralogy. Their division into metals and metalloids, and of the latter into amphotens and halogens, is supposed to be known, but farther than that the groups are of no use; we have only to determine the order in which they shall stand, and this will give us at once the plan of the system.

The best arrangement appears to be one that commences with the most electro-positive elements, and ends with the most electro-negative, placing them in the order in which their oxides become less and less electro-positive. The position of many substances will naturally be rather doubtful, owing to the present deficiency in our knowledge of their electrical relations. The arrangement must therefore be considered as "conventional," until the time shall come when it will be perfectly "rational."

I would propose the following as a conventional arrangement :

| | | |
|---------------|-----------|------------|
| Potassium | Nickel | Titanium |
| Sodium | Cobalt | Tantalum |
| Lithium | Zinc | Niobium |
| Ammonium | Cadmium | Telopium |
| Barium | Tin | Tungsten |
| Strontium | Lead | Molybdenum |
| Magnesium | Bismuth | Vanadium |
| Yttrium | Copper | Chromium |
| Erbium } H.C. | Mercury | Tellurium |
| Terbium } | Silver | Antimony |
| Beryllium | Palladium | Arsenic |
| Aluminium | Rhodium | Phosphorus |
| Zirconium | Ruthenium | Nitrogen |
| Norium H.C. | Iridium | Selenium |
| Thorium | Platinum | Sulphur |
| Cerium | Osmium | Oxygen |
| Lanthanium | Gold | Iodine |
| Didymium | Hydrogen | Bromine |
| Uranium | Silicon | Chlorine |
| Manganese | Carbon | Fluorine |
| Iron | Boron | |

If this or any other better arrangement be adopted, our mineralogical system will be easily made, and may contain the following orders :

1. *Elements* in the above order.
2. *Compounds of metals with one another*, in such a manner that the compound shall be placed under the metal that comes later in the list ; first the binary compounds, and then the combinations of these, if any exist, containing of course only those metals which precede it in the list.

3. *Compounds of Elements with Selenium, (Tellurium?) Sulphur and Oxygen*—in a similar order.

4. *Compounds of Elements with Halogens* Haloid salts ; after each salt the natural compound with water, with the oxide of the radical and with other haloid salts.

5. *Compounds of Electropositive oxides (bases) with Electro-negative oxides (acids.)* Hydrates, silicates, carbonates, (and perhaps after these the oxalates and mellitates) borates, titanates, tantalates, niobates, tungstates, molybdates, vanadates, chromates, antimonates, arseniates, phosphates, nitrates, and sulphates, with their combinations with water, their basic compounds both hydrated and anhydrous, and then their double salts formed by their union with the haloid or oxy-salts of the preceding metals.

This plan appears to be simple, and at first sight easy of execution, but the attempt will be found to be attended with many difficulties, at first unexpected. No mineralogist would consent to make one species to consist of diamond, graphite, and wood coal, or of rutile, brookite, and anatase, or of calcspar and arragonite ! But I must remark again that such a thing as a *species* does not exist in mineralogy, and ought to be left entirely out of the question ; we have only to deal with the elements and their inorganic compounds, and these must be systematically arranged.

Elements have often their allotropic forms, and compounds their isomeric modifications, and these must be mentioned with the original element or compound, under their empirical names, and described according to their physical and chemical differences.

But a difficulty may appear to arise with the isomor-

phous compounds, for it would be as great a mistake to rank as the same species under angite, $CS^2 + MS^2$ (old mineralogical formula) a mineral such as $CS^2 + FS^2$ as it would be to affirm that magnesia-sulphate of potassa is the same salt as ferroso-sulphate of potassa, simply because it has the same form.

But it may be said that the magnesia in the augite is not always entirely replaced by oxide of iron, and where then is the compound to be placed ? It is still a salt of magnesia in which more or less oxide of iron is substituted for oxide of magnesium, and consequently it must remain under $CS^2 + MS^2$! But if we examine the subject more closely, and do not allow ourselves to be led astray by the word *substitution*, we shall find that our comprehension of the matter depends, not upon the idea of substitution, but upon the fact that isomorphous bodies will crystallize together in various proportions, without there being any chemical compound of a determinate number of atoms produced.

$CS^2 + \frac{M}{F} \} S^2$ is therefore a mechanical mixture of $CS^2 + MS^2$ and $CS^2 + FS^2$ and must therefore be placed on this list under the latter metals, viz : iron. There are, of course, some minerals containing very minute quantities of certain metallic oxides or other bodies, which must of course be considered merely as extraneous substances.

There are several black augites, which contain alumina and sesquioxide of iron, both acting the part of silicic acid, but these must be considered as mixtures of silicates with aluminates, and cannot be placed with the other augites. Many mineralogists will doubtless consider it as very ridiculous to place the augites in different parts of the system ; but we do not classify forms without compounds, and as similar combinations of the most various elements frequently possess the same crystalline form, so it is evident that the same form must appear in many places, and this applies not only to the augite but to numerous other minerals. If these principles be carefully kept in view, I feel convinced that but little difficulty will be experienced in carrying the plan into execution.

To be continued.

ART. XV.—QUALITATIVE ANALYSIS OF A SPRING IN THE NEIGHBORHOOD OF CHIPPAWA, C. W., CONTAINING FREE SULPHURIC AND HYDRO-SULPHURIC ACIDS.

By THEOPHILUS MACK, M.D., St. Catharines.

A few months ago, a medical friend stated in conversation that there existed near Chippawa a spring having a sour taste, and containing, as he thought, a large proportion of free sulphuric acid, and that it enjoyed some celebrity for its therapeutic effects. Although upon this latter point the testimony was very conflicting, these circumstances invested this spring with some interest for me, and I determined to make a visit to the spot and secure a specimen of the water for analysis ; but the multifarious duties of a country practice prevented me from carrying this into effect, and I was under the necessity of enlisting the services of a gentleman in Chippawa,

who kindly walked to the spot, procured a bottle of the water, and furnished me with a brief description of the situation. It is about two miles from the above town, in a ploughed field, bordered by a branch of a marsh, well known in the District as the Cranberry Marsh. The farmer upon whose property it is, has a due appreciation of its importance, and has erected a shelter over it, built up the sides with stone, and looks forward to it as a source of vast profit at some future day; but the large proportion of free acid fully accounts for the deleterious effects imputed to it by some, and will preclude its employment as a spa, unless in a much more diluted form than when drawn from its source. In an analysis of the Tuscarora spring, published by Prof. Croft in the second vol. of the Journal, the presence of oil of vitriol is attempted to be accounted for by the slow oxidation of some sulphuret of iron. And in the paper of Mr. T. S. Hunt, the production of the acid is wholly unaccounted for, but the origin of the deposits of sulphate of lime in the Onondaga salt group, is referred to its action upon the calcareous strata. The presence in this mineral water of sulphuretted hydrogen, and both oxides of iron, together with the acid and the small quantity of lime, may be found to have some practical bearing upon their theories, by those gentlemen. To account for the production of sulphuric acid in the absence of all trace of volcanic action, would prove a boon to the scientific public, its artificial production being highly complicated, and the only natural source acknowledged (that I am aware of) being the above generation of it by sulphurous fires, and by the action of sulphurous acid on the easily reducible metallic oxides.

As I have no scales of sufficient delicacy for quantitative analysis, my examination was confined to a qualitative one as far as my humble resources and limited chemical skill would permit. The bottle, upon removing the cork, exhaled a strong odour of sulphuretted hydrogen, which in a few minutes pervaded the whole room. A strip of prepared lead paper was immediately blackened upon being introduced into the neck of the bottle. Specific gravity at 60° Fahr., 1014. Taste, intensely sour. A strip of litmus paper was instantly reddened, upon being dipped into the water; a gentle heat did not restore the color; the same effect produced after ebullition. Bubbles of gas were disengaged by heat. Chloride of barium throws down an abundant white precipitate of sulphate of barytes, insoluble in acids.—Sulphuric acid. Brown precipitate with nitrate of silver, from the sulphuret present. A portion allowed to stand with a solution of sulphate of copper in a corked flask, and filtered nitric acid added, solution of nitrate of silver produced no alteration. Hydrosulphuret of ammonia produces a very copious black precipitate. Ammonia, greenish dark precipitate, Iron. Oxalate of ammonia added to filtered water, gave a white, not abundant, precipitate, lime. The solution, filtered from the oxalate of lime, and solution of phosphate of soda, with ammonia dropped in, a white crystalline precipitate, was thrown down magnesia. Red prussiate of potash caused a deep blue precipitate, iron protoxide. Yellow prussiate of potash very pale blue precipitate, rapidly becoming blue, iron protoxide chiefly. Some of the water having been con-

centrated by boiling, the sesquioxide of iron, lime, &c., were precipitated by solution of carbonate of ammonia, the water then filtered, evaporated to dryness, and ignited in a porcelain crucible, much blackening took place, indicating carbonaceous matter. The calcined residue was digested with distilled water, treated with acetate of baryta, filtered, evaporated, and again ignited in a platina crucible, distilled water being poured into the crucible, a portion of the resulting solution was tested with tartaric acid, no precipitate; hydrofluosilicic acid, no precipitate; alcoholic solution of chloride of platina, no precipitate. A few drops of hydrochloric acid, mixed with some of the solution, and alcohol being added and inflamed, a violet tinge was perceptible.

St. Catharines, May 4, 1849.

PRACTICE OF MEDICINE AND PATHOLOGY.

Analysis of the Fluids in Cholera.—M. Pelouse, at the sitting of the Paris Academy of Sciences, on the 12th of February last, communicated the results of the chemical analysis of the fluids of cholera patients. These analyses were made at Lille, by Dr Corenwinder.

The object of these analyses was to ascertain the precise amount of albumen and common salt contained in the fluids; and for this purpose the liquid of the stools, the blood, and the fluid matter taken from the intestines after death, were each investigated.

The liquid of the stools was found to be either altogether wanting in album, or to contain it in but small quantities. Three analyses gave the following results:—

| | Albumen. | Common salt. | Water. |
|---------|-------------|--------------|--------|
| 1 . . . | 0.28 . . . | 0.384 . . . | 98.76 |
| 2 . . . | nil . . . | 0.380 . . . | 98.96 |
| 3 . . . | 0.086 . . . | 0.504 . . . | 98.18 |

The fluids taken from the intestines furnished proportions of albumen varying from 1.5 to 2.2 per cent.

The following quantities of salt and of water were found in the blood taken from the body after death:—

| | Chloride of sodium. | Water. |
|--|---------------------|--------|
| | 0.185 . . . | 75.330 |
| | 0.275 . . . | 75.110 |
| | 0.212 . . . | 75.110 |
| | 0.069 . . . | 71.000 |

Lastly, the composition of the serum taken from the system during life was represented by the following numbers:—

| | |
|---------------|--------|
| Water . . . | 87.000 |
| Albumen . . . | 9.558 |
| Salt . . . | 0.531 |

In examining the results of these experiments, M. Corenwinder draws from his investigations the following conclusions:—

A notable quantity of Albumen is found in the liquids of the intestines; very little dry matter, little or no albumen, and much common salt, in the liquids of the stools. The proportion of dry matter increases in the blood, and the quantity of salt suffers a variable diminution, up to one-fifth of the weight of the blood in its normal condition. Lastly, the composition of the serum does not suffer any notable variation.—*Med. Gaz. March 9th.*

Treatment of Malignant Cholera.—The following comparison of various modes of treating malignant cholera is taken from a review of several recent writings on this disease in the *Monthly Journal*, 1849:—

Blood-letting.—In reference to this, the evidence is conflicting. It has been employed with alleged benefit in all

stages of the disease in this country and in India. In the early stage it has been effectual in relieving the feeling of oppression on the chest. Its effect on the mortality is not evident. Dr. Robertson, in his statistical account of the cholera in Edinburgh, during the present epidemic, states that he has in many instances prevented collapse by this measure.

Stimulants.—According to M. Ross's tables, stimulants given to any extent appear to have been injurious.

Opium.—There seems no reason to doubt its efficacy in the early stage; but, according to the tables above-mentioned, it does not diminish the mortality.

Mercury has not been followed by remarkable success in this country, except in the hands of Drs. Ayres and Peacock, both of whom use it without stimulants. In their experience the mortality was reduced to thirty-one per cent. Dr. Fleming advises the use of a solution of the bichloride, as more readily absorbed.

Tartar Emetic in small doses, with cold water, *ad libitum*, has in the Droitwich Asylum afforded the largest per centage of cures, the deaths being only four in twenty-four cases.

Injection into the Veins has afforded no satisfactory results.

Chloroform has been used by inhalation in thirty-seven cases. The results are inferior to those witnessed in the Droitwich Asylum, but superior to the general results exhibited in Ross's tables.—*Med. News and Library.*

Conclusions respecting the Mode of Propagation of Cholera in Russia in 1847-48. BY DR. FRETENBACHER.—Dr. Frettenbacher of Moscow, in an elaborate statistical report of the progress and ravages of cholera throughout the Russian Empire, during the last two years, gives the following general conclusion as the result of his observations on the subject of its propagation:—

1. Intermittent fevers had prevailed throughout the whole extent of the Empire, previously to the appearance of the cholera. In 1846 they had assumed in many places an epidemic character. In 1847, when the cholera appeared, these fevers ceased, and they re-appeared as the cholera declined.

2. The cholera was preceded, almost invariably, by disorders of the digestive organs and intestinal canal. These derangements increased with the appearance of cholera, and decreased in severity as it disappeared. They prevailed throughout the whole extent of Russia in Europe, even where cholera was not present.

3. The cholera followed the course of large rivers and the chief lines of human intercourse. Prevailing winds had no influence on its progress.

4. When the cholera appeared in places out of its principal route, it was generally found to have manifested itself shortly after the arrival of persons from districts where the disease was prevailing.

5. In localities where the cholera was thus conveyed by individuals, it did not always spread as an epidemic, but those only who came in contact with the affected had the disease, and if it did spread epidemically under these circumstances, its progress was very slow.

6. In many places the cholera appeared in an epidemic form, without any communication with infected districts, under the influence of general causes, of which we have as yet no satisfactory explanation.

7. The cholera propagated itself especially in low situations, in unhealthy and confined dwellings, where the inhabitants were previously debilitated by disease, intemperance, and other depressing causes.

8. Some localities which, from accidental circumstances, were carefully isolated, such as large establishments, and even entire villages, completely escaped the visitation.

The preceding facts prove that this disease, originally epidemic, may become energetically contagious; or, in other words, communicable from man to man.—*Med. Gaz.*

On the Treatment of Internal Strangulation on the Intestines by Strychnine.—By Dr. HOMOLLE.—In this communication Dr. Homolle relates three cases in which he found very minute doses of strychnine (1 milligramme,) repeated every hour, completely efficacious, after various other means had been tried in vain in relieving urgent symptoms of internal strangulation, produced in two of the cases by the return of hernia *en masse*, and in the other by violent vomiting. It was the knowledge he had of the favorable influence which strychnine exerts upon the peristaltic action of the bowels, in constipation from cerebral paralysis, hypochondriasm, &c., that induced him to employ it in the present cases. The borborygmi, the painless sense of vermicular movement, the rapid cessation of the pain and vomiting, and the expulsion first of gas and then of feces, which resulted from its employment, confirmed the anticipations he had entertained. M. Amussat, who employs the conjoined force of two or more persons for the reduction of hernia, believes that in this way nine-tenths may be reduced; but the taxis is, in point of fact, but the substitution of an external constricting force for the insufficient contraction of the walls of the intestine. The alkaloid by increasing defective, or by correcting irregular, peristaltic action, diminishes the volume of the intestine, and expels the detained fecal matters, or removes invaginations. It is to be recollected that the obstacle in strangulation of the intestine is hardly ever materially insurmountable. So that this means sometimes may, associated with the taxis, even in strangulated hernia, prevent the necessity of resorting to an operation.—*L'Union Medicale*, 1848, Nos. 138-9, and *British and Foreign Medical Review*, April 1849.

On the external use of Iodine in Croup.—Dr Willige speaks of having had remarkable success in the treatment of urgent cases of croup by the external application of iodine to the larynx and trachea. He recommends that tincture of iodine should be smeared with a feather over the front part of the neck, corresponding to the larynx and trachea and their immediate neighborhood; and that this should be repeated several times, with intervals of about four hours, until redness and irritation of the skin is induced. In most cases this is followed by subsidence of the distress of breathing, of the spasms of the glottis, and of the other bad symptoms. He mentions the particulars of three cases, in which, by this means, he succeeded in averting impending death.—*London Med. Gaz.* Jan. 1848, from *Schmidt's Jahrbücher*, No. 7, 1847.

Spigelia Marylandica in Pruritus Ani depending upon Ascariides.—Dr Koreff gives two cases of rebellious itching of the anus, which yielded to this treatment after the fruitless employment of the usual remedies. The root is the only part of the plant which possesses the required virtue, the leaves being perfectly inert. The formula employed was as follows:—R.—Radix spigeliae dr. iiss; mannae oz. j. To be infused in a pint of boiling water. Dose, a cupfull three times a-day, for three days. A concentrated decoction of the root may at the same time be used as an enema.—*Revue Medico-Chirurgicale*, Sept, 1848.

Lemon Juice in Rheumatic Gout.—Dr Owen Rees narrates the case of a girl, aged 18, suffering from rheumatic gout in all her joints, who was treated successfully by lemon juice, in the dose of half an ounce three times a-day. In his remarks on the ease, he states that he has in many other cases seen marked and rapid relief from the same plan. He first had recourse to lemon juice from a belief that vegetable acids, from the large quantity of oxygen they contain, contribute to effect the transformation of the tissues generally, and moreover, from the idea that the supercitrate contained in the juice, by its transformation contributed to the alkalinity of the blood.—*Med. Gaz.*, Jan. 26, 1849.

Contagion of Cholera.—The following instance is quoted as an example of the propagation of Cholera by contagion. "The

British frigate, *Topaz*, touched at the Isle of France in 1829, and conveyed thither cholera, which spread rapidly throughout the island, prolonging its ravages for four months, sparing neither age, sex, nor rank, although the deaths were more numerous among the black population. No room was left for doubt that the disease had, in this instance propagated itself directly by contagion. Six thousand individuals perished during the first six weeks of its appearance. When this ship arrived, the Island was in a healthy state, and had been free from any epidemic illness for an unusually long period."—*Dub. Med. Press, in Med. News.*

ON CHOLERA.

(From *Braithwaite's Retrospect of Medicine*, 1848.)

[Out of the innumerable papers on cholera which have appeared in the Medical Journals within the last six months, we have selected the following as amongst the most practical and useful. We would also refer the reader to some very interesting and practical papers on the same subject in our last volume, by Messrs. French, McCoy, and Thorn, and Drs. Bell, King, Massy, Turnbull, Ward, and Watson. It would be useless at present to occupy our pages with the different views which have been published respecting the supposed pathology of this disease. A few introductory remarks, however, may not be inappropriate.]

Dr. LAYCOCK, York:—

After remarking that the main questions at issue respecting cholera are apt to be lost sight of in discussions respecting the mode of transmission of the virus, and minute details "as to the escape of one person from the disease, and the attack of another by it," Dr. Laycock proceeds to say:—

What are the universal facts observed with regard to cholera? In the first place, many are attacked, but a greater number escape—and why? See what an important question this in prophylaxis: for if you can put a whole population into the same situation as that portion is in which escapes, the disease is extinguished. In the next place, as a general rule, it begins with sporadic cases—droppings, as it were, before the thunder-shower—in the locality about to be affected; and it gradually increases in intensity until it attains a climax, and then declines—and why? Here is another important question; for if we can induce the same circumstances at the outset, which occur at the decline of the disease, it need never appear except sporadically.

Let us first fix the meaning of terms to be used in our enquiry; for I believe three-fourths of the confusion which arises in the discussion, as to the spread of febrile diseases, arises from a misapprehension of terms. I have just used the term *sporadic*, it means scattered, dispersed, *disseminated*, (*Græcè*) cases, one dropped here and there, like seeds; thus, variola or scarlatina may be sporadic—there being a few dropping cases here and there. But if circumstances favor their spread, and if there be a number of persons predisposed to be acted on by the contagious principle, then they will become *epidemic*—that is to say, *generally prevalent amongst the people*; for that is the meaning of the term. So, then, a disease is epidemic when it is generally prevalent, whether it be contagious or not. But what do I mean by contagion, you will ask? Why this—that there is a *materies*, either solid or gaseous, given off by or from the bodies of persons laboring under a disease, which is received into the blood of another person, and which, if when received, it produces a morbid change in the blood, that change is followed by morbid phenomena, like those under which the originally diseased person labored. Without these conditions there can be no contagion. Strictly speaking, the term means the communication of the poisonous *materies* by actual contact; but if the poison be in the atmosphere (as it is in the majority of contagious fevers), still it comes to the blood by contact—in fact, we may say by *direct* contact—through the lungs. Contagion, then, or the production of the disease, can only be *conditional*; if it were absolute and unconditional, the human race would by this time have been exterminated. Fortunately, the conditions, the concurrence of which is necessary, are so numerous, that it is only at intervals that that concurrence takes place and fever becomes epidemic at all, and even then only a fraction of the population are subject to its influence by presenting the necessary conditions. As the whole force of prophylaxis must, I think, be directed to the removal of these conditions, let us consider what they are.

Dr. Laycock assumes, without discussing the point, that cholera is a contagious disease in the sense thus laid down. He then remarks, that as the *materies morbi* is generated in a diseased person, our *first* rule of prevention is to hinder *contact* of the diseased with the healthy; in other words, to enforce quarantine, and *secondly*, as quarantine regulations will only *delay* the progress of the disease, the next step is to hinder the *transmission* of the poison from the sick to the healthy. It is pretty certain, Dr. Laycock thinks, that this transmission is facilitated by a damp atmosphere, which probably holds the poison in solution. He says:—

This being the case with the poison of cholera, not only will there be a more ready transmission through a damp atmosphere, but a larger quantity will enter the system at a given time, and in proportion to the quantity taken will be the poisonous effect. Cholera will, therefore, spread more rapidly—that is to say, a *greater* proportion of persons will be attacked in a *less* time, in a low damp locality, than in a dry high situation. The means of prevention in this case is to dry the air by every possible means, or else that the damp locality be abandoned; the latter would certainly be the most efficacious, though seldom practicable. The bedding and clothes of the patients and attendants should be kept perfectly dry; dry heat should be used in every possible way, and all open vessels containing water removed altogether from the apartment. Effective draining should be carried out, stagnant pools filled up with some dry absorbent material, to prevent the transmission of the poison to a distant locality (which I believe may be done by packing up some damp clothes fresh from a cholera patient, in a well-fitting box, and transmitting them per rail or otherwise); all articles of clothing should be exposed to as high a temperature as they will bear in a dry atmosphere; a blast of hot dry air upon clothing of this kind will, I have reason to think, effectually destroy the poison.

You may also dilute the poisonous atmosphere by frequently changing it, that is to say you must *ventilate* well. If you can ventilate with dry air, it will be better, but you had better use damp air freely, rather than shut up the poisonous atmosphere. You should prevent many persons being near a patient, or even crowding their apartments, for they not only abstract oxygen from the atmosphere, and displace a certain proportion of it, but they load it with vapor derived from their lungs.

[But, do what we will, we cannot entirely prevent the transmission of the poison from the diseased to the healthy. It will be absorbed into the blood of many in whom the symptoms are never manifested, in the same way as other fever-poisons, small pox or scarlatina, for instance, are received, and yet do not act upon the system, because all the conditions necessary to their action are not present. In those cases where the cholera-poison does not act upon the blood, in accordance with its nature, in eight or ten days, Dr. Laycock thinks it probable that it is eliminated from the system by the excretions, probably through the mucous membrane of the intestines, a little diarrhoea being excited by it. The *third* rule of prevention, therefore, is to facilitate the excretion of the poison, a principle which, Dr. Laycock observes, has been neglected alike by contagionists and non-contagionists. He says:]

I apprehend persons in perfectly good health, and using ordinary care in keeping so, will always excrete the poison, and never have cholera: nature is quite sufficient, under these circumstances, to take care of herself. I apprehend, too, that persons only in moderate health, who attend to the ordinary rules of hygiene, will excrete this poison with very little constitutional disturbance—having, perhaps, a slight febrile attack ending in perspiration, or slight diarrhoea. These have the cholera, and may *communicate* it, too, totally unaware of the fact. Now, of course, popularly speaking, diarrhoea is not cholera; but technically speaking, it is quite as much an effect of the poison as the more violent symptoms; just as mercurial crethism is quite as much a symptom of poisoning by mercury as pytalism or diarrhoea. And here let me advise you not hastily to conclude that the ordinary symptoms of cholera are the *only* symptoms produced by the poison; it may, and I believe does, produce symptoms altogether different from its commoner effects; and this is the case with all poisons whatever. The poison of erysipelas, for example, will excite puerperal fever. You may have measles without catarrh—scarlatina without a rash; and this leads me to remark how necessary it is to use the greatest cautions in your

conclusions as to the symptoms produced by febrile poisons, and always remember that *one-half, at least, of their natural history, is entirely unknown.*

If, then, when the cholera is epidemic, you have a patient with slight diarrhoea, but especially with rice-water stools, act as if the enemy were upon him. Now I don't think you should instantly check the diarrhoea, for I suspect it is an effort of nature to carry off the poison—not the diarrhoea, but that the poison is passing out by the intestinal canal, and irritating it as it passes. Moderate the irritation by gentle opiates; set up other excretions, as by the skin and kidneys; give your patient plenty of demulcent drinks, and of free pure air; charge him, as he values his life, not to irritate the gastro-intestinal mucous membrane, and, as an antidote to the poison in the blood, give a few doses of quinine, or the vegetable acids. The best formula perhaps would be, a grain or two of amorphous quinine with two or three grains of tartaric acid and a few minims of landanum every six hours.

But suppose your patient have already disorder of the excretory organs, so that the blood is not depurated in the ordinary course of events, you have then a dangerous state of things, and one which will demand all your skill, if the greatest can be of any avail. If your patient have chronic disease of the intestinal mucous membrane, or of any of the principal viscera, but especially of the liver or kidneys, his exposure to the poison will most probably be followed by a violent if not fatal attack. You must therefore warn him to adopt all possible means of avoiding contagion. Patients with chronic disease of the liver and intestinal mucous membrane, and especially with Bright's disease of the kidneys—drunkards belong to this class—will suffer far more than any other class; and I am inclined to think few such receiving the poison will recover.

The exemption of persons engaged in chanderies and tanneries from the disease, points out their atmosphere as being prophylactic,—why, I cannot say. Persons highly predisposed, from the causes etated, might avail themselves of this hint. I am assured that the emanations from tallow are obnoxious to insect life, and therefore they have some virtue or activity as yet unknown to us, and are widely different in their nature from mere putrid emanations.

Now you may have all the functions going on with tolerable regularity, or at least without any marked irregularity, further than the sort of ill health which deficient diet, defective supply of atmospheric air, and the presence of malarious poisons, may excite, and yet such person be highly predisposed to disease. Any thing which lowers the tone of the system will give the poison activity: thus a great number of persons may have already received the poison into the blood, and it remains latent until the depression which precedes a heavy thunder-storm, or a fatiguing journey—as a march of troops, or the want of a meal, or excess in a meal after a long fast, will at once develope the morbid action of the poison. Those examples in which a number of persons have been exposed to the poison at the same time, and then to such an exciting cause as the preceding at the same time, have presented great difficulties to a sufficient explanation, and have been called "nuts for contagionists" to crack; but you will, I think, find no difficulty in them whatever, if you have a clear comprehension of the whole subject.

The miasmata given off from feculent debris, as from privies or accumulations in the sewers, act as a poison, as I have previously shewn, on the intestinal mucous membrane; and, consequently, persons breathing air impregnated with such emanations, are peculiarly liable to be rapidly affected by the poison of cholera. The reception of the latter is but the application of the match to a train already laid. I need not, I think, observe, that the removal of feculent accumulations, and of animal and vegetable debris, is an important point in prevention.

All the depressing emotions enable the poison, when received into the blood, to conquer the re-action of the organism against it, and to overcome the *vis conservatrix*. You will hear of people taking fright at the cholera hoarse, or something of the kind—hardly suffering from diarrhoea perhaps—and go home, lie down, and die in all the agonies of the disease. Now such persons, if they had not had their vital powers so depressed by terror, would have resisted the action of the poison; for rest assured that when a person dies of Asiatic cholera, he must have received a specific poison into his blood, however difficult it may be to account for the communication or reception of it. You might as reasonably

say, that a person with small-pox had never received the contagion of small-pox.

What are the circumstances that lead to the decline of the epidemic? In the first place, all persons who have had an attack do not seem *immediately* liable to a second: then the highly predisposed have either died or had it; so that, like a fire, it dies out for want of fuel; or, thirdly, an atmospheric change may conjoin with the preceding, and the air becoming very cold and dry, puts a stop to the development of predisposing miasmata, and the more ready transmission of the poison. It is in this way all epidemics whatever come to a close, whether arising from miasm or contagion.

The grand object, then, in the prevention of cholera, is to remove as many of the pre-disposing causes as you can. Many of these are entirely within the power of man—indeed, all the most important: I mean those emanations which arise from overcrowding or decaying debris, &c. With regard to cachectic and visceral disease, you can do little.—*Medical Gazette, Oct. 27, 1848, p. 636.*

Dr. W. G. MAXWELL, Calcutta:—

The Progress of Symptoms.—What is cholera? is a question that has been asked a million times.

Cholera is the first stage of fever; the fever of a particular locality—the endemic fever, or the epidemic fever.

Fever is made up of various stages: the collapse stage, the shivering stage, the hot stage, and the sweating stage. All or each of these may be morbidly increased, constituting apparently different diseases, but in reality linked together in inseparable union. It is the morbid increase of the first of these, that I have now briefly to consider, viz., cholera morbus.

Here the fever never rises higher, it never reaches the shivering or the hot stages; if it does, it is no longer cholera; the fever has passed from the collapse into the other stages. Those who have had ague will comprehend the term "collapse of fever." They will recollect having had the paleness of the hands, feet, and countenance (and these generally tipped with blue); they will recollect the cold smooth feeling of the hands, the nervous sensations about the chest and stomach, and extending over the system. These, all or partly present, constitute what I call the "collapse of fever;" and this collapse of fever (in excess) is cholera morbus.

During the prevalence of the epidemic constitution, if an individual sojourn in a locality notoriously febrile, he will imbibe (what I will call for the easier comprehension of the reader) the epidemic leaven or ferment. Now, this ferment will take some time to display its full action, varying according to the quantity taken into the system; but it is generally in the middle of the night following that the effects are displayed; and it is an equal chance whether the individual sinks in the first or collapse stage, or rises from it into fever; hence the explanation of those cases, found in the morning in a high state of fever, which had been first reported as instances of cholera.

The development of the stages of fever entirely depends on the changes the leaven has effected. If this change has been such that the blood has become too thick to flow through the lungs, then, as a matter of course, the collapse stage is developed in excess; in other words, cholera asphyxia is exhibited. The blood, unable to pass through the middle passages into the arteries, collects and swells out the veins, giving that deadly or blue color to the skin. When the vomiting and spasms come on, this mass of blood in the veins is squeezed with great force, and hence the clammy moisture that is forced from every part during these fits. There is no pulse, because there is no blood in the arteries. There are also lethargy and languor, and oppression in breathing, caused by the blood being all collected in the veins. These make up the principal links of the chain of mechanical symptoms. The other train of symptoms and associate symptoms arises directly from the stomach and bowels. I cannot say which are the most important; the neglect of either may be fatal. They, like the former, spring from the influence of the epidemic leaven. When the blood begins to thicken, that same moment all the functions begin to go wrong. The most important of all the functions, digestion and assimilation, are the first to feel the influence; in fact, it is difficult to define priority; the influence must be immediate, being part of the same circle. The derangement of these functions and the deprivation of the blood advance mutually, as a matter of course; neither the one furnishing secretions to the bowels, nor the other nutrition to the blood. The inevitable, invariable con-

sequence of this is the establishment of fermentation of the contents of the stomach and bowels; the abdomen becomes swelled, and the stomach and bowels more or less uneasy; and this uneasiness increases exactly in proportion to the completeness of the changes the alimentary matters undergo. Nausea advances rapidly, followed by vomiting and purging; and, if there is not a free discharge both ways at first, spasms are induced by the irritating fermenting matters remaining in the intestines; if these are in the stomach or upper portions of the bowels, the spasms will be in the chest and upper extremities; if in the lower part of the canal, the spasms will be in the inferior extremities. Examination after death reveals the origin of these spasms in the mucous membrane of the bowels; it is found more or less destroyed in various parts, or covered with ulcerations in protracted cases. The contents of the bowels are found in a putrid state; there are no healthy secretions and not a particle of bile—the preserving fluid of the intestines, the register of putrefaction. The moment it disappears, fermentation and putrefaction advance rapidly. Its absence is one of the links in the great chain; as also are all the effects resulting therefrom. There is not a single secretion carried on in fully formed cholera—for this plain reason, that there is no circulation, the blood is too thick to pass through the middle passage into the arteries; it remains in the veins, and during each fit of vomiting and spasm it is squeezed, as in a cheese-press, and the clammy moisture forced from it at all parts. Hence observe the chain of actions; the leaven leavening the mass, thickening of the blood, stoppage of digestion, fermentation of the alimentary matters, irritation of the mucous membrane, vomiting, purging, and spasm, all re-acting, as it were, on the first symptoms, and increasing the thickening of the blood; all, in fact, parts of the chain linked together in inseparable union.

[The treatment of cholera is illustrated by Dr. Maxwell by an account of an attack from which he himself suffered. He had not been able to think of any appropriate remedy, and was denying himself the use of cold water, from an impression that it would be dangerous. At last, he states:]

The thirst, however, became worse and worse, and I determined to relieve it at all hazards, and not add misery to death. Having made up my mind, the next point was the choice of the particular beverage; there was plain water, whey and barley-water, gruel, congee, &c., wine and water, brandy and water, &c. To the last of these I had a repugnance, as every one has in fully formed cholera, and the others would require time and direction for their preparation, which my disease was not able to afford, or I to give. Whilst thus ruminating, my eye accidentally fell upon a packet of effervescing soda-powders standing among a crowd of other remedies and nostrums on the table. It immediately took my fancy; it struck me as the very thing I wanted, and without further delay pointed to it, and made signs for a copious draught thereof. It was soon made and soon swallowed; it was extremely refreshing and agreeable, and the thirst was allayed; no nausea succeeded, and the pleasing anticipation remained of having a repetition of the draught whenever I desired. This I was not long in desiring; in fact, almost immediately after I swallowed another, and continued repeating it whenever the thirst became urgent. Instead of retrograding or remaining stationary, I began to improve; the stools became easier, and the spasms less vigorous and vicious.

I experienced an inclination to sleep, a desire to be covered up, and for something hot to drink (these are the best signs, they point out the disease escaping from the collapse stage.) I had a large tumblerful of very warm but weak brandy and water made, and drank it off. I fell asleep, and had five or six hours of profound repose. I awoke bathed in perspiration, and with the exception of a little stiffness and considerable thirst, I felt perfectly well. The thirst was again relieved by the effervescing draughts, and I followed up the principle with a couple of dishes of that most delectable and pre-eminent of all stomachics, tea.

Here ends my case, with the remarks thereon, and inferences therefrom. I have only attended to the display of the principle of cure as best I could. Were I to begin with remedies, I might write till this time next year without advantage.

I do not say that the effervescing draught is the only cure, but it is one which carries out the principle as well as any I know, and it is agreeable and refreshing, and allays the thirst; can be taken in any quantity, and is efficacious. I have given it in various instances, in every stage, always with advantage to the

disease and gratification to the patient; but from these only I do not judge, it is from having taken it myself, as I have described, that I feel authorized thus to speak regarding it.

Bleeding, both general and topical, may be necessary in cholera when there is much oppression, restlessness, pain, spasm, blue skin, or asphyxia; neither were necessary in my case. People do not die from being bled, even when unnecessary, but from bleeding being trusted to alone, while the principle of cure I have pointed out is not followed up.

Sinapisms and blisters to the legs, &c., for the relief of spasms, are unnecessary; the origin of the spasms is in the intestines, as I have pointed out. Hot fomentations to the loins and stomach relieve the spasms of the legs. The wishes of the patient should be strictly attended to; nature is the best physician; if he wishes for cool air he must have it; if he desires to be covered up, he must be so; many perish from being too much covered up at first, when the fresh air would revive them. Calomel and opium may be necessary in some cases; in mine they were not, therefore were not used. From it may be defined the nature of those cases that might require their administration. No harsh remedies will do in cholera; all must be of the mildest description—such as will pass in quantity gently along the bowels to remove the fermenting matters; and, above all, they must be such as will be relished and eagerly desired by the sick, and such as can be constantly taken for the relief of the urgent destroying thirst, constantly present from the commencement of the disease.

Recapitulatory Summary.—I have endeavored to make this key as concise as possible, consistent with utility. I think it will be found to embrace the most important points connected with the disease. Of all these, the irritation of the stomach and bowels claims the first rank; it is caused by the presence of fermented matters. The cure cannot be accomplished until they are removed, or their acrimony blunted; and this must be effected in the gentlest manner by copious diluents, as I have pointed out. I took, in my own case the effervescing draughts, and I found them answer admirably; they were delightfully refreshing, and they passed gently downwards, removing the irritation in the bowels. I was solely guided by the thirst; it no sooner returned, than I swallowed another tumblerful of the effervescing draught. After taking fifteen at least of these, always with relief and gratification, the disease began to rise through the other stages, indicated by the wish to be covered up, and for something hot to drink, as I have already described.

I will not say a word on the question of bleeding; it is impossible to lay down a fixed rule on this head, or to explain, within the limits of an epitome like this, all the circumstances connected with it; suffice it to say—1. That, if the natural diluent system is early had recourse to, bleeding will seldom be necessary. 2. That bleeding alone will not cure the disease—for this plain reason, that it cannot remove the fermented irritating matters from the bowels. 3. That the natural diluent system, if early and steadily persevered in, not only removes this irritation, but likewise prevents the further thickening of the blood. If these conditions and their effects, however, from the neglect of diluents or other causes, have become urgent, let blood be taken away; it will flow if diluents are now freely given, and the surface kept moist according to the wishes of the patient.—*Medical Times*, July 22, 1848, p. 185.

POOR LAW COMMISSIONERS:—

[The following are the suggestions made by the gentlemen appointed by the Poor Law Commissioners to inquire into the condition of the metropolitan poor-houses with respect to cholera.]

1. We would urge the necessity in all cases of cholera, of an instant recourse to medical aid, and also under every form and variety of indisposition; for during the prevalence of this epidemic, all disorders are found to merge in the dominant disease.
2. Let immediate relief be sought under disorder of the bowels especially, however slight. The invasion of cholera may thus be readily and at once prevented.
3. Let every impurity, animal and vegetable, be quickly removed to a distance from the habitations; such as slaughter-houses, pig-sties, cesspools, necessaries, and all other domestic nuisances.
4. Let all uncovered drains be carefully and frequently cleansed.
5. Let the grounds in and around the habitations be drained, so as effectually to carry off moisture of every kind.

6. Let all the partitions be removed from within and without habitations, which unnecessarily impede ventilation.

7. Let every room be daily thrown open for the admission of fresh air; and this should be done about noon, when the atmosphere is most likely to be dry.

Let dry scrubbing be used in domestic cleansing, in place of water-cleansing.

9. Let excessive fatigue, and exposure to damp and cold, especially during the night, be avoided.

10. Let the use of cold drinks and acid liquors, especially under fatigue, be avoided, or when the body is heated.

11. Let the use of cold acid fruits and vegetables be avoided.

12. Let excess in the use of ardent and fermented liquors and tobacco, be avoided.

13. Let a poor diet, and the use of impure water in cooking, for drink, be avoided.

14. Let the wearing of wet and insufficient clothing be avoided.

15. Let a flannel or woollen belt be worn round the belly.

N.B.—This has been found serviceable in checking the tendency to bowel complaint, so common during the prevalence of cholera. The disease has, in this country, been always found to commence with a looseness in the bowels, and in this stage is very tractable. It should, however, be noticed, that the looseness is frequently unattended by pain or uneasiness, and fatal delay has often occurred from the notion that cholera must be attended with cramps. In the earlier stage here referred to, there is often no gripping or cramp, and it is at this period that the disease can be most easily arrested.

16. Let personal cleanliness be carefully observed.

17. Let every cause tending to depress the moral and physical energies be carefully avoided; let exposure to heat and cold be avoided.

18. Let crowding of persons within houses and apartments be avoided.

19. Let sleeping in low or damp rooms be avoided.

20. Let fires be kept up during the night in sleeping or adjoining apartments, the night being the period of most danger from attack, especially under exposure to cold or damp.

21. Let all bedding and clothing be daily exposed during winter and spring to the fire, and in summer to the heat of the sun.

22. Let the dead be buried in places remote from the habitation of the living.

By the timely adoption of simple means such as these, cholera or any other epidemic will be made to lose its venom; so true it is that "Internal sanitary arrangements, and not quarantine and sanitary lines, are the safeguards of nations."—*Lancet*, July 22, 1848, p. 106.

Dr. HENRIQUES:—

[Considers that cholera resembles miasmatic congestive fever in its intrinsic nature, and recommends the administration of quinine as soon as the prominent symptoms are developed; and as a prophylactic, in addition to the regimen ordinarily prescribed, he advises that two grains of sulphate of quinine be taken every morning for six or seven days, then suspended for the same period and again resumed, and that this plan be followed as long as the epidemic lasts.]

Dr. KENNEDY, of Woodhouse, Leicestershire:—

[Recommends camphor and laudanum in small doses, antiseptic fumigations, and frictions with stimulating liniments.]

Mr. M. T. SADLER, Barnsley:—

Says, "that we have, from facts, very strong evidence to lead us to assign the specific cause of malignant cholera to some secret emanation from the lower parts of the earth, and that it is probably some agent analogous to electricity.

If there are magnetic storms, why should there not be choleric storms? To be able to account for the irregularity of earthquakes, volcanoes, or the motions of the magnet, science must pierce to the depths below, and be able to watch the mighty operations there going on. This, however, is beyond its reach; but amongst other conjectures, if we suppose there is, as Humboldt suggests, a molten mass of nearly eight thousand miles in diameter, within twenty-one miles below our feet, (put in motion, it may be, by the influence of the sun and moon,) we may then suppose an agent generated by some action of these perhaps perfectly un-

known materials, that may account for the dreadful malady which is the subject of my paper: and the varying nature of the strata of which the earth is composed may conduct it in an irregular form and manner to its surface."

The idea has been entertained by other persons, who have, however, not canvassed the subject at such length as Mr. Sadler: and doubtless in investigations into the still mysterious origin of cholera, and circumstances predisposing certain localities to its advent, geological as well as atmospheric conditions must be taken into account. In the endeavors to prove "that malignant cholera is infectious," and that simple diluents are amongst the most important accessories of the treatment, we conceive that Mr. Sadler is less happy. He remarks:—

"It is evident that in cholera the blood must lose a great part of its serous element; and pathological facts show, in examining the body after death, that the blood is 'of an oily or ropy consistence, very closely resembling tar or treacle;' this being the case, it requires but a very superficial knowledge of anatomy to convince any one, that blood approaching to this state cannot possibly circulate through the fine capillary vessels of the system, and if it does not circulate through these, the blood cannot undergo its proper changes in the lungs; all secretions must be suspended, and death the result."

But it is equally evident that "simple diluents, as water," will not replace the "serous element" of the blood, even if the stomach can be got to receive and retain them. The advocates of the saline treatment, applied to the system by the various modes which have been adopted, will argue, and with some reason, that the fluids they aim to introduce into the system contain more of the constituents of the wanting serum than pure water, and are therefore more analogous to the materials demanded to replace the loss suffered by the circulating fluids. Mr. Sadler is quite right in adding, immediately after the passage last quoted, "Diluents may not save the patient in such a state of the blood."

Mr. GREENHOW, Newcastle:—

Observes, "One fact connected with the history of cholera is most important to be kept constantly in mind—cholera is *not* a contagious disease. It is incapable of being communicated from one human being to another, neither can it be communicated from the dead to the living. Ample opportunities of careful observation and investigation in 1831 and 32, convinced us of this great truth—truly great as regards our conduct in reference to another visitation of this formidable disease.....The danger is not from the persons of the sick, but from the localities in which they have been seized with the disease, the efficient cause of which, for the most part, settles down into hollows, the beds and margins of streams, and dirty recesses, into which a pure and wholesome atmosphere can scarcely at any time find its way.....Such places, in a philosophical point of view, have a near resemblance to the celebrated *Cave of Dogs* in Italy, so fatal to the canine race, while man enters unharmed—simply, because his superior stature enables him to breathe an atmosphere untaunted by the deadly vapor which, lurking in the lower part of the cave, is sure to kill his dog. As in this instance, so in the endemic cholera, there is a certain line of altitude, beneath which disease will certainly take place, in degrees proportioned to the predisposition or susceptibility of the inhabitants, which, in its turn, is dependent upon conditions already referred to; above this line, on the contrary, disease will either be entirely absent, or its occurrence extremely rare.....Experience has proved that this noxious condition of the air cannot be purified by any artificial or chemical means that have been devised; and it is only by removing to a more healthy situation, on a higher level than the endemic line already referred to, that the inhabitants can be saved from disease and death. The manner of effecting this migration, or the removal, *en masse*, of the inhabitants of a locality so contaminated whether by preparing beforehand temporary houses in an airy situation, beyond the boundaries of the town, or by pitching tents in such a situation, on the spur of the necessity, must be determined by committees of health and town councils, or other authorized bodies.....Whatever might be the cost, it would doubtless be greatly exceeded by that of providing for many sick persons, and for the burial of not a few of the dead. It may safely be laid down as a good practical rule, that the prevention of a great calamity is less costly than the loss sustained by its actual occurrence."

Dr. M'CANN:—

[Dr. M'C's treatment, which is highly lauded by Mr. Hodgson, of Birmingham, is the following:]

"*For Prevention.*—I recommend comfortable and nutritious animal food of the solid kind, warm clothing and attention to regular hours, free ventilation and cleanliness; also lime-washing the dwellings of the poor. I advise abstinence from spirituous liquors, from all fruit and raw vegetables, from all salt fish and oysters—the latter especially—from all excesses that debilitate the constitution; and, above all things, I deprecate the strong purgative medicines. When sickness, with derangement of the bowels, is felt, the patient (if an adult) should mix a table-spoonful of mustard, or double that quantity of common salt, in half a pint of warm water, a third part of either to be taken every ten minutes until free vomiting be produced; after the stomach has been well cleared out with more warm water, thirty drops of tincture of opium should be given in a glass of brandy-and-water, to be followed up with a pill composed of five grains of calomel and two grains of opium; for an adult, small doses of these in the proportion of three grains of calomel and half a grain of opium, to be taken at intervals of every two hours until bile is observed to pass in the evacuation."

Embrocations of heated turpentine, hot water in bottles or jars, bandages tightly placed around the seat of pain, and "from two to five drops of chloroform, in a little ginger tea or any warm fluid, as one of the most efficient agents in removing choleric spasm," are the other principal remedial means on which Dr. M'Cann places trust; and his treatment in the stage of collapse "is as nearly allied as possible to that of the early stage.—*Carlou's Sentinel, Sept. 23rd.*

Lancet, Oct. 21, 1848, p. 451.

Dr. MERRYWEATHER, Whitby:—

[The following case seems to prove pretty strongly the contagious nature of the disease:]

In 1832, I was called upon to visit a man of the name of Stonehouse, in Bake-house yard, of this borough, who had just been landed from a ship. I found it a decided case of foreign cholera, in a state of collapse, as cold as ice, and of a leaden hue. This was the first case in this town, and imported. I remember well telling Stonehouse's wife to be cautious, and not be too much about her husband, as it was not yet decided about contagion. The result was, that the wife took it and died the first. Here we have an isolated case imported into a town that was free from cholera, and the very wife who was the nurse fell the first victim.

In 1833, this town was fearfully visited by Asiatic cholera, but owing to the valuable precautionary measures that were adopted at that time, and from the noble manner in which the rich came forward in aid of the poor, this scourge was wonderfully mitigated. My experience leads me to say, that if every one would apply for medical aid immediately the premonitory symptom of bowel complaint comes on, there is nothing more easy to check. If the Board of Health were to placard all the towns and villages in Great Britain, cautioning and intimating to all the inhabitants, that the choleraic bowel complaint was equivalent to bleeding to death, applications would be made at once for medical relief, instead of medical men being applied to too late, when they too often are called upon to visit, and witness all the phenomena arising from the exudation of serum from the stomach and bowels, consequently arresting all other secretions: hence the frightful shock to the nervous system and vital powers.—*Medical Gazette, Nov. 10, 1848, p. 812.*

Dr. W. REID:—

The affection commonly named the Rose, or St. Anthony's fire (the erysipelas of systematic writers) has from time immemorial been classed amongst the *non-contagious* order or group of diseases; in short, it has generally been considered as *not* infectious. Three, however, authentic, uncontested, and indisputable illustrations of the contrary have been noticed within the last thirty or forty years, respectively in Montrose, Edinburgh, and the metropolis. Some twenty or thirty were affected in all, and if we recollect aright, some of these cases terminated fatally. But that does not in the least affect the question of infection.

The corollary or inference, then, is self-evident; for here is a disease, usually in its most ordinary form (and, as every person knows, it is a most prevalent affection) held as *not* contagious, propagated by contagion distinctly through a series of three

different groups of individuals, originating in *one* of each of these groups, in whom the original cause was altogether a matter of pure accident. What holds good, then, in this affection, may, until the contrary is demonstrated, hold no less forcibly in any other new disease, not generally deemed to be infectious. *The production, apparently, of a disease by contagion, does not preclude its origin from causes independent of any animal effluvia; and the generation of a disease from natural physical causes, would not appear to prevent the possibility of that affection subsequently acquiring infectious properties.* So that if we are brought in collision with a disease of such a double nature (if this expression be permitted,) we shall have at once to fortify ourselves against the agency of the physical causes, and avoid, at the same time, free intercourse with the infected, if we desire to live secure from the disease. No one denies now the occasional production of erysipelas by infection. The evidence of the production of cholera in a similar mode is fully as strong; still, the cholera may be, and in all probability is, very much under the influence of atmospheric and terrestrial agencies; but so, likewise, is common continued fever. The cholera is not always infectious; but the fact that it is so at times, upholds the necessity of always being on our guard against that contingency occurring.

We consider that the proposition, also, may be held as established, that the identity of a disease, and its propagation by infection, are not to be reputed as absolutely essential in every instance; or, in other terms, it will be admitted, we conceive, that a disease may at times proceed distinctly and undoubtedly from infection; while under other circumstances, causes altogether of a different character may contribute to its generation. In the case of common continued fever, this seems to be undoubtedly the actual statement of the proposition. And precisely so do we conceive the evidence holds as regards the cholera.

It may not be contagious in one locality, while, in another, it displays that property in an exquisite degree. In the large and spacious dwellings of the rich and affluent, it may never assume that mark (analogous to typhus under these conditions); while in humbler and more crowded abodes of the dwellings of the poor, infection may be its most distinctive mark. It may, likewise, (to pursue the parallel) never attack, at least, but rarely, the wealthy (analogous again to typhus fever, which rarely affects that class of society); while the poor, impoverished, over-wrought, ill-fed, depressed artizan, becomes its ready prey, as is sufficiently notorious in the case of our common fever. It may have one character in the tropics, and display another within the temperate circles, yet continue still the same affection. It not being contagious in one district, is no guarantee that it will not become so in another; for in the first many concurring causes might *not* exist, which may be met with in the latter.

From the data now enumerated, we think we do not rush precipitately to a conclusion when we assert that we have no positive evidence that cholera is *invariably* a non-contagious disorder; and also that, on the other hand, we have most satisfactory and indisputable grounds for saying that it has almost, in its first visitation of this country, uniformly affected the very same localities and tracts which are the unvarying haunts of typhus.

[Dr. Reid, therefore, concludes, that as we cannot tell precisely under what limitations, to say the least of it, cholera is non-contagious, the more safe and judicious plan is to adopt precautionary measures. They can do no harm, and may be the source of much good.]—*Medical Gazette, Oct. 13, 1848, p. 635.*

J. G. FRENCH, Esq.:—

In 1832, I had the charge of St. James's Cholera Hospital. A matron was engaged—selected, among other qualifications, for the vigor of her constitution, and temperate habits. She was forty years of age. Her duties were those of housekeeper, not of attendant on the sick. She had resided in the hospital for some weeks previously to the admission of any cases. The first case which was admitted was Mary Lee (aged thirty) on the 6th July. The journal of the hospital states, that she had been nursing her mother, who had died the day previously of cholera, and was seized in the churchyard at her funeral. This patient died seventeen hours after admission, and was not seen by the matron.

The second case was Margaret Lidgate, aged nine, admitted on the 8th July, from the Burlington School, at 1, p. m. The matron immediately visited this child, sat with her, and rubbed her legs while she was in a state of collapse. About half-past

five o'clock the matron—previously in excellent health—was attacked with cholera, and died in thirteen hours and a half.

I believe that the communication which the matron had with this patient was the real cause of her attack.

John Foy, a laboring man, was attacked while at work at Paddington, at two, p.m., in August, 1833. Some of his comrades had become affected in this locality, and died. He was brought home to Ham Yard, Windmill Street. His wife was attacked after nursing him two days, and subsequently three cases occurred on the floor above that on which he resided. This is precisely the same kind of evidence as that on which the contagious nature of typhus rests.

Although these cases afford ample evidence, to my mind, of their contagious origin, I am by no means disposed to doubt that other and more numerous cases might claim their origin from other causes.

It may, however, here be remarked, with reference to the general question of prevention as contemplated by quarantine regulations, that it is highly doubtful whether any known or practised system of quarantine would prevent the introduction of a disease so universally admitted to be exclusively contagious as syphilis; should a new form of that disease, for the sake of argument, be the object of its laws.

The ideas, indeed, commonly attached to contagion, are so exaggerated, that when diseases, supposed to be of this nature, are observed under ordinary circumstances, the evidence is so weak and doubtful, that men of considerable experience are led to form the strongest opinions that these diseases are incommunicable from one individual to another. Thus, the facts elicited by a careful inquiry into the history of the Eclair, were in direct opposition to the numerous opinions formed by men who had observed the disease, which was the object of inquiry, at different times and places. So, although Dr. Armstrong denied the contagion of typhus, the Commissioners of Health, in a recent circular, declare it to be a "highly contagious disease."

The degree in which diseases are contagious is a question, indeed, of very great difficulty; but it is certain that the principal circumstances connected with it are, the denseness of the population, and the number of cases of the same disease crowded together, although it is a part of the history of disease, that occasional outbreaks of unusual virulence will occur, which defy all calculation.

The chief practical question, indeed, is, if diseases are deemed contagious, how are they to be disposed of.

It has been my practice for many years to separate, as widely as possible, cases of the same disease which are deemed contagious, and, I believe, with an undoubtedly good result. So, if there are more cases than one of erysipelas, or other contagious disease, I place them in different wards; and I am satisfied, from experience, that there is less danger of infection from increasing, as it were, a malarious area, than from the more concentrated taint occupying, possibly, a smaller space; and also that the cases themselves proceed more favorably.—*Medical Gazette*, Oct. 20, 1848, p. 675.

(To be continued.)

SURGERY.

New Operation for Congenital Phymosis. By W. COLLES, F. R. C. S.—I have been in the habit, for some time, of removing the deformity by a simple and very effectual operation. I seize the edge of the prepuce, at its fold forming this narrow band, in the left hand, and holding the scalpel in the right, and at right angles with the penis, I remove a circular portion of skin, about a quarter of an inch wide. The outer fold of skin being loose, is then drawn back on the penis, leaving the glans covered by the inner and tighter fold. I then divide this layer about half way back, more or less, slitting it up exactly in the centre, by passing a sharp-pointed bistoury under it. We have now the outer fold of skin loose, with a large circular orifice; the inner, or more contracted portion, presenting also an orifice, but larger by double the perpendicular incision, which forms two angular flaps.

I then turn these flaps outwards, and by a suture attach each angle to the edge of the external skin, at about a quarter of its circumference from the frænum; a slight suture at the frænum completes the operation. I then draw all forward so as to cover the glans.

In two or three days I remove the sutures, and generally find the wound healed, leaving a covering for the glans, differing in no respect from the natural and perfect prepuce; and in some cases it would be difficult to know that any operation had been performed, or that any had been required, on this part.—*Dublin Journal of Medical Science for February.*

Diseases of the Ear.—By J. TOYNBEE, F. R. S.—I. The treatment of chronic inflammation, and thickening of the mucous membrane lining the tympanic cavity, consists in the use of leeches, followed by an ointment composed of a drachm of powdered cantharides to an ounce of simple ointment, or of the tincture of iodine, below the ears, and as near to the tube as possible. To the outer half or two-thirds of the external meatus a solution of nitrate of silver is to be applied every third or fourth day; the salt is to be dissolved in water, and its strength may vary from half a drachm to a drachm of the salt to an ounce of water. In some cases the surface of the membrane tympani is to be washed with a weak solution of the nitrate of silver, from four to six grains to an ounce of water. Where the mucous membrane of the fauces is thick or relaxed, astringent applications should be made. Small doses of blue pill, the bichloride of mercury, or mercury with chalk, should be administered, not with the object of producing salivation, or any depression of the system, but to aid the local applications in promoting absorption. Warm bathing, exercise in the open air, the avoidance of wine and stimulants, and of close and warm rooms, should be strictly enjoined. Under this treatment, cases of deafness of many years' standing have been cured or relieved.

2. Catheterism of the Eustachian tube is an operation very rarely called for; in nine cases out of ten, by means of the otoscope,* air is distinctly heard to enter the tympanic cavity, or there are other unequivocal symptoms indicative of the pervious state of this tube;† practical experience with the deaf quite agrees with the result of the dissections of the Eustachian tube.

3. Besides the otoscope, in order to arrive at something like an accurate diagnosis of the nature of our diseases, it is requisite to use a small lamp and a delicate silver speculum. By means of the two latter instruments the exact state of the meatus and membrane tympani can be ascertained. It will be observed that the latter structure is not unfrequently more concave than natural—a condition which is produced either by direct adhesion of the membrana tympani to the inner wall of the tympanum, or through the agency of membranous bands, or by a contraction of the tensor tympani muscle.

4. The principal disease observed in the fenestra rotunda consists in the presence over it of a distinct false membrane, which is attached to the margins of the fossa fenestræ rotundæ; the latter fossa is often completely filled up by the thickened mucous membrane of the tympanum.

5. Many deaf persons, as in the case of one of the patients in whom there was found to be complete ankylosis of the stapes to the fenestra ovalis, hear musical sounds when sonorous vibrations can be made to act upon the nervous expansion, as through the medium of solids.

* An elastic tube, twenty inches in length, each end being tipped with ebony; one extremity is introduced into the external ear of the patient, the other into that of the surgeon, while the former attempts to make a forcible expiration with closed nostrils.

† Although the air is heard to enter the tympanic cavity, it does so with the production of a variety of sounds, as a puffing, bubbling, and cracking, according to the condition of the mucous membrane of the tympanum.

6. My experience has not been sufficient to indicate by the kind of deafness the particular part of the ear affected.

7. As a rule, I have not found the fluids of the labyrinth deficient in old persons, but the mucous membrane of the tympanum and the membrana tympani have been the seat of the disease.

8. Some deaf persons hear better in a noise, as in a carriage, than when quiet, because the fluid of the vestibule is thrown thereby into a state of undulation, and in this state can receive the vibrations of the thickened membrana of the fenestra rotunda, which are much less powerful than is natural; indeed, supposing the views on the physiology of the tympanum advanced by Mr Brooke to be correct,—and thus far all my researches tend to establish their accuracy,—in those cases where the stapes is so firmly fixed as not to be able to press upon the labyrinthous fluids, and give them a certain state of tensity, the vibration produced by a carriage, or by a loud sound, would in some measure be a compensation.

9. In some deaf persons there is an over-sensibility of the nerves of the ear; and a loud sound, or a loud voice, aggravates the malady by causing a forcible contraction of the muscles of the internal ear, and a rigid state of the membrana tympani.

10. Tinnitus aurium is probably dependent upon the constant compression of the contents of the vestibule, and by the pressure inwards of the stapes by means of rigid bands of adhesion, thickened base of the stapes, &c.

11. There are cases where loud reports produce a rupture of the membrana tympani; others, in which the hearing becomes gradually dulled, as in the right ear of sportsmen. I have not been able to dissect any cases tending to elucidate the pathological condition.—*Medical Gazette, Feb. 23.*

Repeated Puncture of the Bladder.—In the last number we related a case, where, after the day's interval, the bladder was punctured a second time above the pubes, for retention of urine, with stricture. The stricture continued impervious, and the patient died. On examining the body, *post-mortem*, a tumor was discovered in the belly, pressing on the neck of the bladder, which explained the retention, and the insurmountable character of the stricture. There was no effusion round the two punctures into the bladder, nor any supuration or inflammation, so that one might say the double puncture had occasioned no accident, a fact of some practical interest.—*Annales de Therapeutique, Mars.*

New Method of expelling Foreign Bodies.—Dr. Charles Hansford, of Knoxville, in this State, gives us the following history of a case, illustrative of the efficiency of a new method of expelling foreign substances from the larynx.

A colored girl had accidentally got a pin into the windpipe and was suffering with all the distressing symptoms consequent upon obstruction of the air passages from a foreign body. She was directed to lie upon a bench, face downwards with the head projecting over the edge, and to take a full inspiration. Whilst in this position, with the lungs filled with air, a smart blow or two on the back with a pillow, made hard and firm by compression, had the effect to expel the pin at once from the larynx. In this case, the first blow moved the pin about an inch, the second forced it into the mouth.

"Since that time," says our correspondent, "I have had several opportunities of trying the maul made of a pillow. I have driven out water-melon seeds in this manner, on three different occasions; a grain of corn at one time, and a large glass bead at another."

The treatment recommended above is ingenious and simple, and as it seems to us, is worthy of being tried in cases like those cited above.—*Boston Med. Journal.*

MIDWIFERY.

Use of Anæsthetics in Midwifery. BY PROF. LINDSAY.—The following directions, relating to the use of Anæsthetics in Midwifery, we copy from the Transactions of the American Medical Association:—

1st. That the pain attendant upon parturition, which is frequently so agonizing to the delicate organization of woman, and occasionally even fatal from its severity, may be partially or wholly relieved.

2d. That even in very small quantities, they benumb the acuteness of sensibility, and thus allay that feeling of fear and apprehension, which is often so distressing and injurious to the parturient female.

3d. That this tranquilizing impression may be kept up for hours with entire safety, and will be found of the greatest benefit in those tedious and harassing labors, where the condition of the parts is such as to admit of no other active interference; and our patients may thus be enabled to pass successfully the trying ordeal, when without this relief, they would succumb under their long continued suffering.

4th. That relaxation of the soft parts and of the os tincæ, and increased secretion of mucus follow their use, and that these circumstances are in themselves of much importance in advancing the labor.

5th. It is the opinion of many accoucheurs, and of some of the committee, that they increase the expulsive efforts of the uterus and decidedly aid in the expulsion of the placenta, thus manifesting the qualities of the ergot, in addition to their other peculiar properties. Should farther experience demonstrate the truth of these remedies, particularly chloroform, can be administered much more readily than ergot, and will produce their effects much more speedily.

Horny Growth Attached to the Vulva.—M. Vauclat relates the case of a female, aged 53, who was the subject of continual and severe pruritus vulvæ. She had, in addition, perceived for some time, a hardness between the labia, which gave her great pain, and interfered materially with her walking. On examination, a large round horny substance, resembling a corn, was found embedded in the mucous membrane separating the labia major from the nymphæ. It was moveable, and was excised without difficulty when the pruritus ceased.—*Gazette Med. 7 Avril.*

Management of the Placenta. BY PROF. FLINT.—Directly after the fœtus is expelled, or delivered, and the funis severed, we grasp with one or more hands, the uterus above the pubis, and excite its contraction by manipulation with the fingers, through the abdominal walls, varying the degree of pressure, with the tenderness over the abdomen, never, of course, using force enough to occasion much, if any pain. The uterus will be readily felt contracting under the fingers, until, at length, it becomes firmly contracted. We then intermit our manipulations, and if convenient, it is well for an assistant to make firm pressure over the lower part of the abdomen. Next, seizing the funis, we endeavor to follow up with the finger to its attachment to the placenta. Often this will be easy, the placenta being entirely detached, and lying in the os uteri, or in the vagina. We never make much, if any traction of the chord; but if the placenta be not readily felt, we proceed with but little, if any delay, gradually, and carefully, to insinuate the fingers arranged conically, into the vaginal. In this procedure we never give pain; if the patient complain in the least, we advance more slowly, or not at all. But in the vast majority of cases, the introduction of the fingers, and even the hand, (if it be not of a large size) is unattended by suffering. Generally the fingers introduced will reach the placenta, or uterine contraction will be excited, which will

bring the placenta within reach. If not, the hand is carried forward, provided no pain is occasioned. When the placenta is reached, we make careful efforts of extraction, hooking a finger over a portion of it, or plunging a finger into its structure. These efforts and the presence of the hand, scarcely ever fail to excite contraction, and generally the necessity for continued manual delivery is slight—the accoucheur has only to withdraw his fingers, or hand, before the advancing placenta, giving a little assistance if required.—*Buffalo Medical Journal*.

Double Uterus: Superfœtation.—A female, native of Modena, previously mother of six children, became pregnant for the seventh time in 1817. Nothing unusual was observed, with the exception that the uterus appeared to be unequally distended, a furrow being perceptible along the median line. On the 15th of February, 1817, she was delivered of a male infant at full term and well developed. The placenta was expelled naturally, and the woman recovered her usual strength, but it was remarked that one half of the abdomen was still enlarged, and the movements of a fœtus could be distinctly ascertained. The patient continued in excellent health until March 14th, just a month, at which time labor ensued again, and she was a second time delivered of a male infant, living and well formed. In 1822 she became pregnant again and bore a child now living.

Various explanations were given of that extraordinary case, and amongst others it was considered as a case of superfœtation, with double uterus, by M. Binoqli. The justness of this opinion was verified last year by the death of the patient from apoplexy. On examination, the uterus was found to be double, with a single cervix. The preparation is preserved in the hospital at Modena.—*Encyclograph Med.*, Fev. 1849.

On the Employment of Cold Douches to the Uterus.—M. Fleury communicated a memoir on this subject to the Academie des Sciences. His observations admit of the following summary:—

1. Cold douches will not cure uterine ulceration directly.
2. They are capable of inducing a revolution of engorgement and hypertrophy of the uterine neck, however chronic and rebellious to treatment they may be.
3. In favoring the revolution of the hypertrophied uterine tissue, cold douches assist materially in causing cicatrization of ulceration.
4. The cold douch will also restore several of the displacements of the womb, for which mechanical contrivances have been required, and becomes in this manner a means of removing sterility.
5. They, by giving tone to the uterus, and to the system in general, prove a prophylactic against abortion.
6. They are the best remedies for pruritus of the vulva and vagina.—*Gazette Medicale de Paris*, Mars 11, 1849.

MATERIA MEDICA AND CHEMISTRY.

Case in which unusual Phenomena followed the administration of "Sulphate of Morphia." By L. B. ANDERSON, M.D., of Elton, Hanover city, Va.—Miss V., a young and highly accomplished lady, from excessive fatigue, and loss of sleep in attending a sick friend, became so "nervous," to use her expression, that she was unable to procure the slightest repose. She labored under slight cerebral disturbance, and a very irritable stomach, at the time I was called to see her; both of which, however, were measurably relieved by the operation of a mild cathartic. But she was unable, notwithstanding, to obtain refreshing sleep.

A fourth of a grain of the sulphate of morphia was now directed to be administered, and a like quantity to be taken every two hours, unless it increased the pain in the head, (which was the

only unpleasant sensation she had ever experienced from its use,) until she became entirely composed, or fell into a sound and refreshing sleep. She experienced no unpleasant sensation from its use until shortly after the administration of the third portion, when she complained of a tingling or pricking sensation in the extremities. Her hands and feet became cold: her fingers were involuntarily contracted and extended; she experienced some uneasiness about the elbows and knees, and also at times, a slight difficulty in breathing. The time for the administration of the fourth portion having arrived, she had it given, hoping that it might allay or mitigate those unpleasant sensations. A short time, however, only elapsed after its administration, before all the phenomena above mentioned became greatly aggravated. The muscles of the hands and feet became rigidly contracted; the legs were drawn upon the thighs, and they upon the abdomen: the arms were alternately flexed, extended, and then contracted across the thorax: the muscles of the tongue, fauces, and glottis, became so much affected, that articulation and deglutition were almost impossible, and respiration was greatly obstructed. In fact, the spasmodic action of all the voluntary muscles was so great, as to simulate a genuine case of traumatic tetanus.

Alcohol, ammonia, coffee, cold and hot ablutions, and constant frictions, were resorted to with no effect. The spasmodic action commenced at 2 P. M. and continued until 5½ P. M.; at which time I had anticipated the effect of the morphia would begin to subside; but I was disappointed. Hoffman's anodyne (which I had not been able to obtain at an earlier hour,) was now administered, ʒiij in quantity; a portion of which being ejected, a like quantity was again administered. In a short time the spasms began to abate, and in the course of half-an-hour, had nearly entirely subsided. I cannot say that the anodyne was the cause of the cessation of the spasms, or whether it was occasioned by the agent which produced them, being more generally diffused, or being carried off in the secretions. But only a few moments elapsed after it was taken, before the lady expressed herself greatly relieved.

There was no peculiarity in the constitution of Miss V., nor had she ever before experienced any inconvenience from the use of any preparation of opium. It is true, she had in early life been subject to occasional attacks of epilepsy; an attack of which, however, she had not had for a considerable time prior to the use of morphia. She has taken, since the above mentioned circumstance, several of the liquid preparations of opium, from which no unpleasant effect was experienced.—*American Journal of Medical Sciences*.

Inhalation of Nitrate of Silver, &c.—By THOMAS K. CHAMBERS, M.D., Fellow of the Royal College of Physicians.—While treating diseases in those parts of the mucous membranes which are sufficiently exposed to sight and touch for the immediate application of remedial agents, there are few to whom the wish has not occurred, that equal facilities were afforded of directly influencing the deeper-seated continuations of the same fabric. The powerful remedies which restore so quickly to a healthy state the conjunctiva and the fauces, would probably act with equal rapidity and success on the stomach and bronchi, could we apply them rightly to the right spot, and attack the local disease without passing circuitously through the whole system. A mode I have lately adopted of attaining this end with the most inaccessible mucous surface of all, the pulmonary, though it is clumsy and imperfect, may still be found useful in some obstinate cases, where the upper part of the air-tubes is the principal seat of disease.

The plan consists in the inhalation of a light innocuous powder, which may carry with it the required substance, either diffused in the air or absorbed in its pores. That which I have found well suited to the purpose is the pollen of the lycopodium or club-moss, which has been allowed to imbibe as much as it would take up of a saturated solution of nitrate of silver, or of sulphate of copper, or the two combined, and then carefully dried, and reduced again to an impalpable powder. Mr. Squire has made me some which, in two grains and a half, contains one grain of nitrate of

silver, and another which in five grains contains one of nitrate of silver and two of sulphate of copper. The patient should introduce into his mouth, as far as he can without choking, a well-dried glass funnel, and draw in his breath strongly, whilst he himself, or a second party, dusts the powder in a dense cloud into the large end with an ordinary nursery puff-ball. If the dust is raised by an attendant, the patient can indicate the moment he inspires by raising his hand.

To obviate the necessity for withdrawing the funnel after each inhalation, to prevent the dust being blown about the room, an apparatus with a double valve and a closed powder box may be used, which allows the dust to pass inwards only; but the necessary employment of metal makes the machine less agreeable than the more awkward but cleaner-looking and less formidable glass.

There is usually a slight degree of coughing excited by the dusty vehicle, but not of such moment as to prevent an immediate repetition of the experiment. This is certainly an inconvenience, but it seems a much smaller one than that which attends the introduction of a sponge into the larynx, as has been recommended. The spasm excited by this is distressing to the operator and painful to the patient, and prevents its employment in slighter cases, where the remedy appears to both as bad as the disease. Moreover, the operation is a very difficult one, requiring a rapid accuracy, a spirited tenderness of touch, as artists call it, which is the lot of few, and is seldom retained at that period of life when the intellect is most matured, but when the brush, the burin, and the scalpel, are handled with more judgment indeed, but with less elegance and delicacy.—*London Medical Gazette.*

Cod-Liver Oil.—A discussion on the properties of this article took place at the Westminster Medical Society, 3rd February. The majority of the fellows stated that they had found the oil to possess a very marked effect in almost all cases of scrofula and phthisis. In the first class of cases, it was not only given internally, with the effect of much improving the general health, but it was applied locally to scrofulous sores, with the most marked benefit. In phthisis it appeared to exert its influence at once by nutritious properties. It checked perspiration, and removed emaciation; and appeared, by keeping up the tone of the system, to arrest the further deposition of tubercular matter. Some thought that any oily substance, as butter or almond oil, would have the same effect; others considered the cod-liver oil to have some specific influence. One gentleman had found it rather injurious than otherwise in some cases of phthisis, from its tendency to disorder the digestive organs. Altogether, however, the opinion generally was decidedly in its favor as a palliative agent in consumption.—*Lancet in Med. News.*

Poisoning by Sulphuric Acid introduced into the Rectum.—M. Pinjon, of Saint Etienne, has given in the *Journ. de Méd., de Lyon*, a detailed account of the history of a case in which a wife attempted to destroy her husband, first by poisoned wine, and then by the use of enemata, containing sulphuric acid. The symptoms, as might be anticipated, were those of extreme irritation of the bowels within, and of the external parts adjacent to the anus. The case was treated without any suspicion of the cause of the patient's sufferings; nor was the real nature of the case discovered till three months had expired. About the fourteenth day from the commencement of the symptoms, a portion of intestine was passed by stool, after which the amendment, though very slow, was gradual, and a complete recovery took place. The event occurred in the end of 1844, and four years after the man (Maisonneuve,) was examined by M. Pinjon, and found to enjoy good health, though with some peculiarities in the action of the bowels. The account before us does not enter into any detail of the evidence on which the charge

of poisoning is founded, reference being made only to the effect produced on the straw of the chair on which he sat when the first enema was administered, and on the curtain of the bed on which he lay where the second was used.

Two cases besides are referred to, in which sulphuric acid was thrown into the rectum, and yet recovery for the time took place, one detailed by M. Fouquier, in the *Gazette des Hôpitaux*, 1846, p. 575, the other in the *Annales de Thérapeutique*, vol. ii., p. 457.—*Annales de Thérap.*, Dec., 1848, Jan., 1849, and *Month Jour.*

Case of Poisoning by Creasote.—On January 17th, Mr. Macnamara was called to see Mrs. M—, the wife of a respectable tradesman, and on his arrival at the house, he found her presenting the following symptoms:—She was lying in her bed in a state of profound stupor, from which she could with difficulty be aroused for a few minutes, but only again to relapse into her former state of unconsciousness. Her countenance was fuller and more flushed than it naturally appeared. Her eyes were fixed, but the pupils were neither dilated nor contracted. The pulse was slow and labored; the heart's action remarkably slow and weak; the stomach was inclined to be sick, and the ejecta bore a strong smell of creasote. When aroused, her chief complaints were of vertigo and general uneasiness in the head, as also of burning pain along the œsophageal track, and in the stomach. On inquiry, he ascertained that for the last twenty-four hours, she had been suffering severely from toothache, to relieve which she had recourse to creasote, in the application of which she had been most unsparing, and that her present symptoms had gradually supervened, increasing in intensity up to the period of his arrival.

The treatment adopted consisted of the employment of mustard emetics, sinapisms over the cardiac and epigastric regions, with copious dashings of cold water in the face; the indications being, in the writer's opinion, to remove the poisonous effects of the creasote by the exhibition of medicines that would rouse the vital energies of the patient, at the same time that it removed from the stomach any of the creasote that might have accidentally found its way there. This line of treatment was attended with the happiest results; the stupor was completely removed, and the only symptom that remained was severe pain in the stomach, which was completely relieved by the administration of an anodyne draught, and the patient recovered without any other untoward symptoms than those consequent on a slight febrile disturbance, which rapidly yielded to antimonials, followed by purgatives.

The circumstance that renders this case most interesting, is the extreme rarity of cases of poisoning by creasote, no other case that the writer is aware of having occurred, but one which unfortunately proved fatal, and the particulars of which have not been preserved. It is recorded in the *Liverpool Mercury*, and transferred thence to the columns of the *Times*, June 17, 1839, and it is referred to by Dr. Pereira, in his talented work on the *Materia Medica*. This case differs from that which is here brought forward in this particular, that a large quantity, amounting to two drachms, had been swallowed. In this case the writer attributes the injurious effects that ensued more to the prolonged inhalation of the creasote than to the actual quantity that got into the stomach; that some, however, did get into that viscus, is, in his opinion, evidenced by the great pain referred to the stomach and œsophageal track. Another interesting feature in this case, and one that might seem to give some color to the doctrine of *similia similibus curantur*, is the presence of vomiting, creasote being so vaunted for its power in allaying that symptom. The vomiting, however, is clearly referrible to the irritating effects that the creasote produced on the coats of the stomach.—*Dublin Medical Press*, March 7.

THE
British American Journal.

MONTREAL, JULY 2, 1848.

THE CENTRAL BOARD OF HEALTH.

The Official Gazette of the 9th June contained the following announcement:—

SECRETARY'S OFFICE,

Montreal, 9th June, 1849.

His Excellency the Governor-General has been pleased to constitute "The Central Board of Health," under the provisions of the Act 12 Vic. Cap. 8, to consist as follows, viz:

Dr. Wolfred Nelson, Olivier Berthelet, William Workman, John James Day, Moses J. Hayes, Esquire, Dr. Guillaume Deschambault, and Dr. Robert Ley McDonnell.

And, also, Dr. Aaron H. David, to be Secretary to the said Central Board of Health.

Composed as the Board now is, with Dr. Nelson as its Chairman, it is essentially lay in its feature, and it is to such a Board, armed by the Provisions of the Act under which it is constituted, with almost despotic powers, controlling the Profession and the Local Boards throughout the Province, that we must submit for guidance and direction, in sanitary questions which may arise in view of an approaching epidemic of cholera. Knowing the sentiments of the President of the Executive Council, on the subject of the privileges which should be enjoyed by the Profession, as well as those of some other members of the Legislative Assembly, with whom he was associated in his vote on the celebrated Thompsonian question, it would not have occasioned us much surprise to have seen the Central Board of Health composed wholly of artificers or "old women." Every one, now-a-days, dabbles in Physic, and can discourse most learnedly on Allopathy, Homœopathy, and all the other *pathys*; and it is but one step further to attribute to every one an intimate and intuitive acquaintance with the causes of diseases and the means for their prevention and removal, and a thorough knowledge of medical police and hygiene, therapeutics and pathology, fitting them at once to be able members of a Board of Health, and capable of immediate legislation for the profession and the public, on some of the most subtle and intricate questions which can possibly engage the attention of men.

"Quod medicorum est
Promittunt medici, tractant fabrilis fabri,"

was an aphorism of the Apulian Bard, which, although centuries old, and dictated by common sense, is yet singularly neglected; and the nomination of a majority

of laymen on the Central Board of Health for this Province, is about as egregious a deviation from the aphorism, on the part of the Executive, as it is well possible to imagine.

Is it possible that any thing more preposterous could be conceived than to nominate a majority of medical men on the Council of a Board of Trade, for the solution of some intricate commercial question; or to settle a question of naval tactics by a board composed of a majority of officers of the army; or a question of theology, or of law, by a board constituted in a similar manner? Who would not laugh to scorn such a monstrous attempt! and yet in medicine, and in matters strictly appertaining to its province, the analogy is witnessed, opposed although the proceeding be to common sense and reason.

We are not of those who would object to the nomination of any laymen on such a board.—Far from it. An advocate and a merchant, might each hold a situation on it. Each would be useful in his own sphere; but due care should be taken in the composition of such a Board, that on purely professional matters the preponderating influence should be accorded to those, whose province it is to deal with such subjects; that the benefits of a free discussion should obtain on debateable points, uninfluenced by a lay decision unguided by the light of science.

To secure for such a Board the approbation and the confidence of the profession and the public throughout the Province, the most eminent of the faculty of the metropolis should have been secured, irrespective of every other consideration. Party and political bias should have been merged in a beneficent consideration for the public good; and those means should have been adopted which would have secured a cordial co-operation on the part of the profession and the public. In every one of these points, we predict that the present Board will most signally fail. The profession will not voluntarily submit itself to the control of a Board in which a lay constitution is so monstrously predominant; and the public will lose all confidence in it from the self-same cause. It will become like the General Board of Health of London, the laughing-stock and object of derision of the metropolitan and provincial medical press—a Board which, forgetful of the privileges conferred upon it, has called itself a "Board of Works," for which it was certainly far better adapted than for legislation on medical matters, although it has presumed to dictate on one of the most important questions which could possibly engage the attention of medical men, even the most enlightened, viz., the abolition of quarantines.

If the function of the present Board had been of a mixed character, viz., legislative as well as administrative or executive, then we would have had no objections to urge against its composition; but when its duties are purely of a legislative capacity, when they consist in *advising*, and not in *doing*—as the questions involved are of a purely professional nature,—professional men are alone competent to deal with them, in order to secure for their deliberations that weight and consideration to which they should be entitled.

The Public Health Bill, admirably adapted as it is in its principle and in most of its details to meet the public emergency in cases of threatening epidemics, is thus signally defeated in its intention by the very Ministry who introduced and carried it; for they will not presume to say, that medical men could not be found in this city, even of their own shade of politics, able far to discharge the trust, than the laymen appointed, and to occupy even more fittingly the place of one of the medical members of the Board, whose name is unknown to the Profession of the Province, and on whose judgment they therefore can place no reliance.

What can be expected from such a Board but vacillation, and absence of all firmness of opinion. This is most glaringly exemplified in their first manifesto, which we publish in our present issue. Our professional readers will scarcely fail in detecting, from their strict injunctions as to washing, heating and airing the bedding and clothing of cholera patients, the idea which they entertain of the infectious character of the disease, based upon an impregnation of the fabrics in question by the *materies morbi*; and at the conclusion of the same document, an opposite idea is endeavored to be enforced, founded upon a quotation from Eberle's Practice of Physic;—in the one instance permitting the inference to be drawn, that precautions are required as they consider the disease to be infectious; and in the other, an equally strong inference that they do not consider it so. What is the opinion of the Board, therefore, on this most important point, which may be viewed as the foundation for the subsequent superstructure in the shape of directions? If, like its prototype the General Board of Health of London, it halts between two opinions, committing itself to neither, the profession and the public, while they may approve of their discretion, yet can derive no benefit from that science which it was hoped the ministry would have contrived to concentrate in a Board organized for such important purposes.

CENTRAL BOARD OF HEALTH.

Montreal, 14th June 1849.

Directions for the Cleansing and Draining of Dwellings and Outbuildings, &c.

1. Yards should be cleansed of all filth, dung heaps liquid manure should be removed without delay; low and wet places should be filled up, and premises around dwellings situated in elevated positions should be kept clean and dry; privies should be thoroughly cleansed and washed with a mixture composed of the following ingredients: water four gallons, lime ten pounds, common salt three pounds—these to be well incorporated and sprinkled copiously about. The covers and doors of privies should be left open to prevent the accumulation of foul air, and allow of free ventilation, and such privies as have canals should receive all the water of the house, and even the aqueduct water might be allowed to flow into them at night. Portable water closets and night-chairs should be used as seldom as possible, and when employed, they should be kept in an unoccupied chamber, and their contents removed immediately.

2. As many of the cellars of the numerous smaller dwellings in the suburbs, and even those of the better class houses in low parts of the city, are frequently filled with water, some of them the whole year round, they should be immediately cleaned and drained, and subsequently filled with sand, old mortar, &c., and all cellars that are wet and damp should have the floor covered with the same material, or leached ashes to the extent of several inches. Dwellings thus situated are extremely unhealthy, the worst cases of rheumatism are there found, and also fevers of a low and malignant type, but the most frequent deviations from health consist in disorders of the stomach and bowels.

3. Cellars which are inhabited or used as kitchens should be kept dry and comfortable by small fires and a free circulation of the atmosphere, both day and night, and their walls should be whitewashed twice a month during the prevalence of the epidemic, and this should also be done in old houses especially those occupied by the poorer classes. The floors of all houses in unhealthy situations where carpets are not used, should be washed and scrubbed twice a week, the least quantity of water being used for this purpose, and it should be water in which lime had been slacked and allowed to subside (lime water).

4. Every house should be well aired, chimney boards and stove pipe stoppers removed, and the doors of all apartments left open, both day and night. A ventilator in one window of each room, particularly in old and low dwellings, would much contribute to health.

5. In warm and dry weather the windows should be opened, and the bedrooms should be in the upper part of the house, for few things conduce more to sickness and especially to cholera, than living and sleeping in a damp cold atmosphere. It is also recommended to have a small fire burning for a few hours in the bed chambers during damp and raw weather.

6. The bedding of every family should be well aired every day, and left uncovered and exposed for a few hours, so that the perspiration imbibed during the night may be completely evaporated,—under any circumstance, it is well to adopt this custom.

The doors and windows of schools, as well as those of Mechanics' Shops, where many persons are congregated together, should be kept open both day and night.

Directions for Clothing, Diet, &c.

7. The clothing worn by Cholera Patients, should be exposed to a strong heat, as the most effectual means of purifying them, and should afterwards be immersed in water for several hours, and be carefully washed and well aired before being used again. The beds, it would be prudent to destroy when not valuable, but, when not destroyed, they should be well aired, beaten, and then submitted to a strong heat in an oven.

8. Personal cleanliness should be strictly observed,—a tepid bath taken two or three times a week, and the body rubbed dry with a coarse napkin, will be found very useful,—a good addition to the bath would be a small quantity of common salt.

9. Individuals troubled with cold feet should have them well rubbed daily with horsehair gloves, and when these cannot be obtained, ground pepper, to which a little cayenne may be added, or mustard may be used as a substitute, and warm woollen stockings should be worn, and frequently changed.

10. Flannel Vests with sleeves and drawers should be worn next to the skin, and persons subject to bowel complaints should wear in addition a warm swathe of flannel around the abdomen.

11. The diet should be of a light and nourishing nature, consisting mainly of animal food. Fish of all kinds should be eaten with extreme caution, and vegetables should be used but sparingly, and those only to which the individual is well accustomed,—good mealy potatoes, steam boiled or roasted may be used as heretofore,—bread should always be stale, and it would be well to have it toasted, even for dinner,—bran-bread, so valuable as an aperient, should be used with caution during the prevalence of Cholera,—Indian meal cakes, well baked, may be used,—rice should be used as much as possible, and green cooked vegetables, as peas, beans, cabbage, &c., should be well seasoned with pepper and salt, and partaken of sparingly, even by those in the daily habit of using them,—the majority of individuals should carefully avoid them. Those whose bowels are easily affected by veal or fresh pork, or by boiled meats, should not eat those articles. When fruit is eaten, let it be with the utmost caution, and none but the ripest and most mellow should be indulged in. Those fruits which require sugar to counteract their natural acidity, should not be used during the prevalence of Cholera.

12. Those, who from principle or any other reason, object to the use of spirituous fermented drinks at dinner, are recommended to take tea or toast water as a beverage at that meal; but those who for years have been in the habit of using wine and in whom a sudden change in their mode of life might be attended with bad results, are strongly recommended to observe strict moderation, and to avoid light French and German Wines, and to use none but good Port or old Sherry—or very weak brandy and water—when plain water is used at meals it should be previously filtered and not iced, and drank in small quantities at a time. Nothing tends so much to retard digestion as copious draughts of cold water. Pastry and greasy or oily aliments should be avoided.

13. Excesses in eating, drinking, or in the use of spirituous or fermented liquors, are to be carefully avoided. *Gourmands*, tipplers and drunkards seem to be the especial subjects of Cholera, and constitute its most numerous victims.

14. Long fasting should be avoided; those whose avocations oblige them to dine late, should take a wholesome nutritious luncheon. Late suppers and indulgence in several viands at the same meal should be avoided.

15. In the warm months of Summer, the thirst is generally very great, and cold and refreshing drinks are sought after with much avidity—than which nothing can be more dangerous—cold and acid beverages, as beer, cider, light acid wines and brandy sipping should be sedulously abstained from. Soda water, with an access of alkali or Carrara water, flavored with a little syrup of ginger and tincture of ginger, may be taken, but in small quantities at a time.

16. Over exertion and fatigue during the day, should be guarded against, as also the night air. No one should go abroad in the morning without taking some refreshment, as a cup of coffee and toast, or a cup of milk and a biscuit. Fatigue and long fastings predispose the body to the absorption of poisonous miasms, floating in the atmosphere.

17. Nurses and others who attend the sick should take nourishment frequently.

18. None but the sick should sleep in the same apartment.

Directions for Treating the Premonitory Symptoms.

19. The premonitory symptoms should be immediately attended to; such as rumbling in the bowels, flatulency, heat or fullness in the stomach, or colic, bad taste in the mouth, or nausea; all, or any of these are preludes to diarrhoea, and this is almost a constant forerunner of Cholera. When attacked with the above symptoms, it would be well to take 25 or 30 drops of tincture of Lavender, on a piece of sugar; or a small piece of aromatic confection, the size of a small marble, (perhaps 25 or 30 grs.) may be eaten. The following composition was taken during the epidemics of 1832 and '34, with signal benefit. Tincture of Ginger and Tincture of Red pepper, of each one drachm, Tincture of Cardimoms two drachms and syrup of Ginger one ounce and a half,—of this preparation one tea spoonful may be taken every half hour if required. Should diarrhoea manifest itself, ten or

fifteen drops of Laudanum may be added to the above, or a tea-spoonful of Paregoric Elixir may be taken in a little water, or a piece of opiate confection, the size of a marble may be eaten.

20. If the attack be sudden, a large mustard plaster should be put between the shoulders, and on the pit of the stomach, and the feet and legs plunged in water, as hot as can be borne, into which might be thrown a handful of salt and a table spoonful of mustard. They should be allowed to remain in the water at least twenty or thirty minutes, then the patient should be put to bed, and covered abundantly with blankets. Bottles filled with warm water should be applied to the feet and about his person, and flannels wrung out of hot water and salt, as hot as can be borne, should be applied to the abdomen. In a word, produce heat and perspiration as speedily as possible, and maintain the sweating for several hours. While all this is being done, send for a Physician, as not a moment is to be lost.

It is respectfully suggested to the Faculty that at such alarming periods, the Practitioner should carry about with him such remedies as he has most confidence in for the treatment of this disease, such as a small vial of paregoric, one of laudanum, one of tincture of capsicum, and another of sulphuric ether, or any others he may wish to use, &c.

21. There is no prophylactic for cholera, but by prudence and due attention to the initiatory symptoms, it may not only be in many cases averted, but will often be cured.

Medical men, at all hours, and under every exposure, are ever zealous in flying to the succour of the poor and needy; and it is not too much for them to expect that the more wealthy part of the community will make some contributions to the comfort of the more destitute classes; without which the best directed efforts of the Physician may be unavailable. Were it from no nobler motive than that of self-preservation, the pressing wants of the unfortunate should meet with prompt relief, for where starvation exists during the epidemic, there will cholera prevail; and from such a focus its pestilential breath may reach the affluent and voluptuous, who, when attacked, are not more spared than their famishing neighbors. And it may not be superfluous to say, that the benevolent and charitable, by their deeds of kindness and humanity, are laying up riches for themselves in the shape of Divine protection.

22. The public are earnestly warned against the use of strong purgatives and emetics during the prevalence of cholera, and also against the indiscriminate use of the various mineral waters so much used at present. These latter remedies are most valuable in many diseases when selected and prescribed for the patient by his Medical Attendant; but as it frequently happens that the individual himself decides upon the quality and quantity of them he should drink, it is feared that much injury will result from the practice, although small quantities of them may be used with advantage. The Board also consider it their duty to warn the public against the use of the many kinds of violent purgative Pills, so extensively employed: many cases of cholera in 1832 and '34 were induced by the use of Brandreth's Pills and others of the same nature.

23. As disinfecting agents, the Board would recommend, Chloride of Lime, for Out-offices, Privies, Sewers, Drains, Night Chairs, &c., and they are of opinion that in the sick chamber and other apartments in the vicinity of Cholera Patients, aromatic vinegar, or "burnt" vinegar would be found useful and agreeable. Their objections to some of the "disinfectants" consist in this, that to ensure their efficiency the floors and walls of the apartments should be frequently washed with them (as they are not volatile) whereby a damp and chilly atmosphere, so productive of Cholera, would be constantly kept up; but it must not be forgotten that the best preventives of infection are free ventilation and cleanliness.

24. It may be useful to mention, that during the former epidemics of Cholera in Europe and America "Medical Practitioners have not in any ascertained case conveyed the infection in their clothes to Patients whom they were attending for other diseases, or to their families." *Cyclo of Prac. Med.* And from the following extract a remarkable immunity from the disease is proved to have been enjoyed by persons placed in situations most favorable for its development, and is well calculated to allay the apprehensions of those, who from affection or duty may have to attend upon persons seized with Cholera.

"In the Cholera Hospital of this city (Cincinnati,) in which,

during a period of nearly five weeks, there were constantly from fifteen to twenty Cholera Patients, not a single case of the disease occurred amongst the Attending Physicians, Nurses, and other Attendants, although some of these remained in the Wards day and night during the whole period, and frequently slept on beds where Cholera Patients had lain and died."—*Eberle*.

The above observations are intended especially for the Public as containing suggestions and advice of the utmost importance, founded not merely upon theory but upon experience, and pointing out also how this direful calamity may, in many instances, be warded off, and how it should be met at its very onset when it has attacked an individual.

But they are by no means intended to serve as lessons or instructions to the Public, whereby any one may undertake the treatment of the disease; they merely convey directions how to act while the Physician is being sent for. Nor would the Board of Health presume to dictate to the regular Practitioner the course he should adopt to combat this perplexing malady. So far as relates to the Faculty, nothing is ventured on, beyond the most respectful suggestions.

The Central Board of Health would wish to communicate with the Members of the Profession, and maintain with them the most unreserved correspondence, that, by their united efforts, the cause of humanity and science may be subserved, and the views of the Legislature fully accomplished.

A. H. DAVID, M.D., Secretary.

Approved by the Governor-General in Council, on the 15th day of June, 1849.

By Command,

J. LESLIE, Secretary.

Montreal, 14th June, 1849.

The Central Board of Health appointed under the Act of the 12th Viet. Chap. 8, at a meeting of the Board held on the 14th day of June instant, adopted the following directions and regulations, which they now issue for the protection of the public health, and the prevention as far as possible or mitigation of any epidemic, endemic or contagious disease by which the Province may be visited:

1st. The Central Board direct that all and every the Bye-laws made by the Town Councils, Municipal Corporations and other like bodies of every place throughout this Province, for the preserving the inhabitants thereof from contagious diseases—the removal of nuisances—the cleansing and sweeping of the Streets, and the cleansing, purifying, ventilating and disinfecting of Houses, dwellings and out-buildings, notwithstanding that such Bye-laws might become and be suspended upon the issuing and publication of directions and regulations by this Board shall remain and be in full force, and are hereby adopted by this Board as their directions and regulations, until directions and regulations repugnant thereto or inconsistent therewith, be from time to time issued by this Board; and all Boards of Health and Health Officers and other like Officers throughout the Province, and all Local Boards of Health appointed and to be appointed under the Act 12 Viet. Cap. 8, are hereby authorized and required to see that the said Bye-laws be rigidly enforced.

The Central Board of Health do hereby direct, and the Local and other Boards and Committees of Health and Health Officers aforesaid, are hereby authorized and requested to see, that the following directions and regulations be also strictly enforced:

2d. That all putrid and unsound beef, pork, meat, fish, whether fresh or salted, hides, skins, all dead animals, animal excretions and remains, and every putrid, offensive, unsound or unwholesome matter or substance found in any street or other place, be immediately removed and disposed of, so as most effectually to secure the public health.

[The best and safest place for their deposit where practicable is in the field, where by the plough they are at once removed as a dangerous nuisance, and converted into manure.]

3d. That all cellars, sinks, cess-pools, privies and places containing unwholesome matter or substance which require cleansing, emptying, altering or repairing in order to preserve the public health, be forthwith so cleansed, emptied, altered or repaired and abundantly sprinkled with lime, before the appearance of any contagious disease or epidemic.

4th. That all stagnant water about dwellings, yards, streets and in cellars, pits and vacant lots and other places be at once drained off, if practicable; and all hollow and wet places be filled up with fresh earth or sand; and all drains, sewers and water courses obstructed or stopped up be at once opened, so that the waters may flow freely and unrestricted; and where the public health is endangered from the want of main drains or sewers in any street or place, that the proper authorities do forthwith cause the same to be made so as that all cellars, pits and vacant lots, in which water remains, may be immediately drained off.

5th. That where swine are kept, if they occasion any bad or offensive odour, and especially if fed from the offal of butchers' sheds or slaughter houses, they be immediately removed to such a distance from any dwelling, so that the inhabitants may not be annoyed by such offensive odours.

6th. That butchers keep their premises particularly clean, and dispose without delay of all the offal, excrements and remains of the animals slaughtered, in such wise as not to offend their neighbors or the public with the bad odours resulting from the putrid effluvia, so abundantly given off from such substances.

7th. That all skins and hides and the skulls, horns and bones adhering to such skins and hides in tanners' yards and premises, and all hoofs and horns and bones collected for, or intended to be used in the manufacture of neats' foot oil, shall not be allowed to accumulate, but in every instance be removed before disagreeable odours arise therefrom, to such place, or be put into such a state as that the public health be not endangered thereby.

8th. That tan yards and tanneries be visited by the Health Officers, at least once a week, to see that hides and skins are not piled up in heaps, or in a state of decomposition; and that the scrapings of hides and skins and every thing appertaining to them in the raw, green or crude state, be at once removed, and burned or disposed of, so as to prevent the escape of bad odours from their decomposition.

9th. That all bones and skins collected for shipment, manufacture or other purposes, be at once removed, when they occasion offensive odours, to a place or places where they are not likely to prove detrimental to the public health.

10th. That all imported hides and skins be at once examined, and that such as have suffered from wet, or are in a putrid state, or commencing decomposition, be conveyed away or disposed of so as not to prove injurious to the health of the community.

11th. That during the prevalence of any epidemic, endemic or contagious disease, previous to the interment of any corpse, and as soon after the extinction of life as possible, that the corpse be placed in a coffin, and that there be strewed in the coffin without delay 25 pounds of lime, and that all such as are buried in churches or in the vaults of churches, shall have at least 20 pounds of slacked lime put into the bottom of the coffin, and 20 pounds of chloride of lime under the last investment of the body—the winding sheet.

12th. That enquiry be immediately made on board of all ships, steamboats, crafts, and vessels arriving at any port or place within the Province, whether any deaths have occurred on board during the voyage or passage; and if such be the case, that the bedding, clothes and wearing apparel of or used by the deceased, be not landed, till they have been thoroughly washed or at least steeped in clean water for 48 hours and then well dried.

13th. That the Local and other Boards and Committees of Health throughout the Province, do report to the Secretary of the Central Board, at least once a week the state of the public health in the city, town or place for which they are appointed, and in the event of the prevalence of any epidemic or contagious disease in their respective localities, the nature of the disease and the number of deaths.

By Order of the Board.

A. H. DAVID, M. D.

Secretary to the C. B. of H.

Montreal, 14th June, 1849.

SECRETARY'S OFFICE.

Montreal, 22d June, 1849.

Approved by the Governor-General in Council on the 21st June, 1849.

(Signed,)

J. LESLIE, Secretary.

THE REPEAL ASSOCIATION.

It is permitted for us to judge of men, pursuing a public career, by their acts. Just as surely as effects follow causes, so by the conduct of such men may we be enabled to divine the motives by which they are influenced, and to condemn or approve accordingly. Delicate although it be to impugn the motives by which such conduct may be directed, when we find them professing one thing and doing another,—when we discover beneath a hypocritical mask of unmeasured and ostensibly warm interest, a course pursued, having a directly opposite tendency, we can scarcely find words sufficiently strong to express our detestation of the parties who would so act, or to condemn their proceedings. These ideas were forcibly impressed on our mind by the attempt made to thwart the intentions of the Governors of the College of Physicians and Surgeons, to liberalize the Act of Incorporation for the Profession. No one grumbled during the last two years more fiercely at the alleged illiberality of that Act than Dr. Coderre, who by some means or other assumed to himself the leadership of the opposition which is now unmasked, and who may have been the willing tool of deeper and more knowing heads, who worked more securely, as they thought, because less openly, and from behind the screen quietly pulled the wires and enjoyed the fun. The affair, however, has become too serious for ridicule. The best interests of a whole profession are not to be trifled with, with impunity, nor must they be jeopardized by parties who are unscrupulous in the means they use, and are regardless of every thing, except the attainment of their own destructive ends.

The petition to the Legislative Council, signed by eleven members of the Repeal Association, against the Act of amendments, has suggested these reflections; and so industriously had these parties worked, with the members of the Committee of the Legislative Council, to which the Act had been referred, that they induced the Committee to report unfavorably, even against their own conviction, that the amendments were essentially good. Had not considerable exertion been made on the morning of the day on which the Legislature was prorogued, the report of that Committee would have been concurred in by the Council, the Act of amendment lost, and the profession would still have been laboring under all the disadvantages springing from the old Act. Every one concurred in the necessity for amendments; and no one more than Dr. Coderre himself. When the amendments were actually proposed—amendments which liberalize the Act to the utmost stretch, and of which Dr. C. cannot but in his heart approve—Dr. Coderre and his party again placed themselves in opposition. He was opposed to the Act, because it was illiberal; he opposed himself to any amendments to alter it to remove from it that objection. A course of conduct more utterly inconsistent and unjustifiable can scarcely be conceived. Like the dog in the manger, he would neither eat the hay himself, nor permit the ox to do so. We have, in one of our preceding numbers, exhibited the nature of the educational system proposed for adoption by the Repeal party; the pro-

ceedings of Dr. Coderre, furthermore, clearly evince that, as far as the interests of practitioners generally, and the good of the public, are concerned, he has no sincere desire for the suppression of quackery, inasmuch as he would have retained in force an Act, which is powerless for any good in this respect. Of the character of the proceedings of Dr. Coderre, and his ten friends, we will now allow the Profession at large to judge.

But we cannot conclude without calling attention to the tissue of misrepresentations contained in the petition, which were so glaring, that several most respectable medical gentlemen in this city, who had previously joined the repeal party, refused to sign it; and we know that Dr. Picault was not fully informed on the subject when he affixed his signature, and subsequently requested it to be withdrawn. We will waste no further space upon the document than simply to indicate by the use of italics or capitals the several misrepresentations, distinguishing the negative or the white by the former, and the positive or the black by the latter.

Having exposed the scheme, and the tactics of the *leaders* of the party, we sincerely trust that we shall witness a large secession of medical men, who seek not the destruction of the interests of the profession, but, on the contrary, its amelioration in every respect.

Aux honorables membres du Conseil Législatif de la Province du Canada assemblés en Parlement.

Les médecins et chirurgiens soussignés, membres du comité de l'Association des médecins du Bas Canada, exposent respectueusement.

Qu'au commencement de la présente session du Parlement Provincial, vos pétitionnaires ont présenté à l'Assemblée Législative une requête signée par un très grand nombre de membres de la profession médicale aux fins de révoquer l'acte 10me et 11me Victoria, chapitre 26, et d'y substituer un nouveau bill plus conforme aux vœux de la dite profession en général.

Que vos pétitionnaires avaient dans le cours de la présente session, mis devant le comité spécial nommé par la Chambre Législative pour s'enquérir des allégués de leur dite requête, un grand nombre de documents au soutien et à l'appui de la demande du nouveau bill, et aussi un très grand nombre de lettres et correspondances de la plupart des médecins, faisant voir le besoin urgent d'une loi pour la profession en général du Bas Canada.

Que le malheureux incendie du Palais Législatif, qui a eu lieu le 23 avril dernier, a détruit ces documents déposés devant le dit comité, tel que susdit, relatifs à leur dite requête, ainsi que de nombreux témoignages et tenus par le comité lui-même, avant qu'il eut présenté son rapport à la dite Assemblée Législative, qu'en conséquence il s'est trouvé dans l'impossibilité de le faire.

Que le susdit acte, ayant été passé trop à la hâte et ne rencontrant généralement que la désapprobation de la profession, qui en DEMANDE LE RAPPEL ne devait être amendé dans les circonstances actuelles qu'après un délai suffisant pour faire connaître à la profession les amendements qu'on veut actuellement introduire.

Que vos pétitionnaires sont d'opinion que la série d'amendements, proposés par le Dr. Nelson au susdit acte, et passés *très à la hâte* par la Chambre Législative le 23 ou le 24 du courant, ne sont nullement propres à pallier les nombreux défauts et lacunes de l'acte actuel, et à réparer l'injustice faite à la grande majorité des membres de la profession, en autant que les médecins exclus d'abord de la corporation ne pourront exercer leur droit de vote qu'à la prochaine élection du bureau des gouverneurs, qui n'aura lieu qu'en 1851, et seront forcés, s'il veulent jouir de ce droit, de se soumettre à des règlements vexatoires et très injustes, en autant qu'ils leur sont imposés par quelques médecins seulement, lorsqu'ils auroient dûs émaner de toute la profession.

Que vos pétitionnaires doivent présenter de nouveau une requête à l'honorable Assemblée Législative dans sa prochaine session, aux mêmes fins, et dans le même but, que celle qu'ils ont en l'honneur de présenter au commencement de la présente session tel que eue dit.

Pourquoi vos pétitionnaires prient humblement votre honorable conseil de remettre les dits amendements à la prochaine session étant convaincus que la profession N'AURA NULLEMENT A EN SOUFFRIR, EN AUTANT QU'AUCUN MEDECIN NE JOUIRA DES AVANTAGES QUI POURRAIENT RESULTER DES SUSDIT AMENDEMENTS QU'EN 1851, et Vos pétitionnaires ne cesseront de prier, etc. etc. etc.

Montréal, 26 mai, 1849.

J. B. LE BOURDAIS.
B. H. CHARLEBOIS.
T. E. D'ODET D'ORSONNENS.
P. C. FIGAULT.
C. A. REGNAULT.
W. D. ESCHAMBAULT.
J. EMERY CORDERRE.
C. SABOURIN.
A. E. REGNIER.
E. M. TRUDEL.
T. W. WILSCAM.

REPORT OF THE TRIAL OF DR. WILLIAM DILL FOR RAPE.

AT THE SPRING ASSIZES FOR THE DISTRICT OF GORE, 1849.

Before His Honor Mr. Justice McLean and a most respectable Jury.

(REPORTED FOR THE BRITISH AMERICAN JOURNAL.)

Through the politeness of a medical gentleman in Hamilton, we have been presented with a corrected copy of the evidence taken at the trial of Dr. Dill for rape, and after some considerable hesitation have concluded upon publishing it. We scarcely could have imagined it possible that a man could be found, so utterly depraved and devoid of all sense of moral and religious obligation, as to have conducted himself in the manner in which this monster in human form has done towards the resistless victim of his lust,—resistless from a cause which should, by every principle of nature, religion, or honor, have called forth the exercise of his most protective care. The offence committed is doubly "rank,"—darker considerably than the ordinary ones upon which evidence is given in Courts of Justice, inasmuch as in this case, he availed himself of the privileges of his office for the perpetration of the offence, and in so doing prostituted professional honor on the altar of his appetite. Fortunate for the honor of our profession that such men are rare, that there are few who are found to lapse from the sacred obligations, which they are solemnly sworn to discharge, *cave cante et probe*, at the period of their entrance into public life. Justice, although it may be tardy, is eventually sure; and, albeit, it has failed in previously reaching him in two eventful transactions, in which he was more than suspiciously concerned, it has arrived at last. We sincerely sympathize with his relatives, for the discredit which he has thrown on them; but we rejoice that a man, so utterly vicious in his profession, has been at last removed from all opportunity of further sacrificing the safeguards of society.

The Queen's Counsel, in his opening address, gave a brief but very clear and distinct account of the facts of the case as they would be proved in evidence by the witnesses.

Phæbe Fordham—Is twenty-one years of age; lives near Lancaster; lived formerly at Mount Pleasant; first saw prisoner in March last; was then ill; he came to doctor her; came on Tuesday, 13th March; had then been confined to bed about a week; had been taking some medicines; thought her complaint was ague; Gideon Fordham went for Dr. Dill, and came with him into witness' room; his wife, Matilda Fordham, came in soon after; Doctor enquired into her state; he said she had bilious fever. prescribed medicine; thinks it was rhubarb and cream of tartar; asked if witness had been regular; had been so the Monday before; saw her again next day; he bled her from the arm; pressed his hand on her stomach; it was painful; used his hand in an indecent manner; did not say why he did so; introduced his finger into her person; had not had any difficulty in making water; had no instrument in his hand; he came again on Friday; used his hand again in same way; it gave pain, but caused no bleeding; witness did not complain of this or mention it, thinking it might be usual and necessary; put a blister on her belly; washed the part where blister was to be applied; exposed witness' person in doing so; was too sick to care or object to this; saw Doctor again on Sunday, a little before noon; no one came in with him on this occasion; felt witness' pulse, and asked how she was; asked about the blister; wished to look at it; told him it had just been dressed; he took off the dressing and put it on again; used his hand in an indecent manner; gave her pain; then said, "look here," shewing his finger stained with blood; he then got on the bed; unbuttoned his trousers; said he would not hurt her; she resisted all she was able; was very weak and taken by surprise; he could not accomplish his purpose; then put his hands on her shoulders; turned her round across the bed and accomplished his purpose; witness resisted and screamed for assistance. "I distinctly swear that he committed a rape." He then put witness right in bed and covered her; he asked for a cloth; he went to a bureau and got a piece of paper with which he wiped witness, and then his hands, and threw it into the chamber-pot; as he was doing this Mrs. Matilda Fordham came into the room; he asked her immediately for water to wash his hands; she went for it; he washed his hands; he asked for a towel, and for some paper, in which he put some powders and then left; immediately after he left, witness asked her sister-in-law if she heard her halloo; answered yes, and asked what was the matter; told her that the Doctor had almost killed her; that he first used his hands and then got into the bed; Matilda said there was blood on witness' shoulders; witness replied it must have been from the Doctor's hands; on Monday Dr. Dalton came to attend her; on Tuesday saw Dr. Dill again before the magistrates; he there shewed a silver instrument and asked whether he had not used it; witness said he had not; during her sickness she never had retention of urine.

Cross-examined. (The cross-examination of this witness was continued for four hours. The iteration and reiteration of questions eliciting answers similar to the above, are omitted; they were persevered in till all seemed to be sick of, and disgusted with, the details, and to sympathize deeply with the witness, always excepting the learned counsel for the defence and his client.) Had not known Dr. Dill till he came to visit her; he was sent for by her brother with her assent; said witness was threatened with inflammation of stomach; blister remained on till towards morning; Matilda removed it and dressed the part; when Doctor examined blistered surface, said there was not lard enough on the dressing; the family were attentive to witness; the bedding was changed when necessary; witness had only been put in that bed the day the Doctor came; slept formerly in another room; night-clothes were changed on Saturday; made no objection to Doctor using his hand as he did up to Sunday; made no complaint and asked no question; resisted on Sunday, with all her power, when she saw his intention; he did not ask regarding the state of her bowels on Sunday; did so previously; he never asked if she had difficulty in making water; when on the bed above witness, said he would not hurt her, and that it would prevent the necessity of another bleeding; was very much frightened and cannot recollect distinctly all that was done; does not know when she first screamed; loud enough to be heard down stairs; made a noise when he introduced his finger, but not so loud as to be heard below.

screamed as soon as she could, and as loud as she was able; had more strength to cry as she became excited; can't say the Doctor's person had touched her when she screamed; he said, "don't be frightened, I am not going to hurt you; it will prevent bleeding you again;" there was a palliase and mattress on a corded bedstead; does not know why he did not succeed at first; it was not her strength or resistance that prevented him; after being turned across the bed he succeeded; did not ask her to change her position; prisoner's trousers buttoned in front; was quiet when being wiped; offered no resistance; had not sufficient strength to cover herself; thinks the door was on the latch, but not locked; when Matilda came in did not come to the bed, nor ask any question till Doctor left, nor did witness speak; the bed occupies the corner opposite the door; remembers that he shook hands with Matilda, then came to bedside and took witness' hand which was lying above the clothes; is not sure that she heard the Doctor give Matilda instructions about the powders; thinks her sister told the Doctor to call and bleed Mrs. Jones; thinks she first spoke to her sister-in-law, and asked if she heard her halloo; did not ask why she came not sooner; asked for a cloth because she was flooding; her other sister-in-law came up, asked and was told all particulars; told her enough to let her know what had happened; Matilda slept in a bed in the same room; witness' head wandered the night after the Doctor first called; never was disturbed by singing or other noise in bar-room; could sometimes hear the sound of people talking in the kitchen; could not hear them in the bar room; does not recollect holding conversation with any one not of the family on this subject; has not seen copy of depositions; Mr. Crooks came to the house to intimate that they need not come to court the first day; Mr. Crooks' whole conversation was not about this affair; heard him say he was cautioned not to let the depositions out of his hands; no person advised her to give information of this matter; William Doherty was boarding in the house; does not know much about him; has spoken to him; recollects his being in her room to varnish a bureau; cannot say whether before or after this offence; does not remember asking him what made him so stiff and haughty; does not remember his saying he had something else to do than talk to her; remembers that she heard Doherty say that when coming from Dundas he had seen holes where search was made for a man Doctor Dill was said to have murdered last year; Does not know a man named John Mcnevy in Mount Pleasant; knows one in Bruford; heard he had made reports against witness, he himself denied it; does not remember asking Doherty if he saw "my old Doctor;" her brother never charged her with lying on the floor with any man; once, when the Doctor used his hand indecently, Matilda was in the room nursing her child; his hand was under the bed-clothes and her sister-in-law did not know what he did.

Matilda Fordham—Is sister-in-law to last witness: the family consists of two brothers Fordham, their wives and children; Phœbe Fordham lives with them, and was ill eight days before the Doctor was sent for; he came on Tuesday evening; said the complaint was bilious fever; witness had seen the Doctor twice before; he came to the house professionally; Phœbe was regular; Doctor always came to kitchen door except once when witness was up stairs; he came on Friday evening at dusk; Phœbe complained of pain at stomach; he said he would put on a blister; while preparing it he asked for vinegar and water; washed her and put on the blister; witness asked where it was to be put on; he said he would do it himself as he knew best; witness directed a little girl to hold the candle; he said he could see well enough as it was; on Saturday morning, about dawn, witness took off the blister, and in the forenoon Mrs Jones dressed it; the Doctor never spoke of drawing off Phœbe's water; Phœbe was very weak; had been delirious; on Tuesday night got out of bed and walked about the room; vomited the medicine; the Doctor next came on Sunday, near mid-day; did not then come to the kitchen; children were with witness and her sister in the kitchen; had been up stairs a short time before; has swept the room and put up the window curtain; heard some one go up stairs; thought it was her husband; was told afterwards by her sister-in-law it was the Doctor; were talking in the kitchen; witness went to the sink to wash her hands; heard a scream; asked her sister-in-law if it was Phœbe; she said it was her child in the bar-room; presently heard another scream; Charlotte said she was afraid the Doctor was killing Phœbe, and asked witness to run up; witness wanted Charlotte to go; she refused as her hair was all out of order;

witness then hurried, and as she opened the kitchen door heard another scream and the words "O Lord;" went up stairs as fast as she could; had to go along a passage up stairs and along another passage; Phœbe was in bed, right, and the Doctor sitting by the bed wiping her hands with paper; Doctor said, "How do you do—get me some water;" witness went far enough into the room to see Phœbe and then went for water as quickly as she could go to the kitchen and back; he asked for a towel and some paper; witness asked how soon the fever would break; he said, "God knows," but thought there would be a change soon; thinks it was nearly five minutes from the time she went into the room till the Doctor left; observed that the window curtain was down; thinks Doctor went to bedside before he left, but cannot positively swear; when Dr. went out either Phœbe asked witness if she heard her scream, or witness asked Phœbe what made her halloo; she said the Doctor had almost killed her, first with his hand and then unbuttoned his pantaloons; she began to cry and seemed much distressed; before witness left, Phœbe asked for a cloth, because she was flooding; gave her one; she shewed witness the cloth; witness went down, not aware of extent of what had happened, because of the screams; told Charlotte who went up; witness went up some time afterwards; Phœbe was crying; Charlotte said the Doctor has done what he pleased with Phœbe; Phœbe declared it was true; saw marks of blood on Phœbe's shoulders and told her of it; it looked like marks of fingers; she said it must have been from the Doctor's hands when he turned her across the bed; thinks the noise of the child in the kitchen prevented them from hearing Phœbe's screams sooner; could not say with what the Doctor was wiping his fingers; looked at it afterwards and found it a piece of paper covered with blood; Phœbe afterwards said he had wiped her with it.

Cross-examined—The house is of three stories; Phœbe's bedroom on the second floor, over the kitchen (plan of house submitted and said to be correct); witness, her sister-in-law, and a little boy, were in the kitchen; child was playing and making a noise with a chair; cannot say how long time from hearing footsteps on the stair to hearing cries; Charlotte's child was in the bar-room; other than the noise of the child and their own talking, the house was quiet; heard three cries; does not think that from second cry till she went up stairs much more than a minute could have elapsed; recollected when she heard the scream that the Doctor had been accused of murder, and a "shock" came over her; when witness came down for water, told Charlotte that she saw nothing wrong, that the Doctor wanted water for his hands; witness was so frightened that she cannot tell how she went up stairs and into the room; did not say anything; saw that Phœbe was right in bed, though she looked agitated; after the witness returned with the water saw the agitation more distinctly; witness can't say whether she told the magistrates that Phœbe had told her the whole as soon as the Doctor went away; does not think she did; witness asked Phœbe why she did not halloo sooner; she replied she did so soon and as loud as she was able; and that her voice got stronger the more she was hurt; did not think the Doctor had ravished Phœbe till Charlotte told her; Phœbe never complained of noise in the bar-room; witness did not examine her person, but examined her clothes; did not observe other marks than those of blood.

Charlotte Fordham—Was in the room on the Friday evening when blister was put on; was surprised at the Doctor putting it on; thought he would have asked Matilda to do it; Doctor generally opened kitchen door before going up stairs; on Sunday forenoon heard some one go up stairs; went to the bar-room and asked her husband; he said it was the Doctor; thought Gideon had gone up with the Doctor as she did not see him; returned to the kitchen to adjust her hair and dress; told Matilda; some time after heard a scream; thought it was her child in bar-room; told Matilda so in answer to her question; heard another scream; called to Matilda to run up stairs; Matilda asked witness to go; Matilda then went; when she opened the kitchen door to go; heard a third scream and the words "O Lord;" Matilda soon came down for water and said she saw nothing the matter; witness dressed, went for her child, and then went up stairs after Matilda had come down the second time; Phœbe wanted to spit; witness took out the pot; saw in it a paper with blood on it; Phœbe said the Doctor had almost killed her; that he first used his hands and then got into bed with her; failing to accomplish his wish, he got out of bed, turned her across the bed with her

legs hanging over side of bed, and then succeeded; witness observed blood on her shoulders; never heard her complain of retention of urine; had been regular; did not examine her clothes or person.

Cross-examined—When Matilda first came down, witness asked her what was the matter; she said she did not know, but supposed the Doctor had been looking at the blister; when she came down the second time told witness that Phœbe said the Doctor attempted to get in bed with her; it might be ten minutes from time Doctor went up till she heard first scream; it was not half an hour from time Doctor went up till he came down; sobbing and crying, Phœbe told witness all that happened; did not tell magistrates a different story from what she now tells.

Dr. W. H. Dalton—Resides in Ancaster; was called on the 19th March to attend Phœbe Fordham; she was suffering from remitting fever; was told Dr. Dill had been attending her; was unwilling to prescribe for her as she was under treatment by another; Mrs. G. Fordham (Matilda) said that witness need not hesitate since Dr. Dill should not see her again; asked why Dr. Dill was not to see her again; she said he had seen her too often already; witness then did not understand her meaning; prescribed for her; she was in a high fever; witness called again in the evening; found her nearly in same state; was then told what prisoner had done; on Tuesday, when he went, there were five magistrates investigating the case; prisoner was there in custody; when Phœbe was giving her evidence prisoner cross-examined her as to the dressing of the blister, and whether he had not put his finger into her private parts on Sunday and previously; she answered that he had; when asked why he had done so, he said to ascertain the state of her urinary apparatus; prisoner then produced a female catheter, and asked whether she had ever seen such an instrument; she said she had not; prisoner said he had used it with her not once but several times; in introducing the catheter it is not necessary to affect the vagina or go near the hymen; the introduction of the catheter is not usually attended with pain; it is a very simple operation, and is always done under bedclothes, without any exposure; a small vessel is necessary to receive the urine; examined Phœbe's person on Wednesday by order of magistrates; received order at three o'clock p.m.; went immediately; showed order and directed Mrs. F. to explain necessity to Phœbe of submitting to examination; there was swelling of labia and inflammation of inner surface; internal labia also inflamed; increased mucous discharge, and no appearance of hymen; could not say, from appearances, how long since its rupture; violence on Sunday would produce the appearances; there could be no doubt that violence had been used to the parts recently (within a short period); witness treated the case as remittent fever; she was in a very weak, low state when first saw her; not likely to have sexual desire, or to consent to sexual intercourse; it is not necessary to introduce finger into vagina to ascertain whether there is a retention of urine; introduction of finger might rupture the hymen.

Cross-examined—The marks observed by witness are not certain indications but strong corroborative evidence; hymen not always apparent; liable to be destroyed by various causes; signs observed must have been caused by some thing introduced; saw no appearance of semen, nor of menstrual discharge; the injuries witness saw must have been caused by violence; made the examination when ordered; it would have been more satisfactory if done earlier; prisoner was not present when witness made deposition before magistrate; was not cross-examined till now; was present at the examination on the Tuesday; prisoner, when cross-examining Phœbe, wished other witnesses to leave the room; they did so after a little, as a matter of courtesy, not of right; prisoner was asked if he wished to examine Mrs. M. and C. Fordham; he declined; witness saw nothing in the case of Phœbe to require examination per vaginam; if the urine were retained, the proper and simple way was to introduce the catheter; before introducing the catheter explanation ought to be made to the patient, and to a female friend, who should be present; it might be introduced without the patient seeing it or feeling it much; does not say that from what he saw she had been recently violated, but the appearances he saw corroborated the other evidence.

Re-examined—Knows there was no retention of urine while he attended Phœbe; prisoner said he used the catheter to draw off water in consequence of retention; when there is retention of urine it is generally necessary to use the catheter twice in the 24

hours; sometimes oftener; it is an established rule in the profession, that no examination be made of a female except in presence of a matron; the offence said to have been committed on the Sunday would have produced the appearances he saw on the Wednesday.

FOR THE DEFENCE.

William Doherty—Was in bar-room when prisoner called at Fordham's on the 18th March, along with the two Fordhams and Thompson. On coming in he asked how Phœbe was, and if he might go up stairs; went up and returned in about ten minutes; heard no noise during that time; thinks, but is not sure, that loud screaming in Phœbe's room would be heard in bar-room; witness first heard of the offence on Tuesday; saw nothing unusual about the house till then; boarded there; is a painter; was in Phœbe's room on the Monday to varnish spots on a bureau; she asked, "Did you see my old Doctor this morning?" told her he had, and asked how she was; she said witness was scornful and would not speak to her; saw prisoner at that time through the window on the road as if leaving the house; heard Gideon Fordham on Sunday night speak against prisoner, and say he should not again attend his family.

Cross-examined—Was in the habit of drinking freely, but not lately; required drink to-day in consequence of being locked up all day in a cold room (a laugh); came here to swear anything required (a general laugh, which met with a severe rebuke from the judge); knows nothing against Phœbe's character; never heard anything against her; never said the Doctor was three quarters of an hour up-stairs; did say he might have been half an hour about the house; up-stairs and talking to Daniel in the shed; Mrs. Fordham was in Phœbe's room when he was there mostly all the time; there are three partition walls one way, and two another, between bar-room and Phœbe's room; heard D. Fordham say he could hear persons singing in bar-room where he slept over it in third story.

Re-examined—Does not recollect Mrs. Fordham coming into bar-room for her child; might have done so without his observing her; when prisoner came down did not stay long in bar-room, but went out and spoke to D. Fordham in shed.

James Gurnett—Resides in the village of Ancaster, one-third of a mile east of Fordham's; prisoner came to his house about half past 12 o'clock on Sunday, the 18th March; staid a short time and then drove west; saw him return in about 15 minutes; prisoner had not on an over-coat, but a loose sack-coat and light hat.

Cross-examined—Does not know that prisoner was not at Fordham's before he came to witness's house.

John Jones Bull—Is landlord of the house; thinks much noise could not be made in Phœbe's room without being heard in bar-room; there is a stove-pipe hole through which sound would pass; this hole had no stove-pipe in it on the 18th March.

Cross-examined—Witness is bound over to keep the peace in consequence of a quarrel with the Fordhams; has been in jail for offences, but never tried.

John M'Laig—Has been in Court during trial, and not separated with the other witnesses; lives in Ancaster, two lots west of Gurnett's; saw prisoner go up on the 18th March, between half-past twelve and one o'clock, and return in 15 or 20 minutes.

Cross-examined—Thought he had not time to be as far as Fordham's; is not sure whether he was in a Sulkey or a Buggy; does not know that the Doctor was not at Fordham's between 11 and 12, A.M.

Margaret Douglass—Has been servant to Dr. Dill for eighteen months; knows the clothes he wore on 18th March; wore the trousers produced on that day; the only ones he has buttoning in front; the others opening by flaps, they are lined in front; the lining has never been washed; his shirts were usually washed on Mondays; the shirt he wore on Sunday would not be washed till the Monday of the following week; he changed on Tuesday when he came to jail; the shirt he put on clean on the Sunday.

Cross-examined—Could not have changed his shirt between Sunday morning and Tuesday; knows because she sorted the clothes; had only six shirts; and the week he came to jail there were only two at the wash; the shirt put off on Tuesday would be washed next Monday; cannot say how many were washed next Monday, as she did not sort the clothes that came from jail; saw no stains of blood on any of the shirts washed the week he went to jail.

Anna Lloyd—Lives at Dundas; washed for prisoner since

January; washed on Mondays; saw no stains or marks on his shirts.

Robert Holt, J.P.—The depositions produced, except Dr. Dalton's, were written by Mr. Crooks in presence of witness and other subscribing magistrates; they are those on which prisoner was committed; prisoner was not refused permission to examine any of the witnesses; considered it optional to allow him to cross-examine witnesses or not; does not know of any person influencing Phœbe Fordham to lodge complaint.

Cross-examined—Prisoner was asked if he had anything to say; he said he was not guilty, and was not pressed farther; while in Phœbe's room during her examination, heard no noise from bar-room, although there was much excitement and many persons there as witness believes.

The Counsel for the defence addressed the Jury at great length and with great volubility; he dwelt mainly on the improbability, 1st, of the Dr. committing the offence; 2nd, of his being at the house long enough to do it; 3rd, of the cries not being heard in the bar-room as well as the kitchen; and 4th, of the Dr. being able to assume such coolness and self-possession immediately after committing such an offence.

The Crown Counsel did not reply, neither did he advert to the peculiar circumstances of aggravation in the case—the breach of confidence on the part of the prisoner, and the violation of established professional rules which he had sworn to observe,—but in very few words he reminded the Jury of the main facts, which remained totally untouched, either by the cross-examination or the witnesses for the defence.

The learned Judge summed up with clearness and perspicuity, going over the whole evidence and remarking on the occasional slight discrepancies of the witnesses.

The Jury, after a sederunt of 17 hours, retired, *pro forma*, and in a few minutes returned with a verdict of GUILTY.

Sentence of Death was pronounced, which has been subsequently commuted into confinement in the Penitentiary at Kingston for life.

Health of the City.—On the whole, the city still continues comparatively healthy. Diarrhœas and dysenteries are frequent, and sporadic cholera has been prevalent. Several cases of cholera, presenting all the characteristics of the Asiatic variety have been witnessed. We have heard of some fatal cases within the last fortnight, several of which we have seen; four of these occurred in the military hospitals—all fatal. The 71st Regiment has been removed to St. Helen's Island, where, during the fatal epidemic of 1832, they enjoyed such perfect immunity? The disease cannot be viewed, however, as yet, as strictly epidemic, but we, nevertheless, think that the inhabitants should at once adopt precautionary measures in respect to diet, clothing, ventilation and cleanliness. Should it prevail epidemically, we scarcely believe it will be marked with the same malignity, or prove as general in its attacks, as in 1832-'34. Much has been done in this city as regards drainage, &c., since those years, although yet a good deal more might be effected, which, if costing money, would save life.

Proposed New Work on the Eye.—We direct the attention of our readers to the Prospectus in our advertising sheet. Dr. H. has practised his peculiar branch of the profession with credit for several years in this city, and has had excellent opportunities for studying ophthalmic diseases. We believe him to be adequate to the full execution of the task which he has undertaken.

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR MAY, 1849.

| 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, | + 51 | +57 | +40 | +54. | 29.65 | 29.69 | 29.86 | 29.73 | S W | S W | W | Fair | Fair | Fair |
| 2, | " 35 | " 49 | " 35 | " 42. | 30.11 | 30.10 | 30.12 | 30.11 | W | W | W | Fair | Fair | Fair |
| 3, | " 36 | " 50 | " 40 | " 43. | 30.21 | 30.15 | 29.94 | 30.10 | W N W | N E | N E | Fair | Fair | Rain |
| 4, | " 43 | " 49 | " 44 | " 46. | 29.85 | 29.84 | 29.87 | 29.85 | N E | W by N | N W | Rain | Rain | Fair |
| 5, | " 32 | " 53 | " 38 | " 42.5 | 29.90 | 29.97 | 30.01 | 29.96 | N by W | N W | N W | Fair | Fair | Fair. |
| 6, | " 35 | " 65 | " 47 | " 50. | 30.04 | 30.00 | 29.96 | 30.00 | E N E | E N E | E N E | Fair | Fair | Cloudy |
| 7, | " 42 | " 66 | " 49 | " 54. | 29.93 | 29.88 | 29.80 | 29.87 | E | E | E | Fair | Fair | Fair |
| 8, | " 43 | " 73 | " 54 | " 58. | 29.76 | 29.70 | 29.59 | 29.68 | E | E | E | Fair | Fair | Rain |
| 9, | " 49 | " 50 | " 41 | " 49.5 | 29.60 | 29.60 | 29.62 | 29.61 | E | S E | S E | Rain | Rain | Fair |
| 10, | " 42 | " 62 | " 42 | " 52. | 29.61 | 29.55 | 29.63 | 29.60 | S | W by S | W | Cloudy | Fair | Cloudy |
| 11, | " 41 | " 54 | " 43 | " 47.5 | 29.70 | 29.67 | 29.66 | 29.68 | W N W | N | W | o'erc'st | Fair | Fair |
| 12, | " 45 | " 65 | " 48 | " 55. | 29.72 | 29.66 | 29.65 | 29.68 | N E | N E | N E | Cloudy | Fair | Fair |
| 13, | " 49 | " 57 | " 50 | " 53. | 29.56 | 29.37 | 29.30 | 29.41 | S | S | S | Cloudy | Rain | Rain |
| 14, | " 47 | " 45 | " 41 | " 46. | 29.20 | 29.22 | 29.34 | 29.25 | E | N E | N E | Rain | Rain | Rain |
| 15, | " 43 | " 57 | " 47 | " 50. | 29.44 | 29.51 | 29.60 | 29.53 | N | N E | N E | Cloudy | Show's | Show's |
| 16, | " 14 | " 62 | " 51 | " 53. | 29.66 | 29.71 | 29.75 | 29.71 | N N W | N N W | N N W | Fair | Fair | Cloudy |
| 17, | " 53 | " 65 | " 55 | " 59. | 29.78 | 29.80 | 29.77 | 29.78 | N N W | N N W | N W | Fair | Rain | o'erc'st |
| 18, | " 50 | " 68 | " 52 | " 59. | 29.85 | 29.79 | 29.76 | 29.80 | N W | E by S | W | Fair | Fair | Fair |
| 19, | " 51 | " 70 | " 57 | " 61.5 | 29.80 | 29.75 | 29.74 | 29.76 | N W | W S W | S W | Fair | Fair | Fair |
| 20, | " 56 | " 73 | " 60 | " 64.5 | 29.73 | 29.61 | 29.56 | 29.63 | W | W | N W | Fair | Fair | o'erc'st |
| 21, | " 46 | " 45 | " 43 | " 45.5 | 29.64 | 29.78 | 29.78 | 29.73 | N N E | N N E | N N E | Rain | Cloudy | Cloudy |
| 22, | " 44 | " 60 | " 45 | " 52.5 | 29.70 | 29.49 | 29.42 | 29.54 | N N E | N N E | N N E | Fair | Fair | rn.&th. |
| 23, | " 46 | " 47 | " 40 | " 46.5 | 29.34 | 29.37 | 29.54 | 29.42 | N N E | N N E | N N E | Rain | Rain | o'erc'st |
| 24, | " 41 | " 50 | " 46 | " 45.5 | 29.67 | 29.76 | 29.82 | 29.75 | N N E | N E | N E | Fair | Fair | Fair |
| 25, | " 45 | " 65 | " 45 | " 55. | 29.87 | 29.80 | 29.80 | 29.82 | N E | S W | S W | Fair | Fair | Fair |
| 26, | " 50 | " 75 | " 56 | " 62.5 | 29.82 | 29.75 | 29.73 | 29.77 | S W | W | W | Fair | Fair | Fair |
| 27, | " 53 | " 82 | " 60 | " 67.5 | 29.80 | 29.75 | 29.75 | 29.77 | S W | S W | W | Fair | Fair | Fair |
| 28, | " 56 | " 87 | " 64 | " 71.5 | 29.85 | 29.79 | 29.74 | 29.79 | W | W | W | Fair | Fair | Fair |
| 29, | " 67 | " 76 | " 62 | " 71.5 | 29.92 | 29.94 | 29.96 | 29.94 | E | E | S E | Fair | Fair | Cloudy |
| 30, | " 58 | " 73 | " 54 | " 65.5 | 30.01 | 29.91 | 29.96 | 29.96 | E N E | N E | N E | Fair | Rain | Rain |
| 31, | " 55 | " 59 | " 52 | " 57. | 29.94 | 29.88 | 29.82 | 29.88 | N E | N E | E by N | Rain | Rain | Cloudy |

Therm. } Max. Temp., +87° on the 28th
 } Min. " +32° " 5th
 Mean of the Month, +54.2

Barometer, } Maximum, 30.21 In. on the 3d
 } Minimum, 29.20 " 14th
 Mean of Month, 29.749 Inches.

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.,—MAY, 1849.
 Latitude 43°. 39' N. Longitude 79°. 21' W. Elevation above Lake Ontario, 108 Feet.—(For the Brit. Amer. Jour. of Med. and Phys. Science.)

| DAY. | Barometer at Temp. of 32°. | | Temperature of the Air. | | | | Tension of Vapour. | | Humidity of the Air. | | Wind. | | Rain in. on surf. | WEATHER. | | | | | | | |
|------|----------------------------|--------|-------------------------|---------|--------|---------|--------------------|--------|----------------------|---------|--------|--------|-------------------|----------|---------|-----|-------------|-------------|-------------|-------|--|
| | 7 A.M. | 3 P.M. | Mean of 24 h. | 7 A.M. | 3 P.M. | 10 P.M. | Mean of 24 h. | 7 A.M. | 3 P.M. | 10 P.M. | 7 A.M. | 3 P.M. | | | 10 P.M. | | | | | | |
| 1. | 29.742 | 29.857 | 30.014 | 29.869 | 40.5° | 52.4° | 34.0° | 42.3 | 1.86 | 1.55 | 1.37 | 1.71 | .74 | .40 | .65 | .64 | N. W. | N. W. | N. by W. | 0.650 | Light detached clouds Clear from 9 pm |
| 2. | 30.203 | 30.138 | 30.121 | 30.155 | 34.2 | 43.7 | 39.1 | 39.3 | 1.84 | 1.85 | 1.57 | 1.49 | .68 | .66 | .65 | .63 | N. W. | S by W. | Calm. | — | Light till 10 am 1 1/2 clouds detached pm |
| 3. | 30.069 | 29.844 | 29.680 | 29.680 | 38.4 | 43.0 | 39.4 | 40.4 | 1.87 | 1.68 | 1.91 | 1.64 | .59 | .61 | .80 | .66 | E. by N. | E. | Calm. | — | Clouded. Hail at 9 am. Hail round moon |
| 4. | 29.654 | 29.756 | 29.851 | 29.755 | 42.8 | 54.4 | 43.2 | 46.7 | 2.55 | 3.00 | 2.52 | 2.68 | .72 | .91 | .86 | .86 | N. by W. | N. by W. | N. by E. | 0.555 | Clouded. Slight rain 9 and 10 am Steady |
| 5. | 29.948 | 29.958 | 29.860 | 29.916 | 39.8 | 37.8 | 39.3 | 39.3 | 1.44 | 1.63 | 1.61 | 1.60 | .59 | .72 | .67 | .67 | E. by N. | E. | E. by S. | 0.230 | Clouded. Constant slight rain all day |
| 6. | 29.688 | 29.668 | — | — | 38.5 | 40.4 | — | — | 2.20 | 2.39 | — | — | .95 | .97 | .88 | .92 | N. E. by E. | E. N. E. | E. | 0.290 | Overcast all day Ceased rain at noon |
| 7. | 29.677 | 29.588 | — | — | 38.5 | 44.2 | — | — | 2.56 | 2.63 | — | — | .99 | .92 | .88 | .92 | E. | E. | E. | 0.140 | Overcast all day Rain from noon to 5 pm |
| 8. | 29.385 | 29.367 | — | — | 29.523 | 44.4 | — | — | 2.78 | 3.38 | — | — | .96 | .98 | .90 | .94 | E. N. E. | N. E. by N. | N. W. by W. | 0.010 | Overcast all day generally detached |
| 9. | 29.669 | 29.688 | — | — | 29.746 | 41.9 | — | — | 2.21 | 2.37 | — | — | .76 | .76 | .71 | .78 | N. W. | S. W. by S. | S. W. by S. | 0.100 | Light clouds generally detached |
| 10. | 29.804 | 29.605 | — | — | 29.685 | 44.2 | — | — | 2.24 | 2.62 | — | — | .78 | .76 | .68 | .76 | S. W. by S. | S. W. by S. | S. W. by S. | — | Gen. dr. a few 1/2 clouds Very fine day |
| 11. | 29.672 | 29.665 | — | — | 29.594 | 41.2 | — | — | 1.89 | 2.50 | — | — | .67 | .67 | .75 | .72 | N. by E. | S. | S. | — | A few 1/2 clouds round pm Very fine day |
| 12. | 29.578 | 29.466 | — | — | 29.373 | 46.6 | — | — | 2.23 | 2.29 | — | — | .72 | .61 | .73 | .69 | E. | E. | E. | — | Gen. over. Ring from 6 pm & most of night |
| 13. | 28.980 | 29.041 | — | — | 29.391 | 47.9 | — | — | 3.19 | 3.12 | — | — | .96 | .79 | .80 | .81 | E. N. E. | S. W. by W. | S. W. by W. | 0.850 | Rain till 1 pm Thunder-storm 2 pm |
| 14. | 29.100 | 29.254 | — | — | 29.244 | 47.4 | — | — | 2.88 | 2.53 | — | — | .89 | .69 | .87 | .81 | S. S. W. | N. W. | N. W. by N. | 0.325 | Mostly over. Rain till 9 am Shower at 6 pm |
| 15. | 29.533 | 29.523 | — | — | 29.580 | 45.4 | — | — | 2.19 | 3.02 | — | — | .75 | .73 | .88 | .82 | S. S. W. | S. S. W. | Calm. | 0.005 | Mostly clear Light passing clouds Hail |
| 16. | 29.651 | 29.637 | — | — | 29.672 | 49.3 | — | — | 2.92 | 2.96 | — | — | .63 | .63 | .66 | .69 | N. N. W. | S. S. W. | N. N. W. | — | A few 1/2 clouds till 3 pm 4 1/2 pm Fine |
| 17. | 29.744 | 29.748 | — | — | 29.776 | 50.6 | — | — | 2.40 | 3.13 | — | — | .61 | .61 | .63 | .66 | Calm. | Calm. | Calm. | — | A few passing clouds Most clear. Faint |
| 18. | 29.851 | 29.790 | — | — | 29.778 | 60.0 | — | — | 2.35 | 2.77 | — | — | .57 | .56 | .59 | .59 | N. | S. W. by S. | S. W. by S. | — | Foggy round horn Zen clear Very fine day |
| 19. | 29.838 | 29.774 | — | — | 29.774 | 59.1 | — | — | 2.41 | 2.81 | — | — | .61 | .56 | .67 | .67 | Calm. | S. by W. | S. by W. | — | Clear and unclouded. Very fine day |
| 20. | 29.692 | 29.550 | — | — | 29.787 | 51.6 | — | — | 2.59 | 3.02 | — | — | .71 | .63 | .72 | .67 | S. by W. | S. by W. | Calm. | — | Mostly overcast. Clear spaces |
| 21. | 29.509 | 29.466 | — | — | 29.540 | 55.2 | — | — | 3.20 | 3.02 | — | — | .89 | .79 | .81 | .77 | E. S. E. | E. S. E. | E. | — | Gen. dr. Air light in north at 10 pm |
| 22. | 29.450 | 29.299 | — | — | 29.226 | 67.0 | — | — | 2.63 | 4.53 | — | — | .87 | .89 | .97 | .88 | S. by W. | S. by W. | Calm. | — | Clouded Showers 7 and 8 am Thunder-storm and heavy rain 3 to 11 pm |
| 23. | 29.311 | 29.367 | — | — | 29.499 | 55.4 | — | — | 2.75 | 3.29 | — | — | .64 | .64 | .84 | .78 | W. by N. | W. by N. | Calm. | — | Clouded all day Slight rain from 4 to 6 pm |
| 24. | 29.601 | 29.696 | — | — | 29.696 | 43.0 | — | — | 2.66 | 2.74 | — | — | .94 | .94 | .92 | .93 | E. S. E. | E. S. E. | N. | 0.130 | Overcast all day Slight rain till 6 pm |
| 25. | 29.750 | 29.762 | — | — | 29.738 | 44.8 | — | — | 2.53 | 3.15 | — | — | .84 | .84 | .81 | .88 | S. by E. | S. by E. | N. E. by N. | 0.155 | Gen. cloud till 9 pm Clear from 9 pm |
| 26. | 29.742 | 29.713 | — | — | 29.706 | 50.5 | — | — | 2.84 | 3.09 | — | — | .76 | .73 | .78 | .78 | N. E. | N. E. | N. E. by E. | — | Aureole till midnight |
| 27. | 29.667 | 29.672 | — | — | 29.668 | 54.8 | — | — | 3.24 | 3.34 | — | — | .67 | .67 | .81 | .78 | E. by S. | E. by S. | N. E. by E. | — | Overcast all day |
| 28. | 29.664 | 29.682 | — | — | 29.705 | 51.4 | — | — | 3.34 | 3.47 | — | — | .89 | .78 | .89 | .84 | E. N. E. | E. N. E. | E. | 0.070 | Densely and uniformly overcast all day |
| 29. | 29.748 | 29.774 | — | — | 29.765 | 56.0 | — | — | 3.74 | 4.07 | — | — | .94 | .94 | .93 | .94 | E. N. E. | E. N. E. | E. N. E. | — | Overcast all day Slight rain most of day |
| 30. | 29.744 | 29.737 | — | — | 29.740 | 51.2 | — | — | 3.97 | 3.90 | — | — | .96 | .96 | .98 | .97 | E. by N. | E. by N. | E. | 0.360 | Slight till noon. Over. With dense haze |
| 31. | 29.746 | 29.737 | — | — | 29.730 | 61.0 | — | — | 3.95 | 4.61 | — | — | .88 | .88 | .96 | .94 | S. E. | S. E. | Calm. | 0.195 | Clouded till 10 am. Light detached clouds remainder of day |
| Mean | 29.681 | 29.663 | 29.676 | 29.6739 | 46.6 | 53.3 | 46.4 | 48.30 | 2.59 | 2.99 | 2.59 | 2.70 | .81 | .74 | .80 | .79 | 8.04 miles | 8.04 miles | 4.66 miles | 5.115 | 8 1/2-9 1/2 am, pm, splendid meteor in N. W. from 7 1/2 to 2 1/2 altitude. |

Highest Barometer, 30.214 on 1st, at 9 a.m. Monthly Range, 1.231
 Lowest do. 28.929 on 21st, at 3 a.m. Monthly Range, 1.3
 Highest Thermometer, 57.2 on 21st, at 4 p.m. Range, 41.3
 Lowest do. 41.66 Mean Min. Therm., 41.06.
 Mean Max. Therm., 41.66 Mean Min. Therm., 41.06.
 Mean Daily Rain, .53 = 7 from am to 4 pm on 19th
 Maximum Daily Rain, .89 = 7 from am to 4 pm on 19th
 Maximum Daily Rain, .89 = 7 from am to 4 pm on 19th
 Mean Temperature, at 6 am, 44.83 } Differ., 8.63
 do at 2 p.m., 53.26 }
 do at 4 a.m., 41.83 }
 Mean velocity at 2 p.m., 8.12 } Diurnal Variation
 do at 4 a.m., 2.73 }
 Mean velocity at 2 p.m., 8.12 }
 do at 4 a.m., 2.73 }
 Sum of the Atmospheric Currents resolved into the four Cardinal directions, in miles.
 North 1512.3
 East 1592.6
 South 632.2
 West 857.2
 Mean velocity of the Wind, 5.33 miles per hour.
 Maximum velocity, 21.9 miles from 4 pm, on 18th
 Most Windy Day, 6th.—Mean veloc. per hour, 9.31 miles
 Least do. 20th.—Mean veloc. per hour, 0.83
 Diurnal Variation
 1849... 1848... 1847... 1846... 1845...
 Mean, 51.10 49.80 49.73 64.22 60.23 77.8 79.7 78.1 65.77 65.74 63.75 48.30
 Max., 76.49 74.0 78.2 79.8 78.4 77.8 78.8 79.7 78.1 72.0 72.1 72.2
 Min., 26.5 27.3 29.2 29.7 27.3 27.8 27.8 27.8 26.7 26.7 26.7 27.9
 Range, 49.6 46.9 50.5 46.5 42.9 52.0 51.9 51.9 48.4 46.4 46.4 44.3
 No. Days, 11 7 6 6 8 9 8 8 8 12 12 13 16
 Inches, 2.350 1.375 1.670 5.670 4.334 4.375 2.040 2.620 6.115
 Winds, Calms, 109 95 85 82 81 84 83 81 80 80 80 76
 Mean Force, 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35
 Days, 0 0 0 0 0 0 0 0 0 0 0 0 0
 Snow, 0 0 0 0 0 0 0 0 0 0 0 0 0

The means are deduced from six observations daily, viz., 6 am, and 2 and 10 pm, and 7 am, and 3 and 11 pm.
 Further explanatory notes will be found at the foot of all the Registers for 1845, 1846, 1847, and 1848.
 No Magnetic Disturbances observed during this month.

TO MEDICAL STUDENTS.

CLINICAL LECTURES ON DISEASES
OF THE EYE AND EAR.

BY DR. HOWARD,

Oculist and Aurist, Surgeon to the Montreal Eye and Ear Institution.

DR. HOWARD will deliver Clinical Lectures on Diseases of the Eye and Ear, three days in each week, during the months of MAY, JUNE, JULY and AUGUST, 1849.

The Lectures will be illustrated by numerous cases under the daily observation of the Students, and every opportunity will be taken to make them practically familiar with the operations peculiar to this department of Surgery.

For particulars, apply to Dr. HOWARD, 142, Craig Street.

Montreal, April 2, 1849.

COLLEGE OF PHYSICIANS AND SURGEONS
OF LOWER CANADA.

THE BY-LAWS of the COLLEGE having received the sanction of the Executive, its BOOKS are NOW OPEN for the REGISTRATION of MEMBERS.

It is required of such as desire to register, that they forward to the undersigned (post-paid) their name, legibly written in full, their age, birthplace, date of Provincial License, and the College Fee, viz., Ten Dollars in current money of this city.

All such as signed the Petition to the Legislature for the Act of Incorporation, are entitled to Register forthwith, provided that at the time of their signing they were in possession of a Provincial License to practice Medicine, &c., &c.; and in virtue of the By-Law which refers to Membership, the Books of the College shall be kept open during a period of Six Months from the time of the passing of the said By-Laws, viz., the Tenth day of October, 1848, for the Registration of every Member of the Profession who desires so to do, provided such Member has been in possession of a Provincial License to practice Medicine, &c., &c., Four Years at the time of the passing of the Act of Incorporation, viz., 27th July, 1847.

FRANCIS C. T. ARNOLDI, M. D.

Registrar & Treasurer,
Coll. Ph. & Surg., L. C.

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

MEDICO-CHIRURGICAL SOCIETY.

THE next Monthly Meeting of this Society will be held at the Rooms of the Mechanics' Institute, on Saturday Evening, July 7, at 8 o'clock P.M.

HECTOR PELTIER, M.D.,

Montreal, July 2, 1849.

Secretary.

THE Subscribers have their usual assortment of genuine Drugs and Chemicals, which they offer low for cash, or approved credit.

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URQUHART'S

FLUID EXTRACT OF JAMAICA SARSAPARILLA

THE Subscriber begs leave to submit to the Medical Profession and to the public, his preparation of Sarsaparilla which has been extensively used in their practice, by many of the most eminent Medical Gentlemen in the City, and with the most beneficial results, as the following testimonials, with which he has been very politely favored, will satisfactorily show.

For sale only at the Medical Hall, Great St. James-Street.

ALEX. URQUHART.

August 2.

ALEXANDER URQUHART, ESQ.—DEAR SIR,—I have much pleasure in bearing testimony to the faithful manner in which you prepare your Fluid Extract of the Compound decoction of Sarsaparilla. This I am enabled to do on account of several of my patients having derived the greatest benefit from its use.

For Constitutional Syphilis and Chronic Rheumatism, I have prescribed it with the most marked effects; I can therefore, without the least hesitation, recommend your preparation as one possessing all the Medicinal qualities of the Compound Decoction of Sarsaparilla, while it is, at the same time, more palatable, and less apt to derange the stomach.

I remain, Dear Sir,
Your most obed't serv't,

W. FRASER, M. D.
Lecturer on Medical Jurisprudence,
M'Gill College.

Montreal, 9th February, 1847.

Montreal, February 10th, 1847.

I beg to certify, that I have employed very extensively, the "Fluid Extract of Sarsaparilla," made by Mr. Urquhart, in all those diseases in which that Medicine is usually prescribed, and that I have found it a most valuable preparation. I can, moreover, state from personal investigation, that the proprietor employs none but the purest ingredients, and bestows the greatest care and attention upon the mode of preparing the remedy.

ROBERT L. MACDONELL, M. D.,

Lecturer Institutes of Medicine
M'Gill College,

Physician to the Montreal General Hospital.